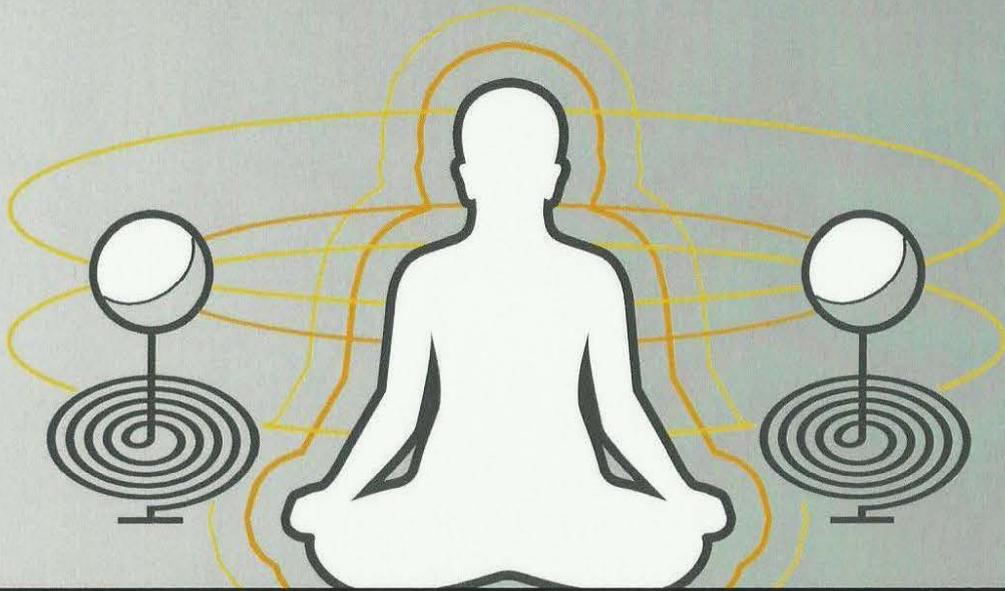


Konstantin Meyl

**Documentation ② on
Scalar Wave Medicine**



**about the practical use of Scalar
Wave Devices from the 1stTZ of
Scalar Wave Technology**

Prof. Dr. Konstantin Meyl

**Documentation ② on Scalar Wave Medicine
about the practical use of Scalar Wave
Devices from the 1stTZS**

Physicians and alternative practitioners working with the scalar wave devices from the 1stTZS are conveying astonishing reports: The effects of drugs are being transmitted wirelessly, pain is being relieved or metastases eradicated. As each successful treatment initially constitutes a singular case of no statistical significance, expert conferences are being arranged annually where such singular cases are being presented and discussed, encouraging medical colleagues to follow suit. These reports are the focus of the documentation no. 2 on scalar wave medicine, making no claim to completeness and intended to be interesting for everyone seeking new approaches towards a bloodless medicine free from side effects.

The devices discussed in documentation no.1 in terms of purely technical scalar wave experimentation have been developed further into the SWT for lab use and the SWD for wellness purposes. Their respective manuals can be found at the beginning of this documentation in order to facilitate the repeatability of the subsequently documented experiments and results.

This documentation takes you straight into a conference of experts on the practical use of scalar waves, allowing you to follow the discussion and make up your own mind. New ground is broken when the paradigm is shifting from a medicine focused on materials and biochemistry towards a medicine based on information, conveyed by magnetic scalar waves.

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about the practical use of Scalar Wave Devices
from the 1st TZ of Scalar Wave Technology

by Professor Dr.-Ing. Konstantin Meyl

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containing original English and some translated reports.

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2.2

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I.

Preface to Documentation 2

There are multiple good reasons for the publication of a documentation on scalar wave medicine.

1. Victims of Radiation Sickness

I am receiving an increasing influx of e-mails from affected individuals: „The radiation in my surroundings, from sources such as cell phones, WLAN, DECT, power lines and electrical railroads, is making me sick.“ A more radical variant reads: „I feel pursued by scalar waves. The military, a malevolent neighbour or some unknown entity is trying to get to me. If someone is able to help me, it surely is you, Professor Meyl!“

How am I supposed to respond to the affected? My domain is the physics of fields, not medicine. How am I supposed to help in a case like this? All I can do is to verbally provide comfort and ask for some understanding of my situation: „Dear radiation victim, time and time again I am asked for help by people who consider themselves victims of scalar waves, mind control, tesla radiation or even attacks from totally unknown sources, to name a few. Resonance phenomena that probably occurred unwittingly and somehow persisted are being interpreted as perfidious targeted attacks on an individual's health. It is a tragic fact that the amount of radiation sources in our environment has risen dramatically and continues to rise.

Please understand that I am in no position to offer assistance in this regard. Being a physicist, my occupation is research into the mostly uncharted territory of potential vortexes and their propagation as longitudinal waves.

Of course, the scalar waves I examine can be employed both for the benefit as well as the harm of humans. I'm known for pursuing the former, as are most Medical Doctors specialized in this domain. Therefore, please consult a trusted physician, who certainly will find himself in a better position to help you than a basic researcher like myself.

Please refrain from further medical inquiries. I have discussed the physical properties of scalar waves in various books (e.g. Documentation 1 and 2, available at www.meyl.eu)“.

2. Scalar Waves as an Instrument of Medicine

„The scalar wave devices you developed are of great use in my practice. They are the best bioresonance machines I know“. Mails like these are sent my way from physicians and therapists as well.

An older lady who had been walking on crutches for several years stayed at a wellness hotel in Warnemünde. According to the hotelier, she left the hotel without crutches after having been exposed to scalar waves daily in the hotel's spa area. Most gratifying for him: She returns regularly, of course without crutches.

Other cases reported by physicians and therapists concern patients who were bound to wheel chairs. After scalar wave treatment, the wheel chairs had become obsolete. It sounds like a fantastic new kind of medicine and the word quickly spreads. Physicians and patients both inquire: „What about this or that ailment? Can you provide further examples? How does scalar wave treatment work in practice? Are you able to guarantee success?“

I cannot guarantee anything. I am not even running a personal practice and I'm not performing any scalar wave treatments. I have reproduced the devices according to a patent by Nicola Tesla from the year 1900 and developed them further for contemporary purposes. They are being sold as CE-certified technical equipment by my institute, the First Transfer Centre for Scalar Wave Technology (established 1988).

It is the transmission of biological information that turns the technical equipment into wellness or medical apparatuses, for example by application of a bottle of essential oils. Dr. Krahl from Erfurt, a physician, was the first to devise this method.

Today there exists an independent distribution network both foreign and domestic, purchasing the technical devices from my institute and reselling them as medical devices to clinics, physicians and therapists. Their duties encompass user support and consulting in regards to practical application within the medical sector – in the broadest sense, including wellness. Being the manufacturer, we are not able to provide any medical consultation.

3. Annual Expert Meeting concerning Scalar Wave Medicine

The annual manufacturer's support of the patented scalar wave devices consists of the organization of and invitation to a conference of scalar wave users. During the meeting, which I moderate, physicians share and discuss their experiences.

It should be emphasized that physicians use jargon different from technicians and physicists. The annual meetings respect this. One finds oneself among equals and so a well of insight is being created year upon year. This well shall be tapped into within this very documentation of scalar wave medicine.

Statements are either reproduced anonymously or attributed upon explicit approval by the author. Scientific papers and various reports complete the documentation. Any reader should be able to find answers to his most pressing questions.

But do read for yourself, for example what became of the 5th DGEIM symposium (German Society for Energy- and Information Medicine), which was held on October 25th of 2003 at the University of Stuttgart under the headline: *Is there a Scalar Wave Medicine?* (see Ch. IX from p.134 on).

Of course, textbook believers were present as well. In their eyes, the scalar wave devices appear as mere psycho gadgets, as testable experimental results were still lacking in 2003. All described treatments are entirely non-invasive. Therefore, any observable effect can only be attributed to mere fantasy, or so the conclusion went. But as the imagination can indeed help and even heal, as we all know, I'm wishing all readers of this documentation new and profound insights.

INDEL department of publishing

Konstantin Meyl

Villingen, May 2014

www.meyl.eu

II.

Overview of Devices for Scalar Wave Transmission

The basis of all efforts is the property of the scalar wave to be able to transport biological information as a so-called carrier wave. Some people compare our scalar wave devices with a truck, where the manufacturer also will or must not know, if then the user transports food or dangerous goods by the transporter.

Doctors prefer the comparison with water as the carrier for information in homeopathy. But this comparison doesn't reveal itself to everybody immediately. The transport function, which matters here, is decisive.

1. The Scalar Wave Receiver, a first step

It has already been reported on the beginnings in the first volume, the documentation (1) of scalar wave technology, in Chapter IX. There is still much to tell.

In summer 1995 I led a colleague, a professor of physics at the University of Munich, in the basement of my house. I showed him a grounded Tesla coil with a spherical electrode as an antenna and asked him to clap his hands. We were able to follow this clear in the oscilloscope picture. The colleague searched the hidden microphone vainly.

Rather, I had collected a scalar wave from the environment, brought the flat coil in resonance and modulated the acoustic wave. The overlay is possible, because both are so called longitudinal waves. The modulation is an essential part of any transmission by broadcasting technology.

2. The Transmission Line, a second step

In autumn 1999, my institute was able to show publicly the first scalar wave transmission line to an astonished audience. I had invited to the presentation in the Technology Park of Villingen-Schwenningen. The "Schwarzwälder Bote" headlined with "World Premiere" in its report on the well-attended event. This proved to be groundbreaking, not only for us.

Six months later, I discussed with business partners about Tesla in a Munich restaurant at lunch. A gentleman at the next table had just finished his meal, came over to me and gave me his business card. 'Because we are interested in Tesla' which he had heard and what was still quite unusual at this time. I also gave him my card, and then he was gone through the swing doors.

I read the name aloud, "someone knows him?" 'This is the chief editor at the publishing house that you can see when you look there out of the window', was explained to me. Soon the door opened again and he gave me his hand: "You are the famous Prof. Meyl? Can I see your transmission line again?" Of course he could, because I had built it up in the factory of a businessman who was sitting at the table.

In short: The curious journalist came, sniffed and suggested to bring the experimental set on the market as a toy. This naturally should practically cost nothing in the production and so the toy box came as a plagiarism on the market, with large Tesla on the cover but no Tesla inside. I should be glad that no mention of my name was done. The poor Tesla on the other hand, he was marketed profitably and could not defend himself. His name stands for obscure plates and electric cars that have nothing whatsoever to do with his inventions.

The customers of the 1st TZS on the other hand know that they get delivered what they expect. Only professionally manufactured circuit boards ensure the required reproducibility in science. Of course we had to invest a lot of money into the development of perfect coils.

In a "copy and paste" society, you can, however, never be sure against illegal imitators. The manufacturer, who had been sitting at the said table, and who had received the first order for the production of flat coils from me and had get paid for, he himself was not too fine to offer its own plagiarism of my experimental sets on the Internet.

I was able to experience, that such a procedure is on the agenda in the United States. In China, the Plagiateur harvests generally high praise, as is well known. What cares the freeloaders a legitimate authorship or the in approval granted patent for my transmission system?

The misbehavior incidentally makes something else clear: The second step was probably the most important!

If something significant and new becomes known in our society, then that attracts not only cadgers, but also all kinds of know-it-alls and freeloaders. In short, the concept of scalar wave spread like wildfire around the world, which is why innumerable products are sold as scalar wave devices today, more from the point of marketing than technology.

But none of these marketing devices is provided with a technical receiver. They all are pure scattering channels with humans as the recipient. One may refer to them as more or less uncontrolled polluters justifiably. As though we don't have enough field sources in our environment that burdens us and that possibly can cause illness, too.

I refer to this abuse, because I didn't want to promote it by my research. I generally reject the operation of scalar wave transmitter, that are operated without technical receiver. Who produces scalar waves, should be obligated to clean his pollution. Do you want to live in a world in which everyone throws his garbage out of the window in your garden and even in your bedroom?

And finally you have to handle the lobbyists, the self-appointed critics, opponents and their paid henchmen. It is then to be regarded as the highest praise and recognition of a discovery or invention.

3. The Scalar Wave Devices of the 1st TZS

Opponents of scalar wave technology banded together, misplayed their ammunition and disappeared anonymously, as they had come, a wide strip of scorched earth behind them. Many false "advocates" were burned in the occasion. So the third phase may be accounted for a salutary cleaning process. Serious persons were left over and are allowed be in the first row today, also in this documentation.

At a medical conference in 2003 in Bad Nauheim, I showed the experimental set the owner of a medical-technical company. He tested the system and could report of amazing properties: of a successful drug-distance transmission (tested with the Oberon device), of unexplained healing successes, etc.

He carried the suitcase to a rehab clinic in Austria. There, they are specialized in bone growth after fractures. With only 4 minutes of treatment per day, the bones were already healed after two weeks so far, as in a control group without any additional treatment after three weeks. Thousands of patients participated in the experiments, which were supported scientifically by the TU Graz.

Those involved soon agreed that the experimental set needs to be improved for clinical treatments. A long specification was created, which included the gained experiences and wishes.

So in 2003, the scalar wave device SWG-A was developed, initially in analogue technology. Except of the successful coils (of type A) almost everything had changed.

Later, the digital SWG-M was added as a further development and improvement and finally the present SWD (Scalar Wave Device), which replaces the previous SWGs.

Specifically for laboratory needs was created another scalar wave system, which has taken its place somewhere between SWD and experimental set, the SWT (scalar wave transporter).

4. The Scalar Wave Transporter SWT

Research institutions working with petri dishes and test-tubes usually require an extension of the experimental sets by another recipient. The tasks of the device temporarily offered as Bio-Set now fulfills the scalar wave transporter SWT. An energy transmitter operates here on two resonant receivers.

It has been found to be advantageous to perform the transmission of information from one to another receiver.

If we compare this with the operation of the SWD, which doesn't need a second receiver necessarily because this is normally the patient himself. The SWT thus is aimed specifically at the group of research institutions that are not working on patients.

In the first volume of the documentation the transporter SWT has already been discussed. Especially the biotechnologists and biochemists were addressed. This second band is aimed primarily at physicians and medical technicians. Of course, they must be familiar with the technical features of the devices, eg with the digital DDS functiongenerator, so there are some repeats from the first band in the following chapter.

I ask all, who hold both volumes in hand, to apologize for the repeats in Chapter III. If you still know about the upcoming chapter, you can skip to page 25 and read more in Chapter IV.

III.

Technical Description of the SWT

All scalar wave devices, the SWD, SWT, SWS and SWM are working with the identical coils (Type A) and with the same digital Function generator.

1. Setup of the Digital Function Generator

* The recommended setup is: **without the 32dB** attenuation (knop up) and **without offset** (the knob in the middle position with an upward-pointing marker).

* By **plugging in** the switched power supply the 5 volt power supply is provided. With the red "**Power**" switched on the electronics are internally powered with 5 volts (display goes on).

* The display shows the last saved frequency, e.g.:

* F = 6780.00000 kHz. Pushing the button [<] shows:

* F = 6780.00000 kHz. Repeated pushing of the button [<] gives:

* F = 6780.00000 kHz. Pushing the button [OK] shows in MHz:

* F = 6.78000000 MHz.

This setting (2nd digit marked and MHz indication) simplifies the finding of the resonant frequency in most cases. The underscore on the second digit means that by turning the adjusting knob (**Adjust**) from this position the frequency can be increased or reduced.

The second line should show FUNC:WAVE=SIN, because the use of a sine as a waveform is recommended. With the button [Wave] the setting can be switched to TRI (triangle) or to SQR (square). Subsequently SIN (sine) shows up again.



Fig. 1: *DDS generator*

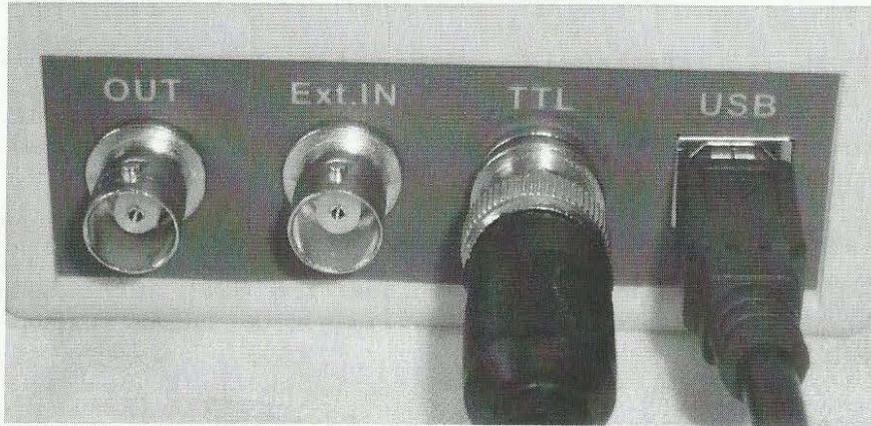


Fig. 2: Connector block of the DDS generator (on the back)

On the back of the DDS generator are the following connections from right to left:

USB: Here is the connection of the 5 V power supply.

TTL: Here is the connection for the pancake coil (type A or C). The connection was prepared for our application, therefore the term is no longer applicable).

EXT.IN: NC (here could be an AC voltage connected and the frequency displayed. This function is not needed, so the connection remains unused).

OUT: NC (here a 50 Ohm load can be connected. If a pancake coil is connected, there is a risk of overloading. In this case it is recommended to review the sine shape by an oscilloscope).

There may be strong repercussions on the transmitter so that the waveform is different from that of the sine wave. This can be seen when a different light illumination is observed on the light-emitting diodes. In such cases it is recommended to reduce the amplitude to the extent until the signal is again symmetrical. It is also possible that the offset controller is not centered. Otherwise for the resonance search initially turn the **amplitude** to the maximum.

The search for the natural resonance is relatively easy with help of the light-emitting diodes (**LED**). By increasing (Adjust clockwise) or decreasing (Adjust counterclockwise) the frequency the LEDs go on or off. The resonance point is found when the LEDs at the receiver glow brightly while they go out simultaneously at the transmitter. The amplitude can now be reduced and adjusted.

It is recommended to **store** the setting if necessary. For this the prompt is switched to the bottom row with the [Sel] button:

* FUNC: WAVE = SIN. After 4 times pushing [>] is displayed:

* FUNC: SAVE = 0. With [OK] the last setting is stored.

2. Safety Instructions

The entire arrangement is operated by the enclosed low-voltage wall power supply with test seal (respectively batteries) and thus with a low and harmless operating voltage. A danger of an electric shock is therefore impossible with the original kit (and the provided wall power supply).

For the Experimental-Kit and also for the Scalar Wave Device SWD we have test reports of an accredited laboratory for electromagnetic compatibility. These evidences for the granting of the CE mark will be submitted upon request. Regardless of that the manufacturer for the DDS generator guarantees for his part the CE and UL testing. On the wall power supply these approvals are usually printed.

Despite of the specified stability it is to be made certain that short-circuits (e.g. by metallic objects or wires) on the circuit boards are avoided. The manufacturer assumes no liability for damages of any kind. These may, for example, be caused due to improper handling or application, or the use of other or additional, not in the set contained, components and their combination with the kit. Also closed components may only be opened by the manufacturer on the grounds of warranty.

The red POWER button switches the 5 volt supply internally off. Who wants to turn his device completely currentless should pull the plug or provide a switch at the plug (to avoid standby energy consumption).

3. Features of the Scalar Wave Transporter SWT

On May the 2nd in Lyon, at the 8th Meeting of expert researchers in the field of scalar waves, the SWT was introduced and is intended for biochemical and biomedical professional labs. For good reason, the test tube is used before the experiments are extended for animals and humans. Therefore, a means of transport is needed to transfer the biological information of a test tube to another over some distance. This requires two receiver coils in our case.

To ensure that the pancake coil remains free, the antenna wire is led downwards as in the SWD. In a specialized laboratory you see the effect of the detuned resonance. When you come too close to the antenna, you get capacitively coupled. Therefore, the antenna must not be hidden in a tower. Normally you love the more open design.

The antenna of the SWT is extendable. This has technical reasons also. Minimal differences between the two receivers cause to different voltages and the LEDs illuminate different. You could swap the three identical coils cyclically and choose the version with the highest accordance.

A fine tuning should follow. This can be done with a slightly longer or shorter antenna to adapt the wavelength. Overall, the range increases while the antenna length is increased.

The LEDs can be switched off as well. If the resonance is found and the experimental setup is not changed, this setting could be saved in the digital generator. The LEDs are no longer needed.

The adjustment of the resonance is very convenient with the help of the LEDs but unfortunately the LEDs cut down the peak in the sine curve when the diode current increases. This can lead to disruptive contortions in transition, which can be avoided by switching off.

4. Delivery Contents of the SWT

- 1 DDS function generator, freely adjustable up to 8 MHz including a frequency counter inside
- 1 wall power supply (primary: 100 - 240V, 50 - 60Hz AC; secondary: 5 V DC, stabilized, USB-B port)
- 1 connecting cable (BNC plug to banana jacks)
- 3 pancake coils, type A, incorporated in a plastic box
- 3 spherical electrodes with telescopic rod
- 2 connecting cables with banana jacks on both sides
- 1 documentation (this book)



Figure 3: *Delivery contents of the scalar wave transporter SWT*

For special needs more coils and antennas are available as well as a battery adapter (accu buffered power pack). Professional labs that do not require medical training and also send their final research report to the I.T.Z.S., can purchase the SWT at special rates.

5. The Boxes of the SWT

The 3 boxes are identical and can be used (1) to transmit energy, (2) to receive energy and transmit information at the same time or (3) to receive energy and receive information at the same time.

As already said, in the case of resonance you can no longer distinguish who is transmitter or receiver. At the end is always a state of equilibrium

Figure 4 shows one of the three boxes.

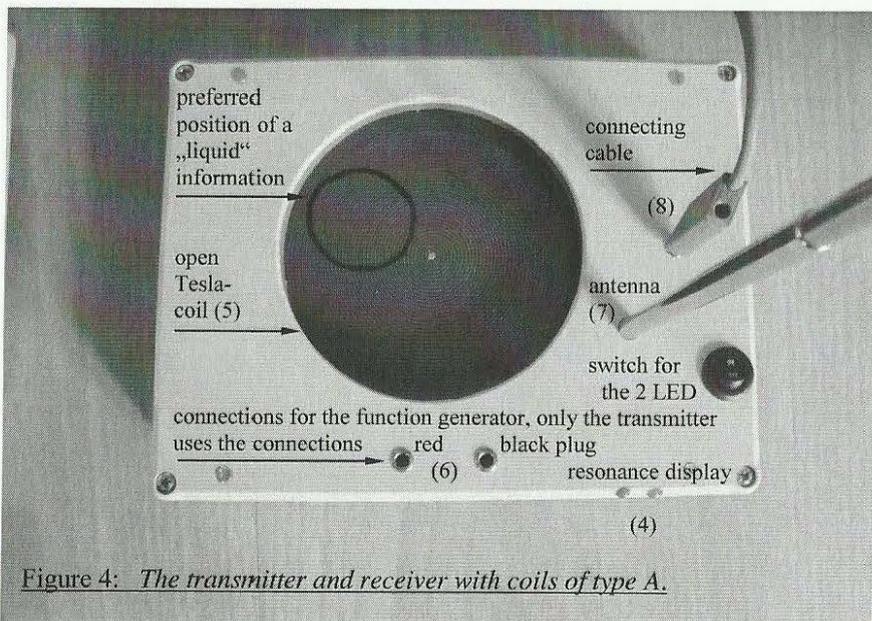


Figure 4: *The transmitter and receiver with coils of type A.*

Each box (1-3) is equipped with two antiparallel connected LEDs (4) to show the resonance. The open window of the Tesla coil (5) has a usable diameter of 90 mm.

7. Placement of the SWT

It is important to ensure that the devices (transmitter and both receivers) are not too close to metal objects which could shift the resonance frequency. A minimum distance of 50 cm to the heater must be maintained. A table with a metal plate should be avoided.

It is also important to ensure that no metal or sharp objects are placed on the pancake coil. This can damage the coil. If you use glass on the flat coil (e.g. ampoules of sample liquid), you should avoid leaded glass which could shift the coil resonance.

The popular misconception that light, so-called biophotons, could transfer scalar waves can be disproved with an optically opaque screen in front of the receiver (Figure 5).

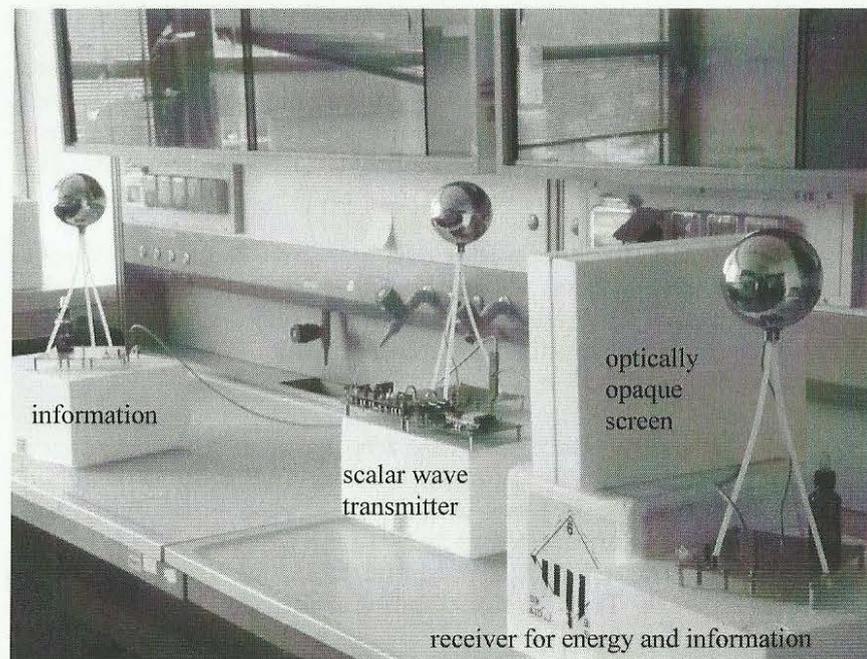


Figure 5: *The experimental setup in the DNA laboratory of the University of Brescia, Italy, 2013 (Facolta die Medicina e Chirurgia, Universita degli studi di Brescia)*

Skeptics like to use the unexamined prejudice that a detectable effect would only work if a certain person was in the room. In such cases, I recommend to try the experiment again by different people. During the transmission, all individuals should also leave the room.

7. The Startup of the SWT

The external switching power supply is connected to the grid and via the USB cable to the generator.

The generator output "TTL" is connected to a box (connections 6). The two receivers are connected from the "ground connection" (8) with the two cables (8).

The antennas are inserted through the hole (7) and slightly screwed by turning clockwise. The telescopic rods are extended to approximately half the length. Otherwise, the boxes fall over.

The 3 boxes should be placed visibly on the table so that the user sees all the LEDs. With the red button, the generator is switched on and with the frequency controller (adjust) the resonance frequency of the scalar wave is searched (advice: press [$<$], [$<$], [OK]).

With the diodes of the transmitter can be controlled if the offset is actually regulated to zero. By turning this knob to the right and to the left, the one or the other LED on the transmitter goes out. However, both LEDs should be equally strong. Please adjust the determined center position.

The amplitude at the used generator frequency slightly decreased while the frequency increased. At 8 Mhz, the stop is reached already. The finding is very easy when you start with full amplitude of 8 MHz and regulate backwards until the LEDs of the receiver are on the maximum and the LEDs of the transmitter remain barely dark. The resonance point is found.

Now, the two paired diodes of the receiver gain the attention. The LEDs should respond equally. If a correction is necessary, you can attempt to change the length of the antenna in order to achieve the desired balancing.

For the search of the resonance with e.g. glass bottles with liquids, the same bottles with water should be placed on the coils. Preferably the bottle is placed on the marked spot of the coil.

This setting should be saved now (as described on page 17) and if necessary readjusted before each new attempt. The quartz crystal is a great help to stabilize the frequency, especially for comparative experiments with the same setup as condition.



Figure 6: *Experimental setup of the scalar wave transporter SWT*

8. Work Surface on the Tesla Coil

The boxes have a freely accessible pancake coil (also called a Tesla coil) on the top as part of an air transformer. On the coil, preferably on a receiver, the samples can be placed in the high frequency field of the coil. For this purpose, the housing was left open to create a work surface there.

Please never give fluids or substances directly on the work surface. Always use a bowl of glass or something similar and never place metallic or sharp objects on the pancake coil. This could damage the coil.

The sample affects the generated field. The generated scalar wave from the SWT operates as a kind of "transport medium", similar to the role of water in homeopathy. A threat from the field of the SWT is almost impossible, as well as the water used in homeopathy considered as comparatively harmless.

For biological experiments with the SWT, the default setting must be chosen. Unfortunately, as electronics producer, we are not able to write a comprehensive instruction manual for MDs. We also point out that the technical product becomes only a spa device or a medical therapy unit through the placing of a nosode or a vial with biological or chemical substances.

For medical indications for the practical use of the scalar wave devices, I refer to the medical-technical distribution of the manufacturing company. I would also like to recommend the references in the first volume, „Documentation 1“, with a biological and technical focus as well as the following compiled reports revolving more around biology and medicine.

These instructions also apply to the basic model, the SWS, which only contains two boxes. One can even perform the experiments described subsequently, if the essences are placed on the same coil carrier surface.

IV.

Experiments in Biology with the SWT

The idea for the research discussed subsequently was born on a hike along the Bodanrück, a mountain ridge dividing Lake Constance. I was telling my friend Johannes of the experiments with the paramecia (Volume 1, page 211) and suggested similar experiments incorporating the transmission of information via scalar waves.

Johannes, who has spent the majority of his scientific education in research, came up with the idea to transmit a drug's signature to yeast cultures. The experiment should be simple and inexpensive, as his holiday home at Lake Constance was no professional laboratory. In any case, this request was difficult to satisfy.

It is nonetheless advantageous to keep such experiments accessible to anyone. Brewer's yeast is available at any supermarket and Canesten, a proven household remedy for athlete's foot, at any pharmacy. The Scalar Wave Transporter was supplied by my institute, the 1st TZS.

As the SWT was only developed after and on the basis of those experiments, I first had to extend the experimental kit accordingly. And then it was time to go.

By the way we remembered our school days, when we had the same German teacher at the Pestalozzi grammar school in Unna, which provided us with additional incentive to prove to ourselves what we had learned a long time ago. The result of our work was first published in German in the journal CoMed (2013). Being a practicing physician, Johannes contributed the biomedical material, while I supplied the bio-technical documentation.

A translated version in English has been published in 2014 (peer reviewed) in Medical Science 8(30), p.58-62, ISSN 2321-7359; Ebbers J.A. and Meyl, K.: "Drug effects in yeast mediated by scalar waves".

1. Drug Effects in Yeast mediated by Scalar Waves

by Johannes A. Ebberts and Konstantin Meyl

published in Medical Science, Volume 8, Number 30,
May 21, 2014, pages 58-62

Abstract

Scalar waves (longitudinal waves, Tesla waves) represent a special class of waves in electromagnetics. Their physical properties may qualify them as a means of informational transmission in biological systems. By the help of an experimental kit producing a resonant scalar wave to be used as a carrier wave for biological information, it can be shown that clotrimazole, a fungicide, exerts a growth inhibiting effect on yeast without any chemical contact. Possible implications for medical purposes are discussed.

1.1 Introduction

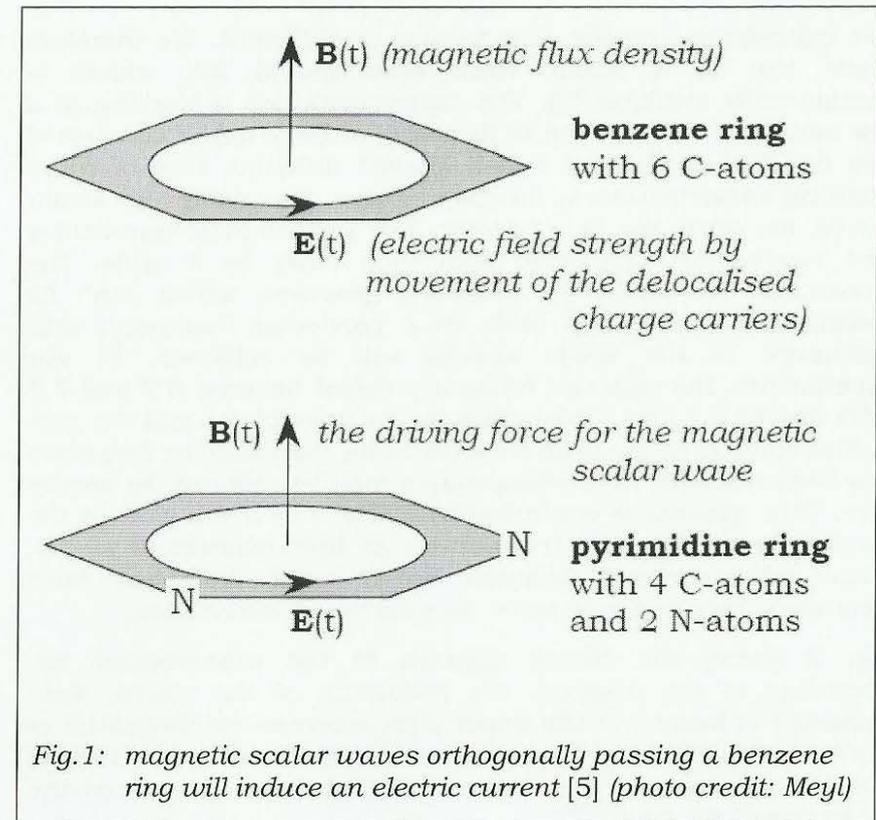
In 1900, a patent on „The Art of Transmitting Electrical Energy Through the Natural Mediums“ was granted to the croatian electrical engineer and physicist Nikola Tesla (1856-1943) [1]. It was also Tesla who emphasized on the medical significance of high frequent electrical currents [2], but no theory was available at that time, to describe his practical findings. In 1990, a theoretical basis for Tesla's work was found by expanding Maxwell's field theory by so called „Potential Vortexes“ which are propagating as a longitudinal wave through space [3]. According to the wave equation (Laplace) this new theory describes electric (or Tesla waves) as well as magnetic waves which could play a relevant role in biology [4, 5].

These waves show special properties in comparison to common Hertzian waves (transverse waves). Applying the definition $\lambda \times f = c$, that means: the product of wave length and frequency defines the speed of propagation, which for transverse waves is always the amount of the speed of light. Longitudinal waves however, propagating in the direction of an oscillating field pointer, will show a varying speed. This condition is of importance in respect to the degree of freedom for information transfer by wave modulation.

In Hertzian waves, either wavelength or frequency may be modulated for information transfer. In scalar waves with their variable speeds, wavelength and frequency can be modulated

simultaneously. Thus, the quantity of information carried by scalar waves is a multitude in comparison to Hertzian waves. These properties make scalar waves a good candidate for a fundamental principle of information transfer in biological systems. Of course, special antennas are needed, a source of scalar waves and a receiver as well. This could be effected by benzene, purine and pyrimidine ring systems, which are wide spread in plants, animals and man. All of these ring systems have free electrons in common.

According to the law of induction, a magnetic field (or scalar wave) passing by, will induce an electric current inside the ring system by moving the free electrons. This electric current supports the necessary energy for chemical reactions as e.g. the methylation of DNA bases (fig.1).



The selectivity of this process is ensured by wave modulation: only waves interfering with the target ring system according to the physical law of resonance are able to induce a reaction.

Unfortunately, scalar waves can not be measured by technical means up to now. Therefore, we developed an experimental set-up in order to detect the biological effects of scalar waves indirectly.

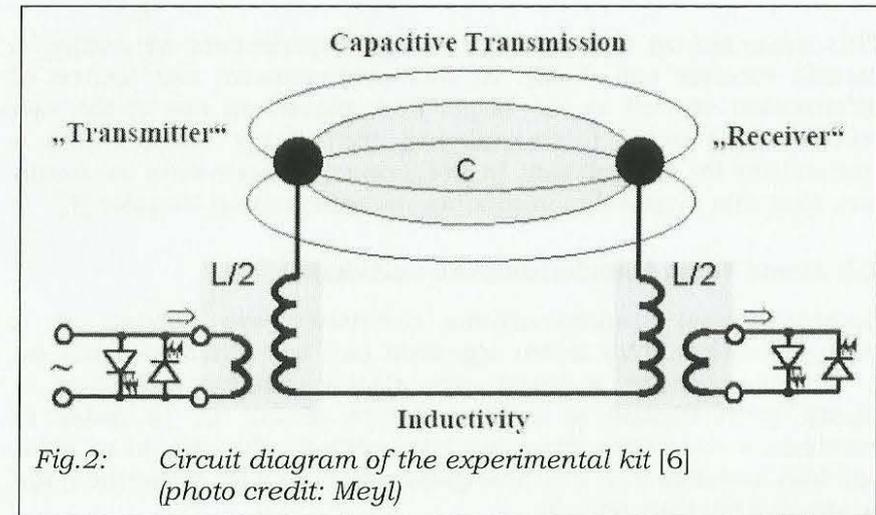
Materials and Methods

1.2 Generation of Scalar Waves

Tesla built huge constructions in order to produce scalar waves. He worked with high voltages (several hundreds of kilovolts) at high power. His predominant aim was the wireless transfer of energy.

For information transfer, low tension is sufficient. We therefore made use of a scalar wave experimental kit, which is commercially available [6]. The experimental kit is working at a low tension of 12 volts and in the range of some mA. It consists of two flat Tesla coils and a ball shaped antenna. One of these identical constructions is functioning as a transmitter for scalar waves, the other one as a receiver. The Tesla coils of transmitter and receiver are connected with each other by a cable. The transmitter is run by a frequency generator which can be modulated in amplitude (AM). At a particular frequency, self-resonance of the whole system will be achieved. In our experiments, the resonant frequency varied between 6.7 and 7.2 MHz due to the field attenuation by the agar plates and the glass bottles containing the drug solution. Once the resonant frequency has been reached, the feeding source may be reduced to nearby zero. This process is controlled by LEDs, which will glow in the receiver but not in the transmitter. At that moment, a stable, quasi self-sustaining resonant scalar wave field has been generated. This field may serve as a carrier of information.

Fig. 2 shows the circuit diagram of the experimental kit. According to the diagram, the maximum of the electric field (capacity) is located in the upper part, whereas the maximum of the magnetic field (inductivity) is to be measured somewhere on the flat coil, where the primary excitation coil is placed on the other side of the board [7].



As the magnetic scalar wave is useable as a transport medium for information, both - the substance with its information to be transferred and the biological target- have to be placed on the flat coils, the substance on the transmitter and the target on the receiver coil.

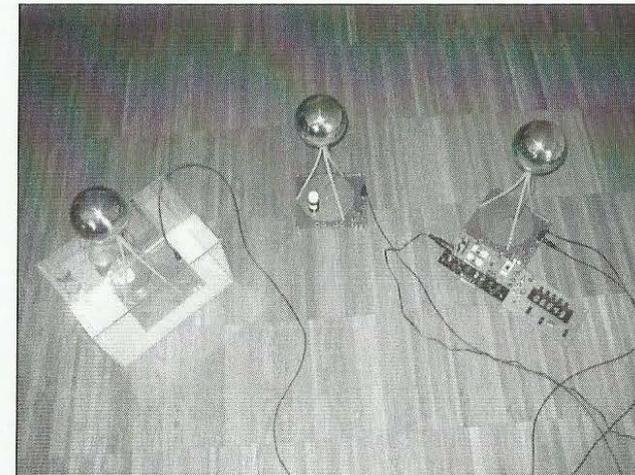


Fig.3: The modified set-up with the transmitter coil and frequency generator (right), one receiver coil with glass bottle containing the drug to be transmitted (middle) and the second receiver coil in its thermostatic controlled glass chamber containing the biological target (yeast colonies on agar plate)

This basic set-up was modified in our experiments by adding a second receiver coil (fig.3). In this arrangement, the source of information as well as the target were placed on one of the two receiver coils each, thus changing one energy receiver into a transmitter for information. In preliminary experiments we found out, that this disposal is improving the information transfer [7].

1.3 About Yeast (*saccharomyces cervisiae*)

Common yeast (*saccharomyces cervisiae*) was chosen as a biological target. This micro organism can be cultivated easily on a suitable culture medium (2% Glucose-Sabouraud agar in plastic petri dishes) at a temperature of 25° C. In order to maintain a constant cultivation temperature, the second receiver coil was installed in a heatable glass chamber with a thermostatic controlled heating. (Fig. 3)

200 mg of fresh common yeast as commercially available were dispersed in 0,5 ml sterile sodium chloride solution. Equal amounts of this suspension were seeded on the agar plate in order to produce as circular and identical colonies as possible.

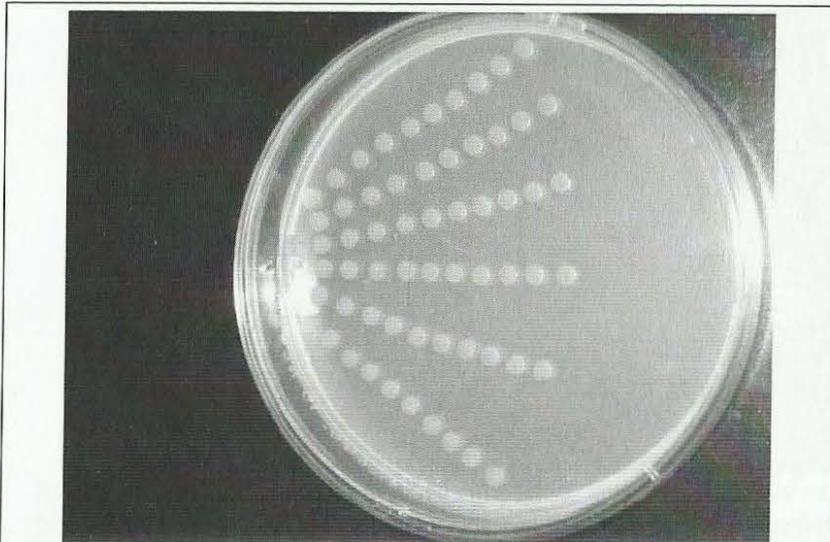


Fig.4: Common yeast colonies on 2% glucose-sabouraud agar

The size (surface) of the colonies was measured and documented by a commercially obtainable video microscope as shown in fig.5. Measuring was carried out initially after the explantation of the colonies, after 24 and 48 hours of continuous cultivation and exposition to the scalar wave field.

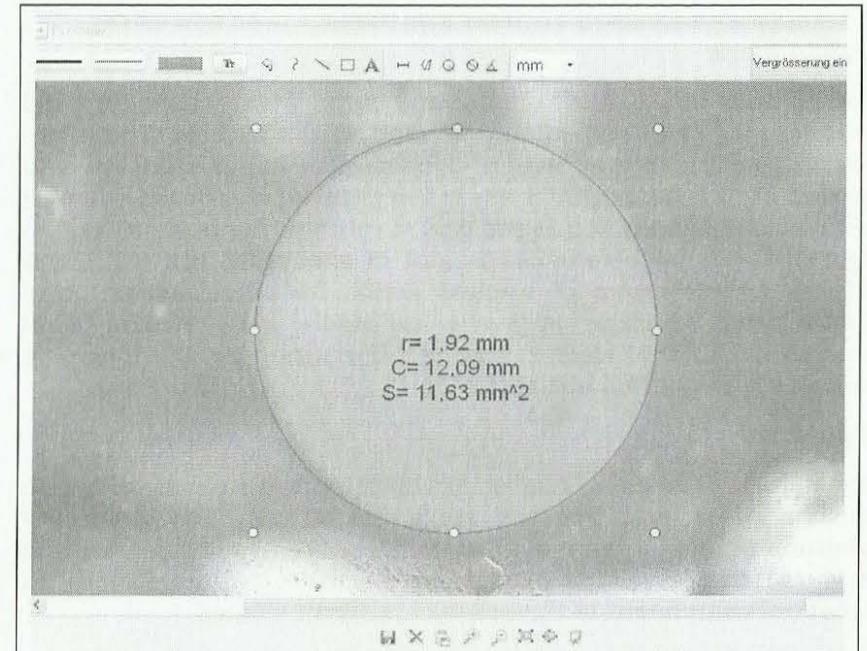


Fig.5: Measurement of a single yeast colony by video microscopy. Surface values („S“) were chosen for further evaluation.

1.4 Statistics

Measured values were lined up in a spreadsheet. Mean values and standard errors were calculated. The results were subjected to a two-sided Student's t-test.

The mean values of the colony surfaces before incubation and scalar wave radiation (start) were converted to 100%, the further growth also being calculated as percent values.

Clotrimazole

Clotrimazole is an antifungal substance, widely used for the treatment of yeast infections in man and animals. There are several mechanisms by which clotrimazole impairs growth and division of the yeast cells: it alters the permeability of the cell wall and blocks enzymes inside the cell. It inhibits the biosynthesis of ergosterol (an important compound of the yeast cell wall) and induces a breakdown of nuclear acids. Its chemical structure shows three benzene and one imidazole ring, which is of importance for the transmission of information by the magnetic scalar field as pointed out above [8].

Ergosterol

Ergosterol as the yeast analog to cholesterol in animal cells also consists of several benzene rings. In so far, the necessary condition of loop antennas on both sides, the transmitter with its drug information (clotrimazole) and the biological target with its ergosterol component of the cell wall is accomplished.

Triamcinolone

Triamcinolone is a synthetic long acting glucocorticosteroid. Its chemical structure is characterized by several benzene rings as well. As any corticosteroid, triamcinolone produces a variety of biological effects by binding to an intracellular steroid receptor. Steroid receptors are evolutionary conservative structures and also present in yeast cells. In our experiments, we tried to show, if scalar waves are able to transfer information in both directions: one growth inhibiting by clotrimazole and another anabolic, growth stimulating by triamcinolone.

1.5 Controls

Both experiments, the information transfer of clotrimazole and of triamcinolone were match-paired by controls, using distilled water, filled in identical bottles to those containing clotrimazole or triamcinolone respectively.

Growth of yeast colonies under direct (chemical) influence of clotrimazole

One agar plate was prepared as described above by implanting yeast colonies suspended in 0,9% sodium chloride. Another agar plate received yeast colonies suspended in a 60% clotrimazole solution. Both plates were incubated together under continuous scalar wave exposition. As expected, a highly significant ($p > 0.0001$) growth inhibition was observed under the direct influence of clotrimazole after 24 as well as after 48 hours.

1.6 Results

Growth of yeast colonies under continuous scalar wave radiation and clotrimazole information transfer

Again the identical set up was used (same resonance frequency, same amplitude, same environmental conditions). The result is won by the difference between a drug information transmitted compared with no information (distilled water).

The transfer of the mere clotrimazole information by (magnetic) scalar waves inhibited the growth of yeast colonies statistically highly significant ($p > 0.0001$) after 24 hours and 48 hours as well.

(Growth of yeast colonies under intermittent scalar wave radiation and clotrimazole information transfer.

The experimental set up was the same as described above, the radiation periods however were restricted to 5x30 min. in 24 hrs. After 24 hrs, a weak growth inhibition ($p = 0.0257$) was observed, which turned however to a statistically high significant growth inhibition after 48 hrs. ($p = 0,0001$). Fig.6 shows the respective expansion rates).

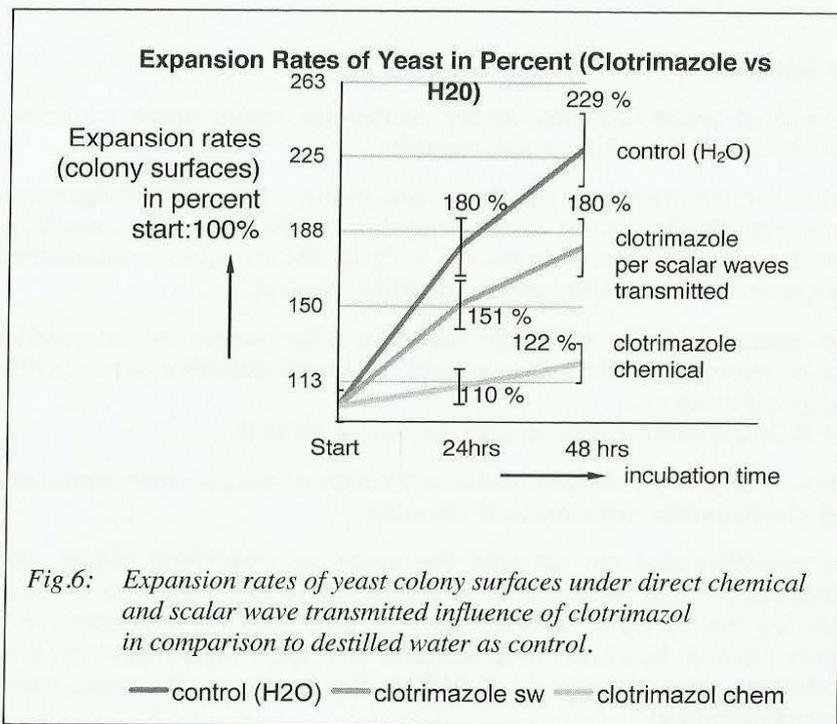
1.7 Comparison of growth inhibition by the tested modalities

As expected, the direct (chemical) addition of clotrimazole showed the strongest growth inhibiting effect: 70% after 24 hours and 107% after 48 hours respectively.

After all, the inhibition rates obtained by mere information transfer via scalar wave radiation reached 29% and 49% after 24 and 48 hours.

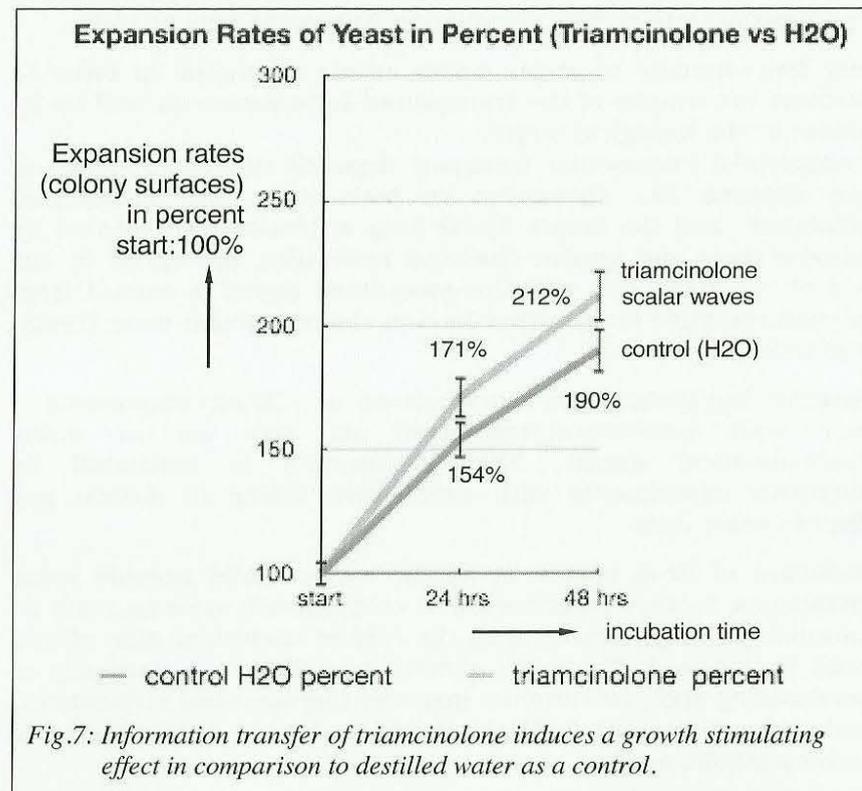
A rough approach allows the assumption, that the information transfer by continuous scalar wave radiation is about half as effective as the direct chemical drug application.

Fig.6 shows a synopsis of the different growth rates of yeast under the influence of clotrimazole by chemical and scalar wave application in comparison to distilled water as a control.



1.8 Expansion rates of yeast under (continuous) scalar wave triamcinolone information transfer

Information transfer of triamcinolone by continuous scalar wave radiation induced an enhanced, statistically significant yeast growth after 24 (p 0.0001) and 48 hours (p 0.024) compared to the water control as shown in fig.7. The growth stimulating effect amounts 17% after 24 hours and 22% after 48 hours.



1.9 Discussion

Drug effects in biological systems are normally mediated by direct chemical interaction. Our experiments show, that there might be an additional pathway by means of physical information transfer. This physical pathway requires a special class of carrier waves named electric or magnetic scalar wave [7].

Our experiments provide evidence for the assumption, that this mechanism is able to work in both directions: growth inhibition (clotrimazole) and growth stimulation (triamcinolone) as well.

Very low intensity of scalar waves seems to be crucial in order to facilitate the uptake of the transported information as well as its release in the biological target.

A successful information transport depends on the existence of loop antenna like structures on both sides, the transmitted substance and the target. These loop antennas, represented by benzene rings and similar chemical molecules, are excited by the field of the coils. This complex modulated signal is carried from one ball electrode to the other by a (n electric) scalar wave (Tesla-Transmission -Line) [7].

Benzene ring systems are widely spread in cells as components of their wall (cholesterol/ergosterol) as well as in many pharmaceutical agents. This assumption is enhanced by analogous experiments with saccharose failing to induce any effect in yeast cells.

Mediation of drug effects by scalar waves could provide some advantages: further experiments in complex cell systems such as mammals might show, that the rate of undesired side effects could be reduced. These are mostly caused by the necessity of metabolizing and excreting the ingested therapeutical substances. Scalar wave transmitted effects do not seem to be subordinated to such metabolic needs.

The combination of both pathways, the chemical and the physical, might enhance the desired therapeutical effect without increase of undesired side effects.

Further experiments in complex organisms are necessary to explore the therapeutical potential of this new method of mediating drug effects.

1.10 References

- 1 Tesla, N.: *System of Transmission of Electrical Energy*. Patent No 645, 576 (1900) taken from *Collected Germ and American Patents, Edition Tesla MVV Peiting, 510-521, (2000)*
- 2 Heerd, U.: *Nikola Tesla Band 5. Wegbereiter der neuen Medizin*. Edition Tesla, Peiting, 168-169, (1997)
- 3 Meyl, K.: *Potential Vortex 1 - 4, (orig. Potentialwirbel 1990), 2nd ed. INDEL Verlag 2012.*
- 4 Meyl, K.: *DNA and Cell Resonance: Magnetic Waves Enable Cell Communication, DNA and Cell Biology*. April 2012, 31(4): 422-426. doi:10.1089/dna.2011.1415.
- 5 Meyl, K.: *DNA and cell resonance, INDEL Verlag 2010*
- 6 Meyl, K.: *The Experimental-Kit (see in the shop of www.meyl.eu)*
- 7 Meyl, K.: *Documentation (1) for the Scalar Wave Technology, INDEL Verlag 2013, manual and reports about the scalar wave kit [6]*
- 8 FDA: *Clotrimazole, official FDA information, use and side effects (2011)*

2. Biological Signals Transmitted by Longitudinal Waves Influencing the Growth of Plants

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Abstract:

In the experiments presented the effects of transmitting information derived from the growth hormone gibberellic acid (GA) to peas over a distance of some meters have been measured. Transmission of the biochemical characteristics of GA was achieved through a carrier wave of approximately 6.78 MHz running along a copper wire comparable to a strip line from the gibberellic acid as the source of information to the exposed peas, which reacted by a statistically significant enhanced root growth. The measured averages of the germinating pea root lengths were compared to control values, i.e. values corresponding to untreated peas. While continuous GA transmission resulted in an average increase of root length by approximately 50-60%, a singular burst of 15 minutes could increase roots' length by an additional 42%, raising the increase relative to the control group by as much as 125% in total. Both values could be established with very high statistical significance. In a third experimental setup, the peas were treated instead of a GA-signal, with an apoptotic signal produced in *two* different ways: with a pulse carrying the information of peas (a) either stored anaerobically (48-100 hours) or (b) peas macerized and therefore decompartmented. The almost total inhibition of root growth showed, again with high statistical significance, that an information transmission must have occurred remotely. The molecule hypothesized should be *cytochrome c*, released by the stress occurring during the apoptotic process. Some hypotheses in technical as well as in biological respect are being discussed.

Keywords: Peas, Cell Communication, Signaling, Scalar Wave, Magnetic Field.

2.1 Introduction, about the effects of gibberellic acid (GA) on plant systems

In higher plants, many physiological processes are being regulated by plant hormones, e.g. cell division, cell differentiation, the extension growth of plant organs and the induction of protein synthesis. Gibberellic acid (chemical structure Fig. 1) is a plant hormone stimulating cell division and cell extension growth of plant cells. Induction of seed germination is triggered by GA as well: The presence of gibberellic acid interrupts the state of dormancy adhered to by the seeds of most plants and lets the cells of the radicle elongate because of the induction of certain enzymes, such as amylases, proteases and other hydrolases by GA [1], [2]. Consumption of respective reservoirs such as carbohydrates and proteins is being initiated this way; the seedling is being supplied with nutrients and energy and is thus able to differentiate itself into root and shoot. During this process, both the synthesis rate of α -amylase and the concentration of mRNA via added transcription of the amylase gene are known to be increased [3].

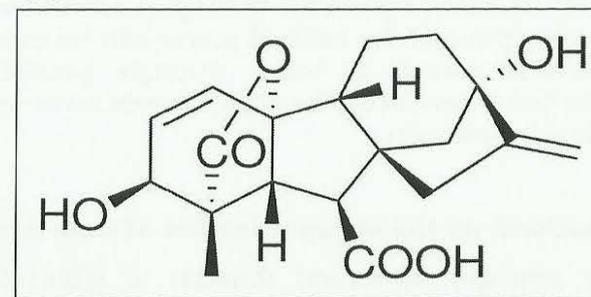


Fig. 1: chemical structure of gibberellic acid (source: Wikipedia)

This ability of gibberellic acid – stimulating the germination differentiation – is measured as accelerated root growth of seedlings.

In the case at hand, it was our intention to both prevent immediate contact of the seeds with the hormone and to ensure constancy of environmental factors such as light and temperature in order to eliminate internally induced influences on the germination process.

To this end, the carrier wave of a scalarwave transponder kit [4], (see Fig. 3 and 6), modulated with the GA information on one side of the kit was used to be transmitted to the peas on the other side of the transponder over a distance of approx. 3 meters. The effects of this transmission could then be measured as an indicator of a possible biological reaction.

The fundamental question is how to interpret any germination increase or growth stimulating effects if the peas did not get into contact with the hormone itself, and were incubated under constant environmental conditions. To examine this kind of information transmission over some distance, it was necessary to compare the experimental GA-data to controls as large as possible.

The distance between the information source (modulated with the hormone information) and the peas was bridged by way of the mentioned scalar wave transponder [4]. We used a standardized experimental kit differing from other common scalar wave systems in that one or multiple receivers can be linked to one emitter. As they maintain resonance through a connection cable, the complete absorption of the emitted power can be ensured. In this way, possible biological harm through possible stray magnetic fields can be avoided. The scalar waves serve as carrier for the biological information.

2.2 A new approach on the communication of cells (acc. to [5])

The spatially arranged structural formula of gibberellic acid consists of multiple pentagonal and hexagonal ring systems (Fig. 1). From the benzene circle or the pyrimidine ring, as they occur in the base pairs of DNA, we know the delocalized electrons that freely move about inside the ring.

When you bring these rings (they are pretty common in organic chemistry) into a magnetic field, then electrons start to move due to induction. What we deal with is a frame antenna for the reception of high-frequency signals.

The induced loop current is capable of saving the magnetic field and then release this stored energy as information, much like a source or transmission antenna (Fig. 2).

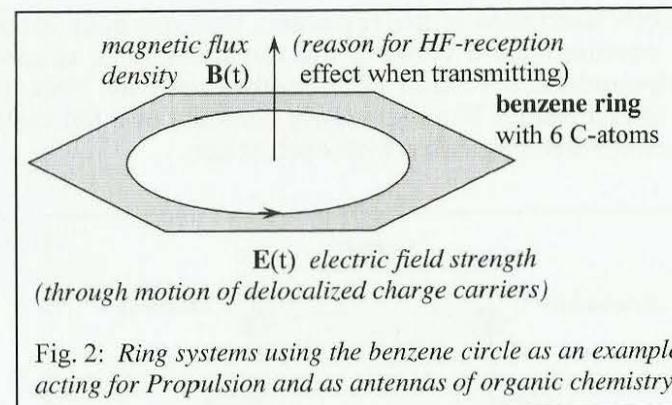


Fig. 2: Ring systems using the benzene circle as an example, acting for Propulsion and as antennas of organic chemistry.

This is the basis used by Meyl to explain cell communication, as well as the reading and writing of DNA-bound genetic information [6]. Should the substance-bound effect of the growth hormone upon excitation in a magnetic field be transferred to the motion of the ring electrons, then the result is the modulation of the created magnetic field.

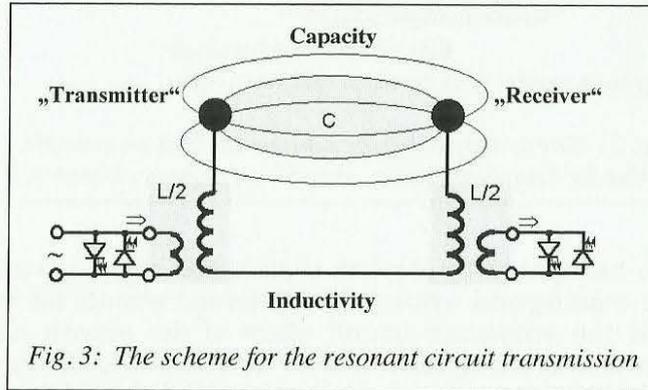
The model concept assumes that the information can be transported after the electrons in the ring have received it from the chemical substance. There is however another problem that asks for a technical solution.

Magnetic fields don't have a big reach, especially not when they are caused by such weak currents. To make the transmission over a larger distance possible the modulated magnetic field has to be modulated onto an electrical field.

2.3 Experimental Setup with the SWT (Transporter-Kit)

By default, inductivity and capacity are in use of the oscillating circuit for the shown setup (fig. 3). A peculiarity however is that the capacitor plates are pulled far away from each other, here the distance is 3 meters.

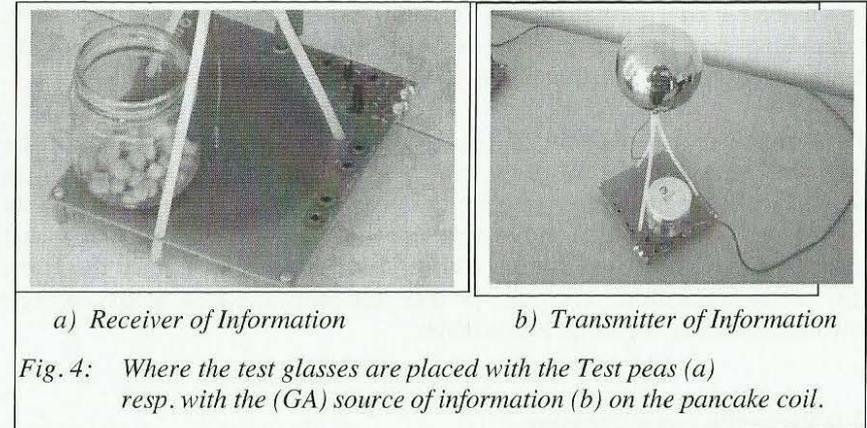
Between both electrodes of the capacitor, that are balls instead of the more common plate variant, the electrical field spans from one ball electrode to the other in a longitudinal way. This further improves the emission. The inductivity consists of 2 flat coils that are connected via a long cable with each other.



The flat coil on the upper side of the circuit board (makes for) establishes an ironless transformer in combination with the coupling coil at the bottom. Both coils are identically built and equipped with LEDs to display any eventual current. A sinus function generator induces a coil that is to be called "transmitter" while the other one will be the "receiver".

If we think of the flat coil with a connected ball electrode as a $\lambda/4$ -antenna, then a standing wave will form in self-resonance according to classical antenna theory. The tip of the antenna is the ball electrode, where a maximum of the electrical and a minimum of the magnetic field strength occurs. At the bottom of the antenna the opposite happens with Minimum of the E-field and Maximum of the H-field (Fig. 4b)

High-frequency stimulation through the coupling coil makes the antenna act like a charge pump at its bottom, where the magnetic field is at its strongest. This "charge pump" puts an electrical current on the connection line, which oscillates back and forth between transmitter and receiver. The characteristic frequency of the oscillatory circuit comes to about 6.78 MHz for the coils used here. It's a special case of resonance in which transmitter and receiver are in antiphase, yet oscillate with the same frequency.



2.4 How to optimize the experimental Set-up

The antiphase behaviour seen in the present test should, however, be avoided. Experiences with similar transmissions, for example the Canesten and yeast culture test [7] have shown a doubling of the performance when *two* receivers were used. To do this a second, identically built receiver is connected to the transmitter. Because of the antiphase behaviour both receivers, compared to each other, oscillate equiphase, which means there's a repulsion towards the carrier wave. This seems to support the detachment process of the information from the carrier wave.

The statement about the field distribution of the antenna has been checked by technical measurements as well. The maximum of the magnetic field strength is indeed located at about half the wire length between the ball electrode and the connection line. The point lies on the outer third of the flat coil as a measurement using a magnetic field probe that has told us.

Right here is where the coupling coil is placed on the bottom of the circuit board to optimize the induction process and this is also where, on the upper side, the biological substance should be brought into the magnetic stray field (Fig. 4).

In practice the glass has a spatial extent of course, but this proves to not be a big issue as the maximum is not especially distinctive and the full coil surface may be used.

To maximize the overlay of the magnetic fields of the substance and of the high-frequency carrier, which is interpreted as modulation, a watery solution inside of a glass container is preferred. Experiments have proven that the permittivity of glass and water is about the same. Plastic bottles however may dampen the weak magnetic signals of the samples to the point where transmission is no longer possible.

2.5 Experimental Design

The pea seeds (*Pisum sativum*, var. Kelvedon Wonder) were initially soaked in deionized water for 12 hours before they could be handled under differing conditions. After the wave treatment in incubation bowls (30x15cm), the seeds were distributed on damp fleece mats (30 seeds/bowl) and incubated under constant environmental conditions. After a given time (24, 30, 36, 48, 54, 60 and 72 hours) the lengths of their germinated roots were measured.

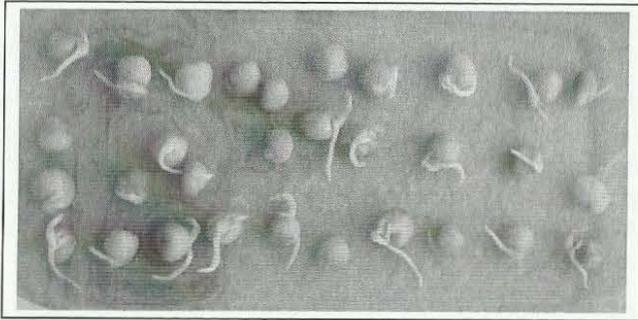


Fig. 5: Incubation bowls in which the treated pea seeds are being germinated on damp fleece and under constant environmental conditions.

Experiment 1:

The pea seeds that received *permanent treatment* (15/per container) were placed in incubation vessels (5cm in diameter) and set on a receiver module in a specific position (see Fig. 4a). After the preset time intervals, their root lengths were determined

Experiment 2:

The pea seeds that received a *pulse treatment* of 15 minutes while in identical incubation vessels were thereafter moved into incubation bowls (30 per bowl) with damp fleece. Their root lengths were measured after the preset intervals (Fig.5).

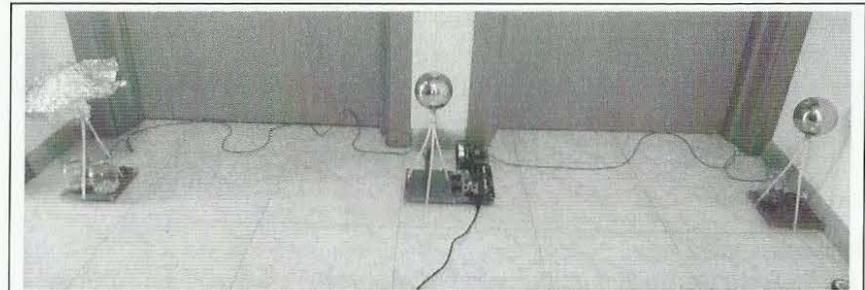


Fig. 6: Positioning of power-transmitter (center), the first receiver (left) with the pea seeds to be treated and the second receiver (right) with the gibberellic acid as information source (or the apoptosis signal emitting peas, respectively).

Experiment 3a:

The second receiver, in a position illustrated in Fig. 6, was loaded with either gibberellic acid (10^{-5} molar) during the permanent and pulse treatment or – alternatively – specially processed peas to transmit the apoptosis signal. For this, two approaches were chosen:

10 peas that after 12h of initial soaking were brought to germination for 24h in incubation bowls until a predefined root length was reached (ca. 4.2 mm). After anaerobic storage in water (48-100 hours) (Fig.7), they were used as an information source.

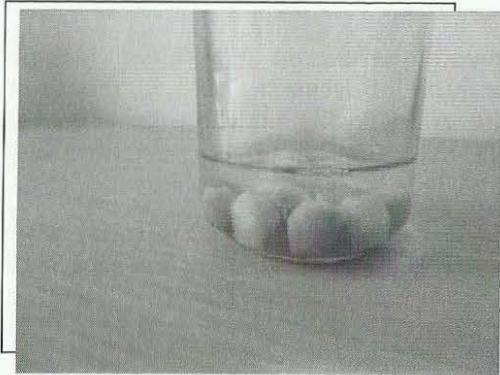


Fig. 7: Information source of the apoptotic signal (Exp. 3a) (10 peas, 48-100h anaerobic storage in water)

Experiment 3b:

To transmit another apoptotic signal, 10 peas, about 12 hours pre-soaked were *macerized* (mushy peas), mixed with water and placed in position on the second receiver.

2.6 Results

Experiment 1:

Continuous treatment of the peas with gibberelic acid modulation

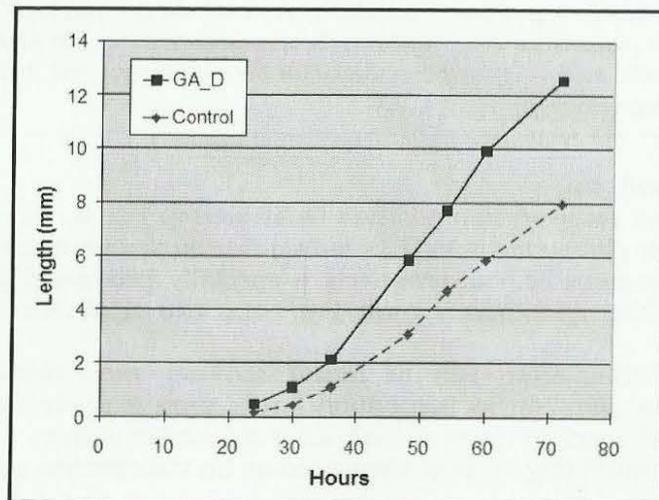


Fig. 8: Growth of the pea roots after 72h of incubation under continuous treatment with GA information (100 peas from 4 test series) in comparison to the untreated control group (405 peas from an overall 9 control series). There is an average length increase from 7.9mm (control) to 12.5mm (GA) = 57%.

Fig.8 displays the root lengths of the pea seedlings after a *continuous treatment* with a carrier wave modulated with GA. After an incubation period of 72 hours, they averaged a length of 12.5 mm in contrast to the untreated control group average of 7.9mm, equalling a percentage increase of 57%. These results are based on 9 control groups, so that overall, 405 peas were measured. Conversely, 4 series with continuous treatment were performed, encompassing 100 pea roots. On the basis of a statistical two samples t-test, assuming normal distribution and homogenous variance, this yields a t-value of 6.88 at 508 degrees of freedom, a statistically highly significant result.

Experiment 2:

Pulsed treatment of the peas with gibberelic acid modulation

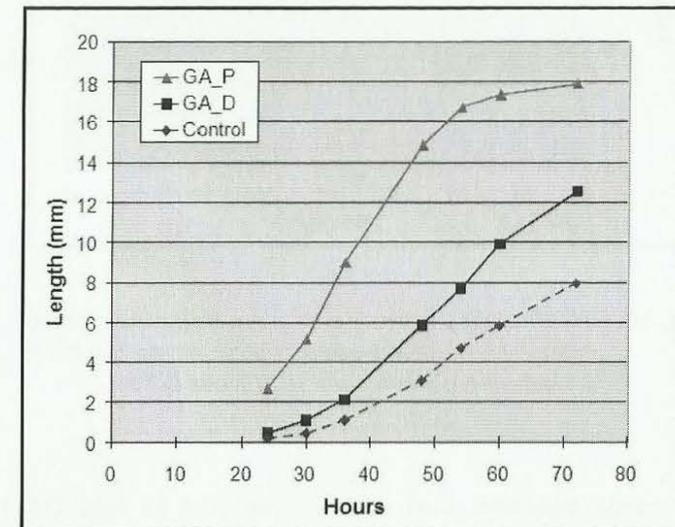


Fig. 9: Growth of the pea roots after 72h of incubation after 15 minutes of treatment with GA information (top curve, GA_P) in comparison to control group (bottom curve) and continuous treatment group (center curve, GA_D).

Fig. 9 shows the effect of a 15 minute pulse treatment in relation to both control and continuous treatment groups, consisting of an additional root length growth (additional 42% in comparison to the continuous treatment). Statistically, the result is highly significant with a t-value of 4.74 at 178 degrees of freedom.

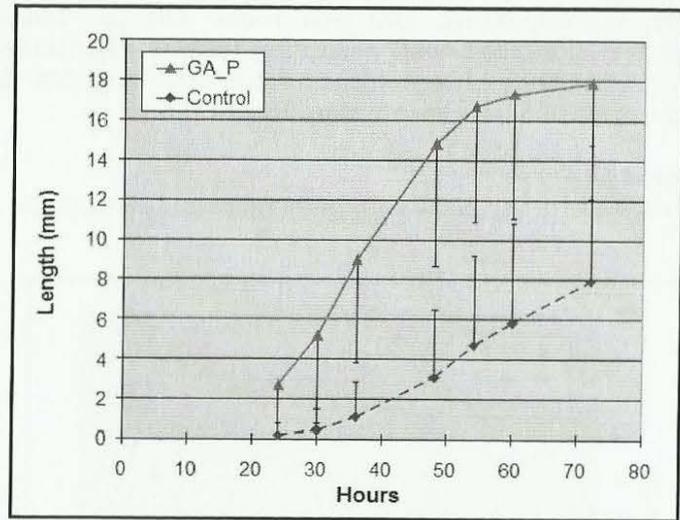


Fig. 10: Growth of the pea roots after pulse treatment (15min) compared to an untreated control group results in an increase of statistically significant 125%.

The differences between both GA curves (GA_D and GA_P) are highly significant compared to the control groups (Fig. 10), with the average root length of the pulsed treatment group (GA_P) being as much as 125% higher than the control group. The values of the GA pulse treatment derived from 3 different experiments with an overall 80 peas with an average root length of 17.9mm after 72h. With an extraordinary high t-value of 12.2 at 483 degrees of freedom they are once again highly significant.

Experiment 3:

Transmission of an apoptotic signal from the second receivers position.

Experiment 3a:

From pea seeds after anaerobic storage (48-100 hours).

Fig. 11 shows a clear inhibition of root length growth due to the anaerobically stored peas' signal from the second receiver, to only 1.3mm after 72 hours of incubating (top curve, GA_P). This result, which is based on 2 independent series with an overall 55 peas, is statistically highly significant with a t-value of 15.1 at 133 degrees of freedom. It is also of interest that anaerobic storage of less than 48 hours resulted in no inhibition of root length growth of the peas undergoing treatment.

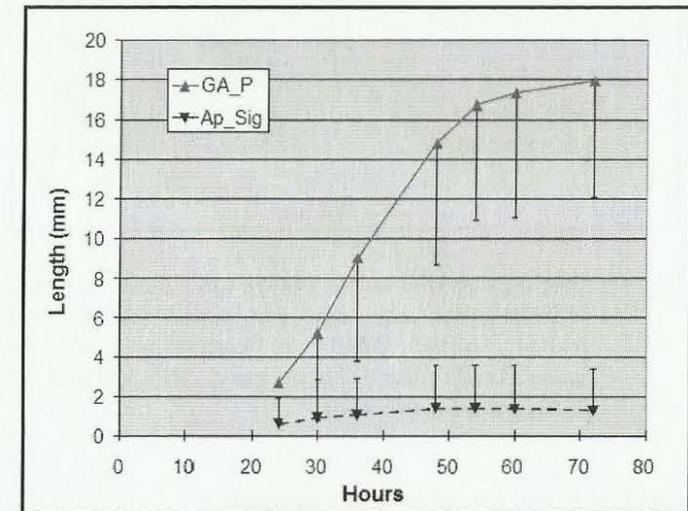


Fig. 11: Growth of the pea roots after GA pulse treatment (15min) (top curve, GA_P) vs. pulse treatment (15min) from anaerobically stored peas (AP_Sig, bottom curve), with statistically significance.

Experiment 3b:

From pea seeds after macerization

Fig. 12 shows the average root length growth inhibition to 3.6mm (from a series with 30 peas) that was achieved by a 15 minute pulse of macerized pre-soaked peas. [In this case, the results too are statistically highly significant with a t-value of 11.9 at 108 degrees of freedom.]

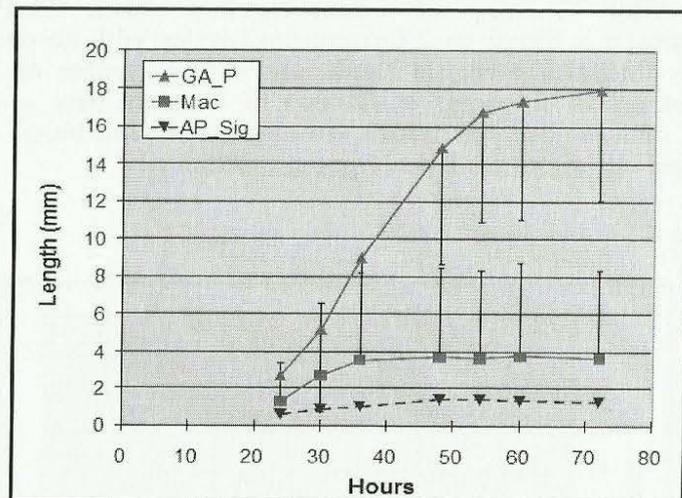


Fig. 12: *Inhibition of root length growth after pulse treatment (15min) from macerized pre-soaked (12 h) peas (center curve, Mac) in comparison to the anaerobically stored (bottom curve, AP_Sig) and GA pulsed series (top curve)*

2.7 Discussion from a biological viewpoint

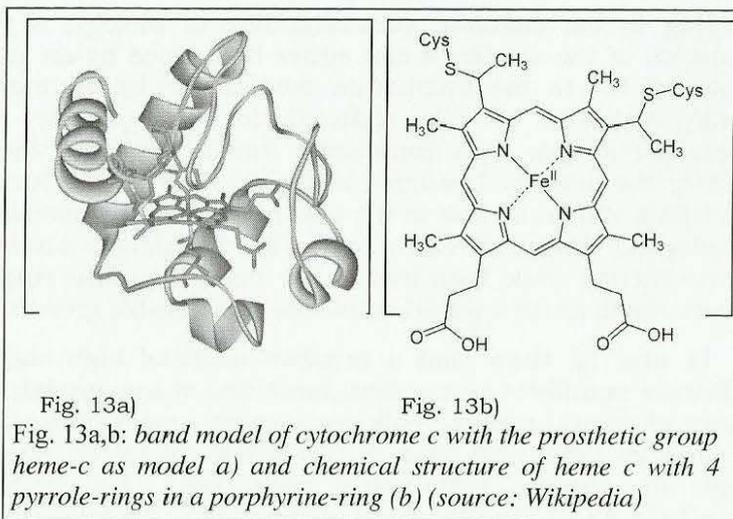
These results can be summarized in that they all displayed high statistical significance.

In the experiments 1 and 2 a biologically effective signal – in this case GA in 10^{-5} M solution – could be transmitted over a distance of about 3m without any structural chemical agency, as indicated by the increased root growth (see Figs. 8, 9 and 10).

According to the common understanding of biology, a growth stimulation of the seedlings can either be caused by an *external* addition of GA to the incubation medium or by an increased *internal* synthesis of GA, induced for example by higher temperature and/or light conditions. Since both were definitely excluded, the described positive biological effect of the increased root lengths should be due to the electromagnetic transmission of the biological GA signal exclusively. The mechanism outlined in the introduction could then lead to the induction of the respective enzymes which in turn would cause the measurable growth.

Figs. 11 and 12 show that a negative effect of high statistical significance manifests as a radical inhibition of root growth over a distance of several meters. This presumably apoptotic signal was generated by preparing peas in two ways: (a) by an anaerobic storage of already germinated peas over 2-5 days and alternatively (b) by macerized, i.e. structurally decompartmented peas that had been pre-soaked for 12 hours. In both cases, an *apoptotic signal counteracting* root growth was likely created due to a stress reaction.

It is known that stress reactions of various kinds cause initiation of apoptosis, indicated e.g by a release of cytochrome c from the mitochondria [8]. It can be assumed that anaerobically stored peas (48-100 hours) show a damage of the mitochondria induced by oxygen deficiency correlated to a release of cytochrome c and other proapoptotic factors from the mitochondrial intermembranous space through mechanisms yet unknown [8]. Via the coupling of the cytochrome c as a proapoptotic factor and dATP to Apaf-1 (apoptotic protease activation factor 1), a conformation change of the protease is effected. This signal is assumed to be a prerequisite for the autolytic activation of caspase 9 and thereby triggers the activation of the apoptotically induced signal chain [8, 9].



2.8 Discussion from a technical viewpoint

An interesting fact in this context is that both the gibberelic acid molecule as well as the cytochrome c incorporate *ring systems*, whose electrons are free to move via mesomery. These ring systems, ubiquitous in organic chemistry, are stimulated by magnetic fields and set into motion through induction, effectively creating a frame antenna for the reception of high frequency signals. Acting as an emitter, the ring atoms can transmit stored information [10].

In summary, the above points lead to the hypothesis that two different signals – in the case of growth stimulation a GA specific signal, in the case of growth inhibition a cytochrome c specific signal – can be transmitted over a certain distance. These signals apparently triggered the same biological reactions in the receiving peas as material biochemical molecules.

Both signal molecules – gibberelic acid and cytochrome c (Figs.1 and 13) – incorporate ring structures containing mesomeric electron clouds. Since these electrons are freely movable, they react to externally applied magnetic fields by a displacement. The induced currents in the ring generate a magnetic field acting as a loop antenna.

As known from the high-frequency technology the electric current and the magnetic field can be modulated, so they become the carrier of information. This is done by placing the sample with a biological substance in the magnetic field of the coil. Thus, the information of the signal-releasing molecule (GA or cytochrome c) is transported to a biological receiver and reflected accordingly there.

The scalar wave concept could as well answer the unexplained findings of Luc Montagnier et al.[11].

The finding could lead to fundamental consequences for today's understanding of biological communication:

- Rings with delocalized electrons act as magnetic field antennas.
- Organic ring antennas receive, store or transmit signals.
- The rotating electron ring creates a magnetic field.
- The magnetic field holds energy and modulated information.
- Nature communicates in a wireless manner by using the H-field
- Perpendicular to the magnetic field pointer the electrical one is.
- The electrical field vector oscillates in step with the information.
- The modulation is executed by a high-frequency carrier wave,
- and transmits the oscillations over long distances.

In conclusion and on the basis of three highly significant test results, it seems that the chemical paradigma is not necessarily complete. Instead, the effect of some *corporeal* molecule structures can seemingly be transmitted over greater distances by means of electric and magnetic fields.

2.9 References:

1. T.J.V. Higgins, J.V. Jacobsen, J.A. Zwar: Gibberellic acid and abscisic acid modulate protein synthesis and mRNA levels in barley aleurone layers. *Plant Molecular Biology* 1 (3), p.191-215 (1982)
2. J.E. Varner and D.T.-H. Ho: The role of hormones in the integration of seedling growth. In: J. Papaconstantinou, Ed., *The Molecular Biology of Hormone Action*, Acad. Press, pp. 173,1976
3. J.V. Jacobsen and L.R. Beach: *Control of transcription of α -amylase and t-RNA genes in barley aleurone protoplasts by gibberellic and abscisic acid*. *Nature* 316, 275-277 (1985)
4. K. Meyl: *Scalar Wave Transponder, Field-physical basis for electrically coupled bi-directional far range transponders*, INDEL publisher, 2006, ISBN: 978-3-940 703-28-6
5. K. Meyl: *DNA and Cell Resonance, Communication of cells explained by field physics including magnetic scalar waves*, INDEL publisher, 2011, ISBN 978-3-940 703-17-0
6. K. Meyl: "Task of the introns, cell communication explained by field physics", *JOURNAL OF CELL COMMUNICATION AND SIGNALING*, Volume 6, Number 1 (2012), 53-58, DOI: 10.1007/s12079-011-0152-0. (www.meyl.eu, > papers).
7. J. Ebbers and K. Meyl: *Medikamenten-Fernübertragung per Skalarwellen*, CoMed, Fachmagazin für Complementär-Medizin, 19.Jg. September 2013, p.30-33.
8. M.O. Hengartner: *The biochemistry of apoptosis*, *Nature* 407, 6805, (2000), p.770-776
9. J. Yuan and B.A. Yankner: *Apoptosis in the nervous system*. *Nature* 407, 6805, (2000), p.802-809
10. K. Meyl: "DNA and Cell Resonance: Magnetic Waves Enable Cell Communication", *DNA and CELL BIOLOGY*, April 2012, 31(4): pp. 422-426. doi:10.1089/dna.2011.1415 (www.meyl.eu, > papers).
11. L. Montagnier, J. Aissa, E. Del Giudice, C. Lavalley, A. Tedeschi, G. Vitiello: *DNA Waves and Water*, 5th International Workshop DICE2010, IOP Publishing, *Journal of Physics: Conference Series*, 306, (2011) 012007, doi:10.1088/1742-6596/306/1/012007

3. Invitation to UNESCO, Paris

Newsletter of Furtwangen University, No. 1 - 2014

3.1 Subject: **Visit to Nobel Prize Winner**

Prof. Dr. Konstantin Meyl (Faculty of Computer & Electrical Engineering) traveled to Paris on invitation of Prof. Luc Montagnier. On August 31, he gave a lecture on the topic: "About the Communication of Cancer Cells". The invitation to UNESCO reached him in Stockholm, where he had spoken on the subject at a congress of the Karolinska Institute.

It was followed by several visits in the laboratory of the Nobel Prize winner of 2008. Luc Montagnier proved the non-chemical transfer of genetic information by an idiosyncratic measurement method. He reached, according to his own statement, a match of the copy with the original of about 98%.

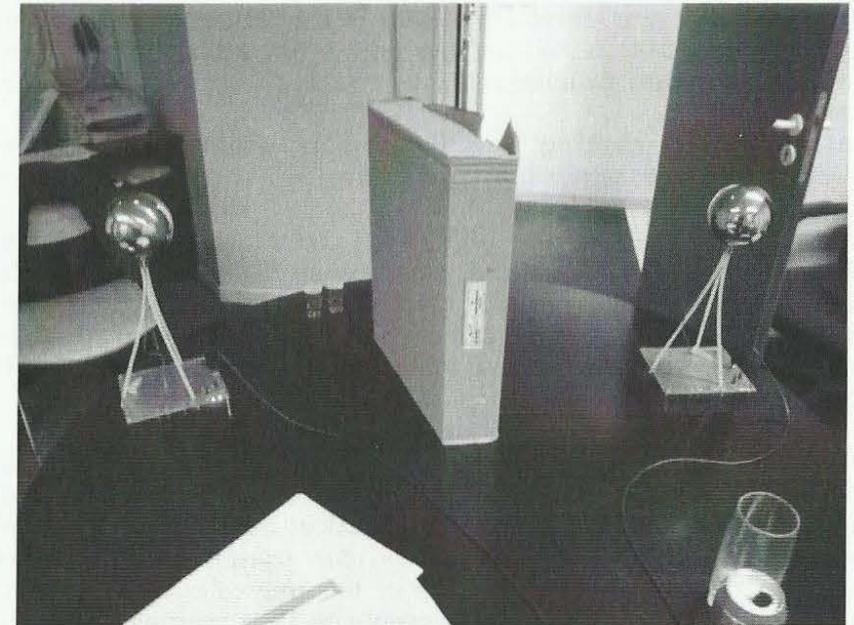


Fig.: [The scalar wave transfer] in the laboratory of Nobel Prize winner Luc Montagnier near Paris.

[In November 2013, this transfer was repeated with a experimental set that Prof. Meyl has developed in his Transfer Center (1st TZS, Villingen). In a first test series, a match has been achieved of over 30%, but this time over a distance of 1 meter. A box was there to contradict the misinterpretation that it might be due to biophotons.

The apparatus, constructed as an open resonant circuit, generates scalar waves, which, as a carrier wave, absorb the biological DNA or RNA information as a modulation and thus transport it from sender to receiver. About 200 base pairs of Borrellia RNA were used in the experiments. The carrier frequency is 6.78 MHz. The essay of Prof. Luc Montangier informs about the measurement method (page 55, ref.11)]

3.2 comment on the report in the newsletter

The Vice-President in charge of research of my university had treated the text with a red pen and had deleted the [---] marked words and sections. Thus any reader of the article, published on January 25, 2014, is lacking the important information that it was a scalar-wave transmission, by which the genetic data was transported.

He also learns nothing about the high significance of 30% similarity to 0% in pure water as a control.

Can someone give me the reason for the problems, which my university has with the scalar wave research? Even if you don't need to ask the colleagues for their opinion, the research is still one of the tasks of each university. Must it be that private misjudgments or interests of lobbyists rank over those of the general public?

Such difficulties should not even exist according to Article 5 of the Basic Constitutional Law (freedom of research and teaching) in Germany. People in medical practice hardly notice these problems. You use the SWT daily, for example, to produce homeopathic remedies from drugs or to produce copies of such. And, as it was shown, this works even with DNA information.

In my opinion, the SWT should be standard equipment in each medical laboratory.

4. Water Treatment with Scalar Waves in Peking

The pancake coils from the experimental-kit, offered by the 1st TZS are in use as well in China. The scientific researcher Gao Peng, employed by the University of Geosciences of Beijing, has send me his report. There are a lot of questions left open, in particular for those, who have not worked on the special properties on energized (magnetic) water.

Anyway I am sure, that real scientists will be animated to repeat the experiments. I am waiting for the feed-back.

Here is the Chinese report (I have changed not a single word):

4.1 Background

„It is not occasional that I do this experiment. When I know the scalar wave, I think it related to the superperformance . Then I saw an experiment like follow: the experimenter prepares 2 bottles of water, one is placed in Beijing with no processing; and the other one is sent to Shenzhen. The water in Shenzhen is place in a man's room who has superperformance. You know there is a special field around the man who has superperformance.

After a night, the bottle of water in Shenzhen is airlifted to Beijing again. Then the two bottle of water is used as experiment subject . They ware put in the ultraviolet-visible spectrophotometer one after another. Soon after, the experimenter gets two curves as result. The experimenter said he got two curves with very difference . He thinks that the structure of water had changed.

So I think the scalar field may have the same properties with the field around the man who has superperformance. So I did this experiment.

4.2 Experimental Process

First, I also prepare 2 bottle of water . One of them is placed on a table far away from the two Tesla coil, absolutely not in the scalar field. And the other one is placed on the receiver's pancake coil. And then I power on the function generator, turn the frequency right (the receiver's LED brighten and the transporter's LED go out). Keep this state for an hour.

After an hour, there will be 3 steps in order:

- First, there is nothing in ultraviolet-visible spectrophotometer. We measure a curve of the ultraviolet-absorption spectra whose wavelenth is from 215 nm to 656 nm, maybe it is the air's (blue line).
- Second, we put the water which is not processed into the ultraviolet-visible spectrophotometer. After about 4 minutes, we get a curve of the ultraviolet-absorption spectra whose wavelenth is from 215nm to 656nm , which is belong to the not processed water (red line).
- Third, we put the water which is processed into the ultraviolet-visible spectrophotometer. After about 4 minutes, we get a curve of the ultraviolet-absorption spectra whose wavelenth is from 215 nm to 656 nm , which is belong to the processed water (green line).

The three curves are as shown below:

4.3 Results

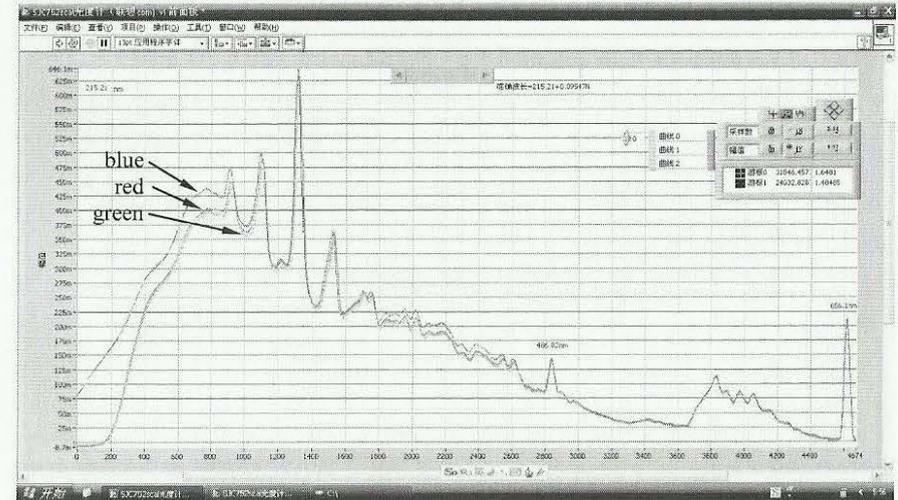


Fig. 4.1: Water Samples in an ultraviolet-visible Spectrophotometer. (215 nm bis 656 nm)

This picture contains all three curves of the 3 steps. The X axis is the number of data, and it also means the range of wavelength from 215 nm to 656 nm. And the Y axis is the signal whose unit is voltage (mV).

There is also a picture which is magnified locally, so that we can see the difference between the 3 curves. As below:

- The upper (blue) curve is that there is nothing in ultraviolet-visible spectrophotometer.
- The curve in the middle (red) is that the normal water with no processing in ultraviolet-visible spectrophotometer.
- The last curve is concerning the test object. The green curve is that the water with scalar wave processing in ultraviolet-visible spectrophotometer.

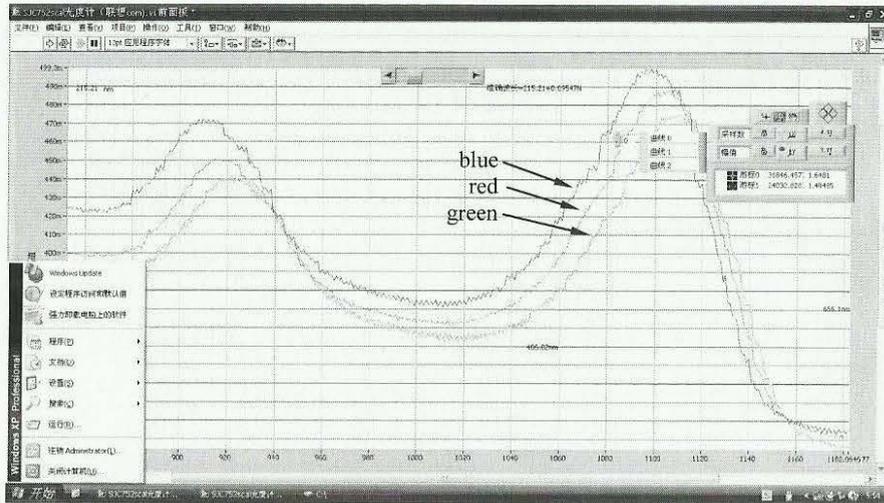


Fig. 4.2: part of figure 4.1 in larger scale.

We can see that the 3 curves have obvious difference. Maybe the structure of water has changed. Of course we need more strict experiments. I also think that this phenomenon is associated with that the water carries the biological information. And I also think that the scalar wave field may have the same properties with the field around the man who has superperformance.

At last, my name and address can be published, of course. It's my pleasure (my professor doesn't want his name to be published).

4.4 Experimenters

Gao Peng, PhD, special researcher in IPQE
Institution of Psychic Quantum Energy (IPQE)
China University of Geosciences (Beijing, China)
 2014.7.18 in Beijing."

V.

Technical Description of the SWD

1. Introduction

The previously discussed scalar wave transporter SWT was developed for the use in laboratories as a result of the scalar wave device SWD. Both work with the identical coils (type A) and with the same digital function generator (see page 15 ff.).

Among other things, the difference from each other is that the SWT is a table unit, while the towers of the SWD usually stand on the ground. The SWD was developed for the use in spa areas and medical consulting rooms. It also has an incorporated timer, an acoustic resonance setting, additional modulation possibilities and about a dozen of other customer-specific adaptations.

The over 10 years (from 2004 to 2014) gained experience with the scalar wave devices (formerly SWG) does not result only in many pages of the first volume about scalar wave technique but also leads to this second volume about scalar wave medicine.

The SWD consists of a transmitting tower and a related receiving tower which receives the fundamental sinusoidal wave again. As with the SWT, the modulated signal runs from the receiver to a recipient of information. The receiver is now a nontechnically patient or test person this time.

Who wants to do the described technical or biological experiments with the SWT as with the SWD in his treatment room, can possibly add a second receiver tower. Since a fine tuning of the antenna length is not required, a symmetrical structure should be adhered with a centrally arranged transmitter and equally long connecting cables to both receiving towers.

2. Operating instructions for scalar wave device SWD

The SWD has two standing housings (20 cm x 26 cm x 65 cm) in which the antennas, the coils and the electronics are placed. The incorporated timer is functional and easy to use like all other controls. Only the wall power supply and the connecting cable of the two towers need to be plugged in and here we go.

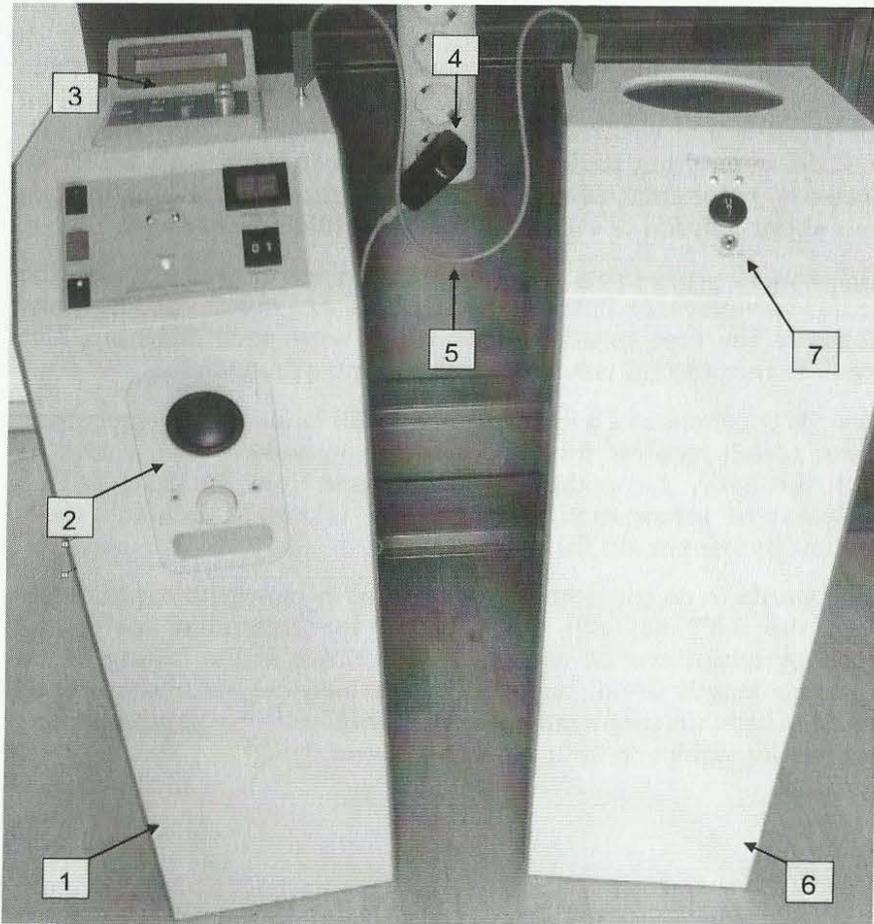


Figure 1: Both towers of the SWD

3. Delivery contents of the SWD:

including:

- transmitter tower (1) with an incorporated active box (2)
- DDS function generator (3)
- wall power supply (4) from 100 V to 240 V
- a connecting cable (5) 2 m long
- receiver tower (6)
- audio cable (7); jack plug on jack plug (3 mm)
- this book as documentation and instruction

4. The receiver tower of the SWD

The modulation of the scalar wave is always at the receiver. For this purpose, the Tesla coil is open (diameter 11 cm). As already discussed with the SWT, substances in the field of the flat coil can be incorporated with biological information directly and modulate the carrier wave. The biological information usually have higher frequencies than the carrier wave (approx. 6.78 MHz).

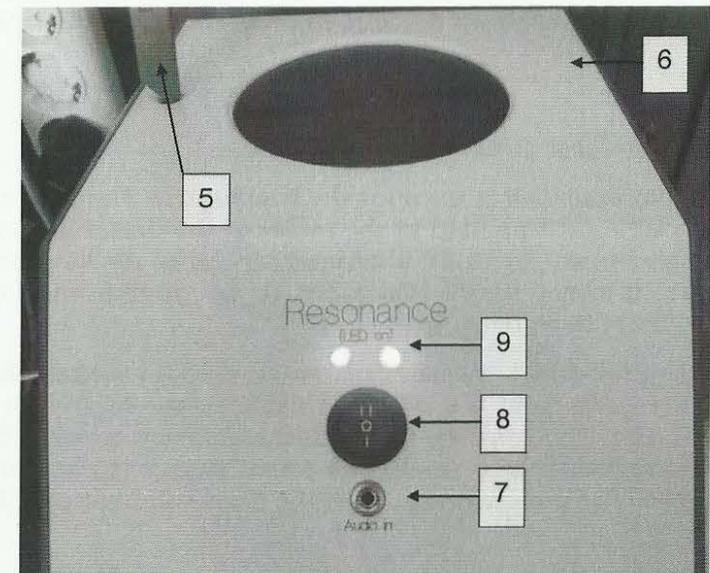


Figure 2: The control panel of the receiving tower

Through a jack plug, also the low frequency sounds can be played and modulated that come from a sound source (7), e.g. from a PC, MP3 or a CD player. The sound source (I = 7) or the LEDs (II = 9) are selectable (9) with the switch (8) or both can be switched off in the middle position.

The LEDs enable the discussed optical resonance setting. This point is also acoustically adjustable with a sound source. In resonance the acoustic signaling (I) is switched on depending on the used modulation or everything is switched off when a DNA or biological information should be modulated as undisturbed and unaltered as possible.

We endeavor to fulfill the requirements list of customers such as the unusual desire for silently transmitted music as music therapy to improve the indoor climate or for the relaxation of spa visitors in wellness hotels after the sauna. Others dub the known rife frequencies (up to about 20kHz) or so called spin-matrix-signals on their patients and with confirmatory success.

The 1m or 2m long laboratory cable connects the two towers together. The connections for the banana plugs are on the upper side, on the right of the transmitter and on the left of the receiver. Therefore, it is possible to place a chair between the towers (see figure 6).

5. The transmitter tower of the SWD

The identical Tesla coil is used for the transmitter. Here the coil is not open but is incorporated in the inside of the unit. Instead, the function generator (3) is in a compatible hole. As long as the cables are, it can also be taken out to be used from a desk. Normally, there is no need for it.

The transmitter draws the power from an electric socket. Simply connect the cable from the switched-mode power supply (4) with the little hub (17) on the back of the transmission tower. USB or jack are here available (5 volts). The power supply is plugged into a wall outlet. The power indicator on the front will light up (10).

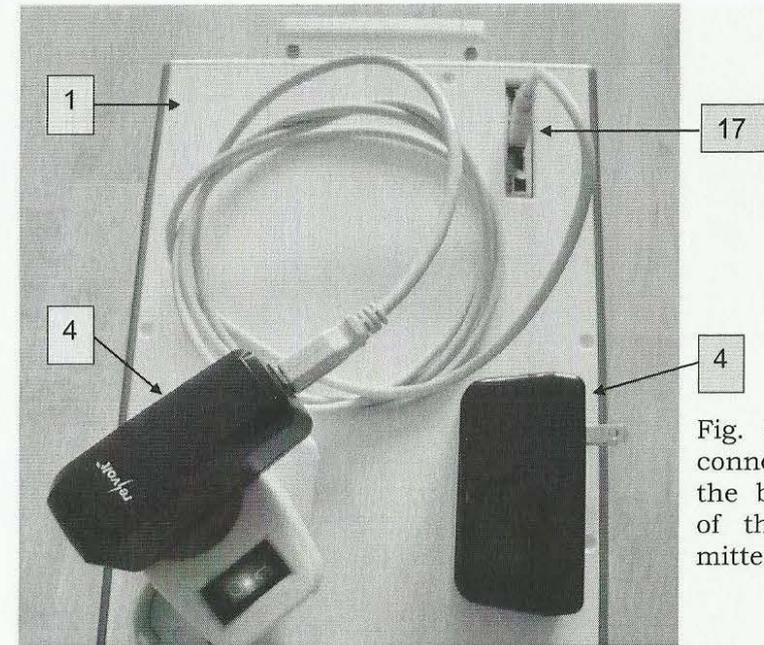


Fig. 3: Power connection on the back side of the transmitter tower.

Who wants to turn the unit completely electroless (it is highly recommended), should always pull the plug during pauses or use a switch (18).

The function generator has an own red power on switch. Following the recommendation, the buttons [<], [<], [OK] should be pressed successively and then the resonant frequency can be searched with "adjust". Please move the controller "offset" in middle position until both LEDs are equally bright.

The changeover switch (I-0-II) could be avoided at the transmitter tower. In the case of resonance, the LEDs do not shine anyway and the demodulator for the sound frequencies charges the coil only marginally. In order to hear the music, only the volume knob must be turned up on the speaker (19). When the active speaker is not in use, it should be turned off. (Turn to the left until the switch cracks).

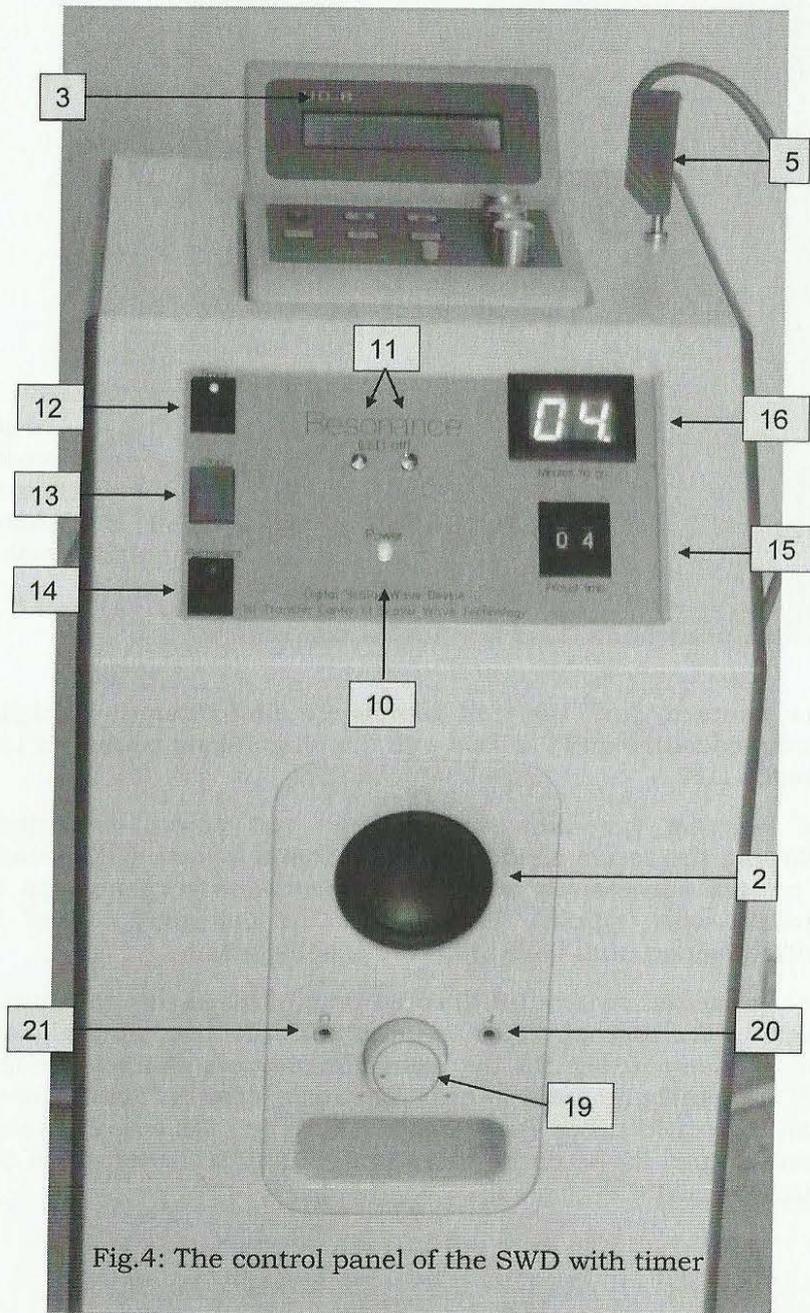


Fig.4: The control panel of the SWD with timer

6. The control panel of the SWD

The control panel of the transmitting tower is self-explanatory.

- 10 Power (LED shines, when the power supply unit provides 5V)
- 11 Resonance (antiparallel connected LEDs as resonance indicator)
- 12 "Enter"-bottom (starts i.e. the down counter with the default time)
- 13, 14 Selection (< left, > right, see the following manual)

At each power-up of the SWD (power supply plugged in) the following start display occurs for a time span of 2 seconds:

```
ScalarWaveDevice
August 2014
```

After that, and in the case that the language hasn't been selected yet, the menu for language selection is shown:

```
Language:
English
```

You can select with the two buttons [13: <] and [14: >] between English, Deutsch, Francais, Espagnol and Portuges. After the language has been set with the button [12: OK/Stop] the following display will always be shown at power-up after the start display:

```
Menue:
Start Timer
```

You can move forwards or backwards with the buttons [<] and [>] through the menue, which has the following structure:

Menue: > Language > Setup Timer > Start Timer > Permanent on

The timer can be adjusted with selecting "Setup Timer" and pressing the button [12: OK/Stop]. You can increase or decrease the time with the buttons [13 <] and [14 >] in steps of 30 seconds and set it with the button [OK/Stop]: i.e.:

```
Setup Timer
4 min 0 sec
```

The treatment is started with "Start Timer", which counts down in steps of seconds, or with "Permanent on". The green LED 10 indicates in both cases that the treatment runs. When the button

12 [OK/Stop] is pressed the treatment stops and the green LED 10 goes out.

To power down the SWD you have to pull the plug.

After each power-up the device remembers the language selection and the time set for the timer. As long as the start display is shown, you can do a reset with pressing the button 12 [OK/Stop], which sets the timer to standard 4 minutes and shows the language selection.

7. Placement of the SWD

It is important to ensure that the devices (transmitter and receiver) are not too close to metal objects which could shift the resonance frequency. A minimum distance of 50 cm to the heater must be maintained. In contrast, the towers can be placed without any problems on the floor or a metal table because in the housing is a sufficient safety distance to the antenna.

It is also important to ensure that no metal or sharp objects are placed on the pancake coil. This can damage the coil and thereby lead to malfunctions of the device. If you use glass on the flat coil (e.g. ampoules of sample liquid), you should avoid leaded glass which could also shift the coil resonance.

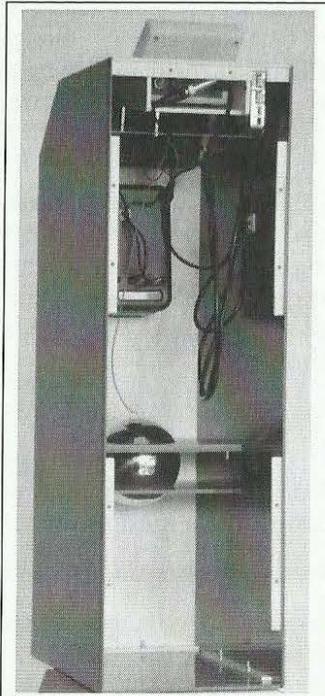


Fig. 5:
*View inside the
transmission tower*

8. Additional Equipment

A power pack can be delivered by request. The battery may be reloaded by the existing switch mode power supply. The power pack thus fulfills the task of an uninterruptible power supply.

The connection from the transmitter to the receiver is made via the two 4 mm long banana jacks and the 2 m long cable (5). Longer cables are available but not recommended. In the case of spa hotels, where several chairs need more space between the towers to be placed next to each other, are 10 m cable length not uncommon.

A handle component is also not included. If the physician finds an increased lack of energy in his patient, for example due to cancer, so many of the physicians recommend to the patient to take the laboratory cable (5) into the hand. They claim that if the energy balance could be restored, they can only begin with their customary treatment methods.

Touching the insulated cable is technically equivalent to the electrically insulated handle that is held in the hand. Apparently, it helps the subjects to connect stronger with the scalar wave field. This positive effect was tested in 2001 at a conference of the University of Berne and could be confirmed by almost all users since then.

Who wants to test such a thing, connects the isolated handle via a short cable with the long cable (5) to the receiver. Handle and short cable can be ordered separately. Possibly even competing products can be used as long as they are isolated.

The two towers should have a minimum distance of one meter to each other. If the connecting cable contacts a metallic object, this can cause a resonance shift. Figure 6 shows a typical treatment place.

To avoid interactions with other people in the room, it is recommended to place the treatment place in a separate room.

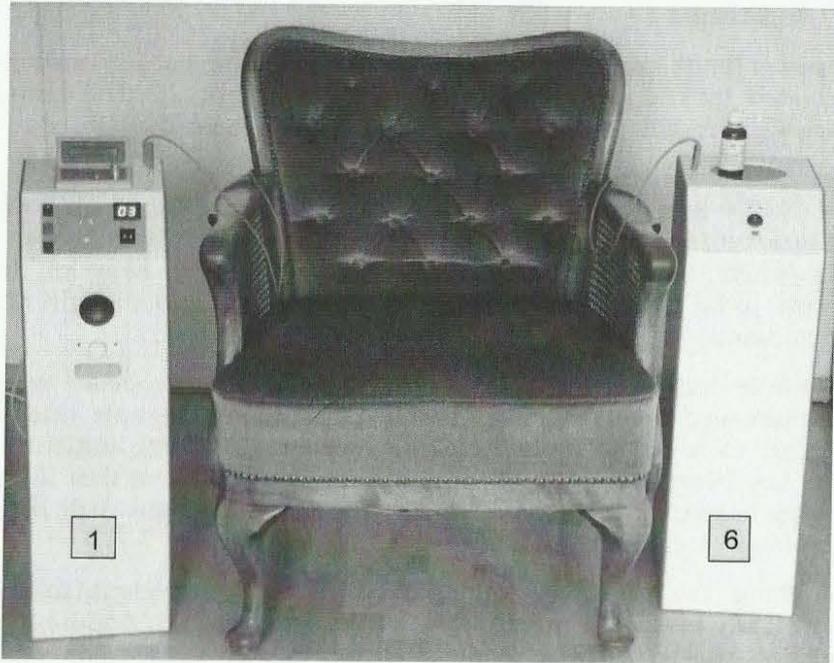


Figure 6: A possible treatment place with the SWG.

9. The operation and the finding of the self-resonance

The configuration of the scalar wave is broadly similar like the SWT. This applies to the distinction of the transverse wave as well as for the search of the self-resonance. To ensure that no point is forgotten, all steps are again listed particular here.

Plug in the power unit and switch on the generator (3) with the red button. Select the MHz range with [$<$], [$<$], [OK]. Disable the ($-32dB$) button. Turn the *Amplitude* completely to the right until it stops (maximum amplitude). Turn the frequency button (*adjust*) to the far right (8 MHz) position. Switch to "Permanent" (14) → The LEDs (11) shine on the transmitter. Bring "offset" in the center position until both LEDs (11) are equally strong. Turn the frequency button (*adjust*) to the left to decrease the frequency. Locate the point at which the LEDs on the receiver (9) are brightest. Search the point where the LEDs on the transmitter remain barely dark. Possibly, slightly reduce the amplitude. Stop the continuous operation with (13). Preset the treatment time (15) and start the treatment with (12).

The resonance point is found when the LEDs (9) of the receiver shine on the maximum and the LEDs of the transmitter (11) remain barely dark.

Physically interpreted, the phase shift of 90° between the electric and the magnetic field or between the current and the voltage can be observed on the LEDs. This characterizes the scalar wave field as it is known from the near field.

An angle of 0° would be expected with the electromagnetic wave. Such a resonance point is also adjustable for smaller frequencies except that both pairs of the LEDs light up and no detectable desired biological or medicinal effect occurs.

The hints about a secure operation of the SWT are still valid for the SWD.

10. The benefit of the music transmission

A low frequency source (e.g. line signal of a CD or MP3 player) with a standardized output signal of $0.7 V_{rms}$ is tested first with the 3.5 mm jack socket (20) which is marked on the activ box of the transmitter tower. We turn the half of the volume control button (19) and when we are satisfied with the volume, we pull the jack plug out and put it into the appropriate socket (7) on the receiver panel. Please make sure that the jack plug is completely plugged into the socket. It clicks into place.

The audio signal is modulated onto the received fundamental wave as soon as the switch (8) is switched (2). The music should be heard again at the speaker in the transmitter tower to control the transmitted audiofrequency signals. Perhaps the frequency (*adjust*) should be slightly corrected.

A quality deterioration of the sound source is expected in any case. On the one hand the test speaker do not know stereo mode and on the other hand the quality of high fidelity is unable to achieve with a superluminal transmitted signal. This is also not our purpose.

The music transmission expands the possibilities of the SWD to two modes of operation:

- The subjective acoustic adjustment of the resonance requires an optimization of the sound.
- In this configuration of the SWD, the (inaudible) spa or music therapy is possible.

The music (with therapeutic effect), for instance, in a spa area should be made audible with a stereo system. Since the transmitted scalar signal is rather annoying than helpful, it is possible to connect a pair of headphones via the socket (21) and turn the speakers off at the same time. Or the active speaker is switched off completely after the the configuration of the volume control. The modulator in the receiver tower still works and continues to transmit the inaudible music because it draws the power from the received scalar wave.

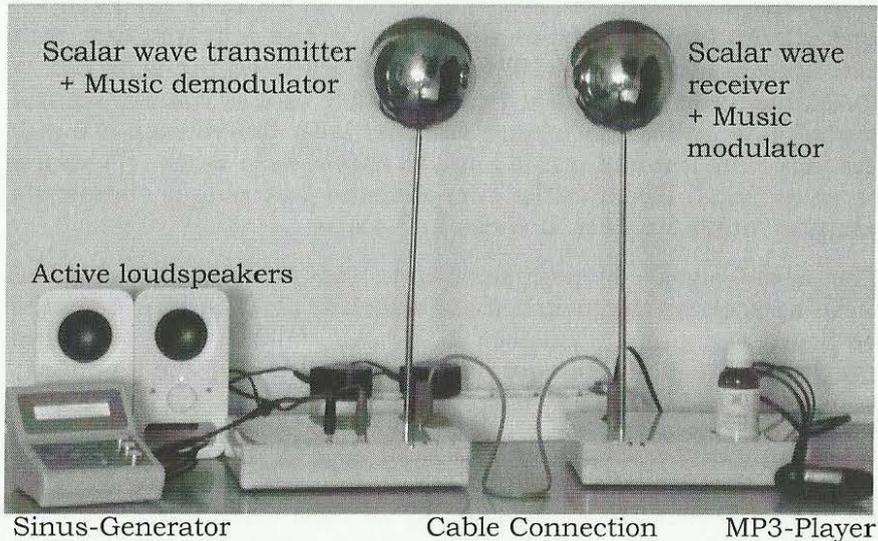


Fig. 7: The SWM, scalar wave device for music therapy.

11. SWM, Music Therapy for Beginners

If the SWD is too expensive for your liking, we're now offering a slimmer tabletop version based on the SWS, yet customized and extended by a modulator and demodulator for acoustic signals. Also, speaker and generator are no longer integrated into the casing, leaving all components loosely on the table. A timer is not included, so penny pinchers are advised to pay attention to any clocks nearby instead in order to turn the device off on time.

This slim variant is recommended for enthusiastic amateurs, for example if professional scalar wave treatment has helped and patients thereafter want to continue the treatment from the confines of their homes, yet don't want to invest into the full-blown SWD. In such cases, the doctor should not only recommend the SWM, but also advise the ongoing therapeutical application. Music therapy, as is applied here, is know to be effective and risk free at the same time.

Of significant popularity are Rife-frequencies, which can be fed into jack 7 via MP3-player. These tones, mostly consisting of a mixture of acoustic signals, promise remedy for most ailments. To help you pick the most efficient tones, lists are provided. However, the precise therapeutical concept should be worked out by the medical practitioner and individually tested. What's good for the goose need not be good for the ganter, as we all know.

To begin, one first establishes resonance with the visual aid of the LED. Next, the MP3-Player is plugged directly into the amplifier and tested for sufficient volume (jack 20), then and only then plugged into jack 7 and the switch 8 changed to audio mode.

We are aware that doctors are going by further, sometimes vastly different recommendations. It is you, the users of the devices, whose voices shall be prominently heard in this very documentation. They report of various experimental set-ups, which will be laid out in the following chapter.

VI.

Experimental Setups of the SWD

1. Operation without Receiver Unit

Under the default setting, the receiver's LEDs are on. The emitter's are off. If we unplug the connection cable, the situation reverses. If a subject (the term "subject" encompasses plants or other biological entities) touches the connection cable, the emitter's LEDs once again go out. This is to be understood as an indication that the subject functions as a receiver, at least partially replacing the technical receiver and absorbing scalar waves. Anyway, the LEDs indicate that the emitter circuit is under load whereby its voltage consequently drops below the threshold voltage of the LEDs.

Some physicians report that if biological information is placed on the emitter's flat coil, this information gets to the subject or biological receiver both by the carrier wave as well as scalar waves.

This mode of operation reminiscent of some bioresonance devices is not recommended, however. Also of concern is the increasing commercial availability of scalar wave devices working in similar ways, partly with extreme power ratings (especially in the US), generating immense stray fields irradiating anyone within the vicinity.

The corresponding energy transmission of scalar waves is occasionally being welcomed by some experts in case of diagnosed "energy deficit". We will not comment on this any further.

During experiments at a congress at Bern University, participants voluntarily performed stress tests. The limit at which stress symptoms first manifested as measured with a Prognos device was at 4 minutes of exposure. This limit should not be exceeded, neither when touching the ground connection nor when using an isolated handle. As this method is not recommended, such a handle is not included with the set and was of course not part of the CE certification process.

2. Operation with Receiver Unit

Starting with the default settings, the connection cable is not unplugged this time. The resonant circuit consisting of emitter and receiver is closed, meaning that all fields emitted by the emitter are being collected by the receiver. The correct initial settings thus prevent the emergence of stray fields. This is a fundamental distinction between our system and other commercially available scalar wave devices, some of which even rely on our research while ignoring our extensive experience.

In regards to the carrier wave, there exists resonance between the units. If an informant, like a vial of a homeopathic agent or a certain nosode, is placed on the receiver's Tesla coil, the carrier wave is being modulated on one end.

Technically, this process can be explained by the Tesla coil, as part of an air transformer, being surrounded by a limited stray field in which the informant is situated. The superimposition of the biological scalar wave information is not measurable due to its infinitesimal amplitude, yet obviously still biologically effective.

In any case, the resonance condition is no longer satisfied for this part of the information. Thus, the fields generated by the receiver no longer return to the emitter, but instead stray around in space until a suitable resonator, such as a plant, an animal, a human, or any other life form shows up. In this case, the information flows to it.

Interestingly, experienced therapists report that the receiving entities are somehow able to control this, so that reception is only established when needed and requested, which is why there have never been any harmful effects observed in this mode of operation. The therapists say that the subject, or rather *each cell, only takes what it currently needs*.

The field strength of scalar waves, including their modulated form, does not decrease with distance, our experiments show. However, the probability of entering resonance does. Therefore, the subject usually sits on a chair between both units. This way, he is closer to the source than anyone else in the vicinity.

3. Wellness or Therapy with Scalar Waves

We are utterly amazed by some of the ideas our customers come up with. A Swiss physician improved the indoor climate in her waiting room using a SWD, resulting in the increased well-being of her patients. She has even been notified of something not being in order when having forgotten to turn the device on before.

In the spa area of a renowned wellness hotel on the Baltic Sea, four recliners have been installed in between the scalar wave units. Now, the exalted hotelier reports, the guests are returning over and over again. Obviously, they enjoy resting and relaxing there. (The following picture is from the brochure and website of the hotel).

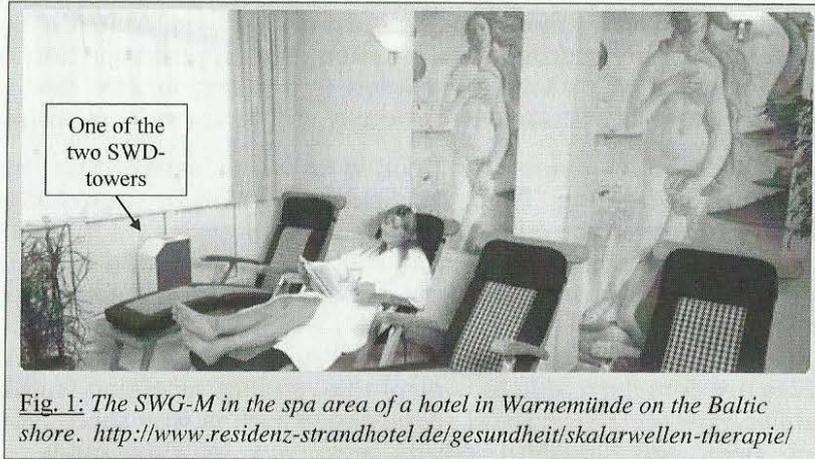


Fig. 1: The SWG-M in the spa area of a hotel in Warnemünde on the Baltic shore. <http://www.residenz-strandhotel.de/gesundheitskalarwellen-therapie/>

In this setup, the informator vial is situated below the coil, not accessible from outside the unit.

In both cases, inaudible musical transmissions were added, expected to result in further improvement of the therapeutic results despite being imperceptible. Mozart or other therapeutic music is being played, if desired also in the common, audible way through conventional speakers of a sound system.

4. Optically Verifiable Resonant Coupling

In an atmosphere like this, one can remain for hours, the spa visitors say. Physicians however have less time. Therapy needs to happen quickly. This might be the reason why in a practice in California, the steel frame of a leather chair was connected conductively to the receiver's ground connector.

Others let subjects touch the connection cable or use an isolated handle, so that generally speaking, the biological system finds itself in a bypass circuit in regards to the technical receiver unit. The tighter the coupling, the less the receiver's LEDs glow or even stop glowing entirely eventually. The subject has been capacitively linked into the scalar wave transmission, indicating a resonant coupling.

By the way, the SWG is the only bioresonance device allowing for a visual verification of the subject's or patient's desired bioresonant condition.

However, the tighter the coupling, the more of the carrier wave's energy is injected. Thus, the physician or therapist needs to decide just how much exposure is desirable. Scalar waves commonly contradict the basic principle of:

„more is better“.

Conversely

„less is more“.

This mantra is reminiscent of the principles of information transmission in homeopathy. Water as information carrier is simply being replaced by scalar waves. In this context, experiments allowing for physical proof of homeopathic theory become conceivable.

One advantage is the galvanic connection between emitter and receiver and further the capacitive connection to the biological system. It guarantees that the scalar waves stay on target, thus preventing uncontrolled stray radiation. This benefits the repeatability of the experiments.

Another advantage is the diminishment of e-smog pollution.

5. Remote Transmission with Scalar Waves

Once again, the default settings of the SWD are the starting point.

The subject has no fixed coupling to the SWD oscillating in its natural resonant state. Some physicians simply place the subject between emitter and receiver and imagine a loose field coupling to him. Others believe the subject's location was irrelevant and that modulating the carrier wave with valid information was the only thing of importance.

To improve the coupling with subject, they put a vial containing some of the subject's body fluids on the receiver's coil in addition to the therapeutic informator. By "writing" the subject's address on the informator package, they're attempting to transmit the information of another nosode on the coil over a greater distance. The subject-specific code is supposed to aid with the location of the desired destination.

In experiments featuring radio-based information transmission like this, it is often difficult to prove causal relationships, complicating the physical interpretation of the actual results. Doubtlessly, one cannot dismiss such properties of a wave (or else we wouldn't be able to transmit TV programs).

This mode of operation is also reminiscent of some spectacular experiments by the Russian space program (Radionics) and after all, physical proof of phenomena such as telepathy might become a reality in this way. However, as mentioned already, causality needs to be verified, which isn't always easy.

With some luck, the SWD allows for interesting experiments with exciting results. For example, Dr. Rothdach, a physician from Munich, has reported the transmission of toxic information to ordinary drinking water using the SWD and scalar waves (s. Documentation 1, chapter VIII 3, German edition). This could be interpreted as proof for the validity of homeopathy.

6. Modulation with Music

Again, the receiver unit is plugged in under the default settings (scalar wave transmission). The modulation capacity is provided by the receiver unit (13) via its 3.5mm jack, the line-in input. It allows for the connection of signal sources such as tape decks, CD players, MP3 players, etc.

If the SWD is running with its frequency setting for scalar waves, the integrity of the transmitted signal can be verified by the active speaker in the emitter (1). The transmission is mono only.

Of course, the integrated speaker or a plugged-in headphone are not really suitable for acoustic therapy. They are merely useful for testing scalar wave resonance and can be disabled or unplugged after successful calibration.

If the music should be audible in addition to its silent scalar wave transmission, it is recommended to use the (stereo) source signal directly to drive a quality audio system or headphone.

As effectiveness depends on various resonance conditions, it can not be guaranteed. Employing the SWD for the purpose of music therapy lies within the domain of wellness.

We will now turn our attention towards the fascinating experiments that have been performed with this device and will partly rely on video recordings from past expert conferences.

VII.

Reports concerning the Scalar Wave Device SWD

The first meeting of experts to share experiences for possible applications of scalar waves in medicine took place in the technology park of Villingen-Schwenningen on Saturday on July the 17th, 2004. The scalar wave devices were still very new to the market. Nevertheless, plenty participants had arrived already and the auditorium was filled to the last seat. I had taken the moderation.

The reproduced abstracts here are typed in the sense of the speaker from the tape. These are suggestions without claim to completeness because the majorities are individual case reports. Then as now, the participants should be encouraged to reproduce the described results and to validate it.

1. Scalar Wave Experience in Acute Infections

Meyl: "The first speaker has a private medical office in the heart of Munich. When you visit him, there you find a lab which looks more like an electrical workshop for an engineer than a medical office for an internist."

"This is my old love to physics that I have left. Yes, ladies and gentlemen, the subject of my present 10 minutes lecture is: My scalar wave experience in acute infections.

The first case earlier this year, it was straightly myself. I got an acute dental problem with my so called closed bite. Normally, the incisors of the upper jaw is few millimeters above the lower teeth. In my case, however, they are completely covered. This is a hereditary anomaly. I have been told that a third of all Habsburgs got it. That is a small comfort because there was trouble with it.

Due to the anomaly, the incisor teeth are more exposed in the lower jaw and abraded over the decades. So the trouble is inevitable and came early this year when I got a slight infection and subsequently a very acute periodontal abscess. You all know what that is. The tooth should have been pulled out but you reluctantly pull a tooth if the area is acutely inflamed.

Therefore, I said to myself, now you try it with the scalar wave transmission. Initially, I only used the transmitter and connected me to the earth as a receiver. With the Aschoff-test, which I have been using for 25 years, I have tested nosodes. As expected, Streptococci and anaerobes of various kinds responded. I placed it on the transmitter coil and applied it for 4 minutes through the ground line. In my experience, it is usually enough as a treatment time. After a few hours the abscess has already declined.

The next day, I measured again and then staphylococci appeared there. I transferred the corresponding nosode back again with the same method. One can say that the whole horrific torture was over after two days. After three days, you have seen nothing at all.

You can imagine that this experiment has impressed us very much. Even my dentist has been very surprised that this is even possible without an antibiotic.

This has led us to try it systematically in acute infections of our patients. Initially, influenza infections of all kinds were possible. In our testing adenoviruses, streptococci, Haemophilus influenzae and Influenzinum responded. In dry bronchitis Coxsackie A7 and A9 responded. If we apply this to the people for 4 minutes, then the disease was quickly overcome at the onset of infections.

You could find that if the flu infections had already peaked, then the course of the disease was shortened to one third to one quarter of the normal time, completely without complications, until remission of the disease.

The next group that we have tried are acute enteric infections. There are two pathogens. On the one hand EHEC (enterohemorrhagic E. coli bacteria) and on the other hand shigella, mostly from dairy products such as raw milk cheese or quark which, e.g., is served in the beer garden as a dip, standing uncooled around for too long. If the patient get diarrhea, then it is usually because of one of these two pathogens.

We have used the two towers of the scalar wave device.

On the receiving tower we have put the ampoules of the nosodes. The patient has touched the ground line. We have used the system like that and it has proven quite good.

The result of these enteric infections was that usually the patients were free of symptoms within one day. The next stool was completely compact again.

Next, I wanted to say something about recurrent herpes infections. In such cases, we treat always with the herpes nosode on the receiver and also with promptly success. When the bubble was already fully developed, then it is quickly dried up in about a quarter of the time as is normally the case. I told the patient, if this occurs again, then come to me immediately into the medical office to treat the herpes immediately because it is very worthwhile in the long run to eradicate this virus.

As you know, this is no simple skin disease but a nervous disease. For example, the herpes viruses are suspected today to be involved in the development of Alzheimer disease. In our experience, eradicating the herpes virus succeeds very well with the scalar waves. The distances between the infections become longer. It is worth to work with the method."

Discussion, questions for the MD

Question: How do you test the nosodes?

"This is done with the Aschoff-test. You can try to test it also with kinesiology or by any means that you master well: EAV or with VEGA testing.

Scalar wave medicine does not mean that the medicine is easy done. You must be diagnostically accurate and precise. The effect can be increased quite significantly with this type of scalar wave transmission."

Question: Can you also use it to cure borreliosis?

"Yes, of course. This occurs frequently with these neurotrophic pathogens (like Toxoplasmosis)."

Question: Can I transfer also drugs along with it?

"I forgot to say. You can certainly put the medicines which have been proven by you on the coil.

Another thing is very important, I think. If you put a medicine on the coil and transfer it to the patient, then it will also lead to a reaction to the medicine by the patient. For this reason, we always make an intermediate copy. We put the nosodes with the medicines on one coil and vials with saline or tap water on the other coil. This purpose-built copy is transferred to the patient and afterwards we throw them away. So, we keep our medicine clean.

Therefore, my recommendation is to work only with copies. "

2. Report from the Perspective of Medical Technology

"We put our patient 20 minutes between the two towers of the scalar wave device. I do not use the electrode or the ground wire in the hand anymore. I have tried all three variants already in the clinic. It works when you put one person or perhaps even two persons in the energy field. An information is always required. I use the JCH-oil. What happens in 20 minutes?

I share the result with you:

- Pains are usually significantly reduced.
- The possibilities of movement are improved with arthrosis, arthritis or discs incidents. Therefore, I can fully confirm the statements which I have just heard.
- Trigger points are no longer present on the entire body and no longer detectable.
- All scars on the body are permanently suppressed.
- After the 20-minute treatment, problem causing fungi and viruses are not any longer present.
- Psychological reversals are no longer present (kinesiologist know what I mean).

- The energetic situation of the meridians is significantly improved (traceable with Prognos or EAV)
- The energy centers build up. After Prof. Meyl has so beautifully explained the scalar waves, it was clear to me that the chakras are scalar waves. (I must thank him again, he has been an incredible help for me with his ideas).
- Many beliefs are positive connotations after these 20 minutes.

The Order is remarkable. Strictly speaking, it is 17 minutes but for safety I add 20 minutes of treatment time. The pains are reduced, the mobility is improved and the patients consistently report a tingling sensation in the painful areas. I go so far that the scalar wave interacts with the system and treated in the areas where it is required. This is my observation and I let it now float here in the room. You have always a coupling between the therapist, the patient and the scalar wave device. The patient decides with his thoughts about the effectiveness of the entire treatment.

We have conducted many experiments in a rehab clinic in Austria. If they do something unkind, then they have less success, one can even say dramatically less success. Our thoughts are scalar waves and our heart plays a major role. At least now it is clear that we should treat each other lovingly. Along these lines, I thank you for your attention."

Discussion

"When the information has once reached and the cell is saturated, the transmission provably ceases. After that, you can stay in the field for hours and days.

But you should not permanently sit in the pure field of the scalar wave without an information vial. Anyway, you will realize it very quickly yourself."

On the issue of adding information: "This is a crucial factor to make the scalar wave device a therapeutic device that you can use without ifs and buts for any patient without contraindications.

There is one exception where nothing happens. When a man does not want to be treated, then nothing happens. This is very impressive and important. The voluntariness of the patient must be always maintained. I am not able to give a therapy against his will. This happens automatically right with the scalar wave device."

"You just talked about a treatment over long distances. We are currently conducting such experiments over any distances. The experiments are very promising."

Meyl: "This is very spectacular. In theory, you can transport information over thousands of kilometers with scalar waves at resonance. However, what about the free will of the patient when the information of the patient is placed, e.g., in the shape of dried blood on the coil of the scalar wave device? In order to perform a resonance over large distances, an individualized scalar wave coupling is absolutely necessary in the sense of the key-lock principle.

The highly individualized information is mandatory to prevent that on occasion two or three other persons are treated in addition who are not being asked. How do you see that?"

"Sure, the agreement was given and the person wanted the treatment. We have also not worked with a photo or any characteristics but with the blood of the patient as a highly specific information. The transfer took place over 800 kilometer and it was successful."

3. Study in a Rehabilitation Clinic with over 1500 Patients

Meyl: "Since the chief physician of the rehab clinic in Austria can not be here today, I would like to briefly mention the study that has been carried out there. I have arrived there as the study was presented in April.

There are many patients with mainly bone fractures who have been treated with the scalar wave device. One objective was the bone growth which is relatively easy to measure and on the other hand the average duration of stay in the rehab clinic.

With the daily 4-minute scalar wave treatment, the bone growth was so stimulated that the spending time in a bed has been reduced from an average of three weeks in two weeks.

There are various alternative medical procedures performed on a voluntary basis and compared with each other. The patients could tick which method they would like to use. Just the patients who have ticked nothing came off badly. The midfield were various bioresonance methods, e.g., with so called micro current. But the top ranked treatment was the scalar wave treatment with my device.

I assume that the effectiveness of bioresonance is somehow based on the involved and unconsciously used scalar wave components. Obviously, the winner is a pure scalar wave device which is designed for this purpose.

In the study were always the same conditions used, always the same vial of essential oils as an information and always the same instrument adjustments. Therefore, this is a very valuable clinical study with reference to a very large data set of about 1500 patients. The statistical analysis was impressive."

4. Studies and Case Examples of a Medical Doctor

Ladies and gentlemen, I am working as an internist for 30 years in a private medical office. I started as a strict orthodox medical practitioner and today I am working with many other things.

I have met Professor Meyl in the European Commission for Interdisciplinary Sciences in which I am also engaged. Half a year ago, his lecture about scalar waves has so convinced me that I have intended to get such a device.

He said at the time that we are certainly all still pioneers and at an initial stage. We still do not know against which disease we can use these devices, with which duration of treatment, with which information, etc.

We have managed in 4½ months to treat 98 patients with the scalar wave towers. The age varies between three and 82 years. We offered wide indications for free to get as many patients as possible in the program.

The diseases were: Rheumatoid arthritis (stiffness and swelling), neurodermatitis and psoriasis, migraine, elderly patients with ear or head noises, nightly cramps in the legs, poor circulation in the legs, patients with rashes of allergic origin, fatigue, etc.

The treatment sessions ranged from 3-4, with those who had felt no effect and wanted to quit, to a maximum of 20 treatment sessions.

We have increased the duration of treatment from 5 minutes to 10 minutes up to 15 minutes per session. If it was possible, such a session was performed daily.

We should always put a bottle with information on the receiver coil. Usually, we used thymus extract and fumaric acid. We have put Bextra (Bextra is an antirheumatic medicine) on patients with arthritis and for itching we have used Bepanthen, etc.

Our successes are and I have only a few numbers in mind: 6 patients with moderate to severe rheumatoid arthritis have responded with only 2 to 3 treatments to 100%. They have lost their morning stiffness or swelling and can get along without their medications. That was a very amazing result. We still try to get more patients with a similar disease.

We have not tried it yet in signs of wear. The scalar wave treatment in neurodermatitis has resulted in a significant improvement for itching and rash in almost the half. We have a three year old and a five year old child treated with 5 treatments in one week. Subsequently, they were free of symptoms and had not an itching any longer.

Most patients with psoriasis have observed that the scurfs on the body and on the head loosen and the itching subsides. Unfortunately, it did not heal completely. We had to stop and have treated them further conventionally after that.

Elderly patients with tinnitus have experienced a significant improvement after 8-10 treatments or the symptoms had disappeared completely. Despite the fact that they had these symptoms for ten years or longer. In this case on the receiver stood Trental, magnesium and aspirin (as a tablet)."

Discussion

On the question of the tinnitus treatment:

"Now, we want to take patients with tinnitus in addition but the range is huge. We had just one patient with migraine who has experienced an improvement but I also do not know for how long.

We had a few patients with no noticeable effects and the treatment was discontinued quite quickly. However, we have not had a single patient with negative side effects."

5. Remarkable Treatment Methods

I had a patient with opiate dependence. She could not drop their opiate anymore and was under neurological treatment. She has developed vegetative symptoms significantly when she dropped the substance.

I have exactly the same product, which she has used herself for years, placed as homeopathic remedy on the receiver coil and treated her with it per scalar wave 2 times. The problem was resolved within several days.

In patients with fertility problems who are often already had the IVF treatment, I could often find an intolerance against the sperm of the husband. A scalar wave treatment in such patients should be worthwhile by transferring the sperm of the husband to his wife via scalar wave (which of course does not lead to pregnancy but the readiness to receive).

The successes are awesome. At least six patients became pregnant after this preparation in the subsequent period.

A very different case about which I want to report is a pharmacist with end stage renal disease. I was able to stabilize the patient over 4 years with a scalar wave therapy until the transplant was finally no longer avoidable. He responded regularly with fever.

For me this is evidence of a response on the information level when I establish a resonance to toxins or bacterial structures or viruses in the body. I am doing here my contribution for breaking the regulatory blockade that the patient brings along. This has become the focus for me in the work with the scalar wave device.

I use the SWD also for detoxification. I have a patient who produces lead glass windows for churches. The profession has a cooperative. She has a reported high lead exposure according to the German employers liability insurance association. These burdens are gradually declining with the scalar wave treatments. That is always very impressive for me to see how you can bring a change through such physical interactions in the body.

The scalar wave technique can be used to eliminate heavy metals or to treat a virus as well as a treatment of hormonal centers when using Global Transmitter and oscillate this as a system or by autologous blood which is oscillated as a nosode in the body.

We have several thousand test ampoules in the medical office. If you want to take the time, then you can of course try out the suitable essence and treat with it by the scalar wave. Therefore, the effects are also psychological. Afterwards, the patients often feel very relaxed. We see during treatment an emotional release sometimes, i.e. they are beginning to cry as a sign to dissolve any blockages.

You stand as a physician next to it sometimes and do not know what happened but I could tell that already because I recognize it from the Osteopathy. Such effects occur precisely with the use of scalar waves. The whole thing is still exciting for me because it also has accelerated the work on patients in pain therapy, in the deacidification or with chronic syndromes. Everywhere it goes better if you use the scalar wave in the corresponding treatment sequence.

I position this treatment at a certain point and proceed quite as required. It may well be that the patient first needs infusions or other known forms of treatment. Only hereafter, I put the scalar wave treatment but then appropriately. This inspires me and Mister Meyl. I must tell him, I also admire his bite to get through the whole issue.

I am often annoyed by companies which manufacture such devices and build a wall. They say nothing about the technology. If a colleague asks me what I am doing with the device, then I have a cookbook. In it is written, in the case of illness, you must take the program 24. You feel absolutely insane as an academic. This is why the spirit that comes together to work scientifically here in this room is very terrific. Thank you."

Discussion:

Meyl: "Maybe it is because I am not a medical doctor and I follow quite different objectives. As the most here know, I have developed a theory. It is required to prove everything experimentally what is theoretically calculated. Only when both match, a recognition is possibly granted.

However, there is no court that could decide whether the extension of a physical theory is correct or not. There are only some colleagues who presume to do so because they think that they are so important. In fact, there is no such an institution. Ultimately, a theory has always recognized at the end if it has been needed.

If the scalar wave is used, then at some point it must be accepted and be right. I am pleased that so many already need it and use it. This shows to me that it can not be so wrong. This is perhaps the background why I have this bite that you have just noticed. I would have certainly discontinued my efforts already without success."

MD: "I want to say something in addition. I have connected the bioresonance device in my medical office in series to the transmission path. You can not imagine how sometimes even such a pointless appearing bioresonance device is established instantaneously when you operate it via the entrance of the scalar wave device.

I use a frequency generator that has a range between 3 Hz and 30 kHz which I connect to the audio frequency input on the receiver tower. You can go through all kinds of resonances in the body with this sound wave modulation. The effects are better in order of potency as in previous treatments without the SWD. I would just like to encourage all of you to use it."

6. From the Medical Office of an Alternative Practitioner

We use the scalar wave device SWG-A (today SWD) and put a sealed vial of JCH Essentia in Oleo on the receiver tower. In addition and as a precaution, we still use a line filter at the electrical outlet.

We use the device:

- in depression and lack of energy,
- in stress and in cancer patients,
- in the liberation of mental burdens (thoughts carousel)
- and in a wide variety of ailments.

6.1 Patient Record

A patient with fear of the workplace suffered from depression and anxiety. The sleep disorders and the fears were gone after a single 20-minute treatment with scalar waves. Only after five weeks, the sleep disorders slightly occurred but no more fears. The condition of the patient has very fast and very extremely improved with the treatment. A new treatment date is still pending. Maybe we can report about it at the next meeting and to what extent the medical condition was permanently stabilizing.

Cancer patients generally sit between the towers during treatment. The microscopic dark field blood analysis shows a significant difference of the anamnesis before and after. This diagnostic procedure gives us the opportunity to analyze and document the effects of the scalar wave treatment.

Patients with mentally new and old burdens are treated by us according to the method of "emotional balance". The scalar wave device gives us here a faster access to the analytical subconsciousness and the autonomic nervous system. The actual core of the cause of a disease can be found more quickly.

After a short time, the patients change from the sympathicotonic phase to the vagotonic phase. They are tired and many are beginning to yawn. After the 20 minute session, the patients feel released and relieved. Some are rather exhausted also.

We understand that the carousel thoughts are constantly recurring thoughts which can be released by the scalar wave treatment. It is possible that surprising perceptions are revealed. For example, one patient said, "I think I want to keep the disease because I still have benefits from it."

The release of blockages can be improved with our recommendations if a conscious deep breathing is simultaneously practiced.

As an early conclusion can be summarized that the release of blockages in a therapeutic application works particularly much faster. External influences, especially thoughts, can be partially reduced or suppressed during the treatment. This can lead to a good cleansing after a busy day for the patients as well as for the therapist himself.

This was my short report from our group practice."

Discussion:

Another participant adds: "On the raised question of possible negative effects by a too long duration of treatment, I would add from my own experience that you can not transfer too long and you can not transfer too little or too much.

If you put information on the receiver tower, the body seeks out and always resonates with what he needs. We have tested it. This is why you can not do anything wrong with the scalar wave."

7. The Influence of Scalar Waves to the EEG Activity

"My short report concerns the electroencephalographic activity of the people on which we judge the external influences on patients. Professor Meyl has provided for us a SWG-A for that purpose.

Our team consists of a neurologist and psychiatrist, a neuroscientist and an otolaryngologist. Among other things, we guide patients with tinnitus, dizziness, disorder of speech development, autism, attention deficit disorder, dyslexia and concentration disorders.

As a first step of the analysis, the EEG activity of the patient is recorded.

As a second step of the therapy, an EEG controlled feedback, a so called neurofeedback, is tried. In addition to the usual pulsating signal therapy and ultrasound therapy, we have still added the scalar wave therapy.

However, let us proceed sequentially. The recording is done in a Faraday cage to prevent disturbances from the surrounding field. The eyes will be opened once and then closed as a test condition. Als Testbedingung werden die Augen einmal geöffnet und dann geschlossen. The baseline is recorded and finally the scalar wave is added.

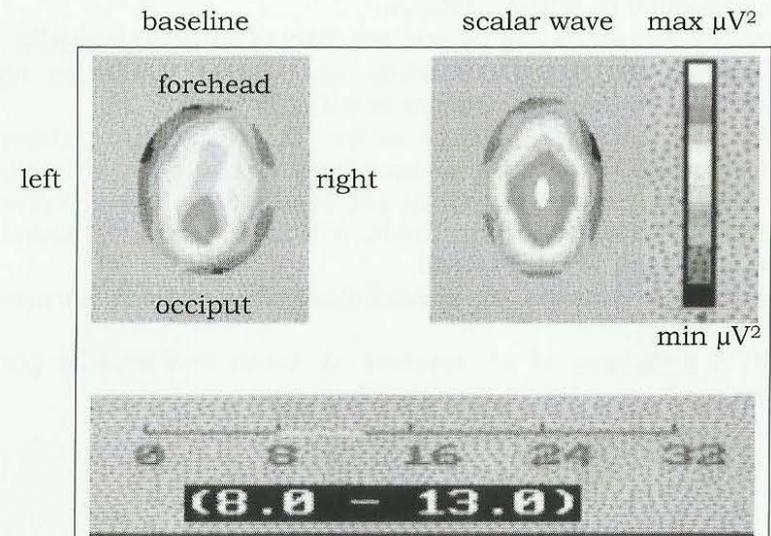


Figure 1: Map of the brain with acute effect of the scalar wave.

The following is the computer-assisted processing. The evaluation of the EEG data is done with a presentation as brain maps, power spectrum or a numeric view.

As compared with the baseline to the scalar wave, the activity is increased and acute effect is recorded in the latter case.

The EEG signature changes over time. Therefore, we were able to measure a weak increase in alpha power (8Hz) with a 2-minute scalar wave treatment, however, 14 minutes led to a reduction of theta power (10Hz).

Based on the presented results, we conclude that scalar waves show an effect on the EEG activity.

After completing these preliminary examination, we were able to face the second step. We have treated many patients with the scalar wave therapy. I would like to present two case studies.

7.1 First example: Unknown Neurodegenerative Disease

- Anamnesis: It is about a 57 years old female patient. She is suffering from an inflammatory disease of the central nervous system with unsteady gait (for 3 years), speech problems, lack of concentration and memory problems, accompanied by chronic fatigue.
- Multiple demyelinating lesions are detectable neurologically.
- Suspected diagnoses are made on Sjögren syndrome or borreliosis. In fact, the disease is still unknown.
- Over the course of time, motor disorders, progressive deterioration of gait and balance disorders appear. Walking is only possible with a walking aid. In addition, a progressive deterioration of the articulation which sounds very faded and is difficult to understand.
- The therapy consists of a combination of neurofeedback and scalar waves,
- with a frequency of 25 sessions at about one session per week.

- Result:

The progression of the disease can be stopped by use of neurofeedback. Motor function and language showed an improvement. However, the patient still complains about constant fatigue and tiredness.

Immediately after the beginning of the *scalar wave treatment*, the patient reported a dramatic improvement of the burnout syndrome. She has thereby

- more energy
- more strength
- and an improved resilience.
- Moreover, she showed after this an usual stable gait again. She does not need a walking aid anymore.
- Her language has improved significantly, is clearer and more understandable.
- A significant reduction of chronic fatigue was also observed.

Such an improvement would have been hardly attainable with known means and methods

7.2 Second example: Partial Paraplegia



Syringomyelia is a disease in the spinal cord within the nerve cells of the spinal cord (especially in the spinal cord of the cervical and thoracic vertebrae area) with fluid filled cavities (syrinx).

(see left figure 2)

In these caves are no functional nerve cells any longer present. Therefore, malfunctions occur in the long term. By pressing on the surrounding tissue, neurological symptoms arise which initially reveal as pain and muscle weakness.

The severity of the disease, especially the progression of the symptoms, are very differently and individually pronounced.

- Anamnesis: It is about a 56 years old male patient. A year ago, he had fallen from a 2 m high ladder. Thereby, he has suffered a fracture of the thoracic vertebra (T5/6).
- Serial rib fracture with hemopneumothorax on the right and dislocated sternum fracture.
- Complete paraplegia below T4.
- Expansion of the central channel to the bottom of the 4th ventricle.
- Currently, "consolidated" syrinx between C6 and T7.
- The therapy also consists of a combination of neurofeedback and scalar waves,
- at a frequency of 44 sessions at about two treatments per week, each 60 minutes.
- Results / reactions:

1. Improvement of the balance (in the wheelchair).
2. Reduction of pain in the left arm and the earlobe on the left hemisphere.
3. Strong tingling of the lower extremities.
4. Conscious control of the feet. Occasionally, the feet can be specifically lifted.
5. Ascending tingling of toes in the direction of the groin and the bladder.
6. No muscle atrophy.
7. The Patient works on the next goal with the first attempt to stand on the wall bars.

Thank you for your interest."

8. Cervical Spine Syndrome and Therapy with the SWD

A randomized single blind study with SWD, Belgium, May 2014

Study Title:	Cervical spine syndrome and scalar wave therapy
Investigational Product:	Scalar wave device SWD
Indication:	Cervical spine syndrome, functional, degenerative and post-traumatic causes
Brief Description:	Randomized, single-blind study set up to evaluate the efficacy of SWD on cervical spine syndrome related symptoms Different treatment patterns in three patient groups were analyzed. Evaluation: -By patient: report of progression (VAS) -By physician: through change in flexion, extension, left and right rotation.
Researcher:	Dr. L. GRYP – Sports Medicine

Dr. Linda Gryp is a sports doctor. She wanted to work with the Cervical spine syndrome and with the scalar wave. What is particularizing in her study is the fact that she did not use any information in addition. She used the two towers, the patient between the two towers and made a simple blind study.

Cervical spine syndrome is a collective name for a number of orthopedic and/or neurological set of symptoms with irradiation in neck – shoulder – arm region. It is caused by whiplash injury, functional hardening of the neck muscles, degenerative alteration of the cervical vertebrae, cervical slipped disk, tumors or spine surgeries. Symptoms are pain in the neck and trapezius region possible radiating to arm / hand, myogelosis, vertigo, headaches, paresthasias and hypoesthesia's, impaired vision, ringing in the ears or paresis.

She started to sort the patients. Finally, she did not keep 9 of the persons in the beginning. The study was made with 21 patients and she made 3 groups with this 21 patients.

The first group got 4 minutes treatment, the second group got 6 minutes treatment and the third group was the control group. The treatment she gave was one treatment in the week with the scalar wave device SWD.

It was only her to put the button on or off on the device. So, the patients did not know when they are treated or not but she knows normally which patient she treated and how many minutes she treated for each patient.

She had an inclusion criteria that the cervical syndrome cause by whiplash injury, functional hardening of the neck muscles or degenerative alteration of the cervical vertebrae which is very common. A lot of us have this kind of symptoms. The exclusion criteria was cervical slipped disks, tumors, spine surgeries, medication or younger than 18 years. She was very strict about it.

She used two ways to see if the patient improved or not. One of the ways she used was the visual analog scale (VAS) and the other one was the goniometric measurement. They measured the flexion, extension of the head, turning left and turning right. The reference points are the external acoustic meatus, the nostrils or the center of the head. The device measures the angle.

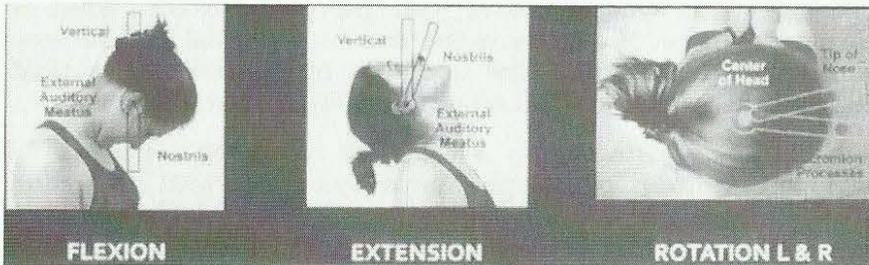


Figure 1: Goniometer measures the available motion or the position of the joint.

The other method, she measured the improvements or the degradation of the patient, was the visual analog scale. In fact, this is the pain perception of the patient. If you do not feel any pain, we have zero pain here or if you feel a little bit more, you have two, three, four or worst possible pain. So, it is a subjectively perception of the patient.

She made three groups randomly chosen. The group number one was treated 4 minutes, the group number two was treated 6 minutes and the group number three had normally no treatment.

She made one treatment a week. The treatments were short. She measured her patient before with goniometric measures how they flex, extend, turn right or left and measured the pain with the visual analog scale. They treat you in the first, the second and the third week. Then they measured again and also one week later without any treatment. So, she measured at point zero, three weeks with treatment and one week later to see if they degrade or continue improving in their situation. This is the result:

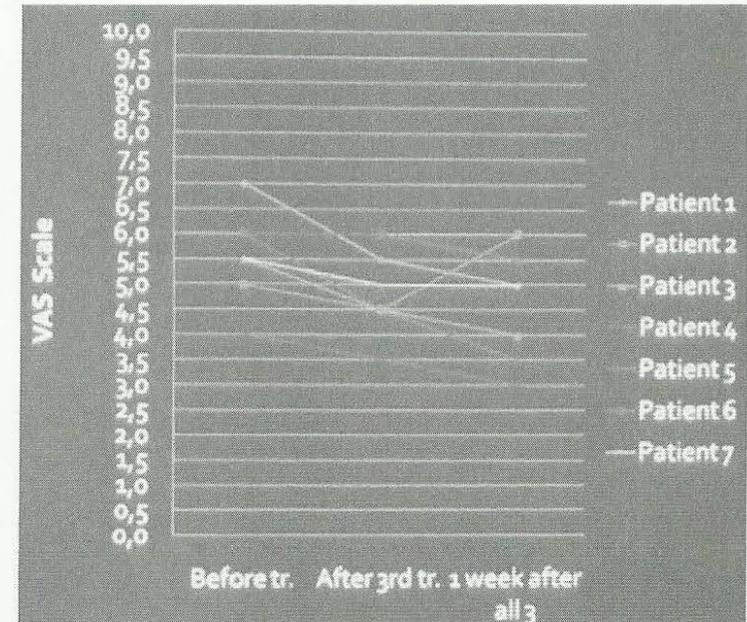


Figure 2: Arm pain of group 1. Except the patient 2, all improved.

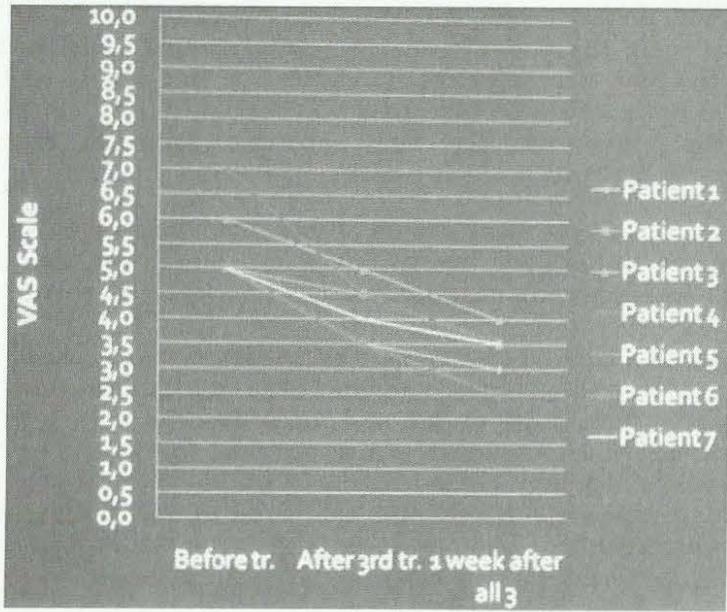


Figure 3: Arm pain of group 2. All patients felt better.

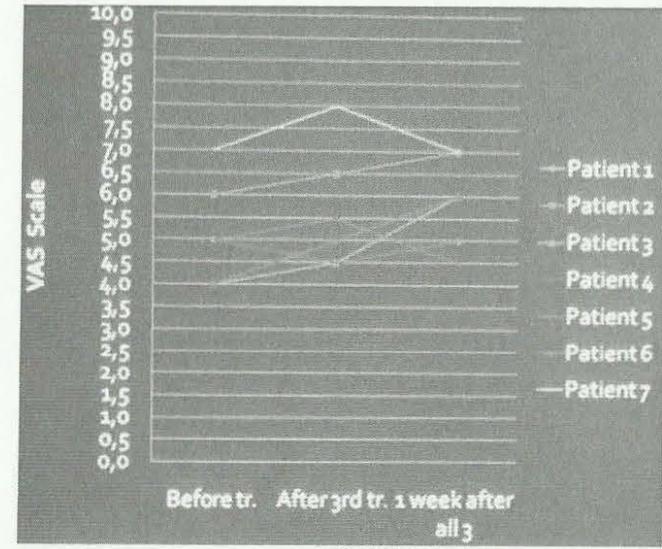


Figure 4: Arm pain of group 3. All patients have rising or falling and rising perceptions.

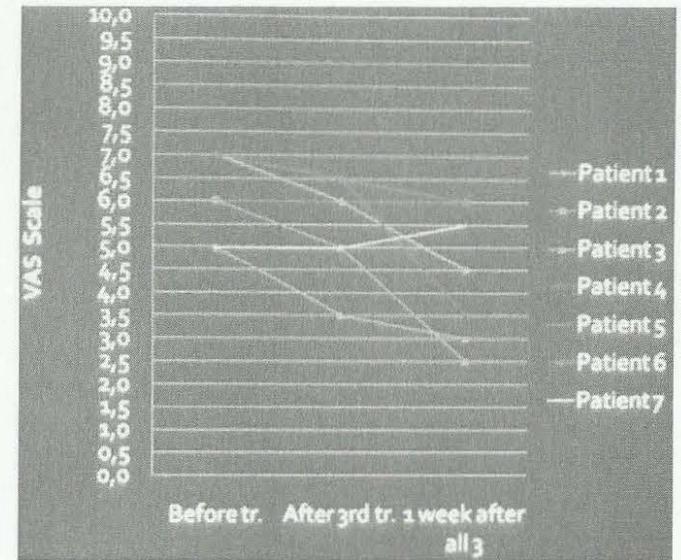


Figure 5: Neck pain of group 1. Except the patient 1, all the others improved.

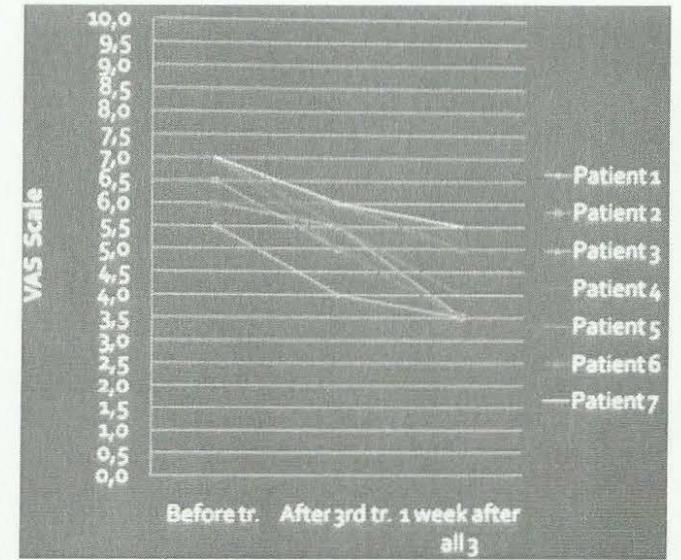


Figure 6: Neck pain of group 2. All patients improved.

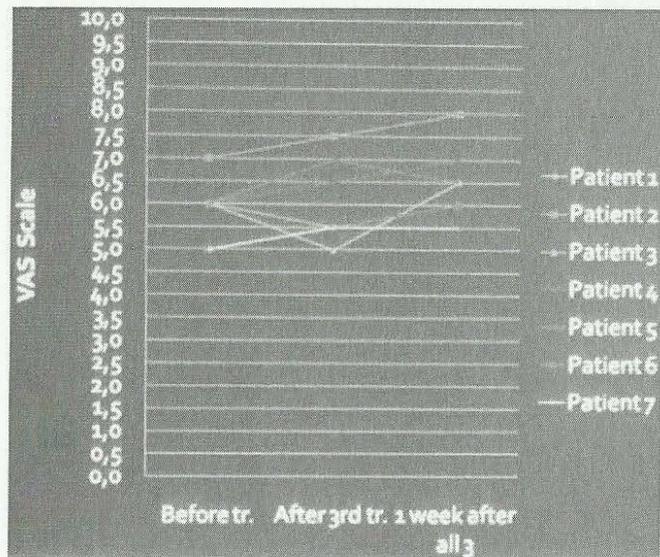


Figure 7: Neck pain of group 3. All patients of the control group have rising or falling and rising perceptions.

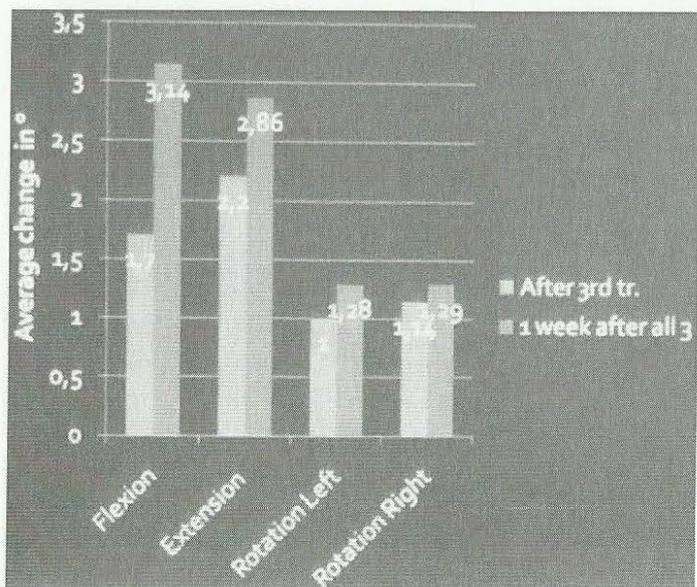


Figure 8: Change in motion vs 1st assessment with goniometry of group 1. All patients improved after the 3rd treatment and one week after the 3rd treatment.

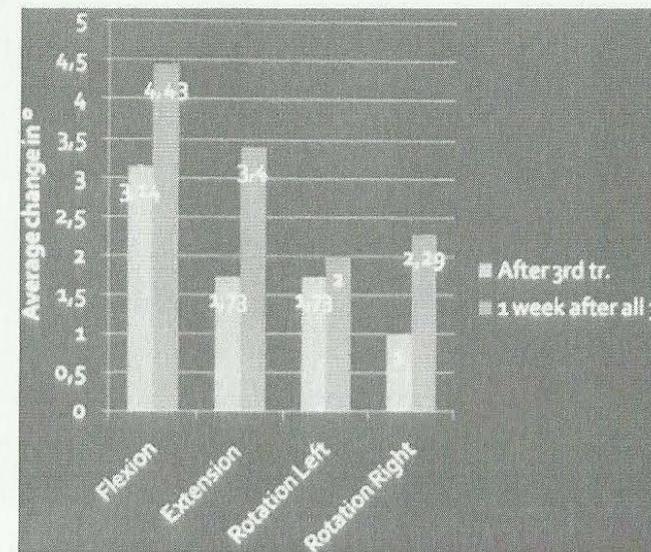


Figure 9: Change in motion vs 1st assessment with goniometry of group 2. All patients improved after the 3rd treatment and one week after the 3rd treatment.

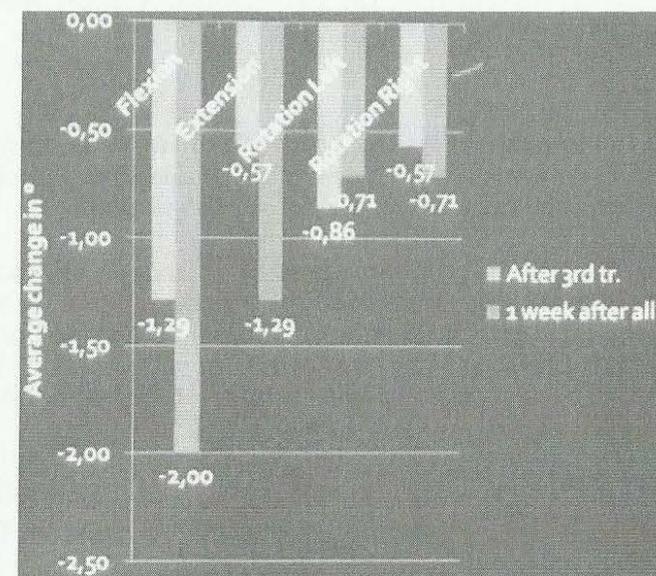


Figure 10: Change in motion vs 1st assessment with goniometry of group 3. All patients degraded.

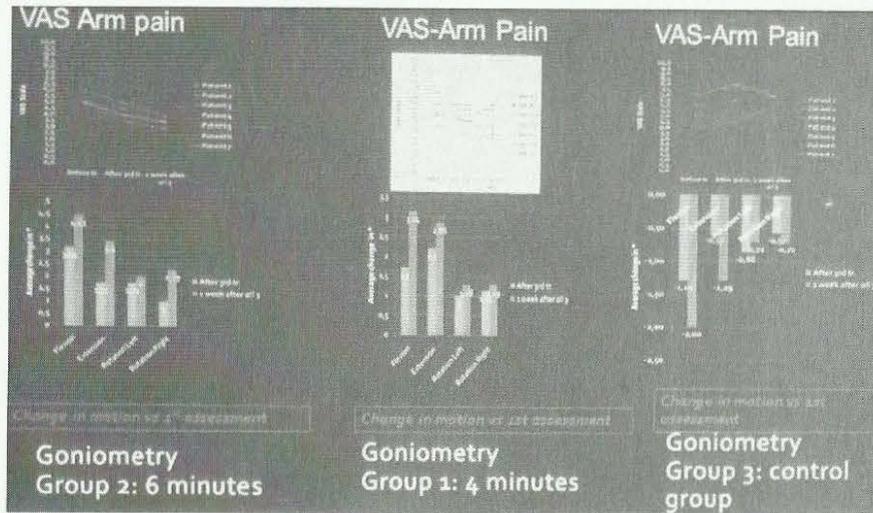


Figure 11: Group 1 and 2 improved their health by treatment with the Scalar wave device SWD in comparison with the control group.

Presented by Dr. Hervé Janecek, Lyon, May 2014

Comment:

The result is remarkable, as no information has been modulated. The scalar wave device SWD gives energy in addition. It looks as if this energy transmission itself has helped the patient.

We know, that all information needed is stored in each cell. Obviously exciting the antennas by unmodulated sinusoidal scalar waves enables the healing process or the beginning of improvement of health. The uploading of information is only required if the body needs it, and because of illness is unable to provide itself.

Thus the result could easily be explained when the wonder and amazement is left to the ignorant hardliners among the medical professionals.

9. About the Treatment of Cancer by the SWG

The treatment of cancer with the scalar wave device poses a special challenge. Let me tell you about the case of a patient afflicted by prostate cancer who is now cured. Of course, it's merely a singular case amongst a variety of cancer types and courses of disease. To express it scientifically: This case has no significant relevance. Still, I consider it to be worth mentioning and educational.

9.1 Cancer as a communication disturbance

In my book „DNA and cell radio communications“, I've been looking for the antennas with which cells communicate amongst themselves through magnetic scalar waves. My search led me to the ring structures common to organic chemistry, for example benzene rings or the pyrimidine rings of DNA bases (see chapter 2.2 on page 40).

If a disturbance of communication occurs, it might lead to cancer, according to my estimate. From a technical perspective, several causes of impairment of the antenna functionality are plausible.

1. E-Smog: If for example a strong external source (radio tower) saturates the biological spectrum of the ring antenna with high frequencies, the cell can no longer enter resonance and thus no longer receive signals (physical noxas).
2. Chemistry: If the ring antennas are deteriorated by chemical substances, they can no longer function (chemical noxas).
3. Biology: The antennas of benzene, viruses or other biological structures can diminish the cells' energy or cause misdirection (biological noxas).
4. Aging: If delocalized ring electrons lose velocity over time, the antenna will eventually fail (mineralization of cells).

As the magnetic scalar wave not only provides the cell with information, but also energy, a cancerous cell suffers from energy deficiency. It's in the nature of things that a cancerous cell consumes a lot of energy while trying to reinstate communications. Imagine "shouting loudly while no one is listening".

The "loud call" of the cells is being diagnosed by physicians as inflammation and fever. The patient is in pain while information and energy are being requested from somewhere in his body for healing. Body temperature is a somewhat reliable measure for the activity of the antennas.

The louder the cells call, the more likely a response in the form of scalar wave resonance becomes. It allows for DNA read access, realigning the cells with the original plans. But what happens if no response is received? What's a specialized cell without instructions to do?

Borne out of technical necessity, the cell will raise its amplitude to whatever its antenna can handle. It divides, as all cells whose energies are depleted do. And as this state is soon arrived once after, they will divide again and again, running rampant and forming a cancerous ulcer. This also perpetuates the antenna malfunction. Now shouting in a choir, yet with no healthy cell listening still, as they speak different languages. At some point, so called metastases form. These are cells that become attuned to the shouting and thus become reprogrammed. Among other things, this has to do with the fact that usually, synchronization occurs with the strongest signal.

Which brings an idea to my mind: How would metastases react if the wrong, cancerous signal was attenuated or the right signal of neighboring cells amplified? Would the metastases once again synchronize correctly? Can they be switched or reprogrammed in this way? Let's try to find out.

9.2 Test Tube Experiments in Preparation

David, an entrepreneur from Madrid, was interested in the initial experiments that could, with exception of the SWT series, be performed during his visit to the 1st STZ on the 21st of April 2013. (Documentation (1) about scalar wave technology chapter 7, page 214).

He wanted to reproduce the experimental results and therefore financed a cancer research institute in Madrid. Furthermore, he brought aboard Dr. Marti Bosch, an experienced specialist in the treatment of cancer, as well as professor emeritus Dr. Lopez of the university of Madrid.

Numerous experiments followed, until the glass vessel and duration of treatment were optimized and the most effective substances found.

At the end of July 2013, David reported a breakthrough in his test tube experiments.

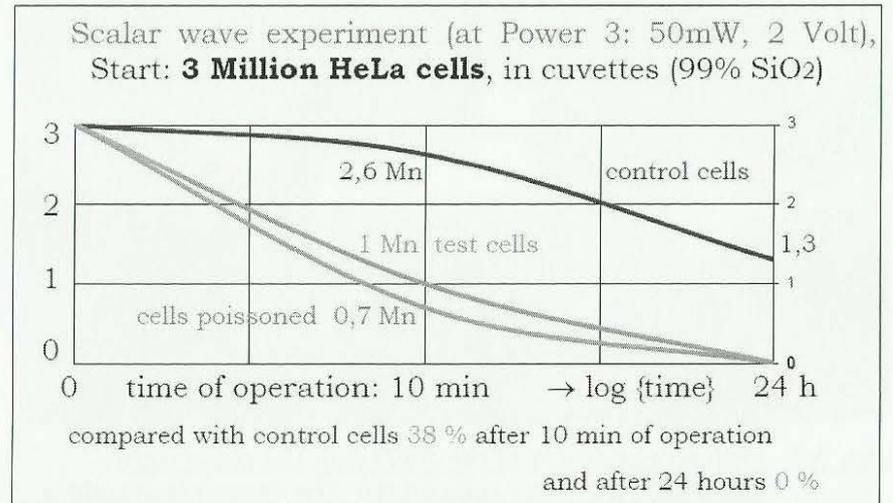


Fig. 9.1 The successful cancer experiment No. 4

Starting conditions were always 3 million HeLa, of which after 10 minutes and 24 hours, both the surviving cells and dead cancer cells were enumerated. If the cells were poisoned in a vial with a chemotherapeutic substance while the SWD was running, only 0.7 million cells survived the initial 10 minutes.

Obviously, the 'notice of death' could be transferred from one unit to another via scalar waves, as cancer cells on the other end started dying as well. After 10 minutes, there were only 1 million remaining, while the control vial, which had not received such notice, still contained 2.6 living specimens.

The next day, both the poisoned and informed cancer cells were all dead, while 1.3 million control cells lived. This result encouraged everybody, the research team around David in particular. They now wanted to go even further and considered extending their cancer treatment to purportedly 'untreatable' patients and those considered moribund.

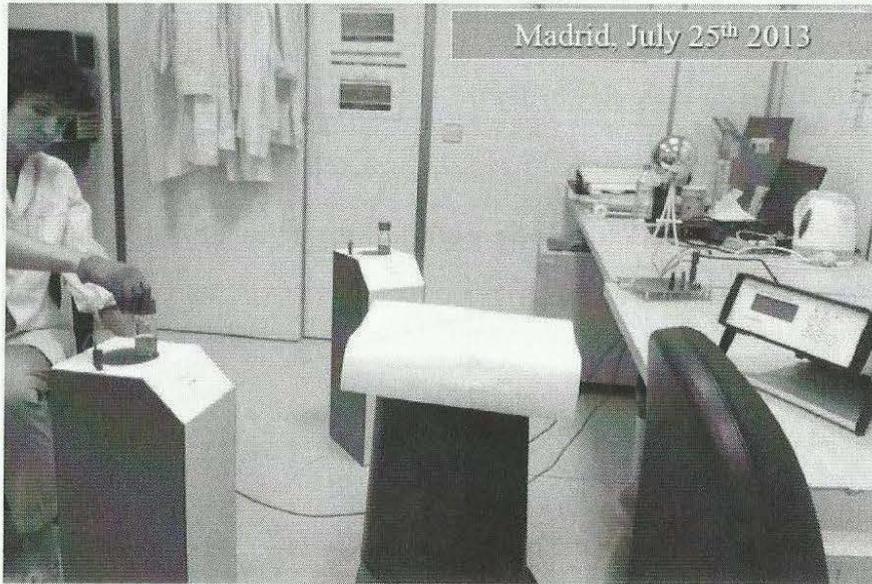


Fig. 9.2 Both receiver units of the SWD with the glass vials containing the HeLa cells on top. The emitter is standing on the table (replacable by the current SWT).

9.3 In Madrid, at the Center of Development

In November, David wrote to me, telling me to come to Madrid immediately. I took the next plane and was taken to the office of Dr. Marti the same evening. I was briefed quickly: „The prostate patient who will soon arrive has been tied to a wheelchair only ten days earlier and was immobilized by pain. Thanks to the scalar wave treatment, he's now practically free from the pain that had mostly been caused by the metastases. We don't know whether the cancerous ulcer has itself been reduced, but are certain that the metastases are mostly gone.“

Had all cancer cells and metastases been killed, the patient might have died from liver failure. How could his body have dealt with such an excess of necrotic tissue? Were the metastases not dead, but merely reset to normal operation? Questions remain...

The office door swung open and the patient greeted the team and myself. He used no walking frame and appeared reinvigorated. But before he invited us for dinner, I was to witness the treatment method of Dr. Marti.

To communicate with the cancer cells and metastases in the patient's body, extraction of a sample was required. Both blood and urine turned out to be viable sources. And so, some blood was drawn and put in a vial. Another vial was filled with his urine. Both vials were placed on a receiver unit, the patient situated in between, and the scalar waves turned on. Next, a certain amount of a chemotherapeutic drug tested earlier was injected into both vials, initiating the demise of the cancer cells contained therein.

At the same time, a vial containing water was placed on another receiver unit and informed by the dying cancer cells, thereby creating a homeopathic. „In this way, the timespan between treatments can be bridged more conveniently, so the patient doesn't have to show up daily“, the medical doctor said.

If I were him, I would have added the water vial to the other two, rendering a second receiver unit unnecessary. But whatever works.

The next day, an expert meeting had been spontaneously arranged at the health center Fey, which was attended by the patient. As far as I know, he lives on to this day, in defiance of all prognoses by professional clinics. But what's most important to him is his newfound quality of life.

This experience deeply impressed me and motivated me to schedule another expert meeting in Lyon half a year later, so that the Spanish team could inform us of their progress. The talks have been recorded, allowing us to reproduce all that has been said in detail. Here's what cancerologist Dr. Alberto Martí Bosch said during his talk in Lyon on May of 2014.

9.4 Experience with Cancer Patients Treated by the SWG

"My name is Alberto Martí. I am working in medicine from fourteen years ago. When i was 29 years old, I saw that you have terrible results with chemotherapy, all of it. We lost a lot of patients. The patients suffered a lot of side effects and there was not a working solution."

"We want to show you the treatment with a few groups of patients. I hope in the next year we have more patients. We have 13 patients for you in this group. The test evaluate the effect of the SWG in patients in vivo. We saw in vitro the results are excellent. Why we not try it with this kind of patients who have not been able to retreat their goal in the hospital? So, we adjust the design of a working method. We used blood and urine of the patients with carriers pathogenic substances or "markers". In the blood of the patient and in urine of the patient, there are cancer substances. So, if we put the consistence in the blood and in the human, we can destroy this cancer substances and this is the way to stop the cancer too.

We evaluate variations, we are looking for a method to see if the treatment is effective or not because there is a lot of bias when u talk about it. The refractive index of plasma could be or would be an indicator of the health of the patient and its evolution during the process toward healing."

"The method of the protocol was the following: 2 ml of blood was extracted from the patient. 1 ml is centrifuged and then we measured the reflective index of the plasma. The other ml is dissolved in isotonic plasma of Quinton and then we put the solution in a quartz flask, lead free. It was very pure. A patient's urine sample is placed in another bottle of quartz with Vitamin C and Vitamin B1." Note: He refers to Linus Pauling and Otto Warburg.

"At each vials we added 1 ml of venom. It has no side effects. The 2 vials with samples of blood and urine are disposed on the station of the tower to transmit the information to the patient and to the other tower. In a normal glass bottle is put alkaline water, pH=7.8 with brandy 30%. This bottle is shaken 250 times to make it dynamization. The bottle is in the condition to be recorded with the information of the patient and the poison that we are using. The patient is placed between the two towers. Apply two sessions of 6.72 MHz at averadge amplitude (level 2 - 3), about 3 minutes for its potency. Repeat two times per week and two weeks per month.

We decided to put the treatment kept in 15 days because how we saw that in vitro it was able to destroy all the cells. We thought that if a patient have the same effect that toxicity produced by the chemo of the cells, then the patients need two weeks per month and at least 15 days for 20 minutes, the toxins on the tumor destroy it. For this reason we choose this kind of work.

The streamlined bottle is delivered to the patient to take it as a homeopathic remedy. In this way the patient is following the treatment at home but not by scalar waves, its by tropes with information.

9.5 The concept of treatment with cancer patients

(Dr. Alberto Martí Bosch)

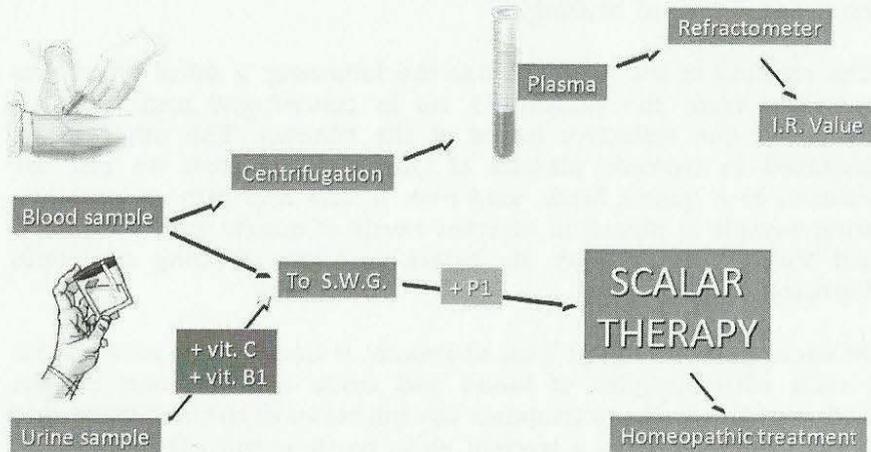


Figure 9.3: *Methods of the treatment*

This is the way we work and treat. We take out the blood, centrifugation of the blood and then we have the plasma. We take out a sample out of the plasma and then we put it in the refractometer and we have the value of the reflective index of light. Then, we have the urine. One part of the blood goes to get the value. The other part of the blood goes to the tower to transmit information. In the same tower we put a sample of urine with Vitamin C and Vitamin B plus the poison (P1).

Then we make the scalar wave therapy and the information from the tower from the patient is recorded in the bottle as homeopathic remedy but this is specific for a patient. In this bottle we have the information of Vitamin C, the information of Vitamin B, the information of poison and the information of the dieing tumor cells.

Yes, the cancer cells dieing. It will be a memory to transmit to the patient along the 15 days that the patient is at home during a detoxification treatment simultaneously.

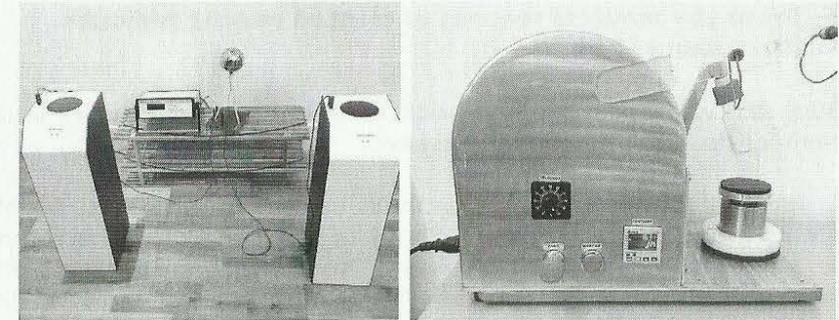


Figure 9.4: SWG (left) with 2 receiver towers and dynamisation (right) for shaking the bottle of water.

This are the elements that we are using, the towers, the generator and the machine to make a dynamization of the sample. Then on the transmitter tower we put the blood sample and the urine sample with the poison, the Vitamin B and Vitamin C. Between the two towers is the patient and on the receiver tower we put the bottle with the water and brandy.

We dynamized it in order to recall all information, and then the patient will take that to put the drop that need to receive the information and we give this bottle to be taken in at home. We use a whole wooden table in order to not having tempered with metals in the issue of the scalar waves. And this is the machine (9.4 right) for dynamization by shaking the bottle."

9.6 From the medical records of treated cancer patients

(Dr. Alberto Martí Bosch)

Almost all oncological patients with tumors of different types and several of them with metastatic cancer.

"We have at this moment 13 patients in critical situation. All of them arrived at the clinic with a hope of live 3 months, 2 months and 1 month and the hospital said, "No more then 30 days, no more then 60 days, he will die. Everything is fatal, nothing is working. With this kind of patients with several metastatic cancers, there is not one patient that have no cancer.

I give you an example, which is one of my best results. It is a 3 years old boy with brain tumor arriving the clinic. He has had metastasis all over the head and all along the spinal column. In the hospital they gave him one week, maximum 10 days to live. We started the treatment of a scalar wave therapy in December 2013 and today the boy is still alive. Now he is able to talk, able to rock, is moving his right arm, he has not been able before, when we started. In the meantime all metastasis of the brain and of his back disappeared"... Applause.

"This is possible by the SWD; the applause is for Dr. Konstantin Meyl. He has given to us a very good element to treat the patients!

The results and assessments are: The treated patients were 13 in these last three months.

3 patients discontinue the treatment.

2 patients were dieing a long the trial.

6 have reached clinical significative improvement during treatment. I think this is a good group because its almost 50% is getting better.

You must take care that all the patients had been in a critical situation and though the medication they would be not able to be alive one month or two months more. So, this is a good result.

2 more patients I have had, that do not feel anything, not better and not worsens.

And this is the study we were doing.

By the moment it is not possible to get conclusions because of the shortage of the time but we are very holding to have a good result (6 of 13) because in few times we put some results. The time of experiences is too short and the number of patients treated is not enough to arrive a real conclusion, to have a statistic result.

We are presenting a way of reasearch that we started to developpe in Madrid looking for real results."

(taken from the presentation of Dr. Alberto Martí Bosch in Lyon, May 2014: Experience with cancer patients treated with scalar waves by help of the SWD).

VIII.

Scalar Waves as an Explicative Model

Numerous alternative medical treatment methods are considered inexplicable, as suitable physical models are lacking. Physicians are free to experiment with such „miracle cures“ and justify themselves by the pragmatical claim that „who cures is right“, but when asked to explain precisely the underlying mechanisms, the voodoo magic is soon history.

The scalar wave model, which rests on canonical laws from text book physics and can be derived directly from them without any additional postulates, has the potential to rehabilitate several unexplained and ridiculed treatments. And this is increasingly recognized by both physicians and scientists, who are turning towards the 1st Transfer Centre for Scalar Wave Technology for assistance or inviting me to talks, so I can elaborate on what remained inexplicable for the longest time.

Not seldom does my institute receive mails inquiring about either the functionality or my qualified appraisal of some bio-resonance device. What they would prefer most of all would of course be a full report, free of charge and stamped by the 1st TZS.

Obviously, I'm neither a professional product tester nor do I possess intimate knowledge about all the devices out there. To be able to offer a profound opinion, years of laboratory work can be required at times. This is something most people don't seem to be aware of.

Of course our scalar wave devices are not the only ones on the market. They might be the only ones including a receiver for the carrier wave, based on calculations of field theory. But there are other devices and methods which yield great results, despite possibly being the product of a rather empirical development.

1. Field Report from Geriatric Research

In April of 2014, I received the following field report form a municipal nursing home via email. It contains astonishing and well-documented results. The author of the study turned to me in distress, as he was hard pressed for an explanation. Could the effects be explained with the scalar wave model?

He had utilized the new method after initial verbal approval of his institution's quality assurance department. He wrote to me:

“Now, after having received my report, preinstilled behavioral patterns no longer in accordance with the former approval seem to emerge. My question is: can you help me!? Attached you will find the report”.

1.1 An Overview of the Field Report

in case of acute inflammation, pain, swelling and injuries

“Our nursing home was given several pads (so called bion-pads) free of charge in between 12/30/2013 and 03/03/2014. They were provided by the health mail-order service A. Heine. It turned out that (for now) their application immediately aided in cases of pain, inflammation and injury.

Without the need to satisfy formal prerequisites, a common necessity for chemical pharmaceutical products, application of the pads to the skin or a bandage proved to be a boon and provides us with a healing method without any risk of harm. Acute health care assisted by the pads has significantly raised average expectations of the following common medical textbook cases:

- immediate abatement of pain without delay or unwanted side effects, for example a decreased appetite. The effect's duration is often significantly reduced and within minutes, positive changes can be observed. According to circumstances, pain can be relieved enduringly. Elderly people whose pain cannot be eased by conventional medicine gain an adequate new method of treatment which they can utilize autonomously.

- Mechanically fissured wounds and inflammations (not resulting from a chronic course of illness) on a dermal level (< 4cm) were protected from healing disturbance by the pad. Each time, a recovery of the existing defects could be observed within 27 hours.

- In case of decubital ulcers of degrees 1-2 and erythema with minor defects of the sacrum, it could be observed that in addition to decubital prophylaxis (skin care and pressure relief) application of a pad to the shoulder made the reddening subside within 3 days and regenerated a healthy shade of pink to the skin.

Being able to act self-sufficiently and locally also strengthens the motivation of the nursing staff. With the emerging possibilities, namely autonomous action and promotion of our patients' self-reliance, comes a feeling of satisfaction, which is being perceived as rewarding due to its success. The well-being of the givers and receivers of care is interdependent in many ways.

Being able to smoothly combine the pads with other modes of treatment offers great potential, which is deserving of further examination. The possibility to disinfect the pad and its durability over decades is also a most welcome ecological touch.

Case study 1.2 (W. A., m):

Acute inflammation and reddening of the epidermis in an area around the lumbar vertebrae of about 2-3cm diameter. The bion-pad of dimensions 4x4cm (size 2) was underlaid with a compress and affixed to the affected area for about 27 hours. Later observations: The skin tone has been normalized entirely. The reddening has vanished, a healthy complexion is visible.

Case study 1.3 (H. A., w):

Warm-up pain in and around the left knee joint after resting. Painful sensation best described as „stinging“.

A pad of dimensions 20x8cm (size 4) was applied to the left knee briefly. After about 15 minutes, the knee could again be stressed without pain.

Case study 1.4 (W. E., w):

Fracture of the pelvic ring subsequent to a fall. After the hospital stay, the size 5 pad was worn under the left buttocks nightly and when resting on the bed. Walking with a walking frame was once again possible after 10 days. Two and a half weeks later, the nursing home could be left for home.

Case study 1.5 (C. K., w):

Despite application of Buprenorphine 52,2µg (BTM-matrix-plaster) every 72 hours, strong pain has been experienced in varying locations ranging from musculature to joints as well as pressure pain sensitivity and accompanying symptoms such as mood swings and morning stiffness. On 5 consecutive days, pad no. 5 was applied to the chest for half an hour before getting up, making the morning stiffness vanish right after the first application and stabilizing the mood. In the early mornings of the weeks after using the pad, there have been no complaints at all.

The pain that's been recurring over the last 9 months has been alleviated entirely within about 45 minutes after application to the chest while lying down and have become less frequent in the subsequent days. After having used the pad for about 2 weeks, the pain hasn't resurfaced in several weeks.

Case study 1.6 (B. S., w):

Superficial skin defect on the back near the right side of the pelvis. About 2 cm in diameter and bleeding lightly. Wrapped in a compress, the pad no. 2 was applied to the afflicted area with Fixomull. The next day, about 19 hours later, the pad was removed. The skin wound was now closed. Where the wound had been before, the skin tone had been restored to normal except for a light pink shade.

Case study 1.7 (H. H., m):

The last couple of hours of the dying phase (prefinal) were accompanied by accelerated respiration and agonal gasping. 10 minutes after applying pad no.4 to the chest, respiration returned to normal and appeared relaxed.

Case study 1.8 (L. D., w):

Persistent pain in the left shoulder. Pain medication with Novalgin 500 tablets failed to offer a remedy even after 2 weeks. The left arm was cast in a restrictive posture. In the afternoon at around 4 pm, the pad no. 5, wrapped in a cotton cloth, was placed on the left shoulder. In the evening, during the preparations for the night, the pad was removed. The left arm was briefly moved about and brought into the position which had been painful before, yet this time without causing any enduring pain.

Case study 1.9 (S. K., m):

Having stayed in bed over a longer period, the derriere is severely reddened due to pressure load. This is called a first degree cubitus. An area of around 15 cm diameter. The pad no.4 was placed on alternating sides of the shoulder for 5 days. On the second day, the reddening subsided slowly. On the third day, the irritated skin is recovering further, isolated patches have turned a light shade of pink. After five days, the entire derriere is no longer reddened and shows a light pink complexion.

Case study 1.10

Necrotic tissue on the left lower leg, about 10 cm in length and 5 cm in width. After having applied the bion-pad no.5 over the bandage for approximately three weeks, the black patch has come completely off on its own. Wound basin and wound margins appeared clean and without irritation“.

2. Eigenfield therapy with the pad as a scalar wave reflector

I replied to the nurse searching for a viable explanatory model with the following mail: “Many thanks for sending me your report about your experience with acute inflammation, pain and wounds.

I personally know the physician Prof. Dr. Hegall Vollert. Among other things, he has spoken about the effects of the pads developed by him at the expert meetings which I organize yearly. I also know patients who used them and reported of results so fantastic that I, as a physicist, initially found them difficult to comprehend. However, I perceive such phenomena as a challenge and am eager to find viable explanations. In my opinion, the pads are based on a principle called **eigenfield therapy**.

The physical basis of the functionality of these pads could be the so-called electrostriction. A well known application of this phenomenon are piezo speakers. In them, a field flux causes an audible mechanical vibration.

As described in my essay about DNA and cell resonance (on www.meyl.eu > papers > DNA and Cell Biology) and my similarly named book, every cell emits magnetic scalar waves. If this field radiation, often referred to as a person's aura, meets the pad, the quartz sand particles, elastically bound within the silicone (or latex), are subject to electrostriction. The mechanical deformation however immediately rebounds and thus reflects the received field back to its source. According to this model which was developed by myself, the pad acts as a **field mirror**.

As DNA contains all information about how a healed wound is supposed to appear, the information density is doubled by the signal's reflection. In this way, the patient's own field is amplified. This eigenfield treatment can obviously enhance any healing process. At least this is what's being reported and how the presented field report reads.

This type of therapy based on reflection of the eigenfield can also alleviate pain. This becomes obvious when considering the definition of pain as an „urgent call for information from the cell tissue“. Should my model turn out to be correct, scalar wave treatment in combination with the pad could develop into a central aspect of information medicine.

With best regards“.

3. Scalar Wave Diagnosis with the Oberon Device

A whole product line of devices utilizing scalar waves, with most of their users not even being aware, had caught my attention. Its developers speak of multidimensional nonlinear spectral analysis, or NLS analysis for short.

- But how are the colorful pictures that can be observed on the computer screen generated?
- How reliable is the system?

These are challenging questions for any scientist.

3.1 The Patent on Scalar Wave Diagnosis

After the collapse of the Soviet Union, many scientists found themselves out of a job and money. And so they took what they had worked on over the past decades and tried to sell it to the West. One of them was Prof. Stanislav Nesterov. Nowadays, his work is being continued by his nephew Vladimir Nesterov, a hygienist.

It's probably owed to the circumstances in Russia at that time that so many competing NLS systems suddenly appeared on our markets seemingly out of nowhere.

The researchers from the formerly largest development team secured the intellectual property by filing a patent in the US in 2001 (US 6,549,805 B1), which is titled:

Torsion Diagnostic System utilizing noninvasive biofeedback signals between the operator, the patient and the central processing and telemetry unit.

As inventors it lists:

- Vladimir L. Nesterov (Omsk, RU)
- Anatoly E. Akimov (Moscow, RU)
- Oleg M. Elistratov (Irvine, Ca, US)

In 2004, the company Metavital GmbH filed another patent under the same title for the Oberon system they distribute: „*Torsion diagnosis system, utilizing nonintrusive biofeedback signals between the operator, the patient and the central processing and telemetry unit*“.

One can imagine the russian term torsion field as a vortex field. As field vortexes propagate through space as scalar waves, one could also speak of a scalar wave system for diagnosis of the information stored in the vortexes. Bio feedback tells us that we're dealing signals that are being fed back.

The radar principle provides a simplified explanation: A biologically relevant, i.e. highly complex modulated signal is transmitted into the body as a field vortex and the response recorded. By cross-correlating both the emitted and received signals, one can arrive at conclusions about the reflectivity and absorptivity of the tissue.

The signals consist of a mixture of innumerable frequencies, which in sum can be measured as noise. Therefore, we can also speak of noise analysis. I would not refer to it as nonlinear, however. Only when working with the classical field theory according to Maxwell, which is unfit to describe scalar waves, one is forced to introduce a nonlinear term to the equations.

3.2 KGB Style Mind Control

Had it indeed been the intention of the Russian secret service to develop a device purely to aid humanity?

Nesterov could shed some light on the matter: The aim of the KGB had been a different one. The researchers were supposed to develop a telepathy device, which would allow an investigator to read the mind of his opponent. This proves once again that whatever can be used to harm humans can also be used to their benefit. And so, we have to thank the collapse of the Soviet Union for the rapid transition from terrifying military to exciting civil research.

The Oberon is not only the oldest and most sophisticated system offered in Germany. I was given access to the circuit diagram and general structure and could technically examine the hardware in depth. This way, I became intimate to several interesting details and believe to have gained an ever greater understanding of the apparatus. In order to elucidate readers, I will quote parts of my lecture from Hamburg on May 5th, 2012.

3.3 Lecture on the 12th international Oberon conference

“To begin with, I made the following approach: DNA enters resonance with a longitudinal wave which oscillates in the direction of the magnetic field pointer. I will elaborate on this thesis later on (see chapter IX).

Each cell not only requires energy, but also information. This makes modulation of the carrier wave a necessity, as only it can carry information, as we're all accustomed to from our everyday radio communications.

With this technique, a low frequency signal (NF), for example a singular tone frequency, is modulated upon a high frequency carrier wave via AM or FM (Fig.1).

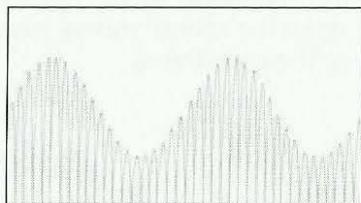


Fig. 1: technical modulation (AM)
(HF-carrier: light lines)

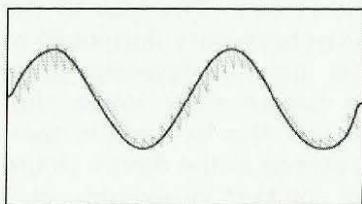


Fig. 2: natural modulation
(NF-carrier: dark line)

Nature proceeds differently, as it has to deal with extremely high frequency signals. If the high frequency (HF) is modulated upon a low frequency carrier, the resulting signal appears approximately as depicted in Fig. 2.

Nature is far superior to technology, as an increase in frequency also increases transmittable bandwidth. Nowadays, 1000 television and radio programs can be simultaneously transmitted via satellite through only one microwave carrier, which makes little sense considering one can only watch one of those programs at a time.

However, by reversing this technique, biological organisms succeed in transmitting the entire genetic code through scalar waves. For that, they're using a frequency that's a million times higher than that of microwaves. Technicians can only dream of such bandwidth.

Satellite radio is already approaching the limits of the currently available semiconductor technology. In the case of TV signals, it includes an additional carrier wave within the UHF or UHF band, which is being down mixed right in the satellite dish. Only once arriving at the receiver unit does the image information become filtered out through demodulation.

Nature also modulates carrier waves upon carrier waves, and only the highest order carrier, usually within the infrared range, carries the actual information. It's no mere coincidence that the human body is warm. To a physician, the body temperature indicates whether the information exchange is functioning properly. What did you think a clinical thermometer was supposed to tell?

It's the carrier waves that convey the energy. This poses the question which frequencies are being used by the body as carrier waves? There are many, such as beta waves (14-30 Hz), alpha waves (7.5-14 Hz), theta waves (3-7 Hz) or gamma waves (up to 3 Hz). Respiration and heartbeat follow their own rhythm. Variability of heart rate shows especially well that bodily frequencies tend to be everything but constant. As such, they are hardly suitable as carrier waves, much less so if they're supposed to be synched to technical devices.

The movie running before our eyes does require a constant frame rate, however. This is guaranteed by the brain wave at around 10 Hz. It qualifies as the lowest usable carrier wave frequency. Which is why the Oberon synchronizes to the brain wave, the base clock of the brain. Other providers of bio resonance devices have also recognized this and make good use of it“.

3.4 Metrological Examination of the Noise Emitter

It appears as if organs and cell areas down to the DNA level are not directly affected by the Oberon, but rather indirectly via the brain waves. The frequencies displayed on the PC screen (1.8 Hz to 8.2 Hz), which upon closer signal inspection concern the pulse-pause-ratio (duty cycle between 96% and 6%), integrate themselves into the 10 Hz grid of the brain waves and obviously stimulate the low frequency carrier wave (Fig. 4).

Upon this carrier, another carrier wave is modulated. It has a base frequency in the short wave range of 3.5 MHz (the scalar wave devices SWT and SWD of the 1st TZS operate in the same frequency, or a doubled one, respectively. These are frequencies that lend themselves well to technical manipulation as well as modulation).

Upon it, a microwave is modulated (1-4.9 GHz). This carrier of the carrier is within the range of resonance of water colloids, the liquid crystals which make up our cells. Our metrological verification confirmed this claim by the developers from Omsk, Siberia.

Because of the superposition, the signal now has a structure so complex that only well defined regions in the body remain capable of resonating with it. By sweeping through the frequencies (wobbling), resonances can be probed in sequence, thereby creating a scan of the resonance and absorption properties.

This should however not obscure the fact that these carrier waves are only meaningful in the domain of cellular energy supply and liquid crystals. The information wave is not only of higher frequency by 6 orders of magnitude, but also instates an intermediary carrier wave within the infrared range.

The Oberon also addresses this circumstance by incorporating a LED (IR-LED with a wavelength of 875 nm, corresponding to a frequency of 343 THz) as the emitting diode. This is still insufficient to read out the information wave, which presumably is within the UV range (as has been derived in Chapter IX). Nonetheless, out of all the systems I know, the capabilities of the Oberon come closest to those of the biological signal structure.

3.5 Examination of Preceding Devices

The Russian Academy of Sciences, commissioned by the KGB, had also experimented with a laser (630 – 680 nm, < 5mW, pulsed with 4-7 Hz) directed towards the so-called third eye on the forehead of test subjects. Empirically, this had yielded the best telepathic results. The German TÜV however prohibited this method's practical application in medical offices. The handling of a laser was considered simply too dangerous.

During the occasion, I also examined older models of the headphones blocking ambient noise that the patients are supposed to wear. Their membranes had been removed and their voice coils, likely of little use due to their low cut-off frequency, originally been used.

The headphones with microwave antennas embedded conically into highly compacted quartz have been much more effective, I'm sure. Signal processing of such high frequencies is anything but trivial, though. Before leaving the headphones, the signal had to be downsampled into frequencies low enough to be transmittable by the connection cable. Today, these measures have become unnecessary save for the use of an IR-noise-diode.

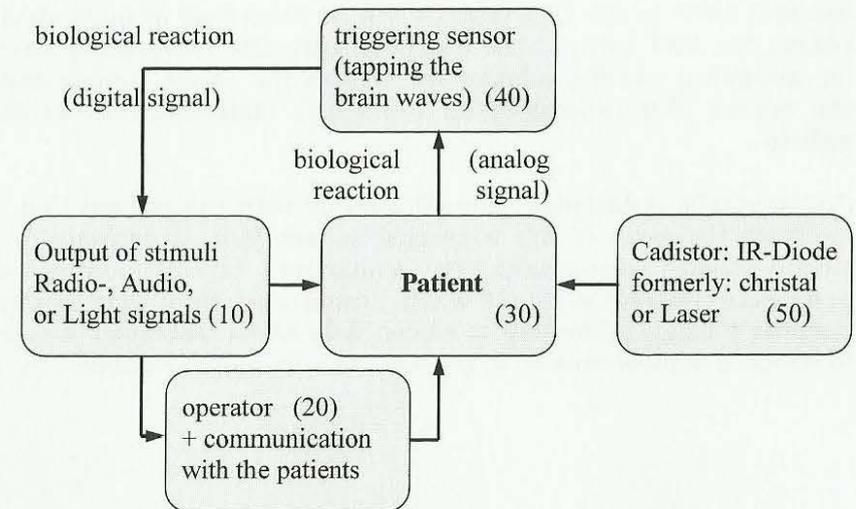


Fig. 3: block-diagram of the diagnostic system acc.to invention from 2001 [1].

3.6 Explanation of the Block Diagram within the Patent

We best let the russian autors of the patent explain the provided Figure 3 themselves [1]:

„A CPT device (10) contains a situation-generating block designed to output a predetermined series of stimuli, also called “information codes” and transmits it through a dual peripheral device to both the operator (20) and the patient (30). A number of appropriate peripheral devices can be employed with the system depending on the nature of the information code.

Examples of such peripheral device include but not limited to: a magnetic induction coil for modulated magnetic field transmission, headsets or speakers for audio transmission, video monitor or a light display for visual signal transmission such as an image of the evaluated organ for example, etc.

It is essential to point out that such information codes are transmitted to both the operator (20) and the patient (30), a unique feature of the diagnostic system of the invention.

A triggering sensor (40) collects the biological response from the patient (30) as an analog signal, converts it into a digital one and sends it back to the CPT unit as will be described in more detail below. The CPT unit is also equipped with the designation block for assigning specific relative weights to the input signals from the sensor (40) depending on individual characteristics of the patient.

Cadistor (50) is designed to work directly with the patient (30) to facilitate the work of the triggering sensor (40). It consists of a silicon-based semi-conductive transistor crystal acting as optoelectronic radioelement when illuminated by a light source such as a laser. Preferably, a silicon field-effect transistor is used in which a control area is in the form of a thin flat channel.

When a laser light is directed at cadistor, an abrupt temporary short circuit is formed in the semiconductor and a small level of energy is released. Repeating of that process with high frequency caused periodic releases and accumulation of the energy. It has been established that the preferred wavelength of laser light is between 630 and 680 nanometers, the laser power should be below 5 MW and most importantly the light pulsation has to coincide with the theta-rhythm of the patient's brainwaves.

The cadistor is placed on the forehead of the patient about ½ of an inch above the nose and the eyes and symmetrical therebetween. Appropriate eye shielding and other precautions are recommended to avoid damage by the laser. The laser source is located only about 5-6 inches from the patient's forehead and is directed onto the cadistor placed on the patient's head as described above. Activation of periodic illumination of the cadistor with the laser light causes periodic release of the energy, which in this situation was clearly shown to increase the intuitive potential of the patient. It is also important to orient the cadistor properly in a space relative to one of the elements of the triggering sensor (40), namely its antenna.

In the above-described situation, both the electromagnetic (EM-wave) and the torsion components (vortex) of the laser light are directed at the patient. To block the electromagnetic component, a cavity resonator is deployed which prevents the electromagnetic component from getting through while forming and directing the torsion component as the only stimulus to effect the patient. (this is referring to the penetration capabilities of scalar waves).

The cavity resonator is typically made of metal and has a volumetric chamber with the size selected to be a multiple of the wavelength of the incoming signal, preferably about 1.45 GHz“ [1].

[1] Klaus Valentiner: Die Entstehungsgeschichte und die Funktionsweise des Oberonsystems 4021, Seite 23 ff., Firma Metavital GmbH, Hamburg.

3.7 The functionality of the device according to the patent

The remarks about the wave and vortex complements of the utilized laser beam make it clear that in Russian experiments, researchers have long been familiar with the propagation of field vortexes as scalar waves, while at the same time in the West, essays by myself were being rejected by so-called technical journals because they violated Maxwell's laws. The term *torsion wave* indicates the empirical background of the experimentally determined properties, while the term *scalar wave* coined by myself is derived from field theory in general and the wave equation in particular.

The patent specification subsequently provides detailed descriptions concerning the trigger sensor (40), which records brain waves. However, they do relatively little to improve the general understanding of the device as a whole. The image description ends with the following synopsis:

„The diagnostic system of the present invention functions in the following way. Upon initiation of the test sequence, the CPT unit (10) generates information codes as electromagnetic, radio, audio, or light signals depending on the nature of evaluation. Such signals or stimuli influence the receptors of the nervous system of the operator (20) shifting it to a highly sensitive and reactive state and therefore increasing the strength of a biological feedback between the operator (20) and the patient (30). The action of the cadistor (50) assists the patient (30) in generating his influence as a useful disturbance signal for the sensing element (41) of the triggering sensor (40) thereby completing a second biofeedback loop between the CPT unit (10), the patient (30), and the triggering sensor (41)“.

I admit: Reading patent specifications is cumbersome. But when aiming to get a better grasp of the scientific motive and aim of the researchers, one's left no choice but to delve into the original writings.

Here, we can find a few highly important hints towards experimental results.

“The studies conducted by the inventors have shown that the effect from the patient on the triggering sensor is more reproducible when the frequency of interruptions of electromagnetic impulses is close to that of the theta rhythm of the patient's brainwaves. That frequency tends to fluctuate towards increasing or decreasing depending on the state of health of the patient.

In fact, a relationship is determined between the deviation in that frequency and the specific pathological conditions of certain body systems, selected organs, and even separate cells and chromosome fragments. Such relationship allows for specific diagnosis of a variety of pathological conditions.

Examples include diagnosis of protrusions of spinal disks, remote metastases of various cancerous tumors, broken bones and trauma in general, blood vessel thrombosis, acute and chronic hepatitis, cirrhosis of liver, and a large variety of other pathological conditions. It is important to highlight that such diagnosis is possible to conduct using the subconscious level of brain function and therefore is independent of the patient's influence.

Another possibility of using the apparatus is to collect the digital signature of an organ as obtained by the triggering sensor with the library of available signatures collected previously from normal volunteers. Such comparison allows determining the degree of pathology and the state of disease development of the organ“.

Allow me to summarize in my own words: Central to the diagnosis system is the comparison of two digital signals or signal patterns: The signal metrologically obtained from the patient on the one hand and a reference signal from a database of „normal“ healthy Russian subjects on the other hand. Naturally, age, sex etc. should match as closely as possible, so that the signal differential allows conclusions about the state of health and possible illnesses in particular.

Unfortunately, the patent ends right where it gets interesting for physicans, leaving only a cursory note that the statements therein are supposed to describe the principles and application only.

3.8 Graphical Evaluation of the Scalar Wave Analysis

If the brain wave discussed in chapter 3.2 could be shown to be a suitable interlink frequency between man and machine on the basis of theoretical deduction, the patent specification shows it to be so on the basis of practical experiments, coupled with frequency interruptions in the range of the theta rhythm (3-7 Hz). The pulse width modulation (PWM in the range of 1.8 – 8.2 Hz) successfully employed in the Oberon is therefore the result of systematic trial and error.

The pulsed signal in this raster, complexly modulated and of high frequency, is sent on a journey through the patient's body by the IR diode. Theoretically, the input location can be arbitrarily chosen. In practice, the infrared diode shines out of the headphones into one of the patient's earlobes, whose brain waves shall be used as a carrier.

The received signal exhibits an identical PWM raster, although in an amplitude modulated fashion. Obviously, it contains the response of the organs, cells, etc, as they are perceived by the brain and detected by the phototransistor.

Stimulation and detection not only occur at a fixed pulse-pause-ratio (PWM = pulse width modulation), displayed by colors, but also at 11 selected colored dots or PWM ratios, respectively. To cover all the dots sequentially, 11 times as much time is required, i.e. about one second. Exactly as long as the plotting of the red and blue curves during a scan (Fig. 4).

However, the dots here are not displayed individually, but connected by a corresponding curve. The respective amplitude is shown both on a linear scale (on the left margin) and a logarithmic scale (on the right margin of Fig. 4).

“The red line represents the input signal and the blue line the output signal of a regulated system [1]“. In an optimally regulated system, a case unlikely to be observed in practice, the red and blue lines would exhibit identical shapes. (see Fig. 4).

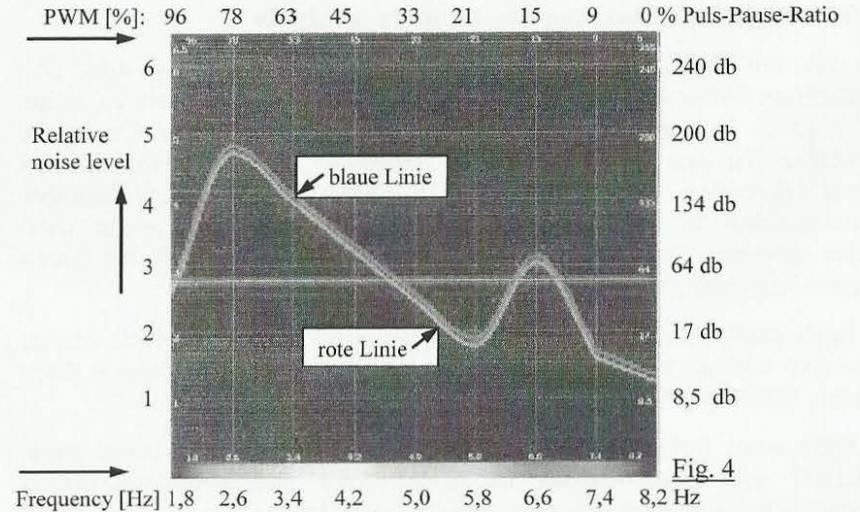


Fig. 4

It should be noted that the two curves do not represent the actual emission and response signals (nominal and actual value) immediately. All signals are digitalized by the Oberon's electronics and passed to a computer numerically through a USB port. Once there, the data is fed into a digital arithmetic unit and then finally displayed on screen.

Due to the low frequency of the brain waves of around 10 Hz, this can virtually occur in real time. In addition to the red and blue curve, others can be displayed in a similar fashion, for example ones provided by a database or those identified as therapeutic signals.

Propositions for the analysis of the curves are available [1]: “If the blue line is above the red line, the dissociation is positive or **anabolic**. Meaning: in the anabolism or development phase, the biological system's metabolism is absorbing energy and information (from a scalar wave). As the blue line represents the adaptivity of the respective organ, this indicates that the internal energy of the organ is sufficient to compensate for disturbance.

In the opposite case of negative or **katabolic** processes, the biological system dispenses energy and information during the so-called catabolism or reduction phase.”

3.9 Notes for performing scalar wave analysis

In an additional visual depiction, animated organs and the difference between the red and blue curves are displayed in steps of 1 to 6. In case of congruence (= 3,5) a 3 or 4 is shown, a deviation in one direction tends towards 1, a deviation in the other direction tends towards 6. This very comprehensive visualization is blinking unnoticeably (or still noticeable with older devices). This aims to aid the synchronization of the brain waves between patient and therapist.

If both patient and therapist are situated closely to each other, i.e. one within the field (aura) of another, and resonance does occur, both will oscillate antiphase (resonance condition!).

If they were however synchronized to an identical source, their mutual oscillation would in phase and the synchronization between patient and therapist could break down.

This possible conflict should be kept in mind, and if necessary, everyone should look at a different monitor in order to maintain synchronization. Being yet another coupling function of the Oberon, it is indeed desirable and corresponds with the original concept of mind control.

The greatest difficulties the developers of the Oberon faced and still face concern the coupling of organ-specific signals. This is probably due to the fact that every human is equipped with a variety of filtering mechanisms to prevent disturbance from foreign environmental signals. These protective measures therefore need to be duped by the emitted signal.

In the past, there have been experiments with quartz, pulsed lasers or ironless induction coils. Nowadays, the IR noise diode has prevailed as an economical and effective technical solution. The noise signal serves as a carrier of sufficiently high frequency for the low frequency brain wave.

As in all scalar wave devices, the rule is: the more complex the modulation of the field vortexes, the more stable they become, the greater their range extends, the smaller their stray field losses are and the more accurate they can be used. In terms of the emitter signal, the Oberon represents the pinnacle of what can be achieved with current technology.

There have been little changes on the receiver side over the years. Else, all statistically established data in the extensive database would have had to be recollected.

Because of this, only the germanium transistor (of gold-peak-technology), which is no longer commercially available, has been replaced by a more modern silicon transistor (of planar technology). Its higher offset in the flow direction could be compensated mathematically, so that this modification left the data fully usable.

In addition, the correction controller can compensate for the variable distance to the subject's ear (position of the headphones and shape of the ear). Problems are only to be expected if the headphones wiggle so much during the scan that the correction controller can no longer compensate successfully.

The microwave antenna for frequencies up to 4.9 GHz is no longer necessary and has been removed. This way, the current models have been optimized in terms of user comfort (no laser, no induction coil, no microwave antenna, etc.) while at the same time, the hardware requirements have been minimized.

The software arithmetic unit was not subject of this examination. The program is partially encrypted, obscuring more profound insights. Still, I'm going to try to assemble the fragments at my disposal into a bigger picture (Fig. 5), illustrating what to me seems to be the fundamental functionality.

At the center, there's the subject, wearing headphones without hearing anything. Instead, the modulator sends the complexly modulated signal into one of auricles through the IR emission diode. On the other side, there's a reception diode or phototransistor. The received signal, which is rather weak, first needs to be amplified.

Both noise signals are then being cross-correlated through a mathematical analysis (KKF). The result represents the control variable (actual value) for the comparer. The reference variable (nominal value) is selected from a database. It delineates the curve progression a healthy „standard Russian“ should exhibit while simultaneously exciting the organism with that very same signal.

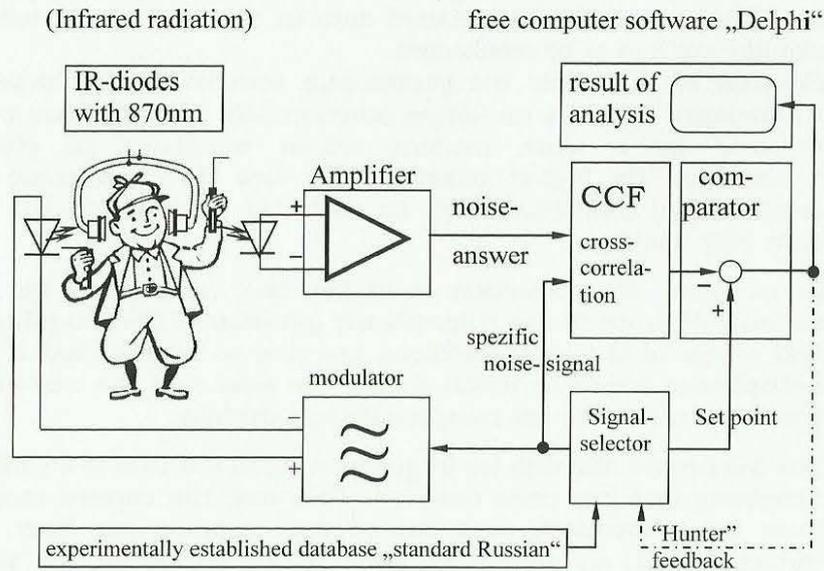


Fig 5: *The working principle of the Oberon simplified to its bare essentials*

If a subject displays significant signal differentials, which might be classified as pathogenic by the operating physician, a scan can be repeated or deepened. The so-called Hunter, with its feedback signal displayed in a dashed line, is capable of carrying on this measure automatically.

Analysis tools and a graphical interface are provided by the PC software „Delphi“. Working smoothly with such a complex system does require some learning, though. An autodidactic approach or crash course is hardly sufficient in order to become a responsible user. That's why I will have to pass the baton to physicians and therapists. Only they can competently assess what illnesses might hide behind deviations from the nominal curve and how suggestions made by the system should be evaluated.

4. Scalar Wave Therapy with the Oberon and SWD

Why should a powerful diagnostic device not be used for therapeutic purposes? If a signal pattern the body is somehow lacking has been identified, excitation with that signal could prove helpful.

The developers of the Oberon have already invested some thought into this matter and looked for a way to transmit the signals to the patient. They chose the detour through water, i.e. a homeopathic method, which comes with certain problems in terms reputation of acceptance on its own.

Our SWD scalar wave device is often compared to homeopathy. However, the carrier of signals is not water but scalar waves. This is faster, more direct, better reproducible and often times more effective. Seems like in case of the Oberon, it would make sense to replace the pot of water with the SWD or SWT / SWS (see page 20, Fig. 4, use jacks 6 of the receiver). The necessary connection cable can be ordered from the manufacturer of the Oberon on demand. A later upgrade is always possible.

The first tests were very promising. A respective study, while still pending, is supposed to be published in CoMed, a journal for complementary medicine. Things remain interesting...

IX.

Scalar Wave Medicine in retrospection

Scalar waves carry both, energy and information and may be seen as the heart of energy medicine. That explains my personal commitment in the "Deutschen Gesellschaft für Energie- und Informationsmedizin" (www.dgeim.de). I am not only a founding member, but also the Vice President from the beginning.

The DGEIM organized two meetings every year that I regularly enriched with contributions to scalar wave technology and medicine. The number of my supporters within and outside of the association grew rapidly until it finally came to a showdown at the University of Stuttgart. I was keynote speaker at a conference, which was held under the motto:

Is there a scalar wave medicine?

In the lecture hall, about 200 listeners were gathered, mainly doctors who were insulted as "esotericists" by the also present opponents of the scalar wave medicine.

Temporarily, the air was burning. Many will be able to remember the memorable event, so I type the text from the tape and reproduce it here. It was a truly historic event, for the proponents, such as for the opponents and losers. But listen and read for yourself what happened on October 25, 2003.

1. Congress Opening by the President

First, the President picked up the microphone: "You know that the topic of scalar waves has become very current by the activities of our Board member Konstantin Meyl. You can imagine that there is a discussion between the mathematicians, physicists, and the complementary-medical scene, as I want to call them. We will not perform this discussion today. We have many physicians and therapists among us today who have to deal with patients who have problems, are suffering and set hope in what is spoken here. And you can not convey to these people that a Congress, like this one, should not take place, as had been suggested before. "



Fig.1: The projector shows the opening of the conference, the first film.

The short excerpt from the opening speech points to the intense discussions that had taken place prior to the conference. Of course, the desire, not to result in the discussion about scalar waves, was not fulfilled in the end.

Then the microphone was passed on. Because the next speaker, a professor at the University of Stuttgart, held the Congress in his house, he were called upon to justify this step well, an act on a narrow level considering the present colleagues and authorities of the University in the room, who seemed to put his every word on the gold assay balance.

2. The introduction of a representative of the University

"I would also like to welcome you. I am a professor of this university and would like to be responsive a little bit to the previous discussion, which took place at this university.

I am neither a patron of this event, as I was often titled, yet I am the host, yet I am the local organizer. Although I have denied it so often, it was not registered until yesterday. I am simply someone who is open-minded about new ideas.

The reason is that some of the colleagues of the University are in great concern over the academic reputation. There has been the movement and discussion in the university, whether it was appropriate or if you make yourself international ridiculous when you allow such an event to take place here.

I have been asked about this issue and have said: The Science thrives on scientific discourse. The scientists are seekers of truth, and nothing but the truth counts. So there is no vanity, no doctrines, and nothing can stand in the way, if someone comes to me seriously and argues an explanation of the world.

If we lose this, as I've said the rector and also written to colleagues, then this is the end of the university and the end of science ". *Applause.*

"Therefore, we would do ourselves as scientists and the university a disservice if we don't allow such events in the University.

It is also about the form of dealing in this connection. For me, it is like this: Any knowledge that we have is the child of astonishment. You may feel your astonishment at the world as a creative coincidence or as a creational plan. But the fact remains that the root of all this is that we wonder.

When we begin the scientific debate then, it goes without saying that we respect the scientific partners, regardless of whether we agree or not. If we respect him, then at least, we must read what he says. I realized that in the course of internal pseudo-scientific

dispute it wasn't read, eg if I am patron, let alone, whether it concerns scalar waves or not. It was always discussed like a self runner.

So I ask you all, to lead the discussion in a way that there is always respect for others. If we look at what others have said on the subject, then I remember one sentence: Von Weizsäcker has gone one step further. He told:

The sin of our time is knowledge without love.

This is expressed from a different point of view, but for me, it hits the bull's eye. I would like to conclude with this perspective and wish us all an insightful time on this Congress. "

Big applause in the lecture room before Konstantin Meyl continues with the keynote speech.

3. Keynote-speech: Is there a scalar wave medicine?

"I would like to welcome you to the opening lecture on scalar waves. That means I should introduce you a bit into the topic. Mr. Popp also wanted to talk about the scalar waves and the Maxwell theory. So this can be dealt with succinctly.

On the one hand, I'm not going to withhold the debate, because he will present his paper himself; on the other hand the Maxwell theory in today's notation can't describe any scalar waves. Insofar we are finished there very quickly.

I will still try to awaken a certain openness for scalar waves, whereupon we must look for proofs of existence. I will discuss the whole with reference to the current mobile telephone problem

Historically, there are scalar waves, at least mathematically, for a long time. But you know how it is with mathematics, if we write down an equation, then that is first of all value-neutral. In our case, this is the wave equation. Whether this equation is physically justified or not, can actually answer the experiment only.

This wave equation is more than 200 years old. It comes from the mathematician d'Alembert and in the present form from his student Laplace. This equation actually describes both, longitudinal and transverse waves, if the Laplace operator is decomposed after the calculation rules of vector analysis in grad div and curl curl. Thus we have within a wave description two parts, whereupon from the mathematical point of view both occur first of all equally.

4. Derivation of scalar waves

Prof. Dr.-Ing. Konstantin Meyl: scalar wave medicine

Derivation of Scalar waves

Laplace equation as a special case for $v = c!$

$$v^2 \text{grad div } \mathbf{E} - c^2 \text{curl curl } \mathbf{E} = \partial^2 \mathbf{E} / \partial t^2$$

longitudinal wave with $v = \text{arbitrary}$	transverse wave with $c = \text{const.}$	velocity of propagation
$\text{div } \mathbf{E} = \text{scalar !}$ $\Rightarrow \text{scalar wave (Tesla)}$	electromagnetic wave (Hertz)	
$v < c$ noise, plasma wave $v = c$ photons $v > c$ neutrino radiation	radio waves, microwaves, infrared radiation, light, UV radiation, X-rays, cosmic radiation	

Fig. 2: *The message of the Laplace equation.*

Historically, the Laplace equation was the teaching content of the lecture of Maxwell, a professor of mathematics. He had discovered that the equation has properties which are identical to those of light. So he came up with the idea of constructing a theory of light on this basis.

For that purpose, he first wrote the field equations of electromagnetism and partly, he postulated it. For example, the dielectric displacement \mathbf{D} could be proven experimentally only after his death. His postulate, it has been a physical fact that has only revealed the greatness of this man by the later evidence.

In his time, the experimental evidence was still missing. That occurred only 26 years later in 1888 in Karlsruhe by Heinrich Hertz. He could show that one of the two wave components physically exists, and that is the transverse electromagnetic wave. These so-called Hertzian waves could one after the other all be proved experimentally, as here listed on film 2. These are all waves that spread at the speed of light.

The term on the left-hand side, which we have to look at even closer, was not initially proved. This may have led some scientists to stand on the point of view and still claim today: There are no scalar waves! Heinrich Hertz had supported the proposal of Heaviside, to put simply to zero, which is not proven or provable. We owe them today's mental block especially.

In the textbooks, it is written that the divergence in a plane wave is always zero, equivalent to the fact that the left term vanishes. So the world of science was satisfied. It was still not the case that this measure was accepted uncritically. On the contrary, there were many scientists who have resisted the shortening of the field theory and have noted that there are longitudinal waves in nature. We still can't simply set this to zero.

But, you can, is the statement of today's textbooks. Thus also Maxwell's field equations can be written down simplified in the present-day form of representation.

Now we turn our attention to the left side of the wave equation nevertheless once again. We find the divergence of a vector, in this case the electric field pointer \mathbf{E} and that is from the mathematical point of view a scalar. This gives the wave component the name of a scalar wave. And usually, they are charge carriers. It can be just as well similar field configurations or field vortices.

The subsequent application of the gradient to this scalar gives a vector again. This means that this part of the wave equation has a spatial orientation. The scalar wave spreads directed and not undirected like many supposed critics falsely claim".

(The comment was aimed at the attending representatives of the para-scientific GWUP sect that spreads its nonexistent GWUP-wave as an alleged mathematical error in my derivation on the Internet. To establish a connection between his mistake and my name is more than just slander, it is practiced science deception and counterfeit).

"How should we imagine such a scalar wave physical? In the case of electrical charge carriers the plasma wave is well known. There a particle abuts the next, creating a standing wave character. The plasma wave is therefore a scalar wave. The proof of existence is provided.

Another scalar wave is the acoustic wave, in which an air molecule abuts the next. This gives also such a standing wave then.

If we want to proceed scientifically, a generic term could be very helpful. In the case of transverse waves, the term of the electromagnetic wave had established. In the case of longitudinal waves such a term is missing, which is why I prefer to use the mathematically well-founded term of a scalar wave. It is ideal because it is neutral and not yet otherwise occupied by any physical phenomenon.

If you are interested in the discussion of terms, then it should be recalled that the concept of the electromagnetic wave has been extremely attacked from contemporaries because it could not be that Maxwell lumped together the different disciplines of electricity and magnetism. But he fought back and could finally present evidences. Today, this term bothers no one anymore.

I think you will have accustomed to the term scalar wave eventually and thus get along well. It is in any case value-neutral and ideal as a generic term for the longitudinal wave components.

Also gravitational waves can be found in this section. Dr. Mueller, who will report later, too, has demonstrated such a scalar wave transmission in public and claimed that he would use gravitational waves. We'll see what he has to say to us.

Next there is the light, which also can form pushing a wave as a photon if it spreads as a particle of light with the speed of light in space. In general, this applies to all physical particles that are traveling as a wave in space. This also applies to the neutrino radiation then.

5. The Properties of Scalar Waves

Let's take a look at the properties. In transversal waves, the field pointers are perpendicular to the vector of propagation (arrow c in slide 3). Concentric circles wrap around the emitter as a stray field.

At the scalar wave, on the left side, the fields spread from electrode to electrode in the direction of the spreading. Each capacitor, of electrical engineering, has exactly this alignment of fields. If an electrode is charged positively, then the field lines extend to the other electrode which is negatively polarized. This arrangement is not unknown. Just we normally assume that it is a homogeneous field. Because of the short distances in a capacitor, the wave character is negligible or undetected.

The famous experimental physicist Nikola Tesla had already demonstrated exactly this phenomenon 100 years ago. The effect can be reproduced at any time, as we have shown with our replica. We indeed use in our experimental set a reduced scale and a higher frequency than Tesla, but the identical results should be seen as a proof of the existence of these waves.

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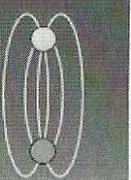
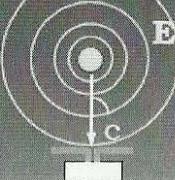
Properties of Scalar waves		
comparison of longitudinal and transverse waves		
•Transmitter: (+/-)		
•receiver: (-/+)		
•typical:	focussing, without losses	scattering, transmission losses
•positive use:	mobile phone energy converter	radio, information distributor, TV
•negative use:	electro smog, radiation weapons	cell phone, directional radio

Fig. 3: The properties of the wave components in comparison.

The historical experiment is easily explained. You take a resonant circuit consisting of two coils which act as an inductance, and a capacity of two spherical electrodes. I recommend connecting the two coils by a cable that Tesla has yet called grounding and that receives the return current. This initially sounds like a conventional resonant circuit.

Now the capacitor is pulled apart, ie the field lines between the electrodes are protracted. But it is amazing what I observe when I reach at least half of the wavelength of the tuned frequency. The resonant circuit shows wave behavior; and this is new!

I have reconstructed the experiment, because the new, that it wants to show us, is important. I even market the replica so any doubters have the possibility of reproducing.

So everybody can convince himself that, in a capacitor, we don't have it to do it with a homogeneous field, but rather with a wave field, possibly also with a vortex field.

The experiment has been purchased pleasing often. Also a surprising number of doctors have bought it. That has surprised me. However, they have performed very different experiments what I have found out only afterwards. The buyers tell me that they were very successful with their biological-technical experiments. There, some information are mixed up on the scalar wave and transmitted with the field, so they say.

So the request was brought to me to place everything in a closed housing, washable and usable in a medical practice. We have followed the request and have already delivered some devices (SWG). Find out best on my website www.k-meyl.de.

Therefore the devices are ideally suited for bio-technical experiments, but only for those users who open their eyes. But those who do not want to acknowledge the new information, that a wave character exists, that the wave is transporting energy and is modulatable, those can not be helped. Then these are also not those who come in question for such experiments.

The difference between the two in physics known wave components is that the EM wave has a huge stray field with enormous transmission losses, while the scalar wave warrants a bundling of the field lines that is lossless. This has consequences for the practical application.

When broadcasting, so if many receivers are connected, the electromagnetic wave certainly makes sense. But if a point-to-point connection is required, for example, if I want to call by mobile phone only one person in the world, then this is the wrong wave. I don't need to irradiate millions of passive listeners with the stray fields of the EM wave, if it were possible even without harassment.

When my mobile radio unit receives just about 2 microwatts high frequency radiation, then, by using the scalar wave, only two microwatts transmission power would be required and no one would be bothered.

Why working today with a million-fold transmission power so that just two microwatts arrive? Here, a sledgehammer is taken to crack a nut. The completely wrong technique is used here.

Another positive use of scalar waves is the so-called transponder technology. This is known by the RFID technology. Theft monitoring systems, such as those used in shopping centers, work with magnetically coupled systems.

If the receivers, flat coils, resonate with the transmitters installed at the exit of the store, then the alarm howls. Therefore, the flat coil is either removed at the pay desk, or it is effectively detuned.

I've had conversations with the former development director of AEG who designed and built the first transponder on this basis in Germany. He was able to confirm that there are no electromagnetic waves used, rather, that there are longitudinal waves, which is exactly the one I call a scalar wave.

It is a fact that scalar waves are in daily use. And it works great. As such, it is strange, when technically retarded warn of the practical use of these supposedly non-existent wave.

I have pointed out the negative use of the EM wave. In the case of the scalar wave electromog occurs, if a person is the receiver. Therefore, I demand that a transmitter that radiates scalar wave components must always be connected to a technical receiver collecting these fractions again. If you are testing a scalar wave transmission line in an EMC laboratory, then you will measure zero stray field, if care is taken to ensure that all field lines bundle at the receiver again.

Why should they - in an EMC laboratory there are measurement equipments for Hertzian waves only."

General laughter in the hall.

6. The Electromagnetic Wave

Prof. Dr.-Ing. Konstantin Meyl: scalar wave medicine

The Electromagnetic Wave

properties of the planar electromagnetic wave:

1. propagating with speed of light c

2. Transverse wave: $\mathbf{E}, \mathbf{H} \perp c$

3. $\angle(\mathbf{E}, \mathbf{H}) = 0^\circ$ (angle between electric and magnetic field pointer = 0)

Fig. 4: Properties of plane electromagnetic wave

The sheet shows a plane electromagnetic wave. The properties of this wave are the following:

- The propagation is constant and is done with the speed of light c ,
- It is a transverse or cross wave, and this means that the electric and magnetic field pointers (\mathbf{E} and \mathbf{H}) are at 90° to one another and positioned perpendicular to the direction of propagation (c).
- Finally, between \mathbf{E} and \mathbf{H} is a phase angle of 0° . That is, where the electric field passes through zero, and the zero crossing of the magnetic field.

Please imagine making phone calls with a cell phone. The radiated high frequency runs at the speed of light through your head. A small part, as we know, is absorbed from your head. It remains in your head, and thus can be no EM wave anymore, because at least it no longer fulfills the first condition. What, we must ask ourselves, is the absorbed wave then?

On the issue of electrosmog we want to know what is the cause and not the cause of the cause. (You also can't infer from the consumption of chicken feed to the number of laid eggs).

The discussion of limit values for the electromagnetic wave is basically missed when the absorbed wave is no Hertzian wave. At the end, perhaps there is heat, we know that. But the wave equation says nothing about heat at all. At this point, we have to go on the search.

7. Antenna Radiation according to Schoolbooks

I checked out my old textbook for secondary schools of Grimsehl, whose content is the curriculum at the secondary schools for physics lessons in junior high. Of course, this representation is also in high scientific papers.

The shown dipole is explained that electric field lines (Slide 6, left) run from plus to minus. Subsequently, the charge carriers move through the dipole and generate a magnetic field offset by 90 ° (second picture), as long as it comes to a complete reversal and the process turns around.

Look at the picture precisely. There is a phase angle between the electrical and the magnetic field of 90 °. Therefore it can't be an electromagnetic wave, because the property number three is violated here, according to it the angle has to be 0 °!

A dipole antenna doesn't radiate electromagnetic waves. We must make that clear to us once. We need to keep on searching.

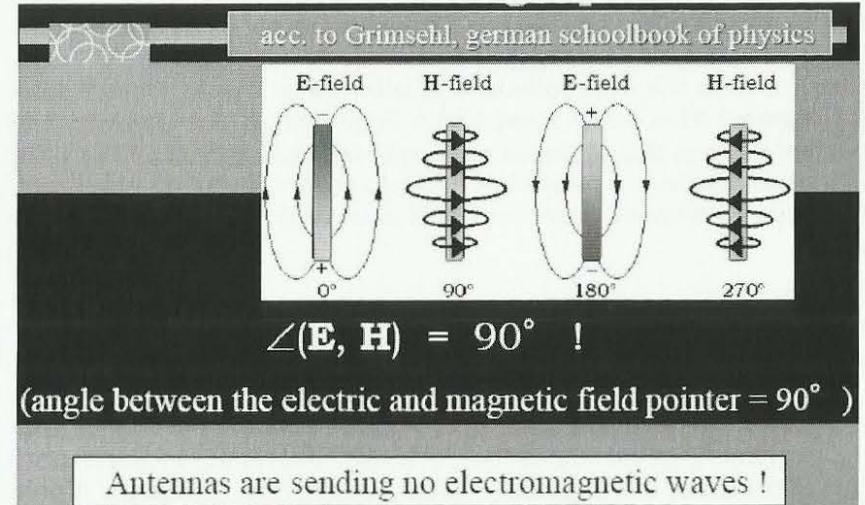


Fig. 6: Fields of the oscillating dipole antenna (from a schoolbook).

I look at the same schoolbook again and scroll one page further. I find the following picture here.

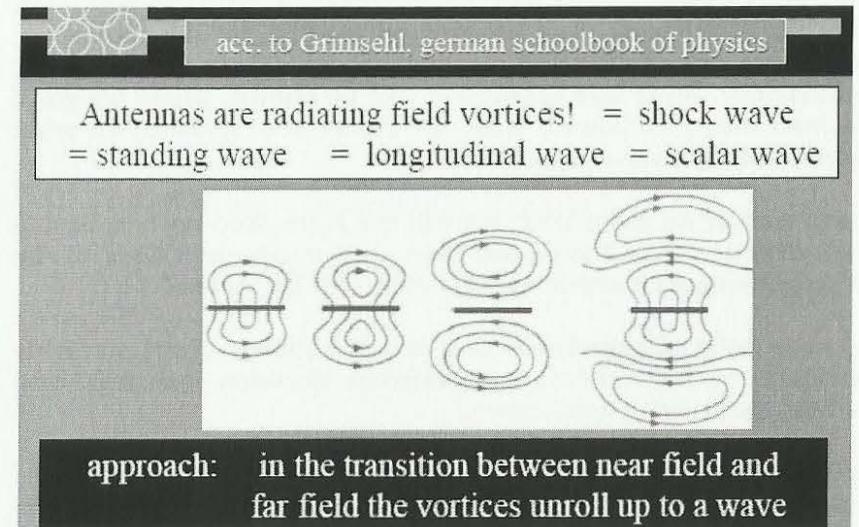


Fig 7: The near field of an antenna, from a textbook for secondary schools

8. The Near Field of an Antenna according to a Schoolbook

Slide 7 shows the field radiation of a Hertzian dipole. Does it look like a wave? This looks more like a field vortex. The presentation teaches us that this antenna only radiates field vortices. The right picture shows how a newly formed field vortex abuts an older one. This creates a shock wave and that is exactly what I call a scalar wave.

To summarize:

A dipole radiates scalar waves only.

A grotesqueness shall be mentioned by the way: this picture (7) is arranged in honor of Heinrich Hertz at the entrance to the Faculty of Electrical Engineering of the Technical University of Karlsruhe. Just they are no Hertzian waves, what the Hertzian dipole radiates here.

This monument honors Nikola Tesla, who has first proved the scalar wave in an experiment. Tesla had been segregated by the scientific world, after he had publicly claimed that Hertz would have been wrong. No one had noticed that yes, both are right with their respective wave. And no one had studied the wave equation, which was well known and the dispute could have been stopped immediately. From this example it can be shown, where we go, if the laws are not followed. What are the laws of physics, for what do you need the wave equation then?

Every technician in an EMC lab will teach us: 'You have to keep a large distance from the dipole, if you are measuring. Only in the so-called far-field electromagnetic wave can be proven.'

On slide 7 the so-called near field range is shown. There are fields for which no instruments are available. Between near field and far field a transition zone exists.

In the transition region something strange occurs. The properties change completely. Instead of the 90 ° phase shift it suddenly is 0 °. I explain this by saying that the vortices unroll in the near field to an electromagnetic wave.

Here in the transition area a transformation occurs without external energy supply. So at a transmitter a transition takes place into another also stable field structure, and this is the Hertzian wave.

At the receiver, a reverse transformation takes place. A wave rolls up back to a vortex as at the end of the antenna rod the received wave is reflected back. A high-frequency technician calls this resulting field vortex a standing wave. This process provides us with a useful conceptual model how we must imagine the vortex physically constructed.

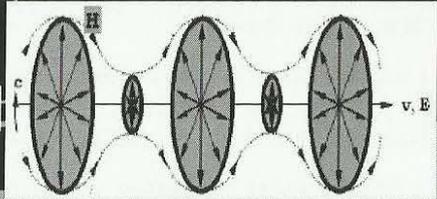
9. Scalar Waves measurable as Antenna Noise

Prof. Dr.-Ing. Konstantin Meyl: scalar wave medicine

The Antenna Noise

model of penetrating vortices

electric scalar wave i.e.



- Longitudinal waves run in the direction of a field pointer (H)
- With the field pointer the vector of velocity (v) oscillates!
- The faster the oscillating vortex is, the smaller it gets.
- The vortex permanently changes diameter and wave length.
- The swirl velocity is constant (= speed of light c) [f = c/λ]
- The vortex acts as a frequency converter!
- The measurable mixture of frequencies is called **noise**.

Fig. 8: Model of explanation for the structure of a vortex

Let us imagine the EM wave travels with the speed of light in a circle. This means that the vortex velocity is the same as the speed of light c.

So it has still to be classified as an electromagnetic wave, otherwise I would have to put energy into it. Just now, this runs in a circle around a point, and that is the vortex center. If this point is localized in space, so it is a fixed phenomenon.

From the principle two different vortices are distinguishable. One wraps itself around the electrical field pointer and the other around that of the magnetic. Here, in the slide 8, I drew the latter case.

As you can see, furthermore, all three pointers E, H and c are mutually perpendicular. So I assume that the Maxwell theory has further validity as a basis for the description of the EM wave. This requires that the E-field pointer points from the vortex to the outside. The transition describes the damping term within the so-called fundamental field equation. This initially has nothing to do with a scalar wave.

If I move this structure, however, with (v) in the direction of the field pointer, the result is a longitudinal wave. This corresponds entirely to the textbook definition of such a wave.

The field pointer oscillates and the velocity vector v resonates with it. So it is not constant, in contrast to that of light c. As we know this from the acoustic wave, the speed of a longitudinal wave is generally not constant, ie it accelerates and brakes the next moment again.

In the region of the speed of light a field vortex is subject to the Lorentz contraction. This phenomenon, known from the theory of relativity states that the vortex gets smaller the faster it is traveling. The vibration in propagation results in such a vibration in this size.

If the diameter changes, then the field vortex also changes its wavelength λ . The vortex velocity is about the speed of light c, and it is constant. It is calculated according to the definition of

$$c = \lambda \times f.$$

So from the varying wavelength follows a frequency mixture.

The vortex thus operates as a frequency converter.

If such a frequency mixture is technically measured, there is a special technical term for it: the noise. When I can prove an antenna noise, then this antenna noise is the scalar wave component radiated from the antenna.

If you want to determine, for example, the antenna efficiency, then you will only measure the antenna noise directly at the antenna in the so-called short range. You may measure the Hertzian component only at intervals greater than $(\lambda/2\pi)$. This measurement result is calculated backwards by the law of inverse square of a distance to the antenna surface. This hypothetical value is compared to the power fed in the antenna and out of it the efficiency is defined. This is the best available technology.

Suppose there are 80%, to name one example. Of the 100% field vortices generated in the near field of the antenna, and which are leaving the antenna rod as a scalar wave, 80% have rolled to EM waves in the far field. The remaining 20% stay as an antenna noise.

Because it is about noise vortices, it can be assumed that it will eventually come to a vortex collapse. The decaying vortex in turn generates heat, which is then identified as an antenna loss.

Now we have shown the relation conclusively (for the first time). Such a representation is missing in textbooks. But this would be very important, for example, when it is about the biological effects of fields and waves, because the noise is nevertheless more fundamental than the EM wave.

What do you measure, when scanning a person from head to toe? You measure noise! This is a strong indication that a human on the inside works with scalar waves.

If you adjust an AM transmitter and drive along an avenue of poplars, then the received field strength goes back at every roadside poplar. It is lost in the noise, the expert says. We recognize the fact that the trees radiate a noise signal. This is no acoustic, but an electrical signal.

I assume that the whole nature only works with scalar waves and not with electromagnetic waves.

10. The Frequency Diagram of Scalar Waves

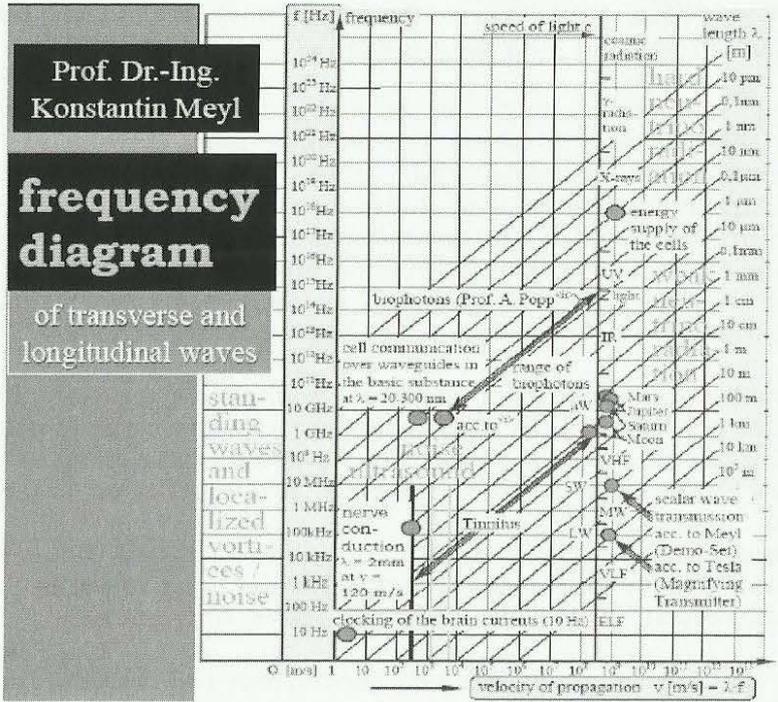


Fig. 9: The frequency diagram of transverse and longitudinal waves.

The window of the frequencies used in biology will become clear, if the derived results are recorded in a frequency diagram.

In slide 9 the frequency f [Hz] is applied to the propagation velocity v [m/s] with the wavelength λ [m] as a parameter.

The wide line at $3 \cdot 10^8$ [m/s] represents the speed of light c . Here the transverse waves are found again in the well-known one-dimensional representation.

Notwithstanding c the longitudinal waves run slightly unusually. These begin with a stationary noise on the left, go over the acoustic noise as it propagates in air or in a body, further over a huge, yet largely unexplored area of biophotons and of vortex heat and end beyond the speed of light at the neutrino.

The special case is settled in between that propagating particles as a scalar wave, or rather vortices, have exactly the speed of light. In this case light can appear either as a wave or photon radiation.

There is hardly any university where no research is running to hide information in the noise signal to filter it out again by a cross-correlation. These are all works, that are also known to me here at the University of Stuttgart, and which could be subsumed under the concept of scalar wave technology.

Strictly speaking it is the transition from a line (at c) to the shown surface about the extension of an entire dimension. This has enormous consequences. So there is not only a one-dimensional modulation option available as by the EM wave shown as a line. Because the scalar wave propagation speed is not constant, wavelength and frequency can be modulated separately. We have gained a dimension of modulation, as shown by the representation as a surface.

This reflects the high effectiveness of the scalar wave. And it also explains why nature only works with scalar waves, because it optimized its systems for millions of years already and not just for the last 100 years. It so happens that our head is more powerful with a CPU frequency of 10 Hz than a modern PC in the GHz-range, which is still working with a serial image transfer pixel by pixel and line by line. The human, however, works with an advanced parallel image transmission and you can take that for granted.

We can't do it better with today's high-frequency technique because we aren't proficient in scalar wave technology. But we work on it and maybe we will eventually reach the technical standard that our PCs are working with scalar wave technology, which would result in a huge leap in innovation.

The last thing we need is someone who warns publicly about the technical development and practical application of a promising technology.

11. The Communication of Cells

Let's look again at the representation. There the biophotons of Professor Popp are inscribed. In a moment, he himself will give a lecture on radio signals in the UV range radiating cells, which he is able to prove by a sensitive photomultiplier.

I would like to point out that he can not measure the frequency with this measuring arrangement. He himself has implicitly assumed that the signals propagate at the speed of light. But he can not even measure it. That would be the precondition that it is about light signals, as the term of biophotons coined by him makes believe.

Professor Heine is also engaged in cell communication. He says: 'Who did not understand this fact, did not understand what life is.' Because: life arises from the fact that cells are formed, which communicate with each other.

Heine proves a hyperboloidal structure when cells communicate with each other in the extracellular matrix. The structure of the waveguide channels that arise temporary corresponds exactly to the representation of Slide 8, which I have drawn for the scalar wave. In this case, the structure filters out the matching signals that are to be transported. This increases the fault safety of transmission. Such a technique wouldn't be feasible with stupid power cables.

The nodes of Ranvier Mark also mark in the nerve conduction the wave nodes and so determine the wavelength. As a result, only a signal at the appropriate wavelength comes through. We can speak of a scalar wave filter. The nature filters out what is a useful signal and what is noise and that is very important.

We're surrounded by noise signals. You may like to take a noise meter in hand, walk around here in the auditorium and you will prove noise signals everywhere. The scalar waves in our environment come partly from technical sources but also from the cosmos.

We are adapted to the noise mixture, because we live in a capacitor between the ionosphere and the earth's surface. More than that, the plants and animals in the biosphere can be seen as electrical losses of a large capacitor.

People are dielectric capacitor losses of the nature.

Professor Heine works on the same topic as Prof. Popp, but he believes that his proven bio-signals are traveling at the speed of sound only. From the chart, we see that it would be about microwaves.

Water colloids actually have a resonance frequency in the microwave range at 2.4 GHz.

If you have a microwave oven at home, then it also works at 2.4 Ghz. Its task is to heat vegetable and animal food. Using our model, we can now understand the process better. The microwaves are absorbed in the water resonance, ie they become vortices that decay in turn, creating heat.

But also the UMTS mobile radio operates in this biological window, as well as Wi-Fi and Bluetooth. When it rains or snows, the mobile communications works worse and now we know why.

In the Netherlands, a study of three ministries was initiated to the issue of mobile communications. It revealed that effects were observed, which didn't exist with the previous D network. Massive physical reactions were observed, such as nausea or headache.

Finally, I should like to point out that the microwave mobile communications use the same wavelength as this, which is audible at the speed of airborne sound. Therefore it can't be excluded anymore that some people couple these signals in the auditory nerve bypassing the instrument transformer, which we call the ear. This is referred to as a case of tinnitus.

This is comparable to light signals or stars that you can see at an impact on the eye, although there is no light. It is not about a disease in both cases, but about biological disturbances that would immediately disappear if we would keep clear the biological window.

It is not warrantable to operate technical equipment in a biological window or even to discuss limit values. I will end my presentation.

12. Wave Propagation as Scalar Wave

Prof. Dr.-Ing. Konstantin Meyl: scalar wave medicine

Wave equation acc. to textbooks

The extended Theory of Meyl is peer reviewed published!

- textbook: the **Wave equation** ↔ according to
- **Laplace:** EM wave + scalar wave
(d'Alembert 1747) (transverse + longitudinal wave)
- **Maxwell:** $c^2(-\text{curl curl } \mathbf{B} + \text{grad div } \mathbf{B}) = \partial^2 \mathbf{B} / \partial t^2$
(1865) EM wave + vortex (damping)

solution 1: EM wave ≠ 0; rest = 0 (negligible)

solution 2: field vortices forming a scalar wave (≠0)!

Fig. 10: Field vortices as a problem of the field theory.

The problem of scalar waves does not arise in the practice, because the use of scalar waves exists and is now a technical standard in many sectors. One even can get used to the term scalar wave. As an open question remains only the correct treatment of the field theory.

On one hand, the Laplace equation describing electromagnetic waves and scalar waves equally, as discussed, can be found in the textbooks. On the other hand, there are also the Maxwell equations which inserted Ampère's law inserted in the law of induction, or vice versa always describe a damped wave equation.

Both wave descriptions are textbook equations. Both agree in the mathematical description of the electromagnetic wave, as long as the second part of the wave equation is set to zero, or would be negligible.

Transferred to the antenna with 80% efficiency, it would be the equivalent to a neglect and an error of 20% if the wave equation by Laplace is used as a basis. After Maxwell, it would be the special case of an undamped electromagnetic wave.

This solution (No. 1) used in most textbooks must be rejected as unscientific and useless. For example, if the sunlight in the ionosphere were not damped, then the sky on the day would be black and not blue. Who opens the eyes immediately recognize how worthless those textbooks are.

The vortex damping derivable from Maxwell equations had been the basis of my own dissertation, which I had submitted at this university in 1984. So I know what I'm talking about when I ask for the consideration of the damping term.

The problem of field theory is now however the fact that we have two different descriptions for a wave phenomena. It can be solved only for the case (No. 2), if the vortex damping is equated with the scalar waves, so the terms are equal.

It means physically that the damping of an EM wave by Maxwell forms a vortex field as the wave curls up, but according to the Laplace equation this then forms a longitudinal shock wave, which I refer to as scalar wave.

Anyone who sets a size to zero in physics, is committed to error analysis. It is necessary to consider whether the neglected term is also small enough so that he may be set to zero. This, our students are learning in the first semester. Is there anyone here who does not see the necessity?

Thank you for your attention“.

(long lasting applause).

13. Discussion

The organizer rose to speak: "Because of this important lecture, standing in the center of the Congress theme, we have to allow 5 minutes discussion, although this is not scheduled. Maybe I may immediately begin. I received an interesting email from Paris, the substitute of the EU Commissioner. So to the top of the EU research and planning, it is also about the use of this energy and I really have to say: The University of Stuttgart is there too and it is on the list, is among the front runners in the EU."

Meyl: "It is proper that way. We can not bury our heads in the sand on energy questions. We are asked to find new energy sources. So the scalar wave naturally has an effect, because it is made of energy-carrying particles."

One participant noted: "I would like to add the remark that the water of a body can possibly be changed by the scalar wave. How resistant are the water colloids and how do salts matter? "

Meyl: "The electrical conductivity will massively influence the vortex decay with certainty. You could even go so far that the body regulates the vortex intake and the vortex decay via the salts. This is then similar to a regulation of energy and information absorption."

Dean: "I may introduce myself, I am the Dean of the Faculty of Physics and Mathematics at our university, and I was one of those who was worried about the reputation of the University, and who didn't want to let the event take place here."

And after I've now heard this lecture here, I must say that my concern was justified. I have rarely heard something as confused to the Maxwell theory. Throughout the science the Maxwell theory is the best experimentally based theory. If we tweak around at this theory, pick holes in it, make changes, then you can pack up the entire nature science."

Interjections: "Go ahead!", "The sooner, the better!" "Pack up and go home".

The Dean repeats himself, because of restlessness in the room:

"Maxwell's theory and its generalization to the quantum electrodynamics is experimentally demonstrated best for a distance of 10^{-16} cm."

Interjection from the audience: "*Then it is indeed about time for an overdue extension.*"

The Dean continues his sentence: "... And what I have heard here of terms, this was a confusion. But I just want to express my opinion here. When I hear: vortices are scalar waves, it is unbelievable what I have heard here ".

Meyl: "Maxwell's theory is not questioned by me, only extended. It is not wrong. I've never said that Maxwell's theory is wrong. I'm talking about an extension. And an extension must be possible in science at any time. Imagine, a scientist would say: My theory does not describe scalar waves and therefore there are no scalar waves, then I have to make it perfectly clear: The physical reality does not follow a possibly erroneous theory."

Consent and persistent applause in the lecture hall.

The GWUP board member Gullible reaches for the microphone: "TU-Darmstadt. I want to fully to join in with the colleague. I have many objections to what you have said here, Mr. Meyl. Let's start again with the basic equation you have shown here. You have derived it from erroneous calculation steps. You can only write the equation for $v = c$, and then, there is the normal wave equation."

Meyl: "Anyway. I am willing to let me invite you to a lecture in the seminar in Physics and Mathematics or in Electrical engineering of your university. Then I can reckon my derivations, and then you can also discuss whether there is an error or no error at any step of the derivation. My theory was recalculated by a professor of mathematics at the University of Ulm, and he can confirm that my derivation is correct and error-free. You claim that this is not the case. You distribute this hoax on the Internet, which is known to me, and we can discuss it in a Technical Symposium, but not here. This is about the question: Is there a scalar wave medicine?"

Applause.



Fig. 11: the wrong math professor (Dr.) Ernest Gullible discusses with a participant of the conference

Gullible: "You have told us about about the divergence of E . This is a scalar, so far I agree. But, in non-conducting media, in a vacuum or in air, in such a medium is $\text{div } E = 0$, the charge density is zero and that means a wave can't be produced.

You, Mr. Meyl, have derived the fundamental field equation with the extension of your Maxwell's equations in your book EMV 3, to the extent I agree. But if you then add the conditions that $\text{curl } E = 0$ shall be ... "

Meyl: "I do not set $\text{curl } E$ to zero. As the derivation, with which you have agreed, would not work."

Gullible: "but $\text{curl } E = 0$ is on page ..."

The audience is tired of it: "*Stop stop*", can be heard, accompanied by loud noise, expressions of discontent and heckling.

Gullible, who appeared here under a pseudonym, is still trying to say something inaudible and after 2 minutes, he gives in unnerved. They had turned off his microphone.

14. The Aftermath

I have made an appointment with the dean for Mathematics at the TU Darmstadt and asked for Ernest Gullible, who had pretended to be Prof. Dr. of TU Darmstadt. The dean said, 'he doesn't know him at all. This must be a title scammer!' Then I showed him the website of the impostor, whereupon he called a retired colleague, who answered surprisingly that he was this Gullible. He again had to explain himself at the Senate of the University afterwards, so I was told. Result unknown.

As a bonus, the anonymous Gullible even got a criminal charge of pension fraud, because he collected the pension of a university professor monthly, although he is just a simple title scammer. Perhaps we should mention that he claims to be a leading member of the para-scientific GWUP sect, which is located in Darmstadt.

Why does someone go so determined, even in the case that it would be a mathematician in real life, to a Congress where it comes to the question of scalar wave medicine?

Why does this parascientific sect agitate against the scalar wave research in general and homeopathy in particular? In its Wikipedia-plagiarism "Esowatch" (renamed in "PsiRam" on the run from the prosecutor's office), the operator (GWUP activist Ramstöck) is not visible. Instead, in the imprint is written: "We are generously sponsored by the pharmaceutical mafia and the Constitutional Protection. If you are interested in a good extra income, you can also join us."

It is probably safe to assume that "PsiRam" is used for the malicious deception of unsuspecting Internet users.

By the way, the next DGEIM Congress took place in Heidelberg and no longer at the University of Stuttgart.

15. The Rewarded Science Counterfeit

As soon as the sect had written in Wikipedia or made a pirated copy, their own activists are cited mainly. This is obviously part of the business idea.

Among the quotes, an article with the title: "A critical examination of the theories of Konstantin Meyl" always appears in the newsletter FGF 1/2004 published by the research community radio. Just the title doesn't hold what it promises, and it finally targets to head off my serious criticism of the mobile communications. This corresponds entirely to the assignment of the FGF.

There, the author is free to attack my person frontally and discredit me scientifically on 8 pages. The focus of his criticism are the scalar waves of Meyl, as it is the headline of his chapter.

It is remarkable, so it is written in a internal letter of a reader to the company Vodafone, "that the relevant publications of Prof. Meyl on the topic of scalar waves are not even mentioned. Two books about potential vortices of 1990 and 1992 are cited, which are partly no longer available already. The books are about vortex physics and the calculation of quantum properties. The concept of "scalar waves" doesn't appear in them at all.

The third source, that Mr. Eibert relies on, is a presentation which Prof. Meyl had given at a congress in Bregenz. But this presentation was only published by the transcript of a present journalist. The quoted report therefore displays what the journalist had understood of the topic.

It seems that Mr. Eibert doesn't know the extensive work of Prof. Meyl on the subject of scalar waves that have been published between 1996 and 2002. Now I would like to politely point out that the company Vodafone may not rely on an incomplete piece of work.

Who wants to deal with the theory of Prof. Meyl, should read the derivations in Chapters 27 and 28 of his book on "electromagnetic environmental compatibility" (English title: "Scalar waves"), to understand it and criticize if it succeeds. Finally, there already are evaluations from prominent scientists and mathematicians [i] that you will not find in the bibliography.

[i] Prof. Dr. H.-J. Runckel, Höhere Analysis, Oldenbourg Verlag 2000

What are the avowals worth of this young zealot who judges about a theory that he does not know and states about an experiment that he has never seen? You can assume that I know what I'm talking about because I had purchased the experimental case at the Institute of Prof. Meyl and passed it on for purposes of scientific research at famous universities.

It is striking that hardly a critic is left when the skeptics of the GWUP are ignored, who have written on their banners the personal pursuit of Prof. Meyl and who have to put up with the reproach of lacking seriousness and a lack of scientificity (<http://www.skeptizismus.de/henke.html>).

I am sure that the company Vodafone yet has to dwell upon the research of Prof. Meyl on the topic of scalar waves. This only may serve, in my opinion, the improvement of today's mobile technology and the welfare of the population. So my recommendation is to start with it immediately".

(signed by Dr. Detlef Frommann, a purchaser of the experimental-kit).

It may be added that the author was employed as a graduate engineer in RF technology at FGAN of the German Army in Wachtberg at the time when this paper was written. In the Internet, it is expressly pointed out that authors are pursued as science counterfeiters who defraud used work or who do not quote properly.

Shortly afterwards, the article appeared on the page of the Institute for RF technology in the University of Stuttgart. The author was appointed directly from the German army to the Chair of the University of Stuttgart (now at the TU Munich).

16. Symposium on Medical Naturopathy

The symposium at the 113th ZAEN Congress in Freudenstadt on 29/09/2007 was enriched by a lecture by Prof. Dr. Meyl on the topic of *scalar wave medicine*. In addition, he offered two workshops on the topics of *energy medicine based on scalar waves* and *E-Smog*. Again the question came to the fore: **What are scalar waves?**

Who looks up at Wikipedia under the keyword "scalar wave" will just find polemics of the worst kind. The author has revised the article, which is the starting point for his lecture.

16.1 Basics

Under the heading '**scalar wave**' can be subsumed both, accepted waves such as acoustic waves or plasma waves, as well as hypothetical waves that are different from the conventional electromagnetic transverse waves by a vibration plane parallel to the propagation direction. They have all in common characteristics of **longitudinal waves**.

16.2 Different Interpretations

The term '**scalar wave**' originates from mathematics. It is rather seldom used, is often misunderstood, misinterpreted or even abused. The different concepts must therefore be kept apart strictly.

16.2.1 The concept of particles

A '**scalar wave describes the directional spreading of undirected (scalar) quantities**'. The scalar quantities (particles) form in the case of:

- **acoustic wave**: the air molecules
- **Seismic wave** (primary wave): material particles of the earth
- **Plasma wave** (Langmuir wave): the plasma existing of charged particles.

Because the particles about each other, this phenomenon is also referred to as a '**shock wave**'.

16.2.2 The electric scalar wave⁷

The famous *experimental physicist Nikola Tesla (1856 - 1943)* has observed longitudinal waves in an open capacitor operated in a self-resonant circuit, so called scalar waves and called attention to the for longitudinal waves typical properties¹. There is a debate about the '**Tesla wave**' because of some unconfirmed properties^{2,3}:

- *The electric scalar wave is faster than light* ²²,
- *can not be shielded by a Faraday cage,*
- *it does not follow the law of inverse square of a distance*
- *and interacts with the environment.*

In accordance with the established concept, the propagation takes place directed from one capacitor electrode to the other.

At the suggestion of the *theoretical physicists Hermann von Helmholtz* and *Lord Kelvin*, the scalar quantities should be field vortices (*Kelvin vortex ring models*).

Dr. Meyl, professor of energy engineering at the University of Furtwangen (University of Applied Sciences) has created an **experiment** according to plans by *Tesla*, with which the results can be verified. The criticism of *Tesla* and of the about 200 times replicated experiment of *Meyl* refers to the field theory of *Maxwell* that describes no scalar waves without postulated additional conditions.

Meyl is able to solve the problem for the first time, via an extension of the field equations by the so called '**potential vortices**' that both explain the dielectric losses of a capacitor as **vortex losses**, as well as represent the scalar quantity, in the case of propagation as **electric scalar wave**⁴.

The field-theoretical derivations of *Meyl* are scientifically published and are discussed at international congresses since 2006^{5,6}.

16.2.3 The magnetic scalar wave⁸

In the **near field of an antenna**, longitudinal wave components appear that run in the direction of a field pointer. As long as there is no resonant receiver, the stray field of the transmitter is the '**radiation field**' of the antenna⁹.

Thus, for example, **RFID**-chips use the near-field for wireless energy transfer using a '**magnetic coupling**'. *Meyl* has formed the term '**magnetic scalar wave**', due to the propagation in the direction of the magnetic field pointer in duality to the electric scalar wave (*Tesla*). He sees in her the actual **energy wave**, because magnetic forces are at work, which are known to be up to 1000-times bigger than the electric Coulomb forces⁴.

The definition of scalar waves and the unconfirmed properties are valid in the case of the magnetic scalar wave analogue.

16.2.4 The electromagnetic scalar wave

also called **longitudinal electromagnetic wave**¹⁰ can not exist, because electromagnetic waves are always transversal waves. Nevertheless, a handful of *representatives at Wikipedia* have invariably discussed this concept and logically associated it with the **para-science**. According to the state of the research in physics, in vacuum and in non-conductive, non-charged media (such as air, glass, etc) are **electromagnetic transverse waves** only¹¹.

16.2.5 The wave of a scalar field¹²

Some people from the *movement of skeptics* have dealt with this hypothetical wave type. They point out,

- that scalar waves are highly valued by *esotericists*, but
- that this '**skeptics wave**' does not exist!

It is mathematically 'proofed' that each wave is known to be directed, while a scalar field is non-directional by definition. It is concluded that this concept of a **scalar field wave** (skeptics wave) can not exist in principle¹³.

16.2.6 Disordered concepts

Numerous described '**scalar wave phenomena**' from different areas of science, para-science and the esoteric, the origin of some would need to be resolved, wait for a professional and technical association with the above concepts, such as e.g. *Telepathy, telekinesis, earth radiation, Aura, Od, Orgone, biophotons, cell radiation, morphic field*,¹⁴ etc. In these areas there is a great need for research.

Furthermore, the physically senseless concept of a electromagnetic scalar wave is encountered frequently if out of ignorance or neglect a more precise assignment is not made, or is just not yet succeeded.

16.3. Theory of Scalar Waves

Quite different approaches have been published at the derivation of scalar waves, they can be divided into the following groups:

16.3.1 According to the wave equation of Laplace

Not just a few scientists see the **definition of a scalar wave** as *the directional spreading (gradient...) of scalar quantities (divergence of a vector field) in the wave equation of Laplace mathematically justified*.

Is the Laplace operator Δ decomposed according to the rules of vector analysis [in $\Delta = \text{grad div} - \text{curl curl}$], then the the term of the scalar wave is via an **addition** connected to the Term of electromagnetic waves, which is usually derived from the Maxwell equations, then **both wave types** only form purely theoretical limiting cases that allow a separate mathematical consideration as *Meyl* is explaining it³.

Simonyi also used for calculating a waveguide the operation (grad div) on the magnetic field as an determining equation for a *longitudinal electric wave* (LSE)⁷ and equally vice versa for a *longitudinal magnetic wave* (LSM)⁸.

Criticism: In fact, according to the physical meaning of the wave equation, a mixture always takes place, *longitudinal and transverse waves occur always coupled*^{4,15}.

16.3.2 The calculation of the near field

In the region designated as 'blind near field region' by *Meinke and Gundlach*¹⁶ (up to $\lambda/2\pi$), the calculation of the longitudinal field components happens by subjecting the *Maxwell's equations* to the relevant boundary conditions of the selected antenna geometry, in the case of *electrical radiation* the **Hertzian dipole** and in the case of *magnetic radiation*, the **loop antenna**^{9,17}. This approach contains restrictions:

- *The result is following the postulate of the boundary conditions,*
- *it can not be directly deduced from Maxwell's equations (such as the EM-wave),*

- *it is merely an approximation which is close to the measurement result and*
- *applies only at the speed of light c .*

Criticism: Because longitudinal waves swing in the direction of propagation, so usually only an **average velocity** can be specified (see velocity of sound.). Therefore, the limitation to c is an extreme, if not undue restriction.

16.3.3 The Tensor Calculation

James Clerk Maxwell has written the field equations alternatively in a **quaternion** representation in his famous book¹⁸, which can be regarded as a precursor of multi-dimensional tensors. *E. Schmutzer* (University of Jena) derives scalar waves using a **5-dimensional tensor calculation**¹⁹ and so he is in the tradition of Nobel Prize winner *Louis de Broglie* and his student *J.P. Vigier*²⁰.

The author *Thomas Bearden* (born 1930) has demonstrated the origin of scalar waves, relying on the original script of *Maxwell* using the *Hamiltonian quaternions*. According to *Bearden's* interpretation²¹, the British mathematician *E.T. Whittaker* showed in his publications in 1903 and 1904²², how to convert electromagnetic wave energy in electro-gravitational potential energy, and how to interfere two scalar potential waves to get back electromagnetic energy at a remote location.

In contrast to the accepted principle of superposition *Bearden* says that in case of a superposition of electromagnetic fields, whose sum is zero, the "underlying energy" does not "disappear", but may have an impact in another dimension (**zero point energy**). And he has also taken ideas from the *Kaluza-Klein theory* that presumes 5 dimensions.

Criticism: The *Maxwell theory* is considered to be the best confirmed theory in physics. This however applies only to the current notation of vector analysis (*Gibbs*) and in the by *Heaviside* retarded form²³, who can be charged for the cut of the scalar waves from the field equations.

The referring to an unconfirmed original description is no proof and the extension by another dimension always smacks of a postulate and arbitrariness.

16.3.4 The extension of the field equations

If assuming the accepted *Maxwell's equations*, then these have to be expanded by a **vortex term**, which is always different from zero, if any scalar waves occur or are involved. Only in this way it can be ensured that all previous calculations and evidences of the **Maxwell theory** retain accurate despite expansion. Because scalar waves require a scalar quantity with particle character, it should be about a **contractive vortex**, which is able to form structures as a counterpart to the accepted, expanding **eddy current**.

Prof. Meyl calls it based on the Fluid Mechanics "**potential vortices**" and provides two derivations:

- *via duality⁴ and*
- *via a derivation by accepted equations of textbook physics^{5,6}, that of the unipolar induction and convection (here without postulate).*

Meyl derives from his extended field equations furthermore the **wave equation**, with scalar waves, which can be both slower (sound, plasma wave) as well as faster than light (neutrino radiation). The result includes the *Laplace's equation* as a special case⁴.

16.4 Further Aspects

16.4.1 The metrological evidence

Metrologically, it is common to make a distinction with reference to the **phase angle** between the electrical field pointers and those of the magnetic field, which in the case of a scalar wave is 90°, wherein in case of the electromagnetic wave is 0°, however²⁴.

Meyl proposes alternatively to measure the **antenna noise**.

Following his idea, the scalar wave components of an antenna can be equated with the metrological detectable antenna noise or the noise of a capacitor⁴. This thesis, however, is even unconfirmed.

In conjunction with the vortex interpretation, the **noise power** respectively the antenna losses would be physically interpreted by the amount of decaying vortices. The generated **heat** in turn provides the commonly known and used way to measure the antenna losses indirectly. However, the **increase of the temperature** takes place with a time delay, which is why the dominant time constant of relaxation or of the vortex decay would be observed.

16.4.2 Importance in medicine

Already *Tesla* has pointed out the effect of electrical scalar waves to humans²⁵. Evidences for the **biological effectiveness** of electrical, magnetic or noise signals are present (frequency therapy, diathermy, etc.). The users believe that this positive health effects are achieved or telepathy is possible. However, the biological activity does not distinguish between helpful or harmful radiation. So the **electrosmog** is commonly referred to as the, health incriminating or damaging scalar wave component²⁶.

According to *Meyl*, the Ranvier's nodes in **nerve conductors** indicate the standing wave character of the conduction, the **action potential** are equivalent to his **potential vortices**²⁶, alone the concept of scalar waves explains conclusively the functioning of **cell communication**²⁷.

16.5. Sources

- 1: Nikola Tesla: The Problem of Increasing Human Energy, The Century Monthly Magazine, June 1900, ISBN 1-882137-00-0, Page i-15
- 2: N. Tesla: Apparatus for Transmission of Electrical Energy, US-Patent-No.: 649,621, New York 1900, Dr. Nikola Tesla: Complete Patents pp318-321.
- 3: K. Meyl: Scalar Waves: Theory and Experiments, Journal of Scientific Exploration, Vol. 15, No. 2, pp. 199-205, 2001,
- 4: K. Meyl: Scalar Waves, From an extended vortex and field theory to a technical, biological and historical use of longitudinal waves, INDEL Verlagsabt. Villingen-Schwenningen, 1st Ed. 2003, ISBN 3-9802 542-4-0.

- 5: K. Meyl: Wireless Tesla Transponder, Field-physical basis for electrically coupled bidirectional far range transponders according to the invention of Nikola Tesla, SoftCOM 2006, 14th intern. Conference, 29.09.2006, IEEE and Univ. Split, Faculty of Electrical Engineering, ISBN 953-6114-89-5, p. 67-78
- 6: K. Meyl: Scalar Wave Effects according to Tesla - Field-physical basis for electrically coupled bidirectional far range transponders, ANNUAL 2006 of the Croatian Academy of Engineering, ISSN 1332-3482, p. 243-276.
- 7: K. Simonyi: Theoretische Elektrotechnik, VEB Verlag Berlin 1979, 7.Aufl., S. 823 (LSE)
- 8: K. Simonyi: Theoretische Elektrotechnik, VEB Verlag Berlin 1979, 7.Aufl., S. 824 (LSM)
- 9: K. Simonyi: Theoretische Elektrotechnik, VEB Verlag Berlin 1979, 7.Aufl., S. 682 ff.
- 10: G. Galeczki, P. Marquardt: Requiem für die Spezielle Relativität, Verlag Haag + Herchen 1997, ISBN 3-86137-484-6, Seite 178 und 238
- 11: Max Born: "Optik. Ein Lehrbuch der elektromagnetischen Lichttheorie", Springer 1932, ISBN 3540059547, §3
- 12: Marco Bischof: *Tachyonen - Orgonenergie - Skalarwellen*, AT-Verlag 2002
- 13: E. Gullible (Titelbetrüger der TU Darmstadt) und G. Bruhn: Meyliana. (die TU Darmstadt hat sich von dem Missbrauch ihrer Internetseite distanziert): <http://www.mathematik.tu-darmstadt.de/~bruhn/Meyliana.html>.
- 14: R. Sheldrake: Sieben Experimente, die die Welt verändern könnten. Goldmann Verlag 1994
- 15: B. Lehnert, S.Roy: Extended Electromagnetic Theory, World Scientific 1998, p.16.
- 16: Meinke, Gundlach: Hochfrequenztechnik, Springer Verlag 1986, 4.Aufl. Seite N2
- 17: Zinke, Brunswig: Hochfrequenztechnik Band 1, Springer Verl. 1990, 4.Aufl., S. 351 ff.
- 18: J.C. Maxwell: A Treatise on Electricity and Magnetism, Dover Publ. N.Y, pp 618.
- 19: E. Schmutzer: Projektive Einheitliche Feldtheorie mit Anwendungen in Kosmologie und Astrophysik, Verlag Harri Deutsch, 2004
- 20: M. Evans, J. -P. Vigièr: The Enigmatic Photon, Vol. 1+2, Kluwer Academic Publishers, Dordrecht-Boston-London 1994.
- 21: Tom E. Bearden: *Skalartechnologie* (Michels Verlag, 2002) und *Fer de Lance* (1986)
- 22: E.T. Whittaker: On the partial differential equations of mathematical physics, *Mathematische Annalen*, 1903
- 23: A. Lakhtakia (Editor): Essays on the Formal Aspects of Elektromagnetic Theory, World Scientific 1993, ISBN 981-02-0854-5, P. Cornille: Scalar inhomogeneous waves, p.139, 151
- 24: H. Hora: Elektrodynamik, Felder und Wellen, Roder Verlag Regensburg, S. 49
- 25: Tesla Said, Tesla Book Company, ISBN 0-914119-00-1
- 26: K. Meyl: Elektromagnetische Umweltverträglichkeit Teil 1-3, INDEL Verlag
- 27: H. Heine: Lehrbuch der biologischen Medizin, Hippokrates Verl. 1997, 2.Ausg.

17. Clinic Report (Anaesthesia and Intensive Care Medicine)

Without question, a tiny group of self-proclaimed skeptics have managed to effectively complicate the beginning of scalar wave medicine. But they weren't truly successful at any time. It was rather followed by a general uncertainty.

The meeting with a young doctor took place in Austria in 2010. He had acquired his doctorate at the Medical University of Graz. The topic of his dissertation was: "The Khalifa therapy: A complementary method at ruptured cruciate ligaments." The Egyptian is generally regarded as a miracle healer, because he makes miraculously healing successes possible with his hands, what the young doctor again accepted as a challenge.

He told of a key experience as a patient with a torn cruciate ligament came to the appointment on crutches. It was impossible for him to burden the affected leg or straighten his knee. After one hour of treatment, he could walk again, manage the stairs and jump with the healed leg even one-legged.

MRI scans prior to the manual therapy and thereafter formed the basis of dissertation of the doctor, which was shown to meⁱ. Internationally known athletes could be healed and perform their profession without further complications and get world records. Actually, reason enough to ask the question, what is going on here?

We discussed precisely this question at our meeting. To test the abilities of the healer, a prospective, clinically controlled, randomized, observer-blind, multicenter study was designed and started with 40 patients. It was not yet complete, but it showed already at 12 evaluations a clear trend to significant healingⁱ.

Cruciate ligament cells possess stem cell character according to one study. The doctor also mentioned other explanatory hypotheses, such as the basic regulation according to Pischinger or the piezoelectric properties of Zeleni. But he could not really explain what was happening and seemed rather perplexed to me.

Patients reported from very painful pressure with which the healer maltreated their knee with his hands. Bruises attested it some time later. They also speak of a kind of electric current that would flow from his fingers through the knee to a finger of his other hand. It would feel like an electric shock. And now, I should physically explain this.

"In my opinion, the cells communicate via magnetic scalar waves", so my reasoning. "If a cruciate ligament in the knee gets torn by accident, there is a risk that on this occasion, the resonance between the cells is interrupted. If so, communication is no longer possible, then no repair mechanism works anymore.

But if the healer manages it to lead the two ends of the band so close together until they get into the desired scalar wave resonance again, then the communication will be working well again. Because the cells exactly know because of their DNA, how the band has to look like and has to work, the repair can start immediately and the function will be restored very quickly.

Usually, I demonstrate the process of resonance with my power kit and a fluorescent lamp. If I bring it close to the field source, it resonates and illuminates. I can now extend the distance until the resonance breaks off at some point. Now I need again a small distance to repeat the experiment. Technically, this is the same process as at the cruciate ligament in the knee.

By the way, we owe this phenomenon, the finite range of the resonance, the narrowness of our organs. Of course, the type of modulation helps, which is different for each organ. So also the cruciate ligament performs its own specific scalar wave communication."

"Your concept of scalar waves seems plausible as an explanatory model. We must explain it the still doubting professors of the TU Graz now," said the doctor and made a plan.

ⁱ: Dr.med.univ.Michael Ofner: Die Khalifa-Therapie, TU Graz, Oktober 2009

18. About the Invitation, Disinvitation and Re-Invitation of Graz Technical University

It didn't take long until I was invited by the TU Graz to give a lecture in the Auditorium Maximum, the large lecture hall of the TU. The invited organizers included the rector of the Technical University of Graz, the Austrian Electrotechnical Association (OVE), office Graz, Krenngasse 37/5, 8010 Graz, the Austrian Computer Society (OCG), the Faculty of Electrical Engineering and Information Technology at the Technical University of Graz, the Faculty of computer science at the Technical University of Graz and the club ELiTe - Association of Graduates of the Electrical and Computer Engineering.

All the honorable associations and faculties framed my text to the lecture, which should be held on June 16, 2010. But it turned out to be quite differently.

Once the poster was enlarged to A3 and was posted anywhere in the TU, it was also perceived by the colleagues of electro-dynamics. And they responded, like in common for colleagues, when a stranger enters their territory. First, they asked for my writings, and were served with my book of the "Self-consistent electrodynamics". But that was too much, given the announced heresies!

Three of them signed a petition to the Rector to disinvite me again. The Head of OVE, who acted as an intermediary, wanted that a panel discussion would take place instead of the lecture, to which I agreed. But the colleagues didn't want to debate publicly. I should swerve in a pub. But I remained consequent: either the large auditorium, or I did not even come. So it happened.

Six months later, I was still there at the invitation and was able to hold my lecture. But in the audience, only one professor was recognized (a delegated watchdog?). The others weren't come or were hiding.

In the meantime, a lot had happened. The TU Ilmenau had invited me to an international conference, where I could hold a lecture about my concept of scalar waves and hold a workshop.

OVE **ÖSTERREICHISCHE COMPUTER GESELLSCHAFT** **AUSTRIAN COMPUTER SOCIETY**

Vortrag

Mittwoch, 16. Juni 2010 um 18:30 Uhr, HS E

Prof. Dr.-Ing. Konstantin Meyl

Skalarwellen nach Nikola Tesla, von der feldtheoretischen Beschreibung zur praktischen Nutzung

Die schon vor 100 Jahren von dem Experimentalphysiker Nikola Tesla vorgeführte drahtlose Energieübertragung soll auf der Grundlage von Skalarwellen erfolgt sein. In der Tat basieren die aktuelle RFID-Technologie auf den longitudinalen Wellenanteilen im Nahbereich einer Sendeantenne. Die von Tesla angegebenen Wirkungsgrade und Reichweiten werden jedoch mit der heutigen Technik nicht annähernd erreicht.

Anstelle des magnetischen Streufeldes hat Tesla mit einem gerichteten Wellenfeld gearbeitet, das sich bei Resonanz in Richtung des elektrischen Feldzeigers ausbreitet. In der Wellengleichung werden unter Bezugnahme auf die 3. Feldgleichung von Maxwell ($\text{div } \mathbf{B} = 0$) genau diese Wellenanteile zu Null gesetzt, weshalb lediglich postulierte Modellberechnungen existieren, nach denen die Reichweite auf ein Sechstel der Wellenlänge begrenzt ist.

Mit der Entdeckung magnetischer Monopole ($\text{div } \mathbf{B} \neq 0$) hat 2009 die Helmholtz-Gesellschaft Berlin u.a. die Grundlage für eine Erweiterung der Feldgleichungen geschaffen und damit nebenbei, möglicherweise unbeabsichtigt, die mathematische Begründung für die Existenz von Skalarwellen und die Richtigkeit der von Tesla erfundenen Technologie geliefert.

Mit der Jahrhundert-Entdeckung ist durch Berücksichtigung der Skalarwellenanteile in der Wellengleichung die physikalische Voraussetzung für die Entwicklung von Skalarwellentranspondern geschaffen, die über den Nahbereich hinaus betriebsfähig sind. Dabei wird die Energie mit derselben Trägerwelle übertragen wie die Information und nicht über zwei getrennte Wege wie bei RFID-Systemen. Zudem ist wegen der Resonanzkopplung zwischen Sender und Empfänger eine bidirektionale Signalübertragung in beiden Richtungen zusätzlich zum Energie-transport möglich. Dies ist nur ein Beispiel aus einer Überlangen Liste neuer technischer Anwendungen. Was aber die einen als Durchbruch für Tesla-Technologien feiern, stößt andererseits die theoretische Elektrodynamik in ihre tiefste Krise ...

Im Anschluss laden die Veranstalter zum Buffet!

Online-Anmeldung: www.ove.at/veranstaltungen

Österreichischer Verband für Elektrotechnik, Geschäftstelle
Graz, Krenngasse 37/5,
8010 Graz

Vortragender:
Prof. Dr.-Ing. Konstantin MEYL

Hochschule Fürthwangen
University

Fakultät für Computer &
Electrical Engineering

TU Graz

EJE

Veranstalter:
Österreichischer Verband für
Elektrotechnik (OVE)
Österreichische Computer
Gesellschaft (OCG)

Fakultät für Elektrotechnik und
Informations Technik an der
Technischen Universität Graz

Fakultät für Informatik an der
Technischen Universität Graz

Verein ELiTe - Verein der
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und Informationstechnik

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Technische Universität Graz,
HS E, Kopernikusgasse 24,
8010 Graz

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Veranstaltung ist kostenlos,
um eine Anmeldung wird
jedoch gebeten.

Fig. 12: The poster at the TU Graz

In Austria, the Technical University of Vienna had arranged the matter. The vice president, at the same time professor of electrodynamics, told me what the German colleagues had agreed to in the dispute. He wrote: "The discovery of magnetic monopoles by the Helmholtz-Gesellschaft has nothing to do with the third Maxwell equation."

I answered him: "Dear colleague, may I remind you that the third Maxwell equation defines what a magnetic monopole is!" The correspondence was ended. I had split my colleagues into those who love my ideas and those who hate them.

Unexpectedly, I arrived with my ideas in the presence.

19. Invitation to the 2nd DNA Day in Dalian, China

The current state of scalar wave medicine took shape on the second DNA Day in China. I had turned down several invitations to medical congresses that have reached me as a result of a lecture that I had held at the University of Copenhagen in Denmark in 2008 (with the title: Energy from the environment, as a DVD available in the store at www.meyl.eu).

2011 I have almost canceled my participation again. But then I was made a member of the scientific committee. In this honorable committee sat already, for example, 10 Nobel Prize winners. As Chairman, I was allowed to organize and moderate lectures. I couldn't expect more honour in this situation, so I participated on the second DNA Day in the Millennium Park of Dalian.

So it, of course, includes the submission of a scientific paper, even two in my case, because I was allowed to hold 2 lectures. The red carpet was rolled out, only my previous comments on the communication of cells via magnetic scalar waves seemed too little justified to me.

On a world congress with several thousand participants only hard facts count. So I wrote my book about "DNA and cell resonance". The first 100 misprints of the edition, that was flightly translated into English, gave me the print shop. So I could take the copies to China and give away. Quickly, they were whipped out of my hand.

X.

Papers on Scalar Wave Medicine

1. Reading and Writing of the DNA by Magnetic Scalar Waves

by Konstantin Meyl*

1.0 Abstract

The vortex model of the magnetic scalar wave not only covers the many observed structures within the nucleus but also introduces the reader to the hyperboloid channels in the matrix as two cells are then found to communicate with each other. Physical results were revealed in 1990 which form the theoretical basis of the essential component of a potential vortex scalar wave.

An extended field theory approach has been known since 2009 following the discovery of magnetic monopoles. For the first time magnetic scalar wave theory best explains the physical basis of life not only from the biological discipline of science understanding only. And for the first time this interdisciplinary theory and provides a new understanding of cellular functions that are explained such theory depicting the complex relationships of nature. The characteristics of the potential vortex are decisive. Now using the concentration effect, the theory provides a cellular miniaturization view down to a few nanometers.

Keywords: Cell Biology, DNA, Resonance, Signaling

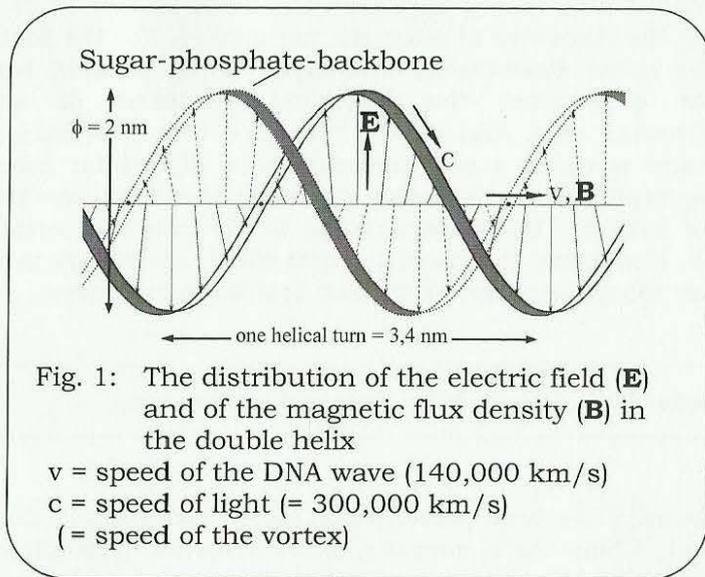
*The abstract has been presented at the 2nd DNA World Congress in Dalian, China. As a member of the Program Committee Prof. Dr. Konstantin Meyl has been Chair and is called to the Scientific Advisory Board. In addition the present paper is according to his presentation at the World Conference WMSCI 2012 at Orlando, Florida, USA, Proceedings Vol. II, page 113-117.

Prof. Dr. Meyl is the author of more than 12 books (www.meyl.eu) and member of the faculty "Computer and Electrical Engineering" at Furtwangen University, Germany.

1.1 Introduction

When two cells communicate with each other, one transmitting the read information and writing it to the other cell, we must ask how the read and write process works, and how genetic information is physically transported from cell to cell from a technical view point? [4, 8, 14, 20]

Hydrogen-bonds hold together through Coulomb forces electrically polarized base pairs in a DNA strand. To gain access to this polarization, the hydrogen-bonds must be separated, requiring radial outward electric field lines or, as I call it, a vortex field. Since the magnetic field vector is perpendicular to the electric vertical field, a resulting axial direction to the DNA strand is a logical consequence. The motion of the vortex field in the direction of the magnetic field results in a longitudinal wave forming a so-called magnetic scalar wave (Fig.1).



“The superbly researched biochemistry of the cell nuclei describes the direction that must be investigated”[12]. “The coding regions in the DNA strand, the genes, make up only a fraction of the total amount of DNA. The stretches that flank the coding regions are called “introns” and consist of non-coding DNA. Introns were

looked upon as junk in the early days. Today, biologists and geneticists believe that this non-coding DNA may be essential in order to expose the coding regions and to regulate how the genes are expressed” (taken from Fredholm, L., science 2003 [5]). Further research will reveal other important functions pertaining to introns.

1.2 The Electric Field of the Four Bases

As we know, the DNA is wound into a double helix with a right-handed rotation (type A or B). The two polynucleotide strands are of opposite polarity. Between the bases hydrogen-bonds are formed, whereas adenine always pairs with thymine and guanine always pairs with cytosine. (Karp, G. 2005 [9]). These represent the code or character set of the genetic information. A chemist distinguishes the four bases on the basis of their structure; however, a physicist on the basis of different charges. Although the electric charges are very low, the electric field strengths, measured in volts per meter, may be very high at such small distances.

While inactive the hydrogen-bonds follow the field strength and neutralize the electric charges of the base pairs. The DNA behaves outwardly neutral and conversely is not interfered with by external electric fields. Only during the writing process are the hydrogen-bonds temporarily removed and the base pairs separated, allowing the sequence of exposed charges to be read. This process requires a higher electric field strength.

The magnetic scalar wave (Fig. 1) can, for example, provide the required voltage. Incidentally, this is the only type of wave in which the field vector of the electric field points radially outward as a prerequisite for interaction with the electric charge of the bases. As a result, a modulation occurs, which is carried by the wave.

1.3 The Circularly Polarized Double Helix

The referenced longitudinal wave propagate in the direction of the magnetic field vector. Magnetic forces are formed between the field vortices and are responsible for the emergence of wave nodes and also are responsible for the propagation of the wave. Because

of the helical structure of the vortex field, the field lines are open and not closed. They wind the screw forward compared to a circularly polarized wave (Fig.2).

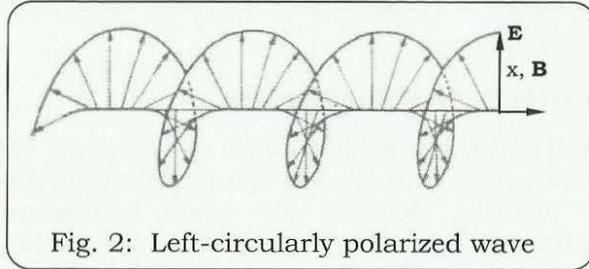


Fig. 2: Left-circularly polarized wave

The vortex velocity, which is at the speed of light *c*, screws along the outer line in a forward direction. Because the resulting path is more than twice as long, the propagation of this field formation in the x-axis direction and results in a longitudinal wave propagating at 140,000 km/s. This is a result of the geometric dimensions (Karp,G., 2005, p.503 [7] and Jaenicke, L. ed. 1998 [9]) on the one hand and the diameter of the helix of 2 nm on the other as well as the path length of 3.4 nm measured in x-axis direction over a full helical turn (Fig. 1).

1.4. The Wavelength of the DNA-Wave

The next step is to determine the frequency and wavelength in the current direction of the magnetic field vectors and with it the modulated wave. Valuable information can be observed by the tendency of the helix to form a coil with two turns of globular proteins called histones.

It becomes obvious that this corresponds to two turns of a half-period. Thus, the transition from one histone to the next always occurs in a wave node, corresponding to half of the wavelength. If a coil produces the positive half-wave, then the neighboring coil is responsible for the negative half-wave and vice versa. The **alternating winding direction** from one coil to the next confirms the correctness of this assumption.

The length of the DNA strand of both windings can be determined in two ways. For the nucleosome core particle, consisting of the

coil body (histones) and the wrapped around DNA molecule, an average coil diameter of 10 nm is established (Karp,G. 2005 [9]). The molecular length of one turn in the middle of the DNA strand is therefore ($\pi \cdot 10$) nm and the wavelength at 4 turns distributed to 2 histones is:

$$\lambda_{DNA} = 126 \text{ nm.}$$

Quoted values in literature differ sometimes, which is explained by the relevant condensation degree of the molecule. An error analysis would help narrow down the possible fluctuation range. Using published data and observations using x-ray structure analysis valuable information (Lewin, B., p.421, 1990 [10]) can be obtained to estimate the range of the tolerance band. In the second calculation method the base pairs are simply counted.

A nucleosome has 146 bp (base pairs) and takes slightly less than 1.8 turns, while one full turn has 83 bp, and two turns have 166 bp. Even more base pairs are required for the transition from a "bobbin" to the next, but sadly there is no reliable data. The high packing density within a condensed chromatin makes it difficult to count the fibers (Fig. 3). In an open and uncondensed fiber 200 bp's are counted (Alberts, B. et al., The Cell, p.343 [2]).

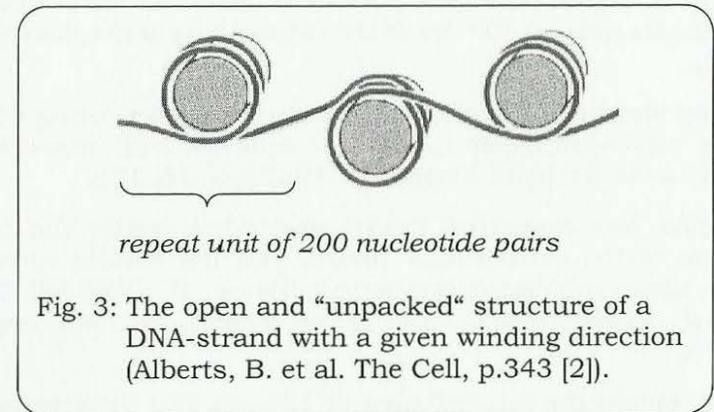


Fig. 3: The open and "unpacked" structure of a DNA-strand with a given winding direction (Alberts, B. et al. The Cell, p.343 [2]).

The ascent of the helix along its central axis is 0.332 nm per base pair (Sinden, R. 1994 [19]). Multiplied by the number of base pairs, which depend on the degree of condensation a maximum

and minimum wavelength is obtained:

$$\lambda_{\text{DNA}}(\text{max}) = 200 \text{ bp} \cdot 2 \cdot 0.332 = 132.8 \text{ nm}$$

$$\lambda_{\text{DNA}}(\text{min}) = 180 \text{ bp} \cdot 2 \cdot 0.332 = 119.5 \text{ nm}$$

or referencing as a range:

$$\lambda_{\text{DNA}} = 126 \text{ nm} \pm 6 \text{ nm}$$

Propagation speed v_{DNA} and wavelength λ_{DNA} in turn determines the frequency of the DNA-wave:

$$f_{\text{DNA}} = v_{\text{DNA}} / \lambda_{\text{DNA}} = 140 \cdot 10^6 / 126 \cdot 10^{-9}$$

$$f_{\text{DNA}} = (1.11 \pm 0.06) \cdot 10^{15} \text{ Hz } (= \text{UV-radiation})$$

$$\text{at } c/2.14 = 140 \cdot 10^6 \text{ m/s}$$

as the average speed of the DNA-wave

1.5 Evaluation

The values determined here are primarily for the B-DNA. An especially important result in accordance with the metrological experience is shown in the table above. It describes the DNA-wave at frequencies around 10^{15} Hz of UV radiation as is therefore a UV radiation.

Prof. Popp speaks of bio-photons and demonstrates, using highly sensitive photo-multiplier tubes that cells do emit measurable extremely weak UV light. (Popp, A.F. 1987 [15, 16, 17]).

Prof. Heine has measured tunnel structures inside the basic substance of the extracellular matrix and his results correlate with the above-calculated wavelength (Heine, H. 1997 [6]). Both scientists' similar results are in agreement but are argued differently.

Popp has moved the cell radiation at 126 nm into the area of the speed of light, while Heine is showing that propagation velocity is equal to the sound wave. The latter view is probably closer to reality, and is in the nature of the magnetic scalar wave.

Longitudinal waves know no fixed propagation speed and

consequently no fixed frequency. To characterize them we must also incorporate their wavelength. This wavelength does not change when the wave is slowed down to lower speeds [11]. The propagation speed depends on the properties of the medium that carries the longitudinal wave.

1.6 The Task of the Introns

In contrast to technical devices biological systems are using an "auto-focus" function; or in other words, in the presence of scalar waves cells show a tendency to go into resonance with each other. In this way, they draw energy and information from other cells and from the environment. Synchronization with external or internal biological stimulators occurs. It has not escaped my attention that this model can also help to explain observations of epigenetics. In physics and engineering the phenomenon of resonance is known in the art of vibratory systems. If we excite such a system and label it as a transmitter, then a different system acting as a recipient of the oscillation becomes the receiver when

- (i) the *same frequency*,
- (ii) the opposite algebraic sign or the *reversed phasing* and
- (iii) the same waveform, i.e. *identical modulations* are present.

If transmitter and receiver are in resonance as a coupled vibration system, the receiver and transmitter stations are no longer distinguishable, as both are free to change their places and tasks. At the end energy and information are balanced [13].

Another very important property is present, derivable from physical laws. During the oscillation between two cells there is an attraction in the form of magnetic or electric interaction. This partially answers the question as to what force drives the DNA wave, provided that the three resonance conditions are satisfied.

In the case that the third condition (iii) is not fulfilled, because the information of the genome radiated from the transmitting cell does not find a receiving cell to go into resonance with, it could be reasoned that the receiving cell has the wrong, or no information.

Writing of the DNA code would not be possible. To prevent this from happening neutral resonators are required on both sides which are not encrypted and do not have to transport information.

These include the so-called "introns", which are in far superior numbers in the DNA strand compared to the information bearing "exons". The uncoded sections possibly provide the resonance condition, that is to say between two identical sections of two cells a standing wave can be formed.

On the one hand this leads to a balanced energy state on both sides. Conversely if the information was initially different the genetic code as a whole will also be pulled from the sender to the receiver, which would have interfered with the build up of a resonance. Because of the resonance of the introns at the end identical information is present on both sides. This clearly demonstrates that no evolution could have happened without introns.

Metabolism controlled by the genes is only possible if both energy and information are introduced. From a technical view, a scalar wave is actually capable to do just that because in contrast to the electro magnetic wave it transports also energy in addition to the information. A DNA wave travelling through the twisted helix must be supplied with sufficient energy to not only advance through the helix, facilitating transport over a certain distance, but will also ensure the desired production of proteins at the site of the recipient. So where lies the motor pushing the DNA-wave?

1.7 Benzene Rings

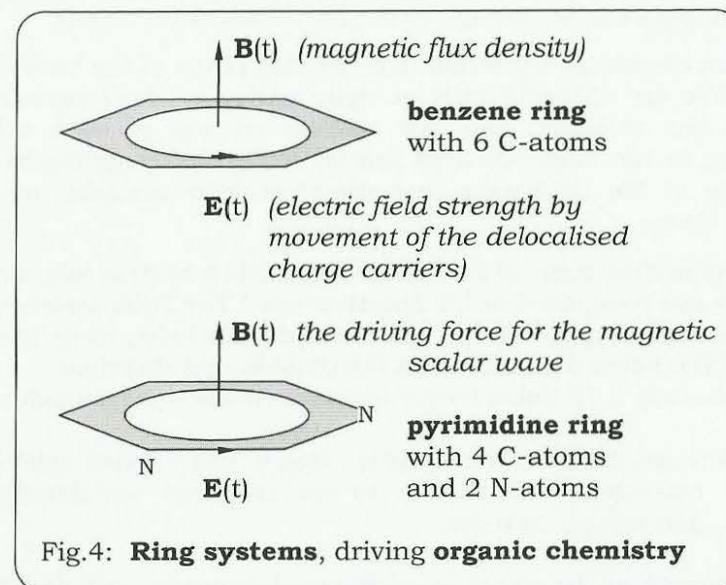
Scalar waves propagating in the direction of the magnetic field vector are clearly driven by magnetic fields, and are formed, for example by rotating electrical charges. Such field vortexes must be searched for; as such a motor would be capable to drive the biological processes and chemical reactions.

To construct such a motor a ring structure with enclosed freely movable and non-localized electrons are required. The most prominent chemical structure possessing these properties is the benzene ring (Adrian, L. et al, Nature 2000 [1]; and Zhang, L.,

2011 [21]). The current orbital model depicts six carbon atoms forming a ring, allowing an electron cloud to move freely. A known fact, for example is that magnetic fields in a nuclear spin resonance spectrometer induce ring currents.

The four bases of the double helix also use such a ring structure, except that two carbon atoms are replaced with nitrogen atoms. One of these nitrogen atoms forms the hydrogen-bond to his partner on the other side of the helix (Fig.4).

These pyrimidine building blocks of nucleic acid consist of a six-membered ring with free-moving electrons, which are not localized in the ring structure. Due to the correlation of the vertical magnetic field vector emanating from the ring and the magnetic field propagating as the DNA-wave an interaction is the likely consequence. The magnetic scalar wave is thus either drawn or pushed through the DNA strand resembling the exact mechanism I was looking for.



1.8 The DNA-wave Generator

If the carbon-containing ring structures play an important role in energy technology, we no longer need to wonder about the vast variety of ring systems, which dominate over all living organisms and organic chemistry.

The physical process can be described as follows: If electrons move inside the ring in one direction a magnetic field perpendicular to the ring plane is created, and if the direction changes an alternating magnetic field is created, with the result of emitting a magnetic scalar wave.

Reversely if an oscillating field vortex of a scalar wave impacts a ring perpendicular to its plane then it acts as a generator to put the electrons in motion. If no external force is present the electrons will remain in its direction. The ring thus assumes the duties of the energy source, the energy sink, and the storage of field energy. These are precisely the prerequisites required for the wireless reading, writing and storing of genetic information, as well as supplying the energy for the biochemical processes.

It did not escape my attention that the ring plane of the bases of a DNA helix are approximately at right angles to the longitudinal axis of the molecule and are stacked on top of each other, resulting in the magnetic-field pointer always propagating in the direction of the DNA-wave and therefore fully available as the driving force.

If the pyrimidine rings of the bases play such a central role, why are they not recognized in UV spectroscopy? The DNA-wavelength is measured along the centre line of the double helix, while the rings of the bases are located on the outside and therefore approximately 2.14 times longer distance needs to be considered.

So 2.14 times the DNA-wavelength $\lambda_{\text{DNA}} = 126 \pm 5 \text{ nm}$ allowing for the extended Path results in an extended wavelength of $\lambda_{\text{basen}} = 260 \text{ nm}$ to 280 nm.

For the rings of the bases to work synchronously with the DNA wave, an increased velocity (approximately at the speed of light) and a wavelength increased by the same factor have to be able to go in resonance. This is achieved at the highest level of

condensation (with maximum purity?) at 260 nm and increases up to 280 nm, in accordance with the chosen spread, which is minimally restricted.

In fact, the result is congruent with the measured absorption spectrum of the four DNA nucleotides (Karp, G., 2005, p.508 [9]). Meaning that the absorption at 260 nm is commonly used to determine DNA concentrations, whereas in "impurities" the maximum shifts towards 280 nm. This conformity is remarkable. Furthermore measurements of the DNA molecule as a total show a maximum absorption at 260 nm. Obviously a resonance is present.

1.9 Nuclear Spin or Magnetic Resonance?

All *results of the evolution* in the biosphere that have arisen between the "capacitor plates" of the earth itself and its ionosphere can be regarded as *structured capacitor losses*, which also apply to humans. Since they are dielectric losses of electric fields, it becomes obvious that even low electrical voltages or currents can be fatal to humans. Magnetic fields are quite different. In a MRI scanner patients are exposed to a magnetic field 30,000 times stronger than the earth's natural field, without leading to an immediate death. This does not destroy the magnetic scalar waves in the body, but an additional and perhaps even desirable energy input from the outside.

In this imaging method, a strong field of a super-conducting magnets initially align the cell nuclei and ring molecules. Then a high frequency alternating field is superimposed and the resulting emanating response to the magnetic scalar waves is measured, allowing the creation of the three-dimensional image of the body. The achievable signal strength when tipping a spinning proton should be vanishingly small and irrelevant compared to the magnetic resonance of DNA.

Radiologists who credit the charged and turning core particles, responsible for the resulting measured voltage induced in the coils as means for explanation, are ignoring physical reality. MRI scanners are only capable of imaging organic compounds but not of inorganic matter.

1.10 Utilization in Biology

At a close look at the DNA wave shows a mixture of wave and radiation. The mixing ratio is not constant and is determined by technical requirements. The basis is that a resonance must build up first, which is not possible without a field. Therefore, any exchange of information between cells begins with the emission of a scatter field. The source of the scatter field can be both the transmitter and the receiver, as means of requesting information. The scatter fields of each living organism manifests as an "aura"-appearance. The sum of all effects and frequencies are measured as a noise field. Similar to the near field of an antenna, the field strength is decreasing rapidly with the distance from the source.

Naturopath speak of a "reaction distance", allowing to draw conclusions about vitality and health status of a person. A cell needs energy to radiate scatter signals. Therefore field strength and range are a useful measure for the available energy to the cells. If another cell picks up the scatter field and goes into resonance, then the field characteristics change dramatically. Between the transmitter and receiver exists now an exclusive coupling in the form of a closed resonant circuit. "Closed" in this context means that no measurable scatter fields occur, no transmission losses occur, and that the transmitter and receiver exchange energy and information among each other until an equilibrium is reached.

1.11 Free Resonance

We should distinguish between a forced resonance and a free resonance. In the former case the range is coupled to that of the scatter signal, whereas in free resonance the range is theoretically unlimited. This answers many open questions of telepathy. Since effective scalar waves in resonance not only transmit information but also energy, even a suitable model for the phenomenon of telekinesis is found. Just as the DNA-wave is radiating from a nucleus, a cell assembly, or even from a human body, suitable waves can radiate in, i.e. a person can absorb energy and information of people in whose aura he is, or by thinking of someone, capable of working even over long distances. (Engels, J.W. 2011 [3] and Sheldrake, R. 1995 [18]).

From a technical standpoint it is a process in which the receiver generates and radiates a very similar structured field vortex, patterned after the desire. This is done by utilizing a magnetic scalar wave. The direction of the magnetic field lines emanating while in resonance from the transmitter to the receiver and the resulting interactions create an attractive force between the two. This provides every person and every cell energy and information from our environment, utilizing the numerous existing noise vortices. Resonance excludes all technical measurability, since all field lines are closed and none are available that could be attached to measuring equipment. For this reason, the most prominent interpersonal resonance will never be measurable: *Love!*

1.12 References

- [1] L. Adrian, U. Szewzyk, J. Wecke and H. Görisch, H. „Bacterial dehalorespiration with chlorinated benzenes”. *Nature* 408, 2000, pp. 580-583.
- [2] B. Alberts, Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. “Molecular biology of the cell”. Garland Publishing, New Your, 3rd ed. 1994.
- [3] J.W. Engels, ”Distance measurements for DNA and RNA in vitro and in vivo”, *Proceedings 2nd World DNA and Genome Day*, Dalian, China 2011, page 64.
- [4] D. Fels, D. “Cellular Communication through Light”. *PLoS ONE*, Vol.4, No.4, 2009, e5086.doi: 10.1371/journal.pone.0005086.
- [5] L. Fredholm, “The Discovery of the Molecular Structure of DNA - The Double Helix”, *Science* 9, 2003.
- [6] H. Heine, „Lehrbuch der biologischen Medizin. Grundregulation und Extrazelluläre Matrix“, Hippokrates Verlag, Stuttgart 2nd ed. 1997, p. 56.
- [7] L. Jaenicke, “Molekularbiologie der Zelle“, VCH Verlag, Weinheim 1998, p.109.
- [8] L.F. Jaffe, “Marine plants may polarize remote Fucus eggs via luminescence”. *Luminescence*, No. 20, 2005, p. 414-418.
- [9] G. Karp, “Cell and Molecular Biology”, Springer Verlag, New York 2005
- [10] B. Lewin, “Genes IV”, Oxford University Press, Cambridge, 1990, p. 421

- [11] K. Meyl, "DNA and Cell Resonance, Communication of cells explained by field physics including magnetic scalar waves", INDEL Publ. (www.etzs.de), Villingen, 2nd ed. 2011.
- [12] K. Meyl, "DNA and Cell Resonance: Magnetic Waves Enable Cell Communication", DNA and Cell Biology, Vol.31, No. 4, 2012, pp. 422-426. doi:10.1089/dna.2011.1415. <http://online.liebertpub.com/doi/abs/10.1089/dna.2011.1415>
- [13] K. Meyl, "Task of the introns, cell communication explained by field physics", Journal of Cell Communication and Signaling, Vol. 6, No. 1, 2012, pp. 53-58. DOI: 10.1007/s12079-011-0152-0 <http://www.springerlink.com/content/n08880u3156217p4/?MUD=MP>
- [14] F. Musumeci, Scordino A, Triglia A, Blandino G, Milazzo I, "Intercellular communication during yeast cell growth", *Europhysics Letters*, No. 47, 1999, pp.736-742.
- [15] F.A. Popp, J.J. Chang J-J, "Mechanism of interaction between electromagnetic fields and living organisms", *Science in China*, Series C, No. 43, 2000, pp. 507-518.
- [16] F.A. Popp, "Coupling of Fröhlich-Modes as a Basis of Biological Regulation", G.J. Hyland, P. Rowlands, editors, 2006. H. Fröhlich, FRS: A physicist ahead of his time. Liverpool: The University of Liverpool. pp. 139-175.
- [17] F.A. Popp, W. Klimek W, "Photon Sucking as an Essential Principle of Biological Regulation", in "Biophotonics and Coherent Systems in Biology". Springer, New York, 2007, pp. 17-32.
- [18] R. Sheldrake, "Seven experiments that could change the world", Riverhead Books 1995
- [19] R.R. Sinden, "DNA structure and function", *Academic Press*, 1st ed. 1994, pp.398.
- [20] R. van Wijk, M. Kobayashi, "Spatial characterization of human ultra-weak photon emission", in "Biophotonics and Coherent Systems in Biology". Springer, New York, 2007, pp. 177-189.
- [21] L. Zhang, „Systems Biology of Human Benzene Exposure“, *Proceedings 2nd World DNA and Genome Day*, Dalian, China 2011, p.110.

Another Paper by Prof. Dr. Konstantin Meyl about:

2. The Physics behind the DNA Signaling

Helical Structure minimizes the Losses of Magnetic Scalar Waves

2.0 Abstract

The DNA generates a longitudinal wave which propagates within the magnetic field vector. Computed frequencies from DNA structure agree with bio photon radiation frequencies as predicted. Optimization of efficiency is done by minimizing the conduction losses which leads to the double helix structure of DNA.

This theory for the first time allows a better understanding of the outrageously high information density in the nucleus. Magnetic scalar wave theory explains how the dual base pair-stored information of the genetic code is formed. The process of converting electrical modulation into "piggyback" information that transfers or is send from the cell nucleus to another cell is a revolutionary theory. Information transferred at the receiving end during the reverse process takes place involving a change in the physical and chemical cellular structure. The energy required to power the chemical process, is now understood by the extended field theory to come from the magnetic scalar wave itself.

Keywords: Cell Biology, DNA, Resonance, Signaling

2.1 Introduction

Previous efforts to describe the DNA-wave Maxwell's equations fail to do, had to. This extension of field theory is required [1].

"Science" reported in the issue from October 2009 about the discovery of magnetic monopoles [2]. Magnetic monopoles could be the missing link in a new understanding and explaining James Maxwell's third law of classical electromagnetism, since the divergence of magnetic flux density would no longer be zero but a duality to charge carriers would exist appearing as magnetic monopoles.

As a result Maxwell's Theory loses its universality and an extension to his theory becomes necessary thus impacting classical electro-dynamics [3].

Take well-known eddy currents as an example tending to expand as demonstrated by the skin effect. Now the dual anti vortex with opposite sign appears showing the contracting effect of the potential vortices. They possess a structure-forming characteristic with which the formation of closed field vortices in the air can be explained.

Since these field eddies carry energy and as a longitudinal wave are propagating, comparably with an acoustic wave, the wireless transmission of energy is physically conceivable and mathematically derivable as a possible application, just as used in nature by the communication of the cells.

Prof. Dr. Konstantin Meyl, Summer Term 2010,
Supervisor of the student Timm Treskatis
 at the **University of Konstanz**, Germany [4]

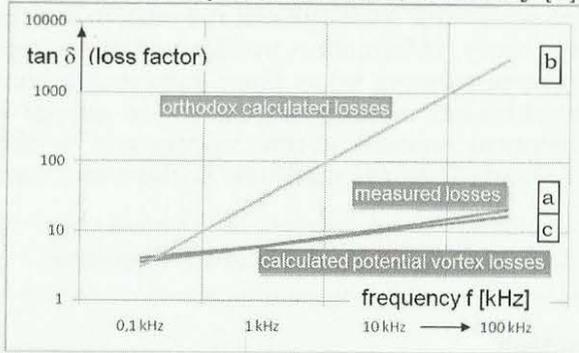


Fig. 1: Experimental prove of calculated losses (qualitative comparison) with a MKT capacitor [4] (Siemens-Matsushita)
 a: measured dielectric losses of the MKT-capacitor
 b: standard calculation according to Lorentz-model
 c: calculation as vortex-losses acc. to Meyl-model

2.2 Problems of Electrodynamics

With the publication in "Science" for scientists, as well as for users, the gate to a new world in physics has been opened [2], even if this has not been noticed by all.

There have been numerous unsuccessful attempts to expand the Maxwell-equations. For example the Proca equations named after Romanian physicist Alexandru Proca (1897-1955) to which the vector potential backwards in the field equations are installed.

But all these attempts fail in the end to the calculations of dielectric losses of capacitors (fig. 1), of insulators as noted in the example of the microwave oven. With a complex Epsilon alternatively losses by the imaginary part are calculated. This implies that all these assumptions violate against the foundations of physics. By definition the permittivity Epsilon ($\epsilon \cdot \mu = 1/c^2$) depends on the speed of light c. A complex size of the speed of light is inconceivable and unacceptable as well. If sometimes mathematically correct results were achieved, so it's just a harmlessly wrong model description.

In the race to a physically consistent solution, avoiding postulates, Germany's largest scientific organization the Helmholtz Association rushed to help.

2.3 Duality in the Field Description

With the discovery of magnetic monopoles in duality to the well-known electric monopoles a symmetry of the field equations is reached and a completion to Maxwell's Theory (Fig. 2).

So if in textbooks, with the help of the equation of continuity a current density in the law of Ampère results in electrical charge carriers and are defined with eddy currents as a consequence then with the discovery of magnetic monopoles charge carriers follow in the same way in duality as a potential density in the law of induction thus appearing as potential vortices.

This "potential density" in literature sometimes is called "magnetic current density" but nothing is flowing at all. Also, the dimension in volts per square meter suggest a potential density, supported by the duality to the current density measured in Ampère per square meter.

If dielectric losses being calculated as vortex losses, if the emergence of heat in an insulator will be declared as decaying potential vortices, this leads to consistent electrodynamics, with permittivity and speed of light remain fundamental constant [3].

As a result eddy currents occur in the conductor, whereas its counterpart, the potential vortex, forms in the bad-conducting medium, with preference in the dielectric.

The duality of both vortices is expressed by the fact that the electric conductivity of the medium decides whether current eddies or potential vortices can form and how fast they decay, i.e. convert their energy into heat.

the magnetic field	the electric field
Ampère's law: $\text{curl } \mathbf{H} = \mathbf{j} + \partial \mathbf{D} / \partial t$ (1) (1 st Maxwell-equation)	law of induction: $-\text{curl } \mathbf{E} = \mathbf{b} + \partial \mathbf{B} / \partial t$ (2) (2 nd Maxwell-equation)
acc. to the rules of vector analysis:	extended by the <i>potential density</i> \mathbf{b} [V/m ²] (Meyl 1990)
$\text{div curl } \mathbf{H} = 0$ (3)	$-\text{div curl } \mathbf{E} = 0$ (4)
1 st equation of continuity: $0 = \text{div } \mathbf{j} + \partial / \partial t (\text{div } \mathbf{D})$ (5)	2 nd equation of continuity: $0 = \text{div } \mathbf{b} + \partial / \partial t (\text{div } \mathbf{B})$ (6)
whereas $\text{div } \mathbf{D} = \rho_{el}$ (7) (4 th Maxwell-equation)	whereas $\text{div } \mathbf{B} = \rho_{magn}$ (8) (3 rd Maxwell-equation acc. to special case: $\text{div } \mathbf{B} = 0$)
with the electric charge density ρ_{el} , resp. <u>electric monopoles</u> (electrons, ions, ...)	with the magnetic charge density ρ_{magn} , resp. <u>magnetic monopoles</u>
and with the current density \mathbf{j} [A/m ²]:	and with the potential density \mathbf{b} [V/m ²]:
$\mathbf{j} = -\mathbf{v} \cdot \rho_{el}$ (9)	$\mathbf{b} = -\mathbf{v} \cdot \rho_{magn}$ (10)
$\mathbf{j} = \mathbf{D} / \tau_1$ (11)	$\mathbf{b} = \mathbf{B} / \tau_2$ (12)
τ_1 = time constant of eddy currents (relaxation time)	τ_2 = time constant of the new developed potential vortex!

Fig.2: The dual filed (new: potential density \mathbf{b} [5]).

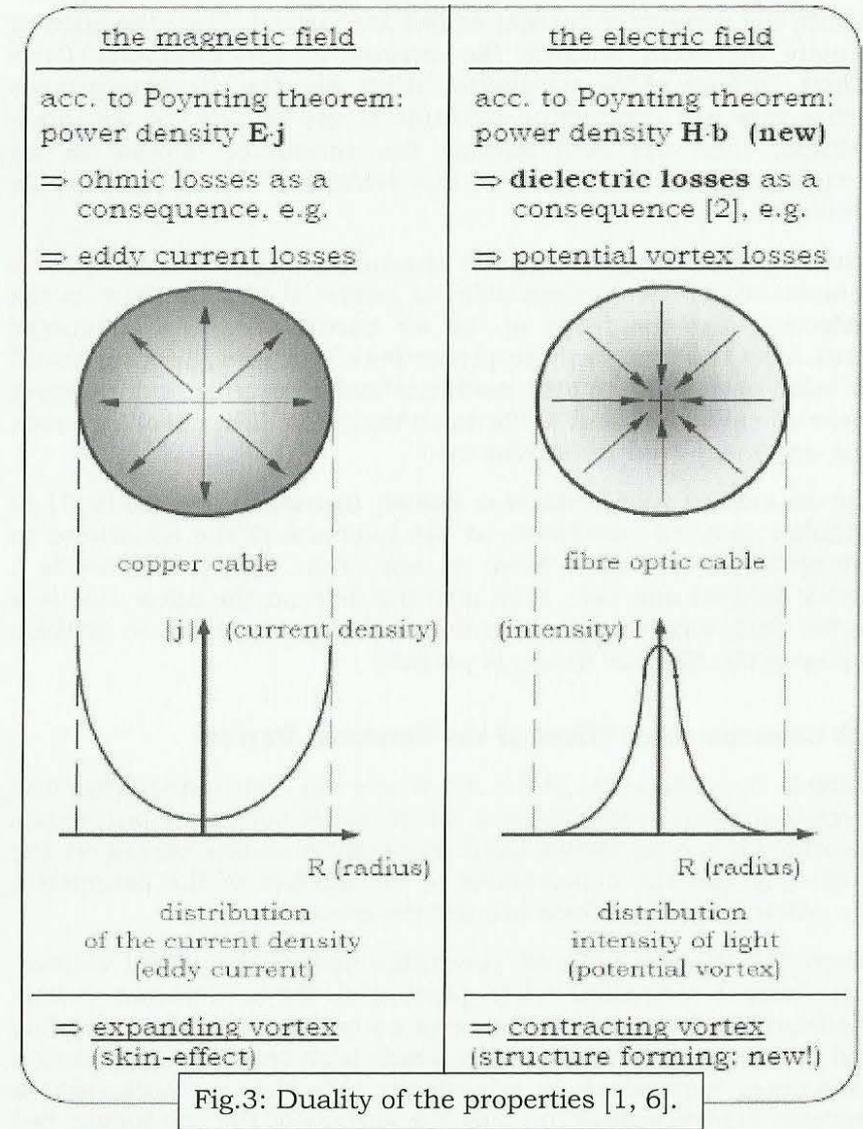


Fig.3: Duality of the properties [1, 6].

2.4 Duality of the Vortex Properties

Fig. 3 shows that vortex and dual anti-vortex mutually cause each other. In high tension transmission lines we find a striking example for the combination of current eddy and potential vortex.

Within the conductor current eddies are formed. Thus the current density increases towards the surface of the conductor (skin effect). Outside of the conductor, in the air, the alternating fields find a very bad conducting medium. If one follows the text book opinion, then the field outside the conductor should be an irrotational gradient field. But this statement causes unsolvable problems.

When *vortices* occur *inside the conductor*, then for reasons of a detachment of the vortices without jumps at the interface to the dielectric, also the fields in the air surrounding the conductor must have the form and the properties of vortices. Nothing would be more obvious as to also mathematically describe and interpret these so-called gradient fields as *vortex fields*. When looking exact this argument even is mandatory.

The as laws of field refraction known *boundary conditions* [7] in addition demand *steadiness* at the interface of the conductor to the dielectric and don't leave us any other choice. If there is a vortex field on one side, then also the field on the other side is a vortex field, otherwise we offend against the law! Here an obvious *failure of the Maxwell theory* is present.

2.5 Concentration Effect of the Potential Vortex

Outside the conductor, in the air, where the alternating fields find a very bad conducting medium the potential vortex not only exists theoretical; it even shows itself. Dependent among others on the frequency and the composition of the surface of the conductor, the potential vortices form around the conductor.

When the thereby induced potentials exceed the initial voltage, then impact ionisation takes place and the well-known *corona discharge* is produced. Everyone of us can hear this as crackling and see the sparkling skin with which high tension transmission lines cover themselves. In accordance with the text books also a gradient field increases towards the surface of the conductor, but an even shining would be expected and not a crackling. Without potential vortices the observable structure of the corona would remain an unsolved phenomenon of physics.

By means of a *Kirlian photograph* the structure-shaping property of the potential vortices can be shown, as the corona consists of structured separate discharges [5].

Another example for a technical application is the transmission of optical light signals over fibre optic cable. Compared to a transmission of energy impulses over a copper cable fibre optic cables show a considerable better degree of effectiveness. If we cut through a fibre optic cable and look at the distribution of a light impulse over the cross-section, then we observe a concentration in the centre of the conductor (fig. 3, right side).

The measurable distribution of the light intensity in a fibre optic cable may confirm the concentration effect, the orientation of the potential vortex on the vortex centre. The formal mathematical reason for the concentration effect provides the reverse sign in Ampère's law (equation 1 in fig. 1) compared to Faraday's law of induction (equation 2).

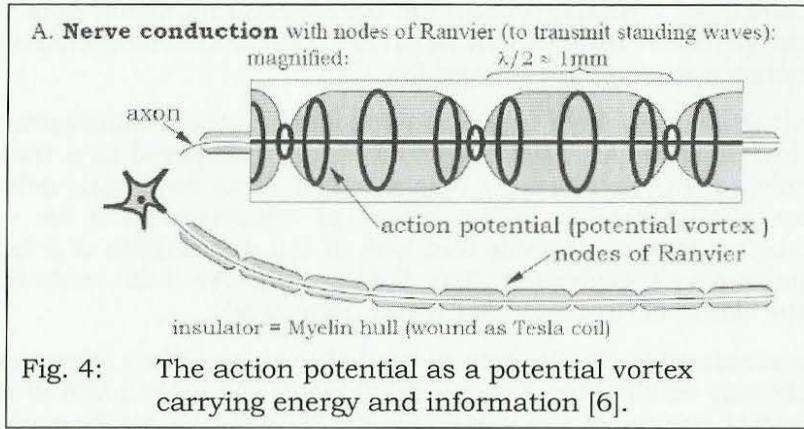
Whereas circular currents and *current eddies* produce *magnetic dipoles*, the *potential vortices* will form *electric dipoles*.

2.6 Nerve conduction

For collecting potential vortices and extracting the carried information we have fine hairs in the sense cells, as in the nose for example, that obviously play a central role. They are connected more or less directly with the end of a nerve and pass on the information without a large transformation. Even in the organs of equilibrium sense hairs work.

From comparing the technique developed by Nikola Tesla it can be shown that the nerve conduction concerns a *single-wire transmission*, as a kind of waveguide, for which the transport of the excitation information takes place in the insulation layer and not in the conductor itself. As proof the thickness of the insulation determines the velocity of propagation, as it is well-known the nerve conductors with thick fat layer pass on their action potentials faster than those with thin insulation.

Particularly interesting is the observation, of how the fat layer is constricted in fixed intervals, like for Wiener sausages (fig. 4).



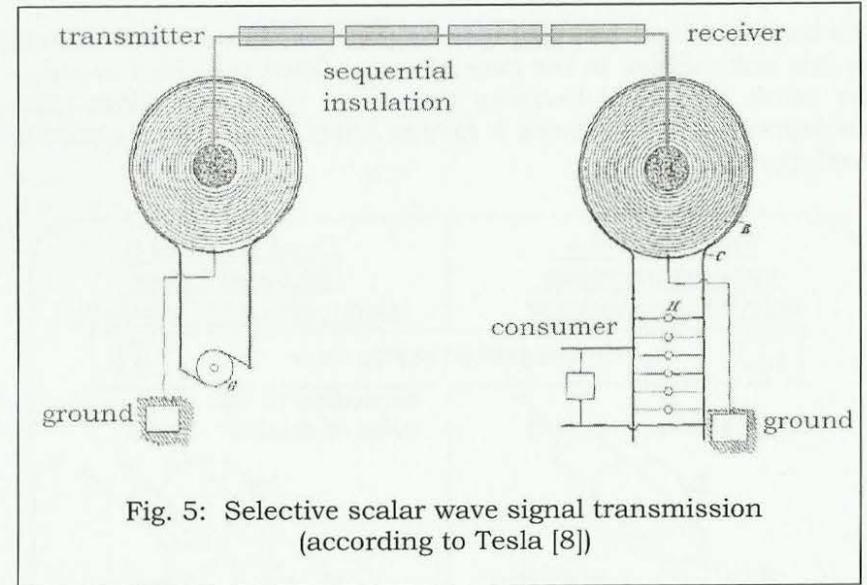
These *nodes of Ranvier* prove that only longitudinal waves are being transported, which are standing waves with nodes and antinodes, if the distance from node to node is the same. This shows that nature with the use of the potential vortices is far ahead of our power engineering. The nerve-cables determine with their structure, which signal (with the correct wavelength) will be transported and which will not.

The technical cables on the other hand conduct everything, including the useful signal and any arbitrary interference signal.

Even nerve fibers that are cut can partly regenerate again, even without the cut through nerve regrowing together with its disconnected end. The nerve conductors are so intelligent, that only the matching information arrives at the end by passing on information from one fiber to the next with the same node interval.

Nerves represent an intelligent and at the same time interference safe wiring, which is superior to any technical solution by far, unlike trying to acupuncture a cable cord of your computer, which would result in little pleasure.

Nikola Tesla also in this regard was ahead of his time. He experimented with a single conductor technology, in which the insulation layer was constructed like for a nerve fiber (fig. 5).



2.7 The Right Handed Swirling

The comparison with the technology we will answer the question of why the DNA is a double helix. Fig. 6 shows an electrical conductor (I) and right next to the dual case of a non-conductor (II).

As taught in school books prepared (I), is wound around the magnetic field **B** pointer to the head caused by the current density **j**. In reality, admitted the physics teacher, it is negatively charged electrons, which flow in the opposite direction through the metal grid and the development of numerous collision processes are exposed.

But this statement, to determine the ohmic resistance is only half the truth. In addition, a current displacement effect is taken into account (drawing III in fig. 6). The cross product of the velocity **v** of the carriers and the magnetic induction **B** is as a result of unipolar induction (Eq. 13) has a radially outward **E_{ind}** the conductor surface directed toward electric field strength. This component of the induced **E** field is perpendicular to the axially oriented and causal field **E_o**, that the conductor current drives.

The overlap of both field components occurs. But it doesn't abide by this one overlap. In the case of vortex fields the effect overlaps the cause and itself becomes the cause for a new effect. The overlapped cause produces a further effect, which for its part is overlapping.

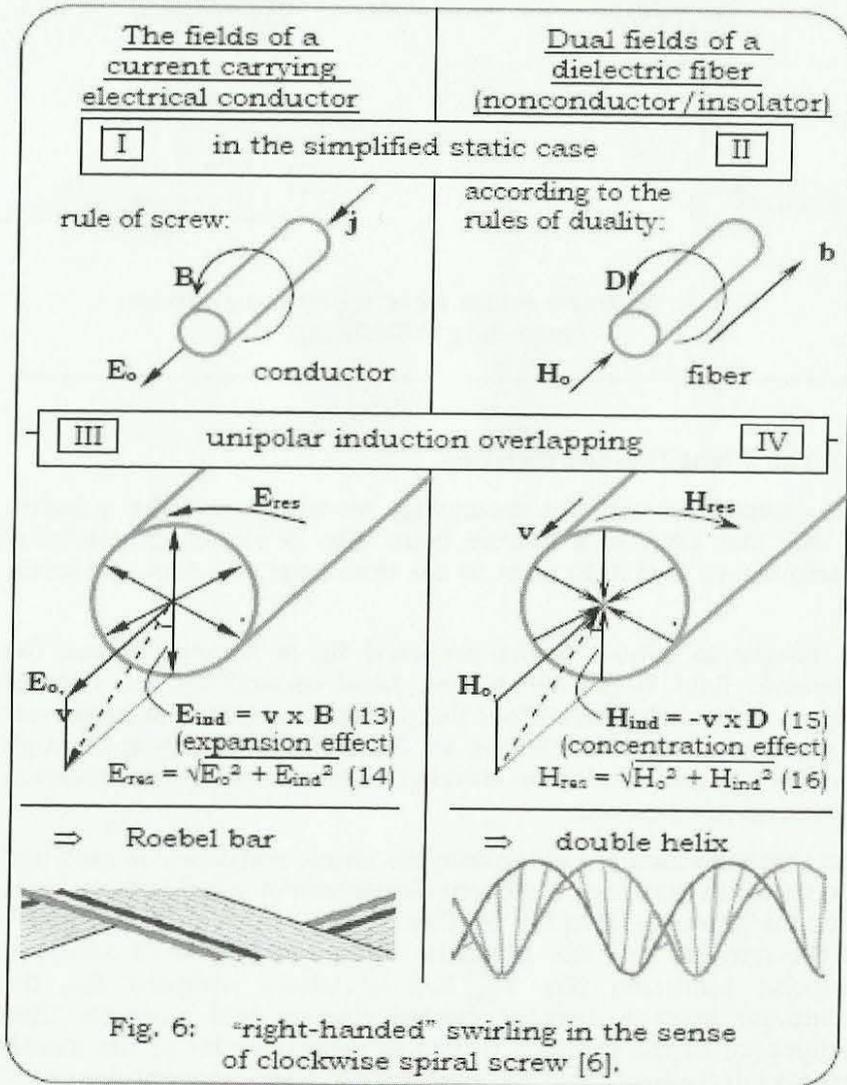


Fig. 6: "right-handed" swirling in the sense of clockwise spiral screw [6].

Thus vortices arise, if overlaps for their part are overlapping and theoretically that reaches to infinity. I was able to eddy processes on theoretical way as limiting angle 45° constructed [9, page 39].

In consequence of the field superposition turn all the field pointer j, E and B out of the originally intended direction and swirl. Which lies between 0° and 45° rotation of the vortex fields is dependent on frequency. The generator construction is the so-called "Roebel-rod" a practical use of this effect known.

2.8 The Derivation of the DNA Double Helix

Consider now the dual relations on the right in figure 6. In the dielectric all charge carriers each type of movement is impossible. In the static case (representation II) drives the magnetic field strength H_o , the potential density of b , so that pile up in the longitudinal direction of electric charge, comparable to many series-connected batteries. Perpendicular to this arrangement, the pointer wraps around the dielectric displacement D to the non-conductive fiber.

In the transient case overlap potential vortex, which run in the form of a scalar wave not by the dielectric fiber, but around it lengthwise. Due to the propagation velocity v is also seen in the present case to a dual process of induction, as required by the convection equation (15).

The induced components of the magnetic field strength H_{ind} point towards the centre line of fiber and are thus perpendicular to the original pointer H_o . This time it comes to the superposition of both field hands and turbulence.

This in turn would lead to eddy losses and a warming. Ultimately, would the spread slowed processing speed v , because that is the cause of the turbulence.

Precisely for this reason, in order to minimize associated with the eddy-current displacement continuous losses, the German inventor Ludwig Roebel (1878-1934) has proposed to distort the individual copper fibers at an angle. Without these measures, it would not give me the current limit power generators.

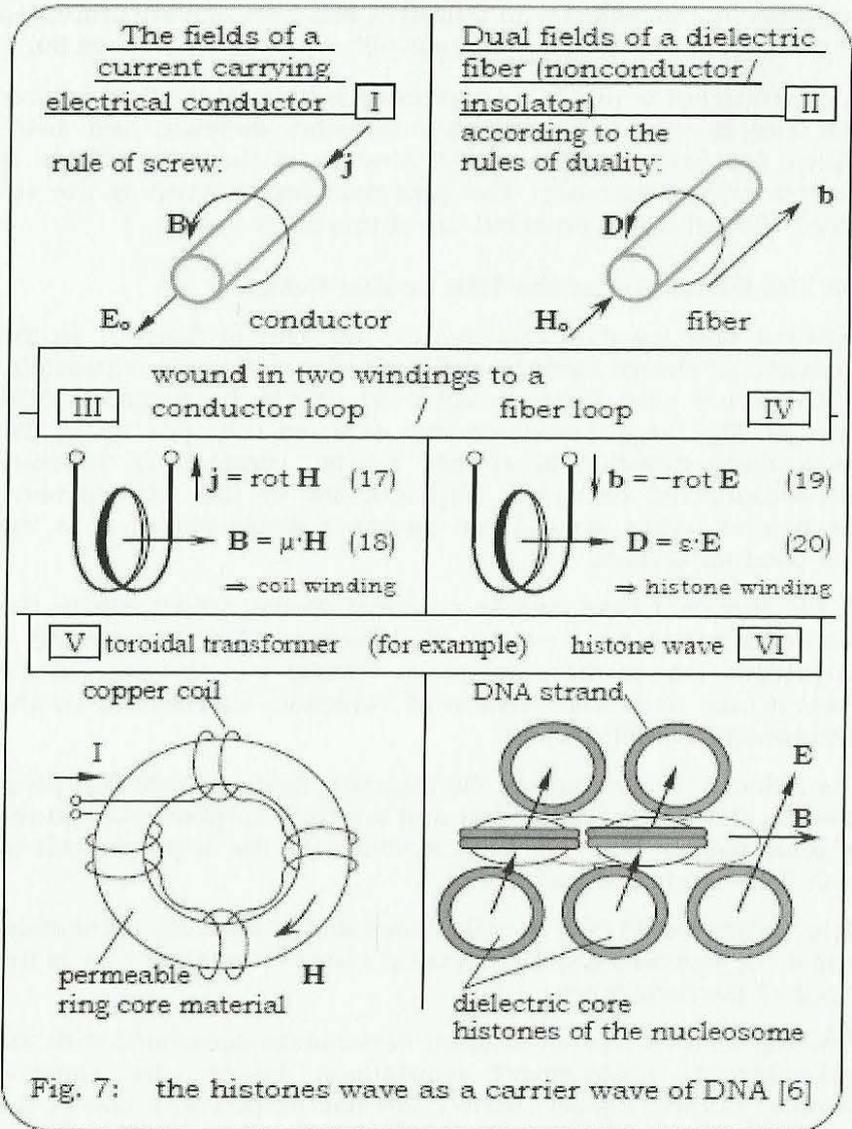


Fig. 7: the histones wave as a carrier wave of DNA [6]

The DNA double helix nature of this principle has been put into practice and optimized. Each helix exactly follows the turbulent field direction, and thus avoids unnecessary eddy losses. Only this and in addition to the true rotation is important [6].

The fact that the base pairing to double-helix structure is required, however trivial and has to do with the rotation in itself nothing.

2.9 A Carrier Wave of the DNA

The twist in the sense of a right-handed screw of the single electrical conductor when Roebel-rod, just as in the DNA strand, wound to the helix, is a fine structure, resulting in average for a longer section, again the original images I and II in Figure 6. Therefore, we use these illustrations in Figure 7 again, make it a current loop (III) or a fiber loop (IV) and finally one of several loops constructed structures.

The representation (V) shows the example of a toroidal transformer where an applied electric field is driving a current through the copper coil. This drives inside the ring core, which usually consists of highly permeable material, a magnetic field in a circle, effecting perpendicular to itself an electric field by induction.

The dual conditions are shown by the presentation (VI). Now the field pointers of the electric and magnetic field are replacing each other. A magnetic field causes the potential density b and drives the potential vortex through the DNA strand that has rolled up to fiber loops. These wrap around the core histones, consisting of dielectric proteins.

Depending on the arrangement of the fiber loops, where the electric field pointer is screwing through, can be formed the so called *histones wave* as a carrier wave of DNA information spreading as a scalar wave in the direction of the magnetic field vector [10, 11].

2.10 References

- [1]: K. Meyl, "About Vortex Physics and Vortex Losses", *Journal of Vortex Science and Technology*, Ashdin Publishing, Vol. 1, 2012, 10 pages, doi:10.4303/jvst/235563.
- [2] D.J.P.Morris et al, "Dirac Strings and Magnetic Monopoles in the Spin Ice $Dy_2Ti_2O_7$ ", *Science*, Vol. 326. no. 5951, 2009, pp. 411 - 414.
- [3] K. Meyl, "Self-consistent electrodynamics. The unified theory is evolving, if the discovered potential vortex replaces the vector potential in the dielectric". INDEL-Verlag Villingen 2010.
- [4] T. Treskatis, „Frequenzabhängigkeit der dielektrischen Verluste eines metallisierten Kunststoff Folienkondensators“, Abschlussarbeit Universität Konstanz, 2010.
- [5] K. Meyl, "Potentialwirbel Band 1". INDEL-Verlag 1990, 2nd Edition 2012, engl: Potential Vortex part 1 - 4, 2012.
- [6] K. Meyl, "DNA and Cell Resonance, Communication of cells explained by field physics including magnetic scalar waves", INDEL Publ. (www.etzs.de), Villingen 2010, 2nd ed. 2011.
- [7] K. Küpfmüller, „Einführung in die theoretische Elektrotechnik“, Springer Verlag, 12. Aufl. 1988, S. 453.
- [8] N. Tesla, "Art of Transmitting Electrical Energy Through the Natural Mediums", US-Patent No. 645,576 (1900) and No. 787,412 (18.4.1905).
- [9] K. Meyl, "Dreidimensionale nichtlineare Berechnung von Wirbelstromkupplungen“, Ph.D. dissertation, Universität Stuttgart 1984, als Buch: Wirbelströme, INDEL-Verlag, Villingen 1984.
- [10] K. Meyl, "Task of the introns, cell communication explained by field physics", *Journal of Cell Communication and Signaling*, Vol. 6, No. 1, 2012, pp. 53-58. DOI: 10.1007/s12079-011-0152-0 <http://www.springerlink.com/content/n08880u3156217p4/?MUD=MP>
- [11] K. Meyl, "DNA and Cell Resonance: Magnetic Waves Enable Cell Communication", *DNA and Cell Biology*, Vol.31, No. 4, 2012, pp. 422-426. doi:10.1089/dna.2011.1415. <http://online.liebertpub.com/doi/abs/10.1089/dna.2011.1415>