## **PSYCHO-SCIENTIFIC FRONTIERS**

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An astonishing discovery in the intermediate realm between life and death.

Title : The Delpasse-Effect

Taking previous basic research into account

The following report has been purposely scripted in an entertaining fashion and it is therefore comprehensible to all and sundry. It is essentially based on the publications of the immune-biologist Professor *James Bedford* and the cybernetic *Walt B. Kensington*, who report about the experiments of the French cybernetic Professor *Delpasse* and his team and by taking the *Grey-Walter-Experiments* onto account.

#### **Preface**

The DELPASSE-EFFECT belongs to the most astonishing discoveries made by natural scientists within the framework of research into the hereafter, ergo from within the intermediate realm between life and death. As with almost all progress within the sciences, the DELPASSE-EFFECT is not based on spontaneously gained insights. It is rather more the logical conclusion after a series of observations and discoveries made by other researchers a priory and the theories that were deduced from their works. Nobody is able to subsequently say where and when the long series of insights started. One can only select a specific event, thereby giving the series an arbitrary beginning. The arbitrary beginning of the DELPASSE-EFFECT could be determined by the moment Swedish and American researchers coined the concept of "memory molecules", something that later on entered the annals of science as a mistake.

About 30 years ago, *Professor Jean Jacques Delpasse* became aware of the works by, within scientific circles world-renowned, neurologist *Dr. W. Grey Walters* from Bristol, during a conference. *Grey Walters* discovered the Theta Brainwave in an EEG in 1943 and also the frequency follow-on effect that finds application in mind-machines. The EEG specialist *Walters* was at the time researching the so-called "standby wave", an impulse that always develops when one mentally prepares oneself to undertake an action.

The necessity to expand the dimension of the human consciousness grows everywhere. At a time when such insights can become common property, the possibility that something outside of any up to now know physical logic could be perceived, would awaken the greatest interest. Can this interest be a serious interest? - Our materialistic view of the world tends to accept something as legitimate, only when a *lot of money* is spent on it. The other side of the coin is that something

might not be particularly reasonable, if nobody is prepared to invest in it. *This is a mistake!* Great nations have invested considerable amounts on researching extrasensory perceptions without immediately informing the public. This is how a border area between physics, biology and psychology, a new discipline came into being, namely *parapsychology*. This disliked child of the sciences will gain central importance in the future.

Bad Salzuflen, April 2002

#### 1. 0 The disowned hereafter

## 1. 1. Afterlife research in the background

The universe is not something that exists independently from us "on the other side". We inevitably participate in everything that takes place. We are not just observers, but also contributors. Even if we might find this strange, the universe is a universe of participation.

John Archibald Wheeler (Quantum physicist)

The question about the continuity of the human existence beyond death no longer only interests psychologists and researchers of the paranormal. Throughout the world, physicians, biologists, cyberneticists, chemists, physicists and engineers are engaged in researching this possibility. The cost involved with such research does unfortunately not only depends on the financial freedom of movement. A lot of researchers have to take *public opinion* and the *benevolence of those around them* into consideration. The technical facilities that are generally available for their work at institutes, universities and other research centres are available for researching the hereafter only on rare occasions. Their freedom of action is restricted, because they want the least amount of publicity for their investigations and there is a good reason for this:

- Not every scientist has such an inviolable name like *Albert Einstein*, who could dare to formulate a preface for *Upton Sinclair's* telepathy report "Mental Radio".
- Not all of them enjoy the high professional recognition of a *Wolfgang Pauli* who could dare to speculate, with *C. G. Jung*, about the non-physical nature of coincidence.

Most scientists must have a fear of being exposed to ridicule, to experience professional hindrances or even loss of livelihood, if their engagement with the scientific underground were to be exposed. A professor of medicine, who is searching for the soul of a just deceased patient, would have to be considered untenable at most universities. Scientists that want to seriously delve into paranormal phenomena, risk being considered occult dreamers. Even though they are actually the exact opposite, namely:

• Realists that are not prepared to acquiesce with the existence of the supernatural and are therefore looking for rational explanations.

Researchers at the forefront of the unknown were always forced to take unconventional paths. They violated taboos and stirred up society against them.

- Leonardo da Vinci hid corpses in his bed so that he could secretly study the anatomy of the human body at night.
- *Galileo*, who was so careless that he promoted his ideas in public, was forced to disavow Copernicus's view of the world under threat of torture.
- *Semmelweis* exposed himself to the hatred and the contempt of his professional colleagues, because he declared that the uncleanliness of doctors and hospitals was the cause for sepsis.

A lot of scientists still fear similar hindrances. They often perform their work in secret, because it

could not be performed officially and because the sciences would not progress without it. A lot of experiments that would still abhor us these days, are being undertaken somewhere or have already been undertaken. Many an experiment is started without the public's finding out - at least not until some convincing results have been achieved.

## 1. 2 CROSS CORRESPONDENCE - evidence of immortality

At the beginning of the last century, five men made the decision to tell the world about their life in the hereafter *after their demise*. The first of their messages was received in 1906 by a lady from within English society. She suddenly discovered that she could *write automatically*. In a state of semi-awake relaxation, her hand guided a pencil as if by its own accord. Only after reading the text later, did she become aware of what she had written. The sender of the message from the hereafter was a man who called himself *Frederic Myers*.

• The reports that followed - altogether 3000 transcripts over more than 30 years - were not only given to this one medium, but also to four other mediums in England and a well-known medium in the USA. The authors, besides *Frederic Myers*, were *Edmund Gurney*, *Henry Sidgwick*, *A. W. Verral* and *Henry Butcher*.

If one can give the spiritistic literature of the 19<sup>th</sup> century credibility, one finds that this was neither something new nor something special. It happened over again that "controlling spirits" from the hereafter announced themselves and transmitted messages via mediums. But a collective company excursion from the realm of the dead had never happened before, undertaken by men that had been highly respected personalities during their lifetime. All of them had been members of the English Society for Psychic Research.

• The Society for Psychic Research was founded in 1882 under the chairmanship of the Cambridge humanist Professor Henry Sedgwick. Its aim was the scientific research of paranormal phenomena.

The reputability of this still existing association cannot be doubted in any way even these days. The list of its presidents contains the names of three Nobel Price laureates, eleven members of the Royal Society, one Prime Ministers of Great Britain and 18 professors, with 5 physicists amongst them. The presidents of the society included for instance: *Sir Oliver Lodge, William Crookes, Arthur and Gerald Balfour, Gilbert Murray, William James, Charles Richet, Hans Driesch, Henri Bergson, Professor Mundle. Arthur Koestler* is a member of the council. The task of the society initially consisted of inexorably separating the wheat from the chaff and to expose all fraudulent manoeuvres. The specialists they dispatched became the bane of all mediums. Many a séance these psycho-detectives participated in, ended the carrier of many a hopeful sensitive.

The deceased members of the society - *Myers, Gurney, Sidgwick, Verral* and *Butcher* - had been able to practically study the problems of collecting evidence for years. They knew how difficult it was to differentiate whether a message simply stemmed from the telepathic ability of a medium or whether it could indeed come from the hereafter. They themselves had been looking with scientific diligence for methods that could withstand any criticism. The idea of a joint message from these five men from the realm of death might initially have appeared monstruous. But if such a realm really existed, such a message wasn't just possible, it was actually to be expected from these men. If there was anybody at all, they would have been competent enough to furnish irrefutable evidence of the continued existence of the spirit. These messages were indeed formulated in a way that any deception seemed difficult to imagine.

• Each of the automatic writing ladies only received a part of the message and it made no sense on its own. But as a piece of a puzzle of an overriding whole, it did make sense. Once they were correlated, these messages could hardly have come from anyone else but from the five deceased people. The themes were chosen from the special fields of human science, something the five had outstanding detail knowledge of. They contained particular details that were demonstrably only known to the deceased.

No scientific examination has managed up to now to expose the many complicated details as fraud or self-deception with absolute certainty. A first class supernatural phenomenon remained - it entered the annals of paranormal science under the name of "CROSS CORRESPONDENCE".

These CROSS CORRESPONDENCES still cause the young discipline that calls itself parapsychology, some severe headaches. They are a part of the few pieces of evidence for a life after death and they cannot be simply dismissed. And as astonishing as it might sound, it is a highly unwelcome situation for this science.

Immortality disrupts its concepts!

This fact is however not as paradoxical as it might seem at first glance. Parapsychology had to pay for its middling acceptance as a serious science in a Faustian tragic fashion because of dealing with eternal life. Its whole existence relies on the pro or contra hereafter decision. Consider this situation on hand of a parable:

A novice approaches the circle of our honourable natural sciences and humanities and demands recognition. What does she have to offer? One listens to her with astonishment: People that can read minds, people that can clairvoyantly see events or even gain a view of the future. Items that fly through the air without a recognisable cause. - Does this novice actually believe that she can scientifically verify the existence of such silliness? Yes, she thinks she can! Even if she cannot explain it to begin with. To actually verify the existence of paranormal phenomena with absolute certainty - would indeed be a scientific feat. This would be something the wise circle of our honourable sciences and humanities could not ignore. With lots of reservations, the novice is finally accepted. A mistrust does however remain. Under the supervision of a lot of suspicious looks, the novice behaves in an acceptable manner. She only deals with the things that are allowed.

What is allowed is what can by necessity be explained as a secular, ergo worldly phenomena.

The opponents of parapsychology eagerly await the arrival of spirit and plasma spitting mediums. How could a young science dare to make such a bold commitment? The commitment, namely that some of the phenomena can *only be explained* when one takes a "highly dubious" possibility into consideration:

The possibility that the human spirit *could survive* death.

## 1. 3 A word in regards to fraud

Whenever a case of *extrasensory perception* or *psychokinesis* is reported about, the *first question* is always about whether we are dealing with fraud or slight of hand. Such reservations are always appropriate. Fraudulent intentions do actually play a part in many cases. It has unfortunately happened that a medium that *initially demonstrated genuine* successes, tried to "enhanced" them later with fibs.

But a second factor also plays a role:

• Deep in their heart, most people wish that everything extrasensory may be fraudulent. Things that do not fit in with our view of the world alarm us. They further call into question our already insecure existence. This is why we tend to dismiss the things that we do not understand as fraud.

This is why at first, only those things are possible within parapsychology, that are *allowed* to be possible. And this includes all the things that can be explained from within a *secularistic* origin, namely extrasensory perceptions and psychokinesis.

- One denotes telepathy, clairvoyance and precognition as extrasensory perceptions, as the biblical gift of prophesy is called these days.
- Psychokinesis includes ghostly appearances, poltergeists and all phenomena where items are moved without any visible physical influence.

*Telepathy* and *clairvoyance* seemed to be the *most possible* at a first glance. Parapsychology does indeed make the world sit up and take notice in both of these fields.

# 1. 4 Professor William MacDougall and Professor J. B. Rhine, Duke University, North Carolina

A significant about-face - largely undetected by the rest of the world - happened within the sciences in 1935: The soul was rediscovered. - This momentous occurrence is mainly thanks to two psychologists: Professor *William MacDougall*, many years at the University of Oxford and the University of Harvard, and the young researcher Professor *J. B. Rhine*. They founded an institute at the Duke University in Durham (USA State of North Carolina) that was designed to fathom the mysterious forces of human nature. The term "parapsychology" was coined at that time to describe a new subject area within the academic curriculum.

These two scientists investigated "crazy things" like dreams, clairvoyance, telepathy and thought transference. But the deeper they delved into this new field of research, the more urgent the question: "If these abilities, they have nothing to do with sensory perceptions and other quite normal performances, are real - where do these "supernatural talents" actually come from? Do people, something that has been believed since the beginning of time, really possess something like a soul? Can it be verified? Can it be separated from the body?

The Parapsychological Institute at the Duke University collected and closely examined ghost stories. Dreams and prophecies were noted down and one pursued all other events that seemed to be of an unusual nature. One developed laboratory test to examine so-called *paranormal abilities*. - The reality is: There are people that occasionally "see" things that take place in far off places and sometimes also in the future. Some might quite obviously defy place and time and seemingly also the laws of nature. But we are not dealing with a miracle when something like this happens, it is actually something natural.

In his book "Extrasensory Perceptions" *J. B. Rhine* reports for the first time about *telepathic* and *clairvoyant experiments* that were undertaken at a university institute. He utilised a system involving playing cards depicting five simple symbols. Five playing cards depicted either a cross, a star, a waved line, a square and a circle. *Rhine didn't* work with professional mediums, but with quite ordinary people - students or relatives of university staff.

• With the first important result of his experiments, he discovered that many more people possess simple abilities in regards to extrasensory perception than one assumes.

It had indeed been often attempted to depict the results of *Rhine* and others as deceptions, even though they could be repeated. But one cannot dismiss scientifically operated parapsychology that easily. *Sociology*, an equally "new" discipline, developed on hand of mathematical, cybernetic, technical and psychological means, sophisticated control mechanisms for testing groups of people. With a few alterations, these can also be applied in parapsychological experiments.

No serious scientist would nowadays consider troubling himself with starting an experiment, knowing that he could already be attacked before he even started. The public's scepticism is still infinitely great even with genuine experiments and its disbelief hardly conquerable even when faced with irrefutable facts. An experiment associated with even a shadow of a fraudulent manoeuvre would not be taken notice of. We can therefore confidently assume that Professor *Rhine's* experiments took place devoid of intentional deceptions. But that was not enough for him. Careful precautions were taken in order to avoid *unconscious* falsifications. Attempts where clairvoyant abilities were tested were not allowed to be watered down telepathically. If a conductor of theses tests had been there to hold up the cards, the medium could have tapped into his thoughts telepathically. Such an ability has nothing to do with clairvoyance. The medium therefore

remained alone in the room. The cards, whose sequence it had to guess, ergo clairvoyantly read, were mixed by an *automatic device*.

When a lot of tests are carried out, the probability calculation can tell us how great the probability for or against is, whether an abnormally high number of hits indicate pure coincidence. Mathematics calls it a determined value that speaks *against* coincidence, the anti-coincidence-probability. *Rhine* conducted thousands of test series with the same people. The anti-coincidence-probabilities that arose from them were a few millions to one. Test arrangements from other institutes were reported in the meantime, that were supposed to have achieved values of 10 billion to one.

• The tolerant laws of probability mathematics thereby indorsed extrasensory perception. And as the probability calculations based on large numbers tests are always right, the existence of telepathy and clairvoyance can apparently no longer be doubted.

The tests carried out be *Rhine* were the first promising approaches of a new science. With methods that were mathematically unassailable, he verified the existence of supernatural phenomena.

But such evidence was not yet enough for either scientist. After lengthy negotiations with major clinics and numerous conversations with terminally ill patients who were aware of their plight, they conducted the following experiment: Beds were constructed whose four legs represented *very accurate scales*. Doctors and nurses could therefore read the patient's weight to an accuracy of grams and milligrams without disturbing the patient.

• As expected, the patients gradually but conspicuously lost weight during their last days of their life. That was normal. But what was not normal was a very sudden, instant loss of weight at the moment of death. Every time a patient died the hands of the scales clearly indicated a loss. Virtually instantly! The dead body became around eight grams lighter compared to when it was still alive.

Shortly after this astonishing discovery, immune-biologist Professor *James Bedford* and cyberneticist *Walt B. Kensington* reported that they had knowledge about an up to now unknown energy that could only be measured at the moment a person died. Based on the DELPASSE-EFFECT, both researchers surmised:

• The thing that is usually called the soul must consist of a code of a quadrillion of energy-quants. These energy particles, comparable to the bundled energy of a laser beam, leave the body when a person dies. Our soul is a bundle of energy. Energy is however, something physics has faultlessly verified, imperishable!

Even very sceptically minded scientists could no longer ignore such facts. Every scientist that wanted to be taken serious decidedly rejected the existence of an immortal souls about 100 years ago - and this is where atheistic materialism developed from - today's philosophers, physicists, physicians and biologists must therefore admit:

• There exists not one single piece of evidence against the existence of the soul, God and eternity. Based on everything that we know about the here and now, a hereafter is much more likely than the ultimate "when you're dead, you're dead" notion.

This is indeed a turning point that hardly anyone would have thought possible only a short time ago. But these facts have unfortunately been too little talked about during the past years and decades. But this simultaneously produced a second, maybe even more important "turning point": Those that believe in their own mortality no longer have to put up with being called hopeless dullards. And: Theologians no longer need to *twist* the texts of the Holy Scriptures in order to make them harmonise with the sciences. It is no longer necessary to dismiss "miracles" or even abandon the idea of the soul's immortality. Contradictions between religious truths and modern science do not exist. *One is once again allowed to believe freely!* 

#### 1. 5 The experiments of Professor W. Peschka

Institute for Energy Conversion and Electrical Propulsion of the DFVLR, Stuttgart

Russia is leading the world in regards to parapsychological research. It therefore seems a little unfair from a fate's point of view that such an important discovery as the following should have fallen into the hands of a country that has been rather *cautious* with parapsychological research namely West Germany.

But this discovery is even more unusual than its country of origin. It actually doesn't stem from, as everything else has so far, from something that deals with paranormal phenomena, ergo the praxis of psychologists. It showed itself exactly there where an ordered energy belonged and where its discovery could accordingly be expected - namely in the research institutes of physics. This discovery deals with a new energy, one that cannot be equated in any way with presently known physical knowledge.

This discovery had initially nothing to do with parapsychology; it was discovered when one was looking for a new propulsion system for space travel. This took place at a research facility that certainly did not regard the exploration of extrasensory phenomena as their actual assignment: It was the: "Institute for Energy Conversion and Electrical Propulsion" at the German Research and Experiment Facility for Aeronautics and Astronautics in Stuttgart.

It all started with an engineer named *Zinsser* from Idar-Oberstein. *Zinsser* had experimented for ten years before he asserted that he had discovered an up to now unknown energy. Mocking all physical laws, it was able to move objects from a great distance. The research results *Zinsser* was able to present where interesting enough for the institute at Stuttgart, that it went about testing its veracity under the direction of Professor Peschka. Experiments were undertaken over two years with all available technological finesse and the elimination of all interfering factors. The result was conclusive enough for the institute to decide, it had to be mindful of its reputation, to make it public. What had been discovered can be put in simple words: *The engineer from Idar-Oberstein was correct!* 

In order to get to this result, *Professor Peschka* constructed two torsion scales (Extraordinarily precise measuring instruments). The first scales was fitted with a genuine sample, the second received a mock-up for controlling purposes. The sample consisted of a container wherein calibrated electrical cables were immersed. The container was filled with water and then sealed. High frequency energy was then introduced into the sample container. The electrical cables acted as transmitter antenna. The energy burst was of short duration and it was exclusively designed to activate the sample. The control mock-up was not energised.

The torsion scales that accommodated the high frequency activated sample now showed something very peculiar: Every time a fluorescent light was switched on, when lightning was seen in the sky or when another process related to the sending of the high frequency happened, the scales would move. It registered a change as if moved by a ghostly hand - and not just for a few seconds or minutes, but for *one to two hours* each time. The scales with the mock-up on the other hand registered no effect at all. The strange energy that moved the scales for such a long time must have originated from the activated sample. This on its own would have sufficed to give the physicists a headache. But the real sensation was yet to come.

• The torsion scales actually didn't just react to lightning and neon lights. It also moved the moment a person entered the room!

*Peschka* could find only one explanation: The high frequency field people emanate provides the active sample with enough energy to keep the scales' balance beam moving for a period of two hours!

The experiments only succeeded when the irradiated energy contained a few, *very specific frequencies*. Only then could the psychokinetic interplay with the torsion scales be staged; the scales' balance beam remained static with other frequencies. *Peschka* himself was of the opinion that the electro-magnetic waves containing the effective frequencies were capable of triggering a phenomenon within the atoms that one calls *induced emission*.

What was the output of the torsion scales?

As input, it received five minutes of high-frequency propulsion energy. In addition to this also the energy from a human high frequency field that is so minute that it can no longer be measured just a few centimetres away from the body. And what is the scales' exertion? It oscillated back and forth for two hours! Even the first glance seems to indicate that we are dealing here with an extraordinarily favourable relationship between effort and outcome, between utilised energy and achieved effort. *Peschka* naturally wanted to know exactly what was going on and made some calculations. The result was a sensation!

• The measured value of the discovered propulsion system was numerous powers of ten above the measured values of all other previously known propulsion methods!

Electro-magnetic emanation, that is as weak as the effects of this field, cannot only be *emitted* by living cells, but it can also be *intercepted* by them. One has to assume from this that information can be transmitted from cell to cell with the help of the minutest of electro-magnetic waves. Peschka maintains that: "The development of a new science on the borderline between physics, medicine, psychology and biology could come into being later."

At the 4<sup>th</sup> International Congress for Biometeorology, W. H. Fisher and his co-workers at the National Centre for Atmospheric Research in Boulder, Colorado, also reported that water reacted very delicately to electrical fields. Fisher also referred to R. G. Zinsser's basic research and he reported about a strange effect taking place in water under the influence of weak high-frequency fields (Micro-watt to Milliwatt range), it indicated a change in the structure of the water and the retention of the influence as well as a laser-like effect on the transmission of the electro-magnetic waves in the water. Such activated water reacted very sensitively to cosmic influences for quite some time and also to the presence of human beings. Fisher thereby confirmed the effect that the German Research and Experiment Facility for Aeronautics and Astronautics in Stuttgart had also measured during numerous experiments.

The complete report by Professor *Peschka* taken from the *Zeitschrift Raumfahrtforschung*, issue 2/1974, can be found in the appendix of this brochure.

#### 1. 6 Physics is undesired

One could have assumed that parapsychology would look for a physical explanation for its successfully verified phenomena to begin with. Amongst the founders of the British *Society for Psychic Research* were, as we have been informed, also respected physicists. They had honestly endeavoured to find an explanation for these incomprehensible apparitions from within their own field of expertise well before *Professor Rhine* appeared on the scene. The physical view of the world at that time, one that was shaped by the ironclad laws of *Isaak Newton*, did not allow such an explanation. They came to the conclusion that paranormal phenomena were not subject to Newton's laws. But as these laws were not prepared to allow for exceptions, it could only mean that another WORLD ORDER must exist next to the physical world order.

• Hidden like in a Russian doll, a second WORLD must be hidden in our world, one that obeyed completely unknown laws. Both of these worlds could apparently exist side by side without colliding with one another.

The physicists of the *Society for Psychic Research* naturally found themselves in significant logical distress with this assumption. The fact that they admitted the existence of the unexplainable, speaks volumes about their *unprejudiced* spirit of inquiry.

But 30 years later, when *Professor Rhine* undertook the experiments with playing cards, the world had considerably changed:

- *Einstein* had declared that there were also other dimensions besides the ones that we were able to recognise here on our Earth. His *Theory of Relativity* had changed physical matter, the solid ground under our feet, into less than concrete, fleeting energy. Even time itself had become an unsteady factor, one that one could no longer securely rely upon as before.
- Quantum theory eventually gave the old, stipulated view of the world of physics an impetus that nothing and nobody was able to glue together again. Men like *Planck*, *Heisenberg*, *Bohr*, *Pauli*, *Born*, *de Broglie*, *Dirac*, *Schrödinger* and many more, whose names have entered the history of modern physics, were shaking the throne of the old sciences that had been so hostile towards everything supernatural.

Parapsychology's chance had arrived.

It would have been easy for it to make the new and unintelligible, well downright illegible appearing physics of an *Einstein, Planck* and *Heisenberg* its own basis. Psychologists only had to declare: We also have our place somewhere here in this unexplored REALM; this is where we want to explore. Such a decision would certainly not have been out of place. Newton's macrophysical laws had given parapsychology an explicit rebuff. But why should the causes for paranormal phenomena not be found in legalities that take place *below* the order of magnitude of atoms?

Parapsychology has up to now paradoxically avoided the golden bridge that was built for it.

Instead of becoming a branch of science within physics, it rather turned into the *domain of psychologists*. This is indeed understandable, because the exploration of the human psyche gained decisive and rapid progresses during the last decades; one hopes that one will soon be able to fathom paranormal events with the help of these progresses.

But one has to ask oneself these days whether this was indeed to only and the correct way? - Because whenever parapsychology managed to gain the attention of the public through entertaining ghost stories, it was when *measurable*, *ponderable* and *repeatable* test arrangements within *physics* were in play. Physics is not in high demand when it comes to parapsychologists.

## 1. 7 The experiments of psychoanalyst Dr. Jule Eisenbud, University of Denver

The American psychiatrist, psychoanalyst and parapsychologist *Dr. Jule Eisenbud* is regarded amongst parapsychologists as one of the pioneers of thought and psycho photography. His book "thought photography" published in 1975, describes the sensational experiments with *Ted Serios*, a hotel employee from Illinois. *Serios* had succeeded in psychokinetically transferring images from his own imagination directly unto sealed polaroid-film under controlled conditions. Similar phenomena had been observed before and also after, but no other case received so much attention and acceptance.

Eisenbud executed his experiments with *Ted Serios* at the University of Denver since 1964. *Serios* possessed the rather strange ability to expose the film inside a Polaroid camera by intently starring into its lens. These images did not depict what was usually seen through the lens - for instance the face of *Serios* or the room he was in. It showed what *Serios* has *thought about*; they were *thought photos*.

Scientific studies revealed nothing else but that every known radiation could be excluded from being the transferrers of the thought photos. *Eisenbud* did not expect another result. According to *Eisenbud*, whatever they participating form of energy, he thought it useless to expect an answer from physics. It states in his book:

"It is possible - as indicated earlier - that physics' conceptual framework, subordinate to ESP phenomena<sup>1</sup> as far as I am concerned, will never be able to accommodate these types of ideas. Insights like the ones achieved in mystical consciousness that doesn't see things from an abstract point of view, might be able to provide a clear understanding of ESP and its nature in its totality."

In contrast to *Eisenbud*, a lot of other scientists hold the opinion that looking at things from an abstract point of view has done any harm. - But methodical scientific inquiries have often been hindered not only by animosities. Financial reasons often play a significant role. Compared with physics, particularly high energy physics, parapsychology works at time with test arrangements that would probably have been on a technical status of Copernicus or Galileo.

• If the same amount of money had been invested in Parapsychology as in other spheres of public interest - we would probably have known whether life after death exists or mot a long time ago. Given the consequences such knowledge would have for mankind, one would have to ask whether it would have been more beneficial to invest billions here and not somewhere else.

<sup>&</sup>lt;sup>1</sup> All paranormal phenomena are summarised under the letters ESP.

All in all, it seems that parapsychology had manoeuvred itself into a highly unpleasant situation. Taking the reputable attitude of serious science into consideration, it should not flirt with the subject of immortality. Its messages from the hereafter, like for instance the already mentioned CROSS CORRESPONDENCE, are therefore *highly undesirable*. Everything one deals with must be explainable within the framework of the world of the *here and now*. They are however physically inexplicable at the same time. - The logical dilemma is indeed considerable!

If ESP<sup>1</sup> phenomena do *not* fit within the framework of the natural sciences the question arises, which laws does it abide by *instead*? These must be laws that exist *next to* the laws of nature we are familiar with, laws that have remained completely hidden *in spite* of all the progresses within the sciences.

One would have to assume that a second, *non-physical* ORDER for the functioning of this world, would have to exist next to the physical.

## 1. 8 The theory of thought molecules

During the fifties, the American scientists *James McConnel* and *Robert Thomson* surprised the world with a sensational experiment. They had experimented with flatworms, limbless creatures with flat bodies that live in effluence. Flatworms (turbellaria) belong to the class of plathelminths. They do not possess blood vessels, but they already have a simple nervous system.

*McConnel* and *Thompson* wanted to know whether animals of such a primitive construction were able to learn something. They illumined their flatworms with a bright lamp, something that usually made them stretch out. Immediately following the light signal, these animals received a mild electrical shock and this produce are rather severe contraction of their bodies. After more than one hundred of these experiences, every flatworm learned to equate the light with pain. They already contracted the moment the beam of light hit them, *before* the electric shock was triggered.

• The scientists then cut all the worms in half. Each of these halves regenerated into a completely new worm. One could now expect that the worm that regenerated from the head part would remember the lesson. But to their surprise they found that the head section as well as the tail section had not forgotten what the complete worm had learned.

The experiments by *McConnel* and *Thompson* initially remained controversial, because they could not be repeated in all their details. What remained was the insight that the brain must not necessarily be the *only* seat of memory.

They came up with more experiments with flatworms and they eventually made a very strange discovery:

• If the trained flatworms were cut into little pieces and fed to their conspecifics, they in turn learned the light-shock-treatment in a considerably shorter time that other, untrained worms. The knowledge in their devoured predecessors had in a mysterious fashion entered their own possession.

The flatworm experiments conducted by *McConnel* showed that the animals that regenerated from both halves had retained their original memory. This led to the conclusion that memory must not necessarily be tied to the brain. It can also find a home in other cells of the body.

This result was sensational!

The New York Times headlines: "Devour your own professor!"

The theory of the grandmother cell was popular right into the seventies. The memory of one's grandmother for instance, was supposed to be stored in one singular cell according to this theory, A simple deliberation eventually however refuted this idea: As braincells constantly die, a constant obliteration of individual memories would take place. The memory of the grandmother would at some stage also be simply switched off - something that obviously does not conform with reality.

The theory of memory molecules could not maintain itself.

McConnel's sensational experiment entered the annals of sciences as a mistake.

#### 1. 9 The Backster-Effect

The American *Cleve Backster*, one of the leading American lie detector specialists at that time, publicly asserted in 1968, that plants also possessed a consciousness. That they were able to telepathically receive messages sent from human beings or other animal organisms. - Plants certainly do not possess a brain. Do we already have proof for this assumption in our hands? Can spirit exist without a brain?

• Backster randomly got the idea to attach the electrodes of a lie detector to a philodendron. He then poured water into the flowerpot. The recorder of the lie detector showed a reaction that Backster was familiar with from his human test series and was therefore able to identify: Joyful excitement.

This gave *Backster* the idea to try the reveres way.

He endeavoured to scare the plant. He initially did not succeed. The philodendron did not seem to get excited when *Backster* dunked its leaves in coffee, not even when he tore individual pieces from it. *Backster* then got the idea of scorching the plant.

• Even though the plant had never come in touch with steam or fire, it seemed to accurately recognise the deadly danger. The lie detector signalled panic stricken dismay when Backster came up with the idea to hold his cigarette lighter near the rhododendron. Mind you - this was when Backster came up with the idea! Not that he actually carried out his idea!

The plants managed in some unimaginable way to guess what took place in *Backster's* brain. They reacted to his thoughts and not his deeds.

For another experiment, *Backster* constructed an *automatic* apparatus that could tip living crabs into boiling water, even when nobody was in the room. The philodendron registered the second of death of the crabs with *vehement emotions*. It seems obvious that not only people are able to send thought signals that a plant can receive.

One eventually decided to "murder" plants.

One of *Backster's* co-worker - none of the other participants knew who had been selected - was chosen to destroy a second philodendron in front of the other philodendron. All the participants then entered the room where the "murder" had taken place and where the surviving philodendron stood.

• The moment the plant murderer entered the lie detector moved fiercely. - The survivor accused the murderer. The so-called Backster-Effect was born.

Various institutes and scientists, amongst them the American physicist *Marcel J. Vogel*, have verified the *Backster* experiments and come up with their own experiment arrangements.

## 1. 10 When is a human being dead?

In July 1924, the German *Neuropsychologist Hans Berger* succeeded with an experiment that turned out to be ground-breaking for the exploration of the brain. Berger had attached two electrodes to the scalp of a mentally ill patient and connected them to an instrument that can register weak electrical impulses. Neither the scull nor the scalp was damaged in any way - he did not establish a direct connection to the brain. But in spite of this, the pointer of the instrument began to move the moment the electrodes touched the head. Hans Berger had discovered *brainwayes*.

In 1929, Berger published the first image created by the identity of a person: An *Electroencephalogram* (ECG).

When one was still dealing with thought molecules and arousal impulses, one constantly talked about a thought molecule and *an* impulse that was followed by other, individual impulses. This was of course just a simplified way of looking at things. The reality is that the brain could perform precious little if it was to always send one impulse after another (in series). One knows these days that the whole brain must perform the same function a million times over *simultaneously* (parallel) in an infinite number of cells and that it is therefore pulsed through by arousal patterns on a continuous basis.

Only a few years ago, brainwaves and electroencephalograms were concepts that belonged in neurological clinics and the public in general showed very little interest in. This only changed when *Dr. Christian Bernard* transplanted the first human heart in December 1967. This was the first time public opinion had to deal with the question, when are human beings actually dead?

The heart of a corpse is useless for transplantation because its circulation has come to a standstill. But on the other hand, one cannot simply rip the donor's heart from the living body! Apparatuses that provide artificial respiration for the donor or - in an extreme case - a heart-lung machine, help deal with this dilemma. These apparatuses can bridge the abyss between "no longer alive" and not yet dead". The blood of the spender whose life is beyond saving, is supplied with oxygen with the help of a machine. The heart recipient receives a vital, living organ.

#### The question arises:

- Is a person, whose tissue does not break down because it is attached to a machine, already dead or still alive?
- When is a person "dead enough" that one can turn the machine off? Or is one not allowed to switch it off at all, because it would constitute murdering a helpless organism?

The necessity to find a new formula for what death actually means became increasingly clearer. An exact point in time when I person was dead had to be determined, so that one could harvest the organs. Brainwaves seemed to be most suitable to solve this problem. Only when the EEG no longer records any activity for some time, ergo shows a flatline, can one assume with certainty that the brainwaves have definitely stopped. But the EEG is only an indicator in regards to the activity of the cerebral cortices, but not for the functions of the brainstem. Flatlines are therefore only an uncertain sign that the brain is dead. The EEG should in practice be supplemented with angiograms as well as clinical and laboratory examinations when it comes to faultlessly determine the onset of the brain's death.

But can one actually do this?

Professor *Paul Glees*, who died in 1999, said that brainwaves had a solid relationship with the mental processing of sensory perceptions. The slower brainwaves seemed to play a role when it comes to processing a memory content into a thought. Simply put one can say that our consciousness can only be accessed through brainwaves. This also seemed to coincide with the medical sphere of experience: When our brainwaves expire, we no longer have consciousness.

With the determination we have gained an insight that makes us wonder whether it is a final capstone or a threshold to a new insight. If our consciousness can only be retrieved with the help of brainwaves, it must simultaneously mean that our consciousness dies when the brainwaves expire. The fact that brainwaves expire cannot be doubted. The EEG verifies this via flatlines. Medicine regards this as the *moment of death*.

Do we stand before a capstone or on a threshold?

We stand *before a capstone* if it is true that only brainwaves can retrieve consciousness and that consciousness dies the moment brainwaves expire.

But we would stand *on a threshold* if we could verify that consciousness continues to exist beyond the expiration of brainwaves. If we could show that it is *also* possible to access memory content *without* the presence of brainwaves.

There would only be one - indeed sensational - explanation:

• The carrier of memory contents would have to be another, up to now unknown ENERGY. An ENERGY that outlasts the death of the brain.

This ENERGY - we could at least conclude this within our working hypothesis - must be the CARRIER of the consciousness that survives death. Physicist and cybernetic *Jean Jacques Delpasse* and neurologist *William Jongh van Amsynck* tried to provide evidence of the existence

of an up to now unknown ENERGY in a joint research project. Within the framework of this endeavour, they discovered the DELPASSE-EFFECT.

#### 2. 0 The DELPASSE-EFFECT

## 2. 1 Neurologist Dr. Grey Walter discovers the standby wave

We can assume that Professor *Delpasse*' peers would not have shown the necessary understanding for his idiosyncratic ideas to begin with. It therefore does not come as a surprise that *Delpasse* kept his contemplations to himself to begin with, even though his contemplations and the construction of cybernetic machines during his everyday field of work did not go beyond what's admissible. Cybernetics, who received its first impetus through the American mathematician *Norbert Wiener*, draws comparisons between information-storage in the nervous systems of animals and the information-storage in computers.

About 52 years ago, the English neurologist *Dr. Grey Walter* constructed his "machina speculatrix", a scouting robot. This small machine, displaying thought behaviour by reacting to light, drew the attention of experts within the ranks of cyberneticists. It gave *Delpasse* the impetus to take an interest in other works of the idiosyncratic neurologist from Bristol. It came to pass that *Delpasse* was stimulated through another experiments by *Dr. Grey Walter* to come up with an idea that was so unusual, that *Delpasse* decided to keep it to himself for the time being.

*Dr. Grey Walter* sat a test person in front of an accordingly modified television set and placed a pressure switch into her hand that could be used to switch the set on and off. The test person was told that switching it on would display a very interesting image on the screen.

The brainwave curves were collected via electrodes and recorded with an EEC device. It was determined that shortly *bevor* the test person activated the switch, an electrical impulse developed in the brain. *Dr. Grey Walter* called this electrical impulse "*standby wave*", because the test person signalised the decision to operate the switch with it.

The impulses received by the brain electrodes attached to the test person were now amplified with a suitable circuit and connected to the television set. The originally weak arousal impulse was amplified to a current surge that was powerful enough to switch the television set on.

• The test person no longer had to operate the switch in her hand. It sufficed for her to think about wanting to press the switch, and the image appeared on the monitor.

This however only functioned for as long as the appeal of the new remained. Once the interest of the test person waned, she was no longer able to produce a sufficiently strong standby wave. Convulsive efforts of will did not help either, only the natural excitement caused by curiosity was able to trigger a standby wave.

• The results stands in striking agreement with the fact that human mediums are also only able to produce their feats in a state of relaxed attention. Even the most gifted sensitive is unable to display paranormal abilities with an effort of will.

This could be the reason why paranormal events are *almost always* impossible to repeat under laboratory conditions. Spontaneity seems to be the premise - the way it is the premise for the production of the standby wave.

#### 2. 2 Biofeedback - control of the subconscious

Just like neurologist *Grey Walter*, his professional colleague *Professor William Jongh van Amsynck* also had a scientific interest in the subject of cybernetics. When one began to introduce the techniques of feedback into medicine, Professor *van Amsynck* was one of the first to test the new training methods on hypertonia patients.

Essential control mechanisms in *animal* organisms, so for instance the control of biological processes in cells, function on the basis of the feedback principle. Nature invented biofeedback millions of years before the arrival of human beings.

With its research into biofeedback, medicine had to *very considerably revise* its views of the nervous system. Anatomical differences between the *impressionable* and *non-impressionable* functional circles of our body seemed to have a well-founded meaning. There were reports about the strange abilities of far eastern fakirs or yogis who were supposed to be able to reduce their heartbeat on command, who could lower their blood pressure and body temperature at will and eventually fall into a deathlike state. They were supposed to able to remain in this state in a voluntary grave for days with minimum oxygen supply. But for as long as such experiments were only told by travellers from exotic countries, it was easy to dismiss them as "charlatanism". But these strange miracle men from the Far East were then tested in scientific experiments. The results left no room for doubts:

• These fakirs and yogis were indeed able to regulate body functions that were considered to be absolutely non-impressionable, at will.

No Zen master and no yogi has so far revealed the panacea for this. The information is rather sobering: *Meditation*, ascetic *going within* until the first decisive success follows. The interest in this remained limited. But this changed immediately once the technology of biofeedback had been discovered.

• Biofeedback connotes to learning of the ability of having an influence within a very short period of time with mechanical help.

The system is simple: A test subject is for instance asked to slow down his pulse rate. He is attached to an apparatus that doesn't have any influence, that *only registers*. If the test subject succeeds - it mattered not how or by coincidence - to slow down his pulse rate for a moment, he is rewarded through a flash of a lamp or a buzzing sound from the feedback apparatus. The reward signal remains constant for as long as the test subject is able to maintain his involuntary reflexes under control. But the reward signal stops once the heart rate increases again. Through the acknowledgment of his success or failure, the test subject learns in relatively short time to actually control his pulse rate at will.

The remarkable thing about this is that he does not have to consciously invent a specific measure - like the contraction of muscles. He rather learns to *subconsciously* bring about a state of tenseness or relaxation of the whole organism and this will then trigger the success signal. After a little training, the disciple is able to "fly solo". He can now achieve the desired state *without* the help of a biofeedback apparatus.

Something a Far Eastern yogi had to learn over years through concentration exercises, the test subject was able to appropriate within weeks.

The sense of undertaking such exercises naturally exhausts itself with the sense of achievement, namely to control a vaudeville like feat. A lot of illnesses can be traced back to a misdemeanour of an *involuntary* nervous system. If one could make this system accessible to *voluntary* influences, it would be akin to the discovery of a medicine that no only attacks the symptoms, but also the *root* of the problem.

## 2. 3 Setback and new starting points

Biofeedback as a medical therapy is utilised these days to overcome insomnia, alleviate migraines, heal nervous tics, relax muscle spasms, fight heart disease and lower pathologically high blood pressure, ergo hypertonia. A heightened blood pressure damages blood vessels and later in life is often responsible for strokes. It can therefore only be imperfectively influenced with medication, because quite often, not the slightest organic cause for this affliction can be found. - It is therefore quite understandable that a lot of doctors, Professor *van Amsynck* amongst them, eagerly employ these new feedback techniques, hoping to finally find an effective healing method therein. To begin with, *Van Amsynck* constructed gadgets in the form of arm cuffs for his patients that measured their blood pressure. Every change of pressure triggered an acoustic signal. A drop in pressure triggered a melodious bell signal, whilst a raise in pressure produced a shrill tone. Some of his patients were soon able to keep their blood pressure under control for lengthy periods of time and this because they wanted to hear the bell signal and not the shrill tone. The next things *van Amsynck* attempted was to test an *indirect* biofeedback training next to the *direct* training.

- *Direct biofeedback-training* meant controlling the blood pressure through measuring it with the help of an arm cuff device.
- *Indirect biofeedback-training* can mean different things. For instance, that the patients learns to influence his heart frequency or learns to relax certain muscles thereby finding out whether this can have a simultaneous effect on the blood pressure.

Because biofeedback training can take place in various ways, there are accordingly also various apparatuses for this. Some of them control the musculature, others the body temperature whilst others in turn control brainwaves, respectively brainwaves according to the principle of the already mentioned EEC device. Electrodes are attached to various locations on the skin of the scull and they stream the brainwaves to the EEC device. It records a number of wavy lines, one for each electrode.

• One of the most sensational discoveries of biofeedback research is undoubtedly the fact that human beings are able to influence the frequency of their own brainwaves.

The brainwaves frequency is certainly not always the same. It subdivides itself into various types of rhythms and they can be clearly separated from each other on hand of the printout of the EEC device. These types of rhythms are given the names of letters of the Greek alphabet: *Alpha, Beta, Delta* and *Theta*.

- Human beings are in a state of *Alpha-Rhythm* when they are relaxed and contently doze off.
- When human beings open their eyes, the frequency of their brainwaves immediately changes; the Alpha-Rhythm is superseded by faster *Beta-Waves*.

- The transition from dozing to light sleep corresponds to the transition from Alpha-Rhythm to slower *Theta-Rhythm*.
- In the stage of deep sleep, the brainwaves finally reach the rhythm of *Delta-Waves* that represent the largest, ergo the slowest oscillations.

EEC measurements of the brainwaves of *meditating* people have indicated that they are capable of producing Alpha-Waves *whilst their eyes are open*. Zen masters are supposed to be able to emanate Theta-Waves whilst awake. This allows the conclusion that there could be a direct connection between mental immersion and the brainwave-rhythm. Such a relationship has not yet been proven conclusively. There are however scientists that assume that the gift of mystical seeing, something the apostle *John* and other biblical seers possessed, could be connected with to production of Delta-Waves whilst in a waking state. Paranormal mediums also develop their abilities in a kind of trance, in a deep absent-mindedness whilst their consciousness is wide-awake. The idea that psychic abilities stand in direct coherence with the frequency changes of brainwaves suggests itself. Psychic gifts, one racks one's brains about so much, might be the ability to change Brainwaves *at will*. Arbitrarily changing brainwaves is also the aim of biofeedback training.

• Experiments actually showed that the right kind of training of brainwaves can enhance or even produce the gift of clairvoyance.

Professor *van Amsynck* also tried to achieve a state of half-awake trance with his patients, but less with the intention of testing their psychic capabilities. He hoped that slowing down the brainwave frequency would also have a dampening effect on the blood pressure. Initial successes were encouraging. But this was followed by the setback one was already familiar with from the Grey-Walter experiments and also from dealing with paranormal mediums.

• Once the allure of the new had disappeared and the patient had gotten used to the exercises, the success rate gradually waned.

The *liberal* acceptance of anything new proved to be an essential prerequisite for success her also. The moment patients replaced their relaxed attention with *cramped* wilfulness, a kind of mysterious blockade seemed to develop within the brain.

This disappointing experience, something *van Amsynck* had to accept, something numerous parapsychological researchers had also experienced in the past with their mediums, turned out to be a blessing in disguise: It actually caused *van Amsynck* to contemplate how one could deal with this brainwave blockade. At the end of his research, *van Amsynck* had come to the conclusion that solving all paranormal mysteries starts with looking at brainwaves.

This was a small sensation! - Brainwaves, electro-magnetic waves, are akin to radio waves, ultraviolet radiation, visible light or even x-rays. One already suspected many years ago that electro-magnetic waves were the transmitters of telepathy - simply because this explanation seemed so obvious. And one also miserably failed with this so obvious explanation many years ago.

Radio waves, electro-magnetic signals of various wavelengths, can transmit music, voices and noises over thousands of kilometres. No human sensory organ is capable of perceiving *how* this journey takes place. But it *does indeed take place*, because with the help of a suitable receiving station, sounds carried by radio waves can be made audible again. Why should a telepathic

message not also travel in the same way? Why shouldn't it be exclusively received by human beings, that possess the corresponding receiving device, a "mental radio"?

• Physical experiments doubtlessly verify that electro-magnetic waves, ergo radio waves also, can be excluded as an explanation for telepathy.

These experiments were first carried out in Russia where parapsychological research is conducted with scientific seriousness. It might seem strange that particularly in the former Soviet Union, a country with an extremely materialistic view of the world, serious attempts are made in a field of knowledge that the western world still dismisses as "occult nonsense" most times. This is indeed astonishing, but one cannot progress without a logical artifice there either. One does indeed solidly presuppose in Russia that paranormal happenings are caused by a specific kind of energy. *Bioenergy*, something one knows not much more than its name, is exclusively of an *earthly nature* according to Russian definitions. Merely a technical problem, one more amongst technical problems that still wait for a resolution. The existence of such an energy can therefore be accepted without getting into conflict with their materialistic philosophy. This is where this oddity springs from, namely that of all things, the former eastern-block nations have become leaders in the field of parapsychology.

One also believes in a *pure earthly* nature of extrasensory phenomena in the West. But as these are supposedly *explicable in physical terms*, one has fallen behind the Russians. Whilst the Russians can look for a physical solution of the problem with all impartiality, one has to produce, like in an alchemist's kitchen, the Philosopher's Stone in the West: A non-physical secondary order for the functioning of the world.

The Russian centre for research is the *Institute for Biological Information* at the *University of Moscow*. This is where telepathic experiments under strict scientific control were carried out in the past and this primarily with the highly gifted sensitives *Juri Kamenskij* and *Karl Nikolajew*.

These experiments produced fascinating results.

*Kamenskij*, functioning as a sender, was accommodated in a locked room and he received the objects he was supposed to telepathically signal to his partner, at the very last moment. At the other end of Russian, in Novosibirsk, *Nikolajew* described the objects with such clarity, that the findings could no longer be doubted. In the age of space travel, the distance between the telepathic sender and receiver could be drastically extended during these experiments. Conclusion: *Telepathy is possible*. - But how does it work?

These experiments, they unequivocally verify the existence of telepathy, also unequivocally excluded electro-magnetic waves as an explanation. In order to bridge enormous distances, these signals would have to come from extraordinarily powerful energy sources. The sending capacity of the human brain, with its billions of neurons, is however rather small. Its energy consumption is a mere 25 Watts - the capacity of a dim lightbulb.

Further experiments also verified that electro-magnetic waves could not be the bearers of telepathic messages. The receiver was placed into a Faraday cage, a cage constructed from simple wire netting. No electro-magnetic waves could penetrate into such a cage - even a million volt lightning strike could not harm anyone inside. Lightning is an electro-magnetic wave. If it is incapable of penetrating the Faraday cage, telepathy should also not be able to do so - assuming that it is also an electro-magnetic wave.

• Telepathic experiments showed that telepathy also function seamlessly in a Faraday cage.

The wire cage did certainly not constitute a hindrance to their CARRIER SUBSTANCE, whatever it is made of. The idea that telepathic messages travel as electro-magnetic waves can finally be eliminated. - This insight did however not bring clarity, on the contrary, it brought additional confusion. Research has actually verified that there must be some coherence with electromagnetism somewhere *after all*.

• As we speak, nobody knows how a telepathic message reaches the brain. One can however accurately ascertain when it arrives there. Its arrival actually changes the brainwaves - the very electro-magnetic waves that the brain constantly emits.

## 2. 4 The subconscious stand-by wave

*Dr. Ipolit Kogan*, the leader of the Popow-Group for Psychological Research in Moscow, had come up with the idea of measuring the brainwaves of *Nikolajew* and *Kamenskij* during a telepathic experiment. In this experiment, it took place across a distance of 650 km, one never told *Nikolajew* when *Kamenskij* would begin, nor when the experiment would be concluded.

The result was a surprise:

*Nikolajews's* brainwaves showed the expected image: An alpha rhythm that corresponded with the relaxed state of rest of a non-sleeping person. At the exact moment *Kamenskij* began sending, *Nokolajew's* brainwave curves changed suddenly - and this always a few seconds *before Nikolajew* became aware that he was about to receive a telepathic message.

The similarity with the Grey-Walter experiments is obvious. There, the stand-by wave *before* the monitor was switched on and here, the movement of the brainwave curve *before* the telepathic message is registered by the consciousness. - Could it be that we are dealing in both cases with the same apparition, namely with a stand-by wave?

A stand-by wave develops with the Grey-Walter experiment, because the test person *is ready* to do something, namely to switch on the monitor. Things are different with telepathy experiments. The receiver does not want to do anything. He is at most prepared to have something done with him - namely having a message transferred into his brain. He can therefore not have triggered the stand-by wave. The convincing fact that the wave develops *before* he becomes aware of the reception of the telepathic message speaks for this.

So where does the stand-by wave come from?

Could it be that the command to its induction within the brain is given by the sender? An attractive and enlightening thought - one could almost assume that the telepathic message simply travels from brain to brain on a stand-by wave. But this is unfortunately not possible, because the stand-by wave is also an *electro-magnetic* wave.

But something else could indeed be possible: The stand-by wave in the brain of the sender could serve the purpose of encrypting the telepathic massage in a still unknown way an order to send it, transport-ready packaged, on its way. After arriving at the receiver's brain, the code is decoded. It transforms back into a stand-by wave that the brain is able to read. We would then have the process that takes place in one brain in the Grey-Walter experiment distributed across two brains: A stand-by wave in the brain signals the command to switch the monitor on in the Grey-Walter experiment. The memory that contains the switch-on command is recorded at the same time. The switch-on command is thereby sent to the long term memory where it is stored. When required, a backward running impulse can retrieve the contents of the memory. This causes a new stand-by wave and it gives the signal to switch the monitor on. It could be a similar situation in telepathy experiments: The stand-by wave in the brain of the sender serves the purpose of encrypting the message in order to send it on its way to the receiver's brain as an encoded packet. The stand-by wave in the brain of the receiver decodes the encoded packet and allows the brain to read the received message.

In this context it also becomes clear why the stand-by wave has to develop in the brain of the receiver *before* he becomes conscious of the telepathic message. It is actually the instrument that is there to decode the message initially *before* the brain can read it and the receiver can become conscious of it. This stand-by wave is called *subconscious stand-by wave*.

Such a concept connotes something completely new: The stand-by wave has up to now been linked with the mental processing of sensory perceptions for us (Professor Glees). It is supposed to be responsible for allowing a sensory stimulus to enter our consciousness. But suddenly a *subconscious* stand-by wave is also supposed to exist! It there a contradiction here? - Amazingly not

• Brainwave measurement have shown that a brain is certainly able to perceive something on a subconscious level.

One could now assume that a perception that takes place below the threshold of consciousness, is simply a sensory stimulus that does not effect any activity within the brain. But this is not the case.

• One has been able to verify that people are able to construct conscious associations on hand of subconscious perceptions. But as the perception remained subconscious, they have no rational explanation for the association.

An example of this is an experiment *Professor Hans Bender*, University of Freiburg conducted with the Dutch sensitive *Croiset*. He was supposed to tell *Bender* something about a lady whose handkerchief he held in his hand. Croiset could only think of raisins - an association he could not find an explanation for. It turned out that this lady was born in Smyrna. But for Croiset, who had worked in a grocery store as a young man, the concept of Smyrna equated with concept of raisins. One could therefore assume here that the paranormal message that Croiset received was Smyrna. The association that produced this concept and that entered his consciousness was raisins. But as the message Smyrna obviously reached him via a stand-by wave, the association didn't make any sense to him.

• One must therefore imagine that there is also a form of thought activity that is tied to the standby waves and still doesn't enter our consciousness in spite of it.

This subconscious stand-by wave is a model image. This model image is supposed to convey to us how the complicated processes in the brain, those that become visible as paranormal

phenomena, could be obtained. But this hasn't told us anything about the central question: How does the coded message travel from brain to brain? One will be able to answer this question with the help of the DELPASSE-EFFECT. But for the time being we must deal with other observations that are suitable to support the model image of the subconscious stand-by wave. There is the conclusion to begin with that not only telepathic phenomena are tied to stand-by waves. Other forms of extrasensory perceptions, for instance *clairvoyance*, also effect a change of frequency in brainwaves.

The following experiment was carried out in Russia:

• Newborn rabbits were taken aboard a submarine that went diving. The brainwaves of the rabbit mother, who remained at the laboratory, were measured whilst her children were murdered, one after another. The rabbit mother managed to do something that no radio signal manages to do the moment a submarine is under water: She managed to stay in contact with her young ones. A deflection in her brainwave graph showed the exact moment when one of her broods was killed.

Telepathy? - Clairvoyance?

Nobody is able to say what happened here?

But the change in the brainwaves shows that something is happening.

## 2. 5 Forcefields - statisticians or principal actor?

Electro-magnetic waves *do not only* develop in the brain. All the nerves of the body also create and transmit electrical impulses. This creates a constant and alternate build-up and dismantling of magnetic forcefields.

Experiment were undertaken at the *University of Leningrad* that measured the electrical forcefields of the organs of animals. Instruments were developed there that are so sensitive that they are able to register the forcefield of a singular nerve.

Canadian researchers developed a series of instruments that react to the forcefields of the human body. They ascertained that an electro-magnetic field caused through fear looks entirely different from a field that conforms to cheerful peacefulness. Animals seemed to notice such fields particularly clearly. Every animal trainer knows that he is exposed to more danger when he approaches a predator with great fearfulness. One often expressed the opinion that the delicate sense of smell of these animals allowed them to perceive the cold sweat of people. But this does not seem to be a decisive factor. - The American David Thomson build a sender that is capable of producing fear waves. They are akin to the electro-magnetic forcefield people create around themselves when they feel extreme fear. Thomson assert that people react to this sender and that they instinctively retreat from a place where they sense these fear waves. The gift of a delicate sense of smell would hardly suffice as an explanation here.

Forcefields also seemed to play a special role in psychokinesis. Forcefields extending to a distance of four meters were measured around the Russian psychokinesis medium *Ninel Kulagina*. The

strength of the forcefields was one tenth of the strength of the Earth's forcefield! Mrs. *Kulagina* was able to spatially direct the forcefield she created at an object and move it without physically touching it. Films exist that were taken under controlled test conditions. They show Mrs. *Kulagina* psychokinetically separating the protein from the yolk, allows objects to hover in the air between her hands without touching them and move a compass needle through an effort of will. Whilst performing physical miracles that cannot be explained with any law of nature, her pulse climbed to 140 beats per minute, her heartbeat becomes arrhythmic and her blood sugar levels increased. Weight losses of up to one kilogram within 30 minutes were recorded. It happened at times that Mrs. *Kulagina* was temporarily blind after an experiment.

• Scientists have ascertained that clinically dead people still produce forcefields that can be measured from a few meters away. The interesting thing about this is that these forcefields rapidly dimmish the moment the phase of clinical death has ended.

When conclusions are later made based on the results of the DELPASSE-EXPERIMENTS, one will find a very clear explanation for this.

• Forcefields apparently appear very succinctly where paranormal phenomena are observed.

The question is: Are the measured forcefields just a concomitant phenomenon or can they influence the paranormal event? Do they play a role in its appearance? Various observations seemed to *back* this assumption.

But one has ascertained on the other hand, that the Earth's magnetic field has a negative effect on extrasensory perceptions most of the time. Thunderstorms also interfere. This is why the Russians conducted these experiments according to weather conditions.

Electro-magnetic forcefields seemed to be of special importance in psychokinesis. The observation that psychokinetic mediums are quite often able to trigger malfunctions in electrical systems speaks for this. It is reported in text books that lighting fixtures exploded, telephones rang without reason and that variations in the energy supply took place that electrical professionals could not explain. *Professor Hans Bender*, University of Freiburg ascertained at that time that a medium was able to interfere with the electronic system of a bowling alley.

• All of these randomly selected examples from a far greater number indicate that electromagnetic waves, respectively forcefields, are able to have an influence on paranormal events. Just how this influence occurs remains unresolved. What is even more fascinating is the unequivocally established fact that electro-magnetic waves and forcefields cannot be the cause or bearer of paranormal phenomena.

These coherences might appear mysterious, but they are not of a supernatural nature. They are by far not the only thing natural that is incomprehensible. There are a great many phenomena within the well-defined field of physics whose effects we can clearly recognise, but cannot explain in spite of this.

Up to now inexplicable effects of forcefields also showed themselves during experiments at the *Max-Planck-Institute for Behavioural Psychology*. One tested the biological clock of people by isolating test persons from the outside world over a number of weeks without any time orientation. It soon revealed itself that the rhythm of the vegetative body functions began to separate from the rhythm of the sleeping and waking periods.

• The organism's clock ticked according to a different rhythm than the clock of the consciousness that had to deal day and night without external orientation aids. But under the influence of a forcefield, both functional processes once again reached a common denominator.

The Russians no longer exclusively deal with magnetic fields in order to improve the paranormal performances of their mediums. One also tested the effects of ionised fields and other test arrangements at the *University of Leningrad*. It turned out that certain radiation sources can also have an effect on paranormal performances. The Russians unfortunately keep the detail to themselves. It would be of the greatest interest to compare the Russian test results with those of *Professor van Amsynck*, because he had asked the question of how the fatigue blockade of brainwaves can be penetrated. He made an observation in the process that seems to concur with the research results of the Russians. *Van Amsynck* also experimented with radiation sources. He also ascertained that the biofeedback accomplishment of his patients could be influenced.

• The blockade in the brain dissolved under the influence of a number of radiation sources; van Amsynck's patients were able to produce stand-by waves whenever they wanted and this independent of whether this activity still captured their interest or not.

But not all radiation sources proved to be successful. Some test arrangements produced the exact opposite by not allowing any influence in the brainwaves whatsoever. The biofeedback with the patients thus treated, had to be suspended.

Just how the effect of a radiation source on the stand-by wave can be comprehended from a physical point of view remains unresolved. It is however not unlikely that we are dealing with a quantum-mechanical process inside atoms here that is comparable to physical phenomena of "induced emissions". Experiments carried out at a research facility for aeronautics and space technology, gave reason for the assumption that psychokinesis could possibly be based on similar quantum-mechanical influences. May it suffice to say at the moment that *Professor van Amsynck* was able to influence the fatigue blockage of brainwaves with the help of radiation sources.

This fact is of decisive important in regards to the following DELPASSE EXPERIMENT:

#### 2. 6 The DELPASSE-EFFECT

On the occasion of a cybernetic symposium, *William Jongh van Amsynck* presented his work to the public for the first time. When he lectured about his experiments before a group of information theoretics, *Jean Jacques Delpasse* was amongst his listeners.

Biofeedback as a form of medical therapy for hypertonic patients was of little interest to *Delpasse*; But he was fascinated by the laboratory conditions *Amsynck* was able to work under. *Delpasse* immediately recognised that the described feedback exercises were in principle very similar to the Grey-Walter television-set experiments. But there was an important peculiarity with the training program of the neurology professor: All the subjects *van Amsynck* worked with suffered from the same ailment: namely hypertension, something that under certain circumstances could lead to a stroke or sometimes even death. And when one of *van Amsynck*'s patient actually died, a person who had undergone intensive brain training passed away. A human being that actually presented the experiment conditions that *Delpasse* required and whose realisation he had thought impossible.

When *van Amsynck's* patients were also trained within the Grey-Walter-Experiment next to their normal feedback training, the most prominent hurdle that *Delpasse* had feared no longer existed. He no longer required terminally ill patients to work with. He no longer required the consent shocked relatives had to give. Not one terminally ill person was trained, because a trained person could possibly die.

Delpasse presented his idea to van Amsynck, namely suggesting leaving a mark on the brain with the help of the Grey-Walter-experiment. Such a message can be rather simple, but it can also be of a very complex nature. The meaning of a single word has for instance a simple memory content. A travel experience as a memory on the other hand is complex and extensive. There is the fact of the trip itself that one remembers, there are the people one encountered, the cities visited and the meals one consumed. Even the preparations for the trip might be part of the memory, the decision to undertake a journey and so on. A whole hodgepodge of memories is listed here.

There is no possibility to separate individual memories from one another. But this is exactly what *Delpasse* wanted to do. He wanted to create a virtually pure memory impulse with the help of the Grey-Walter-Experiment that only carried one single memory item - namely the order to *switch* on the monitor.

Delpasse thereby found a method to mark the tiniest sector in the enormous spectrum of our memory - similar to the way one marks a specific substance in order to track its path with chemical compounds. The purpose - here and there - is the same. Marking is supposed to expose the path memory impulses take. An example: We are familiar with the electro-magnetic gates installed at airports that passengers have to walk through the check them for weaponry. Textiles and leather items pass through these gates without anything happening. The electronics is not geared to register them. But the tiniest piece of metal that we have on us triggers an acoustic signal the moment we cross the threshold. The system is programmed to detect metal or put in other words: Only metal is marked in a way that the system can detect it. If a blind person were to stand guard next to the gate - he would never know what kind of clothes the people wear that walk through the gate and which suitcases they carry across. But the blind person would be able to recognise every cigarette lighter, every metal fastener and ever belt buckle by the audible signal these items trigger.

Death represents nothing else but this gate.

Death is a GATE our consciousness must pass through. Provided of course that it survives the

decay of the physical body. But if this is the case and if our memory survives death as a part of our consciousness, we cannot recognise this because we are in the same situation as the blind person at the airport's security control. We do not have a sensory organ, neither eyes nor ears, that allow us to perceive consciousness or memory. And as we are incapable of creating such a sensory organ, we only have one singular opportunity: We must transform memory and consciousness into one form of manifestation that is *perceivable* to our normal sensory organs.

This is exactly what *Jean Jacques Delpasse* wanted to do. He wanted to *mark* a tiny part of our memory with the Grey-Walter-Experiment - to make it visible as a switch-on signal on the monitor. When we think "switch-on" and call upon the corresponding memory content from our brain, a switch-on signal appears on the monitor. This is how it works whilst we are alive, but what happens the moment we die?

• If memory and consciousness do not perish but actually leave our body after death, the memory content marked by the Grey-Walter-Experiment would also have to leave with them. And if they go - they must produce a switch-on signal on the monitor the moment it happens.

*Van Amsynck* was impressed by Delpasse' conclusions and declared that he was ready to adopt the Grey-Walter-Experiment in his biofeedback program. His hypertension patients now learned to switch a monitor on by producing stand-by waves. The patients readily accepted the change to their training program to begin with. The ability to make the monitor come alive through an act of will gave them a sense of accomplishment. This in turn benefitted the other blood pressure reducing feedback experiments.

But the patient go used to the new game a lot faster than expected.

The success figures went into decline.

This was nothing new to *van Amsynck*, but *Delpasse* on the other hand was disappointed. Because of the rather short training opportunities pro patient, it was feared that the switch-on signal could not be transformed into their memory content. It would instead be lost with the extinguishment of the short-term memory. *Van Amsynck* therefore decided, as he had in earlier experiments, to utilise *supporting radiation sources*. The results were generally the same. Whilst some of the radiation sources had a hemming effect on the stand-by waves, there were others that showed a supporting effect here also.

• Individual patients developed an almost artistic aptness to make the television screen come to live on command.

The emergency *van Amsynck* and *Delpasse* had rehearsed for happened when a 67-year-old woman suffered a hypertonic mass bleeding. To monitor her brain functions, the patent had been connected to an EEC monitor and a Grey-Walter test arrangement. In spite of immediate measures, the patient displayed an increase in intracranial pressure that eventually led to the failure of all cerebral functions. The encephalogram showed the characteristic flatlines that indicated that the brainwaves had become extinct.

The patient had been lying in a coma for some time before her death. She had therefore *no longer* been in a position to produce stand-by waves either *consciously or willingly*. But in spite of the appearance of all the symptoms of the final demise of the brain, the switch-on signal appeared on the monitor of the Grey-Walter apparatus.

• This switch-on signal on the threshold of the final demise, initiated in spite of the non-existence of stand-by waves, is called the DELPASSE-EFFECT.

The DELPASSE-EFFECT perfectly coincides with the appearance that one can expect if the spirit should survive. It could indicate that the human spirit, carried by an up to now unknown ENERGY, leaves the body at the moment death ensues. It could also mean that a tiny fraction of this spirit leaves a trace on the monitor behind - in principle no different from a metal object triggering a signal whilst passing through an electro-magnetic airport security control gate. It *could* be something like that. But it *doesn't* have to be.

Before the DELPASSE-EFFECT can be accepted as evidence of an up to now unknown ENERGY, a considerable number of problems have to be dealt with. The first problem consists of the fact that we only have an approximate time for the moment of death. The question arises: How long is this moment the spirit requires to leave the body? One second? - One hundredth of a second? - One billionth of a second? Energetic processes are probably the cause of the DELPASSE-EFFECT that take place inside of atoms. We are dealing with processes here that - as the nuclear physicist *Nils Bor* expressed it - "cannot be grasped by our concepts of space and time". This order of magnitude cannot even be expressed philosophically because they are confronted by stations of death on the other side that have to be measured in comparably enormous dimensions.

As the brain reacts the most sensitive to a lack of oxygen amongst all the other organs, it will be the first to suffer an irreversible loss of functionality. We talk about *brain death*. It inaugurates the phase of *clinical death* when individual organs perish one after the other due to the lack of oxygen. The end of the process is *biological death*, followed by decay. This biological death is not the result of an outside source as one might assume. The cells carry this information from the time of their conception. A proper decay-enzyme is stored within tiny particles, the lysosomes, and it fearfully screens itself from the rest of the working apparatus. The biological death gives the signal to open the lysosomes - the deadly enzyme emerges and immediately begins to dissolve the cells from within. Biological death therefore spells the end for cells.

The problem therefore exists in the fact that we only have an all too insufficiently exact time determination for the moment death occurs. Dying itself is not one single moment. Dying is a process that takes place in three phases. Three phases that take at least a few minutes without showing any clearly defined dividing lines as they merge together:

- Brain death
- Clinical death
- The cells death.

How could you possibly determine the exact moment within this minute lasting eternity - the moment of the DELPASSE-EFFECT - "cannot be grasped by our concepts of space and time"? - Why is such an exact determination of time actually necessary and what strength of evidence could it impart on the DELPASSE-EFFECT?

• The DELPASSE-EFFECT will only have strength of evidence if it has been clearly established that it can be retrieved after the extinction of the brain's activity.

Reflections can only be retrieved from memory with the help of an electrical impulse. This process can however only take place in a living brain. When the brain is definitely dead, its electrical potential for action and its brain waves are also extinguished. The DELPASSE-EFFECT can no longer appear after that point in time if we assume that consciousness, memory and the human soul *die* with the body.

• But if the DELPASSE-EFFECT eventuates in spite of this - also after the extinguishment of any brain activity, we have the evidence that an up to now unknown ENERGY exists that is capable of retrieving the content of memories after the death of the brain. We can then assume that this ENERGY is the CARRIER of a consciousness that outlasts death, it is the immortality of the spirit.

It had to be proven that the DELPASSE-EFFECT can come into effect *after* the breakdown of the brain's activity. But this is easier said than done, because one has to presuppose that the DELPASSE-EFFECT can be placed within the no man's land of the dying process. The dying enter this no man's land in their journey from life to death whenever death is artificially delayed through artificial respiration and circulatory support. These measures are not taken to arbitrarily extend the dying process; they are rather more an attempt to save a life. Not all pressure increases in the brain must inevitably lead to death. If a change happens or is initiated before permanent damage occurs, the state of the patient can improve. This is why a physician will always introduce the artificial maintenance of the circulatory system when support is required and when there is hope that everything can still turn out okay.

But if the brain irreversibly dies in such a case, the heart of the patient will continue to beat and prevent the decay of the body until the ventilator is switched off. With the help of artificial respiration and circulatory support, it is possible to create a kind of no man's land between the death of the brain and the final demise of the whole organism.

• A DELPASSE-EFFECT that would appear in this no man's land could no longer be fed by the life energy of the brain, because it would be dead. It would have to come from another source, from an ENERGY that is not depended on life.

But the appearance of the DELPASSE-EFFECT would only be afforded a limited space of time in this no man's land. The dissolution of cell structures would begin in the dead brain, because it is not affected by the artificially induced blood flow in the body.

For *Delpasse* and *van Amsynck*, researching this no man's land began on an April day at 6 o'clock in the morning. *Van Amsynck* was called to see a patient who had suffered a sudden cerebral haemorrhage and was now lying in a coma. *Van Amsynck* ordered artificial respiration, an angiogram and the recording of brain waves in order to get an idea of the extent of the damage. The results were not encouraging but *van Amsynck* and his team of doctors did not give up.

*Delpasse* followed their efforts to save the patient with silent tension. Would they be able to save him? - Would he die? And if he died - where and when would the DELPASSE-EFFECT set in?

At around 3 o'clock in the afternoon, flatlines on the EEC indicated the start of a critical phase. The support through the breathing apparatus continued with supplying the lungs and the heart with oxygen. But the DELPASSE-EFFECT showed itself in spite of signs of total loss of function that also included the brain.

No matter how disappointing the result was - Delpasse and van Amsynck had not really expected

a different result. Why should an artificial extension of life, wherein the brain played no part, change anything within the brain?

Further case studies confirm the result:

It matters not whether the biological life of the patient had been artificially extended or not, the image that derived from it principally remained the same. The DELPASSE-EFFECT seemed to be chained to the vitality of the brain. When all functions clearly indicated the demise of the brain, it was no longer possible to record a DELPASSE-EFFECT in one single case. A DELPASSE-EFFECT that can under no circumstances be separated from the last stirrings of the brain, can only be fed by the energy of brainwaves. It does not give us the hoped-for reference point for an otherworldly life, it is rather solid evidence against it. Logic does not allow any other conclusion.

Strictly speaking, this should have been the end of DELPASSE-EXPERIMENTS.

But it isn't always logic that brings progress, it is at times *intuition*! It is sometimes creative fantasy that pushes open the door to new discoveries. They can indeed be measured with logical yardsticks afterwards, but they cannot be sensed by them beforehand.

## 2. 7 Powerful evidence for the survival of physical death

Acting on a hunch, *van Amsynck* now decided to continue his experiments with forcefields and *radiation sources* he had started with in the biofeedback training, at the moment of death.

The results exceeded all his expectations.

With the help of a radiation source, *van Amsynck* not only succeeded in relocating the DELPASSE-EFFECT into the no man's land between brain death and ultimate death; it was also even possible to *shift it back and forth* within this region, like pearls on a string!

Van Amsynck initially selected test arrangements that had brought particularly good results during biofeedback training. But they had no effect here. He eventually introduced a radiation source that previously only had negative success. It had led to the total blockage of stand-by waves during biofeedback training. It had been responsible for all the training cases that had to be aborted unsuccessfully.

When *van Amsynck* used this radiation source in connection with artificial respiration, something unexpected happened: Medical symptoms and gauges showed the total loss of brain function.

The brain was dead, the DELPASSE-EFFECT however failed to materialise!

Van Amsynck waited for a while in order to make sure and to undertake all the necessary tests...

He the switched the radiation source off.

This was the very moment the DELPASSE-EFFECT appeared on the monitor!

One is inclined to imagine the emotions of a scientist who pursued an idea for many years to a point where he no longer dared to believe in it and suddenly sees it realised in front of his eyes. Does he feel pride? Satisfaction? Joy? - Or is he overcome with trepidation over the unveiled mystery, followed by a feeling of guilt, because he was the one to lift the veil? - It might require more courage to continue the experiment after the first signs of success than the decision to start a research project in the first place.

*Delpasse* and *van Amsynck* continued with their experiments.

They found their first results confirmed:

It was possible to shift the DELPASSE-EFFECT, with the help of a radiation source, beyond the brain's total loss of function into the no man's land between life and death, thereby furnishing powerful evidence for the survival after physical death.

#### 3. 0 The latest research results (Source: Badische Zeitung and ZDF online)

When neurobiologists meet psychotherapists there are two possibilities: The neurobiologists will explain that the mental is just an electrical or chemical reaction of the brain, or the psychotherapists assert that the essence of the soul cannot be found in the physical substance that is the brain. (Therefore, nothing has basically changed.)

Something astonishing happened during the  $51^{st}$  Psychotherapy Week in Lindau in 2001: The neurobiologist and brain researcher Gerald Hüther<sup>2</sup> from Göttingen explained to the psychotherapists there that:

• The soul configures the substance of the brain.

The entrance of neurobiology into the sphere of psychotherapy is dramatic. Hüther talked about a paradigm shift. The most important - for psychotherapy revolutionising - result from the latest brain research:

• The brain is not complete after its development phase has ended and then gradually breaks down; it is rather of a plastic nature. The brain remains capable of further development all its life. Its development depends on its experiences.

Hüther reported about an investigation with London taxi drivers where one was able to measure that the centre for spatial imagination, the hypothalamus, was larger the longer they were driving a taxi. Experience shapes the brain. Hüther: "I can only now think this, because such a lot has happened in regards to brain research over the last ten years."

Neurologist Hüther didn't shy away from talking about things that could not be measured: About the experience, that innate influence factor that is anchored somehow in the brain and in the whole body. Hüther: "If nothing goes under the skin anymore, no new experiences can be made". But he also ascertains, that experiences do indeed go under the skin and that they are able to change cells there. Hüther takes his impartiality to talk about no longer measurable factors from his experiences with the measurable. Ever since the dogma of a no longer changeable brain has fallen by the wayside, a new world has opened up.

Dogmas fall, the views of the world changes. This also became clear in Lindau with the scientific sensation of the previous year: The *Human Genome Project*. The cell researcher *Friedrich Cramer* had dismissed the concentration on the human genome as a "completely obsolete concept" right from the start. *Phenomena like the soul say considerably more about human beings. - Hüther* maintained: With the decoding of the human genome, *Craig Venter* had only found out that the secret of life *cannot* be found there. "The human brain is genetically shaped to such a minute degree so that we can learn as much as possible."

Another important aspect is the gut: It has a net of 100 million nerve cells that reach from the oesophagus to the rectum. This so-called *abdominal brain* works independent from the brain, the nerve cells make all the important decisions for the gut *autonomously*, ergo everything to do with digestion and transport. The brain does not interfere. Science now investigates whether the gut is not only responsible for our digestion, but also responsible for our feelings in our abdomen.

<sup>&</sup>lt;sup>2</sup> **Gerald Hüther**, Dr. rer. nat. Dr. med. habil, is a Professor of B=Neurobiology at the Psychiatric Clinic of the University of Göttingen. Prior to that he dealt with brain development disorders and the long-term modulation of monoaminergic systems at the Max-Planck Institute for experimental medicine. As a recipient of a Heisenberg scholarship, he established a laboratory for basic research in neurobiology. Amongst other things, Hüther is a member of the Society for Biological Psychiatry, AGNP, ISTRY.

Nobody knows how this functions, but the build-up of information and memory in the gut is possible. It is conceivable that we feel with our abdomen. What has been proven so far is:

• *The abdominal brain reacts independently to external stimuli.* 

An example: If seeing a certain person X triggers unpleasant feelings, it would mean: The brain receives the information via the eyes and simultaneously feeds this information for instance to the gut in the form of a stress stimulus. The gut then associates this person with diarrhea and carries out its own program. Put in other words: The eyes see, the gut reacts - and does so *independent* from the brain. The abdominal brain registers: Person X equals stress.

Is this automatism also our intuition? - Yes, but only if one perceives it and utilises it. It is imaginable that some people reach a pronounced sensitisation in regards to such information, whilst others are completely insensitive to it in the abdominal region, they are possibly more strongly affected in the heart or other physical sensations. Whilst others completely ignore their body and do not react at all to such signals, all their decision are made in the brain.

But it isn't solely the abdomen that determines our intuition. Our other senses also provide us with important information. They also play an important role in our intuitive decisions. Psychology also interprets the phenomenon of "intuition" the same way. One is easily inclined to locate intuition or feelings in the region of the abdomen and the mind in the brain.

Intuition shows that everything is interconnected with everything else.

Intuition is anchored within every thread of our being. Even when we cannot see or hear, but only feel, smell, taste or have a dry throat, it can also be the motor for our decisions and our behaviour. It can make a considerable contribution to what we consider right or wrong. It might even save our life.

The sensations felt in the abdomen are only a part of what we call *sixth sense*. But still: Whether we are dealing with vital or mundane decisions, these feelings from the region of the abdomen remain *important signposts* for us.

\* \* \* \* \* \* \*

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# **Table of content**

Preface	1
1. 0 The disowned hereafter	3
1. 1. Afterlife research in the background	3
1. 2 CROSS CORRESPONDENCE - evidence of immortality	4
1. 3 A word in regards to fraud	6
1. 4 Professor William MacDougall and Professor J. B. Rhine, Duke University, North Carolina	7
1. 5 The experiments of Professor W. Peschka	10
1. 6 Physics is undesired	12
1. 7 The experiments of psychoanalyst Dr. Jule Eisenbud, University of Denver	13
1. 8 The theory of thought molecules	14
1. 9 The Backster-Effect	15
1. 10 When is a human being dead?	16
2. 0 The DELPASSE-EFFECT	19
2. 1 Neurologist Dr. Grey Walter discovers the standby wave	19
2. 2 Biofeedback - control of the subconscious	20
2. 3 Setback and new starting points	21
2. 4 The subconscious stand-by wave	24
2. 5 Forcefields - statisticians or principal actor?	26
2. 6 The DELPASSE-EFFECT	29
2. 7 Powerful evidence for the survival of physical death	34
3. 0 The latest research results (Source: Badische Zeitung and ZDF online)	35
4. 0 Bibliography:	37
	46

# KINETOBARIC EFFECTS AS A POSSIBLE BASIS FOR NEW TYPES OF PROPULSION PRINCIPLES

By W. Peschka

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#### Content

- 1. Introduction
- 2. Principle of the experiment
- 3. Description of the torsion scale and the measuring arrangement
- 4. Performed experimental work
- 5. Test results
- 6. Conclusions in regards to dynamic effects
- 7. Conclusions in regards to a new type of information transference
- 8. Future program
- 9. Summary

#### 1. Introduction

The following reports about test results whose experimental findings are absolutely unambiguous, but whose explanation, respectively affiliation to known phenomena has not been forthcoming so far.

The idea and the execution of such examinations originally stem from *R. G. Zinser*, 55743 Idar-Oberstein, Oberstweiler 14, whose carefully executed experimental work for over 10 years had achieved some very remarkable results. The appearance of dynamic affects, ergo effects of force on analogues probes, is supposed to have been registered. We were asked to undertake an experimental examination of the facts.

An experimental examination seemed to be relatively simple to begin with. But during the course of the work, it became apparent that the elimination of external interferences was so difficult that the dynamic effects could only be regarded as confirmed after three years had passed. We are mainly dealing with statistic accounts based on evaluations of a great number of carried our experiments.

The prospect to possibly be confronted with a new phenomenon of an up to now unknown effect of forces on bodies, something that could make its application in space travel possible, gave reason and justification to continue this work within the normative framework at least to the clarification of further experimental facts.

#### 2. Principle of experiment

Samples were used that essentially represented resonant circuit elements, ergo inductivities and capacities, or also high frequency semiconductor power devices like for instance quarter-wave lines (image 1). The resonant circuits, respectively the semiconductor power devices, are located in water (Tap water or desalinated water). This arrangement, with its associated container as an isolating factor, represent the probe. It was realised that it does not exclusively have to be water to achieve this effect. The advantage of using water lies in its great dielectric constant, whereby relatively minute measurements of the probes become possible whilst taking the to be used frequencies and wavelengths into consideration.

Next to other apparitions, we will not deal with them within this framework, these probes now show dynamic effects when coupled to inductive or capacitive high-frequency energies. The probes are therefore subject to effects of energies. To verify such dynamic effects, which were relatively minute in our experiments (Levels of 1 to 10 dyn), the probes were placed on a torsion scale of the required sensitivity. This test arrangement was not developed by us, it was adopted in a considerably improved form.

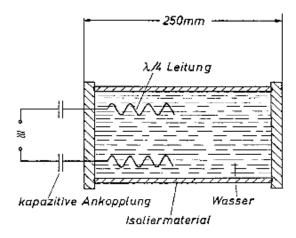
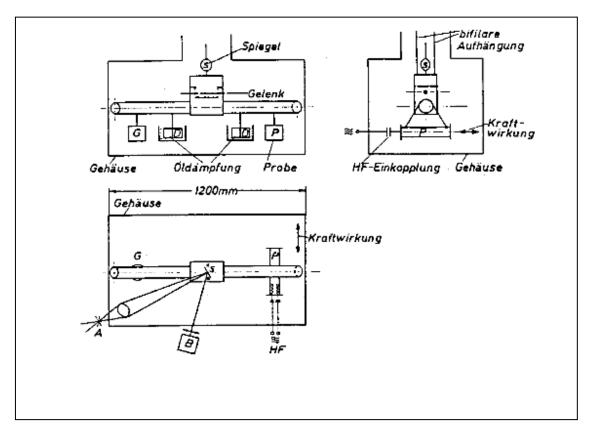


Image 1: Principle of the utilised probes.

#### 3. Description of the torsion scale and the measuring arrangement

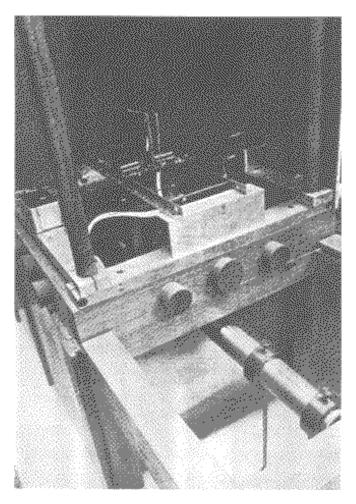
A torsion scale with bifilar suspension was used (in order to eliminate the physical influence of suspension wires) (images 2 and 3). The materials of the torsion scale, as well as all other used parts, are non-ferromagnetic or paramagnetic, and mainly consist of aluminium and brass. The suspension is made from 0.3 mm stainless steel wires. The whole torsion scale is in an enclosure in order to exclude the effect of external air currents. It had been proven that electrostatic influences, magnetic influences as well as air currents have no interfering effect that could reach the magnitude of the expected effect under corresponding test arrangements. This could be verified through a long series of comprehensive tests. The deflection of the torsion scale was registered via a lighting device, rotating mirror and recorder. The recorder utilised a photocell array that helped to guide the ray of light. The path of the light was 7 m. The sensitivity of the torsion scale in regards to the recorder at a distance of 7 m is 25 dyn cm/cm. The torsion scale is aperiodically dampened with oil and damper wings. The undampened natural vibration time is 120 s.



**Image 2:** P = Probe, G = Weight, S = Rotating mirror, D = Oil dampener, L = articulated suspension, B = Recorder (in follow-up circuitry mode), s = path of light (7m), A = Light source.

The coupling of high frequency happened capacitively via air condensers attached to the probe on the torsion scale (They were also inductively coupled in individual experiments). The high frequency HF currents were effective up to around 10 Volts. The output was in the region of 20 micro-watt to a few 100 milli-watt. A push-pull oscillator was used to produce the high frequency, one that could equip a push-pull power amplifier. But the power amplifier was generally not used, only the part of the high frequency that reached the test arrangement from the oscillator to the grid anode capacity of the power amplifier (Current damping factor of around 100 to 200). The full output of the push-pull amplifier under full control is around 20 to 50 Watt. Even utilising the

maximum power output, no initial escalation of the effects in the experiments carried out so far could be ascertained (Saturation appearances). This is why the majority of experiments were carried out without a power amplifier, therefore on a very limited power level. The measurement of the frequency was accomplished with eight-digit digital frequency counters.



**Image 3:** View of the torsion scale from above and at an angle. A part of the cladding has been removed so that one can recognise the damping arrangement as well as the two coils that facilitate the calibration. This pair of coils produce a magnetic field that has a known torque effect on another current-carrying coil attached to the scales

#### 4. Performed experimental work

The two torsion scales that were produced in 1970 were extensively tested for their zero accuracy. No coincidences of temperature variations and building movements (Controlled with an electronic level to an arc seconds degree) could be ascertained. Electro-static effects can also be excluded (The spraying of treated isolators with high frequencies from a 15 kilowatt transformer no longer has an effect after the required modifications). Furthermore, no influence of external static magnetic fields were ascertainable. To facilitate this, the whole arrangement was enveloped with a soil system that could produce a magnetic field that corresponded to around a hundredfold horizontal intensity of the Earth's magnetic field. No influence on the torsion scales was discernible.

Investigations into the influence of air movements on the readings of the torsion scales showed that above everything else, thermic turbulence can have an influence, particularly if the cladding of the torsion scale is of a too large a volume. After a number of experiments, wooden cladding was eventually selected that surrounds the torsion scale at the least possible distance, whereby the influences on the existing sensitivity of the torsion scale could be practically completely eliminated.

It also has to be notes that these torsion scales proved to be remarkably reliable measuring instruments. They combine the characteristics of how the high sensitivity in regards to the measurands against the very lesser sensitivity in regards to external interferences can be dealt with similar to a galvanometer. It is furthermore interesting to note that the sensitivity of the torsion scales was less to a factor of around  $10^3$  to  $10^4$  compared to the  $E\ddot{o}tv\ddot{o}s$  torsion scales Type 1 and 2 as they could now be brought to function faultlessly under high vacuum conditions.

After these preparations had established the zero-levels of the torsion scales and the 2<sup>nd</sup> torsion scale had been housed in another part of the building in line with the coincidence arrangements, the execution of the tests was started. Deaerated water - preferably tap water - but also desalinated water at room temperature, was introduced to the probe with the help of a water jet pump. The water remained in the closed probe during the whole test period - generally between 4 to 6 weeks.

The probe was placed on the torsion scale and the scale and additional zero-runs were carried out. These were perfect and coincided with the usual expectations. The probe was then activated through high frequency current (generally for 1 to 2 minutes). This activation was repeated a number of times at intervals of a few minutes in some of the tests. The currents used were generally between 20 microwatts and 100 milliwatts.

Around 200 tests were carried out over the next three years. Most of these tests were stopped after around two days. Roughly 12 tests were carried out over a longer period of time (6 to 8 weeks). The second scale was only provided with ballast in all of these tests.

Coincidences like the vibrations of the building, tectonic occurrences etc. could never be noticed. Even the influence of the tides, something that influenced the Eötvös torsion scale, does not enter the equation here because of the relatively considerably reduced sensitivity of the arrangement.

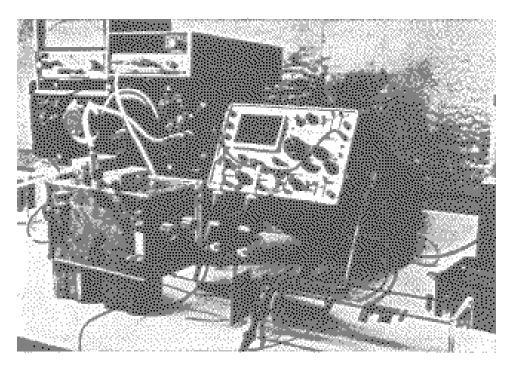


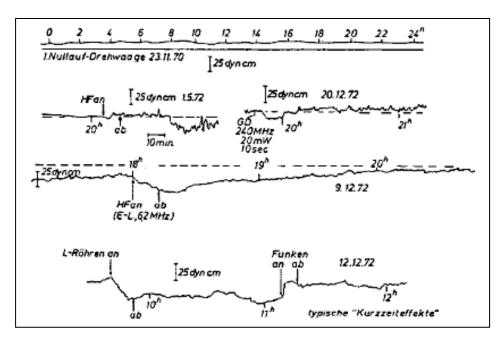
Image 4: Typical stationary test arrangement.

One can recognise how the capacity of high frequency is fed into the probe in the foreground on the right. The corresponding apparatus to produce and to measure the suitable high frequencies can be seen in the background. This stationary test arrangement only serves the purpose of measuring the high frequency characteristics of the probe. Only the probe is on the torsion scale during the activated phase of the test whilst the introduction of the high frequency capacity takes place. The electro-static effect of the capacity plates is smaller to the factor of two compared to the kinetobaric effect and can therefore be ignored.

#### 5. Test results

The research results can be listed as follows:

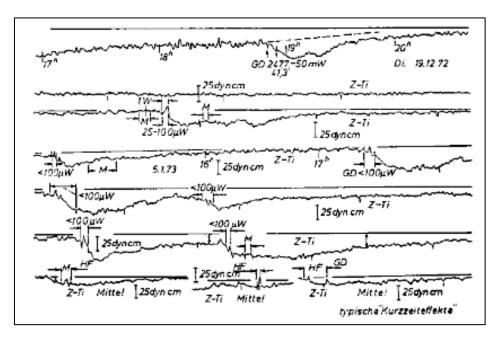
The introduction of suitable high frequency energies to specific probes results in a forceful effect on the probes. The forces measured on a special torsion scale were in the region of 10 dyn (Image 5 and 6). One can assume that far greater forceful effects can appear, something that emerges from the measuring protocols of *R. G. Zinsser*, where forceful effects of up to 1500 dyn were observed over a number of hours in rarer cases. The suitable frequencies utilised must be adhered to religiously, because they are assumedly discretely dispensed and could have an effect on the probe. The exact adherence to the respective frequency is required. The utilised frequencies were within the region of 30 to 40 MHz, 120 to 130 MHz and 200 to 350 MHz. No dynamic effects could be ascertained during sine injections. Harmonic waves are apparently required. The introduction of high frequency energy with a grid dip meter, when deciding the resonance frequency, also produced effects.



**Image 5:** Typical short-term effects as the result of high frequency agitation. The distance from the zero line corresponds with the deflections of the torsion scale. The zero recording of the torsion scale is given above as a comparison. The introduction of the high frequency took place via a corresponding oscillator or at times via a grid dip meter. The last row shows the influence of external sources of interference on the activate probe. (Neon lights, sparks).

- 1. The effects of force could not be ascribed to known interactions between electrical or magnetic fields or external interferences like the movement of air, warming, building vibrations etc. We are dealing with a new type of phenomenon within the framework of recent results.
- 2. The effects of force continue after the cessation of the high frequency energy supply and on the one hand, show a short-term (circa 2 hours) and on the other hand, a long-term character (days) (image 8 and 9).

3. The introduced high frequency performance was in the region of a maximum of 100 milliwatts, the period of supply a maximum of 5 minutes. A warming effect on the probe is thereby excluded.



**Image 6:** Typical short-term effects as a result of high frequency introduction. GD connotes the introduction via the grid dip-meter, the numbers next to it are the frequencies. The maximum value of the introduced energy levels (mW, 5W) is also recorded. M connotes the additional overlay of a magnetic constant field that is one hundred times the intensity of the horizontal intensity of the Earth's magnetic field (Z-Tie is a name for the probe). The absolute sensitivity of the torsion scale (denim/cm) is also given. The short vertical lines in the measuring curve are time marks (1 hour apart) with according times of the day. Interesting is the comparison of the measured curves in the lowest row with the other measuring curves. In contrast to the other measuring curves, the probe in the last depicted row of depicted measuring results was located in the middle of the torsion scale underneath the bifilar suspension and not as per usual at the end of the scale's beam. In spite of the activation, there are practically no deflections that could indicate the impact of torque.

- 4. Probes thus "activated" react dynamically to the weakest of the short-term, external high frequency actions, for instance the switching on of neon lights, "fried" sheet resistors, spark discharges at larger distances, high frequency oscillators that are not located in the test room, as well as lightning. The coherent effects related to them, they result in considerable deflections over a period of between 1 to 2 hours, make executing perfect tests very difficult, because a complete screening against external high frequency interferences was not possible with the available means. The influence of these external high frequency disturbances can also initiate dynamic effects like the deliberate coupling of high frequency energies.
- 5. The influence of these external high frequency interferences can already take place with such a slight level of interference that under certain circumstance the presence of people in the laboratory already suffices to cause deflections on the torsion scale by previously activated probes, that can last up to 2 hours. But no external influences could be detected under these circumstances, like for instance related disruptions through the presence of people, the warming of the air by people entering, air movements, the warping of floorboards etc. One therefore has to assume that the high frequency field emanated by living beings, that can reach

values of microwaves, must be responsible for this influence.

6. Furthermore, long-term effects appear with activated probes. The torsion scale makes periodic deflections at around 12 hours intervals and they are superimposed by short-term effects that might possibly stem from external high frequency interfering sources (Image 8 and 9). The long-term periodical deflections are probably due to the sun's activity or "spheric conditions". The influence of visible sunlight can however be excluded, because the test room is always completely shielded from outside light, so that only radio waves, respectively the microwave component of sunlight and the atmosphere could play a part. The long-term effects tent to subside after 1 or 2 months.

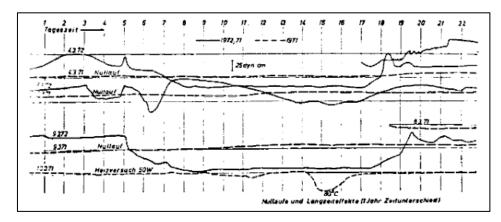
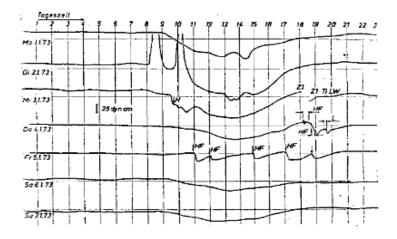


Image 8: Typical long-term effects with superimposed short-term effects.

In comparison, zero-runs on the torsion scale (intermittent lines) and runs of probes that we already activated some time ago that were conducted exactly one year later are depicted. One can clearly recognise the long-term behaviour (the numbers on top connote the time of day) with short-term periodical overlay. In comparison, the lowest row depicts the influence of a simulated interference on the torsion scale. The water of the probe was heated to a temperature of  $80^{\circ}$  C via a heat resistor with a capacity of 50 W. The current supply happened via strips of gold of  $20 \ \mu m$  strength.



**Image 9:** Typical long-term effects with superimposed short-term effects. The short-term effects partially developed from an intentional high frequency energy supply (3<sup>rd</sup> and 5<sup>th</sup> row from above) and partially through the influence of external high frequency disturbances (2<sup>nd</sup> and 4thg row from above).

#### 6. Conclusions in regards to dynamic effects

Even though the presently verified forces have not yet achieved the magnitude of the forces of electrical power units, the existence of such, up to now unknown effects of force, one still has to find a meaningful accordance with the axioms of mechanics, give cause for further investigations - also in regards to new and very unconventional propulsion systems. One could for instance observe effects of force of 5 and 10 dyn over a period of 2 hours, with probes that were exposed to a high frequency field of 120 s within the flow of energy of around 1 milliwatt. This corresponds to a capacity of 3,6\*10e4 respectively 7,2\*10e4 s or in regards to the supply current, received a capacity impulse of:

$$\frac{7.2 \cdot 10^4}{120 \cdot 10^{.3}} = 6 \cdot 10^5 \, \text{dynsec/ws} = 6 \, \frac{\text{Ns}}{\text{Ws}}$$

This value surpasses the one's of conventional propulsion methods by a number of powers of ten (Image 7).

	Schub S (N)	Schub - dauer t (sec)	impuls I (Nsec)	Leistung W	Energie E (Ws)		Isp (Nsec/Kg)
chem.Antrieb el. Antrieb	mν	,	St=ṁvt	1/m v2	$\frac{1}{2}\dot{m}v^2t$	2	<u>mvt</u> = v
v= 4000 m/s v=3-10 <sup>4</sup> m/s						5·10 <sup>4</sup> 66·10 <sup>5</sup>	4000 310 <sup>4</sup>
KBE	s 10*	t 22 · 10 <sup>3</sup>	5·t 72·10'	N <sub>HE</sub> 10 <sup>3</sup>	N <sub>ife</sub> t <sub>he</sub> 10·120³	S·t N <sub>HF</sub> t <sub>HF</sub> 6	\$102 Nuirthe 54:10 <sup>17</sup>

**Image 7:** Chart of specific impulses for various propulsion methods.

This fact offers enough reason to further investigate this phenomenon. One must naturally try to answer the question of, to what degree can this phenomenon be equated with known physical effects. A careful analysis of all possibilities does however show that no physical effect is known to this day, that could be utilised to explain this phenomenon.

One initially tried to explain these dynamic effects on hand of torques that were produced through spin-flip processes (change of the torsion impulse) - for instance through core-spin resonance, respectively dipole-dipole resonance. If this hypothesis has validity, the introduction of high frequency energy would produce a spin-orientation in the presence of the corresponding resonance frequencies in the probe and coupled with the corresponding relaxation period, would exert torques and dynamic effects on the probe due to the angular momentum change. But the detailed examination of the effects showed that there are forces and not torques present. The deflection of the torsion scale is actually dependent on the position of the probe on the torsion scale, something that clearly verifies the presence of forces.

## 7. Conclusions in regards to new types of information transference

Even though the present experimental results, undertaken whilst applying the strictest yardsticks, cannot be regarded as completely secured, they result in remarkable indicators of development possibilities derived from them. Furthermore, basic conditions can be created that can serve as the basics for future experimental and theoretical test programs. We are undoubtedly dealing with an electro-magnetic effect that effects changes within physical matter. But these changes are present for a lengthy period of time in an accumulated form and they can be accompanied by dynamic effects. *Nothing can be said about the nature of these dynamic effects at this point in time*.

It was initially tried to explain these dynamic effects as torques that were produced through a spinflip process (change of the angular moment impulse) - ergo during the core-spin resonance. The validity of this hypothesis would produce a spin orientation in the probe through the introduction of high frequency energy and if the corresponding resonance frequency was present, build up during a corresponding relaxation period of 1 to 2 hours would ensue and due to the angular momentum change of the torque, exert dynamic effects on the probe. Estimates however show that this hypothesis, for various reasons not listed here, leads to contradictions and could possibly not be applied to the case in point.

What has been established is that the torsion scale serves as the detector of some processes that can be triggered with almost laughably slight high frequency energies. Specifically, the possibility to achieve effects with extraordinarily slight high frequency energies, *is of the greatest importance*.

The appearance of dynamic effects when external sources of interference are present at a relatively far distance from the test arrangement, show how delicate this arrangement reacts to such high frequency influences.

The appearance of dynamic effects also ascertained when test personal were present in the room, could possibly be explained through the extremely weak high frequency field that living beings produce.

This required high frequency constant could lead to the conclusion that the resonance processes in the probe can work under very slight half-value levels (something that is also the case with corespin resonance and dipole-dipole resonance in fluids and gases, where half-value levels of a few hertz are certainly realisable). This leads to the conclusion that due to this slight half-value level, a possibility exists on the one hand to achieve effects with extremely slight high frequency energies, if the frequency can be kept at a constant level to a sufficient degree. A lower limit for the required high frequency energy is on the other hand given if the introduced high frequency energy reaches the order of magnitude of the frequency interval of the half-value levels of the omitted part of the thermal noise performance. With half-value levels of a few hertz, the output is around 10e - 20 watts.

Even though dynamic effects cannot be explained, these considerations do give indicators about why the utilised experimental arrangements for detecting external electro-magnetic interfering influences can react so sensitively. The power flux density of a sender with a 1 Watt capacity at a distance of  $10e5 \text{ km} = 10e-21 \text{ Watt/cm}^2$ , so that the signal sources can be effective at an extraordinary great distance under these circumstances. The possibilities that can arise for the transference of information are immediately apparent and require no further intimations.

If one takes a further look at the spread of electro-magnetic energy under these circumstances, one will also find some very interesting aspects. Electro-magnetic energy is usually absorbed by matter under normal circumstances. This happens on the one hand in isolators through direct losses and on the other hand in electrical conductors through the interaction between electrons and the crystal lattice. Let's look at the spread in isolators (no loss mechanisms caused by conductor electrons). The possibility exists in this case that we are dealing with an inversion of occupation conditions similar to Maser, that in conjunction with the incidental electro-magnetic wave induced emission, makes a coherent amplification mechanism possible. This can lead to a reduction of the damper losses (di-electrical losses) that appear during the spreading. The inversion of the occupation conditions could produce higher frequencies in the present high frequency energy (pump-frequency).

With the spread of an electro-magnetic wave through water, this would for instance mean that due to the absorption of suitable high frequency energy, that can either stem from the sun, thunderstorm activity or other atmospheric conditions, or also from the worldwide utilisation of electric energy, states of energy in the corresponding inversion appear in the water.

If a high frequency signal of a suitable frequency is now introduced to the water, it would be quite conceivable that through induced emissions, the spread of electro-magnetic waves becomes possible across vast distances according to what was indicated above. The intensity of the high frequency electrical, respectively magnetic strength of the field can be extraordinarily weak - well, possibly be even under the thermic noise level. What is required is that the half-value range in the induced emission of the associated resonance processes are accordingly small, that is to say, that the lifespan of the inversion conditions are accordingly high. The possibility could arise from this that signals and with them information, can be transmitted over vast distances through water and possibly even through water-bearing layers. Prerequisite for an affective information transmission would be a suitable narrow band receiver system with bandwidths of a few hertz. No accurate accounts about the required frequencies for such transmissions can presently be furnished. According to the previous experimental results, these can be within the ultrashort wave range or possibly also in the microwave range.

The spread of electro-magnetic energy though metallic conductors can, against popular opinion, exhibit modifications, if the intensity of the wave in the electro-magnetic field becomes very small. If an electro-magnetic wave were for instance to hit a metallic surface, the free electrons in the metal would be agitated to resonate through the electrical field vector. This resonance happens coherently with higher field amplitudes, that is to say, a positive phase relationship between the resonating electrons exists within the larger local regions. The result of this is that the electromagnetic fields of the incidental electro-magnetic waves, produced by the oscillating electrons, overlap and eliminate then through superposition. This is what's called the skin-effect. The elimination through interference is disturbed if the unambiguous relationship between the resonating electrons is disturbed, this is the case if the electrons are conceded to the grid through energy impacts. The coherence is disturbed, because these impacts happen completely irregular, so that the depth of penetration of the skin-effect also increases with the increasing interplay between the conductor's electrons and the grid - ergo with an increasing specific resistance of the material.

Let us now look at an electro-magnetic wave where the electrical field vector is so minute that the energy increase of the conductor electrons is small compared to the thermic energy of the electrons. This scenario shows that a different type of behaviour is apparent from the one of the normal skineffect. When explaining the skin-effect, one generally assumes that the energy of the oscillating electrons is greater than its medium thermic energy. By taking the thermic energy of the conductor

electrons into account, a greater penetration depth compared to the normal skin-effect is possible. This depth of penetration is given through the thermalisation of the penetrating electro-magnetic energy through the conductor electrons. The difference compared to the normal skin-effect is only just visual. The introduction of an electro-magnetic wave of an accordingly weak intensity induces the electrons to resonate. These electronic oscillations do however only represent a minute disturbance of the stochastic movement of the electrons due to their own thermic movement. No coherence between the oscillating electrons ensues in this way and the extinguishment of the incidental waves through interference cannot take place in such a case, because the portions of the oscillating electrons average out in regards to time and space.

This is only to show that the possibility of spreading electro-magnetic energy over large distances through metallic conductors and under the noise level certainly exists. This would mean that electro-magnetic energy cannot simply be completely screened through metallic conductors as previously assumed. Screening within the framework of the skin-effect is naturally possible. This can however only function up to the noise level. The spreading of electro-magnetic energy inside the noise level is certainly possible. One has to admit that these aspects for the transmission of signals and information could be of the greatest importance.

The thoughts and possibilities touched upon so far can however only gain importance, if extremely narrow-band receivers for electro-magnetic energy are available that can register the extremely weak signals below the thermal noise level.

These results, they can possibly open up *new accesses to completely novel and yet to be assessable regions of human knowledge*, will gain considerably pertinence when one considers that biological aspects must be taken into consideration here also. The generation and the absorption of electromagnetic energy of such a minute intensity within the corresponding frequency range is also possible in the molecular structure of the cell and it could possibly have played a not to be underestimated role in the evolution of life. If one takes the work on this subject published in the USSR into consideration, the possibility of the *transference of information between cells* through electro-magnetic waves is there.

The development of a science in the border region between physics, psychology and biology rears its head here, one that will surely be allocated a central role in twenty years from now.

#### 8. Future program

Any future program must include the securing of all experimental results thought the utilisation of the strictest of standards. This concretely means the application of the torsion scale in a vacuum environment in order to exclude all air movements, whereby the vacuum chamber must serve as the screening agent against external electro-magnetic radiation as far as possible. The repetition of the previously carried out series of experiments under such an improved arrangement would then, with a positive result, connote the irrefutable confirmation of the described effects. These examinations should also be expanded over a greater range of frequencies than before.

The frequency range of about 30 megahertz to 1.4 gigahertz has been examined.

The long-tern effects mentioned in chapter 5 seemed to indicate that a strong electro-magnetic influence from the sun is possible. The examined frequency range must therefore be extended to include the microwave spectrum of the sun, that is to say, to around 20 gigahertz. Apart from the measurement the dynamic effects with a torsion scale, it generally coincides with the application of high frequency spectroscopy with suitable apparatuses and detection methods.

Whereby the absorption of high frequency energy in the probe must be investigated with appropriate methods. Furthermore, a receiver of electro-magnetic waves must be at one's disposal, one that can verify the weakest of signals from amongst the thermal noise. Such an instrument can be utilised with the help of insights from the field of nuclear magnetic resonance spectroscopy. Certain probes utilised in nuclear magnetic resonance spectroscopy apparently represent resonance systems with half-value levels of up to 1 Hertz, whereby the thermal interference, that would connote a heightened band width, would average out in regards to time and space.

#### 9. Summary

Works have been reported about that are based on a dynamic effect that appears when appropriate hydrous probes are exposed to high frequency fields. Within the framework of experimental possibilities, dynamic effects as well as the minutest external interference fields could be verified. The dynamic effects, whose experimental findings are absolutely unambiguous, but whose explanation, respectively *affiliation to known phenomena* has not yet succeeded, correspond with values of a magnitude of 1 to 10dyn.

The observed energy influences build up during the coupling with high frequency energy and they can remain after the energy supply is switched off. *Time constants of up to 2 hours* could be ascertained.

Even though the verified energy effects have not reached the magnitude that appears with electrical power units, the presence of such up to now unknown energy effects offer something that one must find a meaningful accordance within the axioms of mechanics, ergo find enough reason for further investigations in regards to some very unconventional propulsion systems.

What has to be emphasised is that an extremely low level of energy (20 microwatt to a few milliwatts) can produce this effect. The frequency of the high frequency energy supply must be kept at an extraordinarily constant level if effects are to be achieved. There are indications that we are dealing with characteristic properties of the probe. There are further indications that periodical signals can thereby be detected that do tend to disappear in the thermic noise. It had been indicated that the spread of such weak high frequency signals demands a different, deviating form of general observations, because of the isolators and conductors in use. This above all, because an amplification mechanism can arise through the induced emission that makes the spread of the weakest electro-magnetic signals over great distances possible. In regards to the spread of the weakest electro-magnetic signals through conductors, it has been mentioned that a different, deviating form of general observations are required here also, because the additional energy transmitted by the electro-magnetic field is small compared to the thermic energy of the electrons. This is why the complete screening from electro-magnetic energy, as it is generally applied when metals are utilised, is only possible to a limited degree.

The aspects that arise in regards to the importance of electro-magnetic energy in biological processes have been pointed out.

Even though the results of the experiments carried out so far cannot be regarded as completely verified in spite of the application of the strictest yardsticks, some remarkable hints of possible consequences have come from it.

We are undoubtedly dealing with a phenomenon where changes in physical matter can occur with the supply of electro-magnetic energy, changes that are latently present for some time and that can result in dynamic effects that do not exclude the possibility of gravitational interaction.

But the question of whether the phenomena described here can result in an expansion of our physical view of the world remains unanswered. The only possibility to gain more information consists in having more research results at one's disposal.