# THE EFFECT OF MUSIC-THERAPY ON DRUG ADDICTED JUVENILE DELINQUENTS

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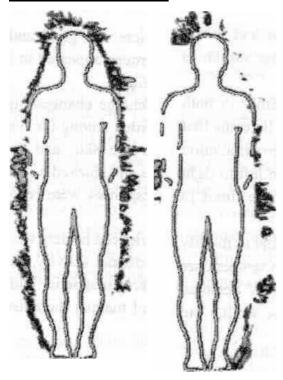
Long ago the ancient philosophers such as Pyphagoras, Aristotle, Plotinus wrote about a healing and prophylactic effect of music. In the XX century music- therapy was widely used to cope with mental frustration, to treat herontologic patients and etc.

## **Objective of the Research**

The objective of the given research was to study the effect of acoustic sound on the psychoemotional state of drug-addicted juvenile delinquents.

The experiments were run in the Saint-Petersburg investigation isolator № 4. The entire body of a person was affected by acoustic sound, (certified Sinkevich's method). During the courses (7-10 courses per month, 40 minutes each) the teenagers were listening to the audio recordings of Russian spiritual music, chime and classic music (organ, harp, lute). GDV-grams were taken before and after a course. Besides, the psychological test according to Lucher was used.

## **Results of the Research**



treatment of drug-addiction. Fig.l. Before (left) and after (right) a course. Results obtained demonstrated gradual improvement of GDV-parameters (for 30% on average) with each course. After the third course the GDV-parameters were stabilizing. The psychological test revealed a lower level of anxiousness among 80% of the teenagers (in 1,8-2,1 times), 90% of the tested became less aggressive, fractious and irascible. We could also observe higher workability. The intensified activity of sympathetic nervous system was registered among 90% of the teenagers. Moreover, the individuals suffering from phobias normalized their night sleep (quicker falling asleep and a less number of spontaneous awakening). Those who suffered from tic recovered. We could also observe improvement of memory.

The results demonstrated that the acoustic soundtherapy with the application of spiritual music was highly effective for the correction of psycho-emotional state of the drug-addicted juvenile delinquents. We find the method promising for its future application in

#### "BIOELECTROGRAPHIC CHARACTERISTICS OF MENTAL STATE"

Korotkov K.K-jun., Kulikov L.V., Lange E.&L

Mental states strongly effect the life activity of a person. The necessity to study mental states appeared in 1940 - 1950 with the invention of advanced equipment and the development of elite

sport. The global computerization and bigger responsibility of an operator put forward a problem of the "human mental state". Thus new methods for the analysis of a human mental state came to being.

A new device based on the Gas Discharge Visualization technique and a special Software enable a quick and cost-effective express - diagnosis of a person. Computer processing of experimental data makes any analysis quick and convenient. The GDV-technique is becoming widely-used in medicine, biology, in the field of elite sport. Thus it seems expedient to develop a method based on the GDV-technique for the evaluation of a mental state.

## **Objective of the Research**

The objective of the given research was to reveal the bioelectrographic characteristics of a human mental state and to prove the reliability of the method for the evaluation of a mental state based on the GDV-technique.

### **Description of the Method**

For the evaluation of a mental state a series of psychological tests based on the method of Pr. Kulikov L.V. were used. Also the Gas Discharge Visualization technique was applied to reveal a psycho-physiological correlation between the test characteristics of a mental state and the GDV-parameters.

## **Results and Discussion**

The most evident correlation was revealed in the first mode of shooting ("filter free mode"), when the device registered a psycho-energy state. Calculations of the correlation coefficients demonstrated some connection of all the GDV parameters (except from Form Coefficient, Left hand and Fractality Coefficient, Right hand) with the psychological characteristics (p < 0.05). Correlation coefficients of Pirson and Spirman demonstrated similar results.

The carried out analysis revealed correlation of the "Deviation" parameter with "Activity" (reverse correlation) and "Emotionality" (direct correlation) as well as with a series of characteristics of the "predominant" state (or stable state).

The most frequent correlation revealed by the analysis of different parameters were the following: "Emotional Stability - Instability" and "High - Low tonus". We build regression equations for these characteristics and corresponding GDV parameters.

The parameters "Emotional Stability - Instability" and "High-Low tonus" correlated with different GDV characteristics. Square (RSnorm) and Deviation (D) were the only common parameters.

## **Conclusions**

- 1. The parameters "Emotional Stability Instability" and "High-Low tonus" revealed the most evident correlation with the GDV parameters.
- 2. The evident correlation of the GDV-gram parameters with the characteristics of "Predominant State" (Stable State) and insufficient correlation with the "Current State" parameters speak for a strong influence of the parameters of the predominant state on the bio-field characteristics. It's probable that the bio-field parameters depend on the peculiarities of a relatively stable state of a person, rather then on his current state initiated by the environmental factors.
- 3. Contrary to the other GDV parameters, "Deviation" is correlated with almost all the characteristics of the method evaluating relatively stable states.
- 4. The GDV parameter "Deviation" (D) is correlated with a series of characteristics of a temperament. There is a direct correlation with "Emotionality" and a reverse correlation with "Activity".
- 5. Data obtained on the correlation between the bioelectrographic parameter characteristics of a mental state provide a good basis for the further development of a method for the evaluation of mental activity by the GDV technique.

# ACUPUNCTURE-DIRCTED INTENTIONAL INFLUENSE OF THE ANIMALS

# ANIMAL DIAGNOSIS AND THERAPY VIA THE HUMAN ENERGETIC SYSTEM VERSUS VIA THEIR OWN ENERGETIC SYSTEM.

Dr Are S Thoresen DVM

### Return to compassionate ways

Many healers do this subconsciously all of the time. It is possible because animals have the memory of a human etheric structure within themselves from the common development of all mammals. Thus, in the domestic animals (and of course in the wild ones also), one can find the corresponding Channels and the working of the corresponding human homeopathic remedies.

## Two (at least) energy systems in animals

The human etheric system occurs in animals in addition to their own etheric structure. This is the energetic system that we usually have used, probably because of our attempts to transpose the theory and principles of human AP / TCM, including Five Phase Theory, the Channel pathways and their acupoints to animals. Thus, two different medical systems can be applied to domestic animals

We can see this most easily in equine energetics. Transposition of the human Channel system is used widely in horses. Apart from having no physical gallbladder, horses have a GB Channel, similar in many ways to that in humans. But we may also consider the equine energetic system as unique in its own right. It is at one with itself, a completely balanced system: the substantial (material) horse is an expression of the etheric (immaterial) horse. As Goethe said, "the material is the secret revelation of the invisible". In that idea, we find an up to now unknown system of etheric energy. By looking at horses in this way, especially the distal limbs, we find that **human etheric analogues do not apply directly to horses**. This is easily seen as regards the location of the Command Points. The reality of these differences has been shown previously by the author, for example in his work on the equine Ting Points.

Although both systems work, by treating horses according to the theory of Goethe, I find AP points that are more effective than points transposed directly from human AP concepts. This shows that animals have more than one energy system. This theory also applies to humans, both in Tibetan medicine and in European esoteric traditions concerning the presence of a "doppelganger" (the personal double). This is a double in the human body that calls on the nervous system to function as its working instrument. Thus, the nervous system, the blood system and the etheric system are not identical

When treating animals directly, we may use both etheric systems (human and animal), although the animal system is the more effective. But by treating via the human etheric system we must use the human-animal system. Into this last system we can sacrifice our own etheric forces. How is this possible? We have seen that human etheric forces are in continuous and direct contact with human surroundings and other etheric forces. This communication is not random or by chance. As a key fits a lock, it is possible to work therapeutically **only with similar etheric forces**, ones with a structural congruence or empathy, a similar feeling, or those in direct communication.

## Use of etheric concepts in diagnosis and therapy of animals

Now we are at the kernel of this article: techniques of using the human etheric system to treat animals. We can regard animal and human disease as an etheric or energetic imbalance. This Qi Process Imbalance can manifest in physical symptoms. The cause of the Qi Imbalance can vary from time to time and from case to case. It can have nutritional, parasitic, toxic, allergic or immune-mediated causes. Other causes include atmospheric, climatic, geographic, constitutional and managemental (human-induced) causes, as mentioned already. In practice one finds many causes from all of these groups operating together.

To prevent further disease it is important to recognise and remove (or alleviate) these causes. However, a more direct therapy is necessary as a first aid veterinary treatment. This may involve direct etheric intervention but, first, we need an etheric diagnosis on the animal.

#### **Etheric treatment**

With one exception, any healthy human can give etheric treatment. The exception is the person who is the cause of the disease, if we have found this to be the case. The therapeutic approach is to strengthen the same Processes in the treating human that are Weak in the animal, i.e. if the animal has a Weakest Process in SP, tonify SP Process in the therapist. When this is done the therapist spends some minutes in contact with the animal, with a conscious, loving intention to heal. Then the necessary etheric forces can flow over from the human to the animal, or organise the etheric forces in the animal so that they balance themselves. During this therapy the therapist may feel certain exhaustion but this feeling soon vanishes when the therapy is over.

#### Clinical results

I have tried etheric methods on several cases since 1985 with very good results. (See case reports at the end of this article). In my experience, the effect of this therapy far exceeds that of conventional therapy given impersonally (without compassion or a feeling of love) to the animal. I have found this to be true even in disorders such as arthritis, heart failure, traumatic indigestion, hormonal and other difficult disorders. In addition to its efficacy, I believe this method to be ethically correct. This type of diagnosis and therapy is possible not only between humans and animals but also between adults and children, humans and plants and between a human as microcosms and the whole macrocosm. Humans have a clear responsibility to Nature and Creation. We can and should use our powers in the healing processes in our companion creations, the animals.

**CASE 1:** A 4-year old female cat had a 5 cm wound on the left foreleg. The wound had not healed for at least 6 months. It had been treated unsuccessfully with various ointments. Its owner, a 20 year old female, was told to place "Heilsalbe" (a complementary healing ointment from Weleda) on her own left arm in the area analogous with that of her cat. She applied the ointment, as directed, in the evening while have the cat in her lap. The cat became anxious and ran out into the night. The wound had closed when it returned in the morning.

**CASE 2:** A 55 year old farmer presented a 5-year old cow with reticulitis, reticular pain, anorexia, ketonaemia and icterus. An acupoint in the farmer's ear showed reactivity when the farmer was placed in contact with the cow. A permanent needle was placed into this point *in the farmer's ear*. Very soon the farmer reported heavy pain in his stomach. Within a day or so the cow began eating. The icterus and ketonaemia gradually disappeared. After three weeks, the farmer slaughtered the cow for human consumption. After slaughtering the cow, the farmer's stomach pains subsided.

CASE 3: A 6-year old horse was presented with lameness of the left forelimb for three years. On Pulse Diagnosis, the horse had BL Deficiency (Weak Process in BL Channel). The owner, a physiotherapist, did not believe in AP at the time. However, when requested to remove his left shoe and place his hand on the horse's back he agreed in disbelief. Placing a needle for 20 minutes in his BL67 treated the owner. He reported that he was drained of energy at the end of treatment. After this treatment the horse became sound. The owner has since become a certified acupuncturist.

#### MILLENNIUM BABIES: RESTORING SOUL TO CHILDBIRTH

## Benig Mauger October'99

Jung's ideas on the existence of archetypes and the collective unconscious as primordial images which inform our psyches, establish giving birth and being born as archetypal experiences of great spiritual and emotional significance. The birth experience has a profound and formative influence

on our lives. But our modern medical institution with its dependence on technology in childbirth, strips nature of its spiritual dimension, dismissing soul.

On the eve of the millennium, we are thoughtful. We wonder what we have learnt in the last 100 years. Are we wiser? Are we the richer for our experiences? We may be proud of our achievements, our technological advances are undoubted, but many of us know in our hearts that we have also failed, and failed badly. For though modern life offers us practically everything we desire, it doesn't fulfil our deepest desires, those of the human heart. And so we have a soul hunger. In the earlier half of this century, the Swiss psychiatrist

C.G.Jung described the greatest malady of modern man as "Loss of Soul". He noted that for many people, life had lost its meaning in some profound way. Nothing much has changed, in fact it has got worse. Fifty years on, on the eve of the millennium, our sense of soul loss is even greater. Despite economic prosperity there are dark shadows; increasing violence and an escalating suicide rate particularly amongst young men. Normal childbirth has almost become eradicated in a mass of technological advancement where not only caesarean sections have become a matter of choice of birth, but babies have become commodities. Sperm and egg as well as wombs have become objects detached from their human homes and babies are now being technologically created to meet consumer demand.

In this presentation I will argue that if we continue on the path of modern technological childbirth, we are heading for soul death and its consequent psychological infirmities. I will demonstrate how western civilisation is nursing a wounded mother archetype; one aspect of the general repression of feminine consciousness which has deeply marked our world. Taking a Jungian view, this presentation will highlight the psychological and spiritual aspect of the birth experience and demonstrate how modern medicalised childbirth practice has led to loss of soul and contributed to keeping the wounded mother in place. Restoring soul to childbirth means reconnecting with nature and recognising the powerful spiritual significance of the birth experience. Honouring soul will reinstating the lost feminine and heal the Wounded Mother archetype.

Presentation using audio visual equipment with lecture/talk (large screen)

### AN ENERGY EQUILIBRATOR

By

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### INTRODUCTION:

# Theoretical basis of operation of this simple device can be found in the paper intitled Physical Model of Human Being:

- \*all energy forms are the same energy
- \*energy is the main parameter of processes
- \*The role of the Inmunitary System is
- -defensive
- -equilibrator
- -and it governs conduct and behaviour

\*The Inmunitary System (Imnumno-Neuro-Endocrine System) depends of two parameters:

"electric conductivity and magnetic permeability of tissues"

The aim of this work is to show and to explain how to construct, how to use and how to understand the operation of an equilibrator device.

## DESCRIPTION OF DEVICE OPERATION AND APPLICATIONS:

Because electric conductivity of tissues is the capacity to move energy throught tissues to reach different parts of body, when diseases appear ,transimission of energy is blocked for several reasons

- -bad conduction of nervous system
- -bad conduction in the acupuntural lines coordinating different parts of bodies
- -insufficient quantity of blood
- -insufficient oxigenation capacity of blood

The operation of this equilibrator device is to transvase energy form a part to other part of the body. The equilibrator device is a low-pass filter, joined to two electrodes. It filtrates signals coming from a part of body surface and sends it to other part of body surface.

In order to increase the profit of energy transvase, filter is cooled inside ice or by a Peltier cell or it is cooled previously inside a freezer.

By means of two electrodes, energy is moved overcoat throught internal tissues from a part of body to other part ,that is to say, we can eliminate blocks since an electric voltage, associated to short circuit among both points, is observed.

We are going to coment some aplications:

- 1.-To transvase energy from the Solar Plexus to pained or inflammed areas.

  To understand effects of this short circuit, we to remember characteristics of Solar Plexus:
- 1.1.-Anatomical point of view: A lot of very superficial nerves located near of the skin.
- 1.2.-Fisiologic point of view: The Solar Plexus coordinates the sympathetic and parasympathetic nervous system.
- 1.3.-Energetic point of view: Energy emission of The Solar Plexus is very high.
- 1.4.-Oriental and shamanic point of view: All oriental and shamanic traditions assert that the Solar Plexus is a very important chacra.

Therefore if we place an electrode on the Solar Plexus skin, signals leave being filtered by the low-pass filter. The other electrode is placed directly on the pained region or on the most next acupunture point.

Obviously electric current appear because electric voltage (mV , dc) can be measured among both sides of the filter. Since conduction process is observed, the circuit is closed inside body tissues. It is a very excelent complement of the magnetotherapy. For exemple, it is very useful in the therapy of eczemas, contusions, psoriasis, warts, skin pained, local edemas, lumbago diseases, tendons pain, celular vessels, etc.

We can also use this equilibrator to the therapy of internal tissues and to control emotions. For exemple, bad humour can be controlled if we send energy to the liver :we can place the electrode directly on the liver or on acupunture points of the liver.

2.-To compensate laterality problems or umbalanced energy among right side and left side of body. Also to compensate umbalanced energy among up side and down side.

In this case we would place electrodes on both writs or on both ankles. However it would better to rotate alternating (right-left,up-down). When energy is transvased, blood circulation and nervous system are coordinated and therefore, a relaxation state is reached (phase, amplitude and frequency of pulses is synchronized).

For exemple, insomia problems are usually associated to laterality problems. Also internal stress is associated to laterality problems: it blunts activities of persons who consume too much energy to live.

- 3.-To equilibrate the main energetic centers. Energy moves along spinal column when electrodes are placed on the perineun and on the crown (or cervical vertebras).
- 4.- Thymus gland stimulation.

Thymus gland is the aging center: it size disminish and it begins to undergo atrophy due to the aging process. Because thymus is the center of the Inmuno-neuro-endocrine System, the Official Medecine begins to consider the importance of this gland.

Stimulation of thymus gland is valid to the treatment of diseases but it is also suitable to healthy persons in order to brake the ederly. It is also very useful to AIDS therapeutics.

To stimulate the thymus gland, we place the electrodes on the Solar Plexus and of the thymus acupunture point located on the up side of the sternum.

Finally we would like to ask to study new uses and applications of this energy equilibrator and to comunicate results to the author.

## PHYSICAL MODEL OF HUMAN BEING

by

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#### METHODOLOGY:

From the Theory of the Unified Field we can approach the study of human being with the following hypothesis:

- 1.-All energy forms are the same energy
- 2.-The Unified Field is a central field; consequently, the Univers oscillates and every part or subsystems of our Univers has her propper dynamics presenting systole and dyastole periodes
- 3.-Energy is the fundamental parameter of any process

In order to construct our model we consider that human being is an "unity ",but it also is a part of other bigger unities (Earth,Solar System...). Human being is physically characterized by means of two natural oscillation frequencies:

Cardiac rythm and frequency of radiation associated to corporal temperature (nearly 37 °C). We can not forget tahat human being is an unity,however if we apply the analytical methode,we can consider that human being is constituted by a lot of coupled tissues.

The coupling level among tissues corresponds to the grade of equilibrium of human being. We will name "the mind "of human being to coordination of tissues forming human being. Therefore, body is a terminal of mind.

### NATURAL OSCILLATION FREQUENCIES:

Low frequency oscillation or cardiac rythm (Wc) must be mechanical resonance frequency of body, because it is the unique guaranty of stability of pysical system.

High frequency oscillation (Wp) is the value of the high frequency resonance resulting of coupling of high frequencies oscillations of tissues.

### HUMAN BEING AS A COUPLED TISSUES SYSTEM:

If we study human being as a whole of coupled tissues, we deduce that transmission of energy inside body can be expressed by means of an equations system. This system has always two natural oscillations frequencies corresponding to oscillations "in phase".

Both frequencies are precisely cardiac rythm ( Wc ) and high frequency of corporal temperature ( Wp ).

Besides,in agreement with theoretical models,the grade of coupling among tissues can be avaluated by the quotient

$$S = Wp / Wc$$

We name "  $\, S \,$  " parameter as Inmunitary System because it depends of magnetic and of electrical coupling of tissues .

Inmunitary System has three roles:

- 1.-Defensive role . This role is accepted by all Kinds of Medecines, althougt Allopatic Medecine abuses of this role.
- 2.-Equilibrator role. This role is accepted by some lines of Allopatic Medecine, however it is one of the foundations of Energetic Medecines .
- 3.-Inmunitary System governs the behaviour, because Neurological and Inmunological System are joined by means of neuropeptides and inmunopeptides. Besides we can not forget that body is an unity, therefore, both systems are also joined to Endocrine System forming the Inmuno-Neuro-Endocrine system whose center is in thymus gland.

# INMUNITARY SYSTEM DEPENDS OF ELECTRICAL CONDUCTIVITY AND MAGNETIC PERMEABILITY:

Equation of mind is wave equation in parametric resonance with damping. That is to say, human being absorbs maximum external energy althought her resonance frequency (Wp) changes due to cardiac rythm and even due to respiratory thym.

Our conclusion is Inmunitary System depends of two physical parameters

Electrical conductivity and magnetic permeability of tissues

Therefore, we can asert

- 1.-Energy of mind is magnetic
- 2.-Because of differents parts of body have very different electrical conductivity and magnetic permeability values, then energy emission of body is very different depending of these physical parameters values.

For exemple, energy emission of the so-named chacras is stronger than emission of foots.

- 3.-Mathematical solution of waves equation has a fundamental frequency and her harmonics. First harmonic corresponds to solid body and superior harmonics are associated to different perceptive and mental processes. All solutions are included in the mind equation.
- 4.-All energies are included in the so-named biofield and can be detected with several instruments. This radiation emission is not homogeneous and it permets to identify the so-named Zajarin-Head areas, that is to say, radiation emission of different organs of body.

Finally it is possible to demostrate that conductivity of tissues undergoes important changes when they are subjected to intense magnetic fields (magnetotherapy) and Inmunitary System depends of magnetic coupling of tissues. Therefore,Inmunitary System depends of the iron quantity inside body and of the oxidation state of this iron.

# THE UNIFIED FIELD .PART I : METHODOLOGY

By

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# In order to develop the Theory of the Unified Field we are going to use a methodology which must be explained carefully.

1.-Heterogeneity of matter, that is to say, we assume that matter is completely heterogeneous as persons and objects of the Nature are different.

Matter in fact, physical properties are very different inside crystals being apparently homogeneous. For exemple, in crystals divided in domains (ferromagnetic, ferroelectric, superconductor,...) different physical properties corresponding to domains of crystals are observed.

Liquids and gases present a shells structure associated to distribution densities.

Stechiometry does not exist even at local level.

In similar form, the same heterogeneity in the Univers is observed: Galaxies and regions of our galaxy or our Solar System are very heterogeneous.

- 2.-Any process of the Nature is a transformation. That is to say, if an observator studies some process of the Nature and he is solidary with physical objects, then he must observe changes in physical parameters such as electrical conductivity and plasma frequency of objects.
- 3.-Nothing happen at random. We do not understand what is hazard and chaos. Anything responds to a Physical Law and for that reason we accept the validity of the Science. In this way, the aim of the Science is to predict how processes must evolve.
- 4.-The tendency of the Nature is not disorder but self-organisation. For exemple, a whole of rotors, being weekly coupled, become to be synchronized if a sufficient time is waited. Planets of the Solar System are synchronized and solar spots are associated to a groupment of planets in a side of the Ecliptics.
- 5.-Order and disorder do not exist. Both terms involve cultural prejudices with respect to behaviour of the Nature. Althought sometimes we can not understand behaviour of the Nature, we can not disqualify it. In fact, any disqualification of behaviour of the Nature is a proyection of our valoration about Laws of the Nature and of our role in it.
- 6.-We can not confound impredictibility with indeterminisme. If we assume impredictibility, we accept ignorance but if we assume indeterminisme, we consider the Nature does not have Laws.
- 7.-Any process includes results.Results are joined to processes and they can not be analyzed out of processes.

- 8.-We can not confound determinisme with predestination because if results are joined to processes, obviously such results depend of how processes are carried out.
- 9.-Since quantity of energy is finite, any process of the Nature last for a finite time, if we speake on temporal terms.
- 10.-If our methodology of work is to look for general conclusions from particular conclusiones and we use the analytical methode, we have to take into account that analytical methode can drive to wicked conclusions because when isolate objects to be analyzed, we can forget the unity in front of the individuality.

We have to start from the Unity and from the Unity we can stablish an individualization or identification methode of processes and objects analyzed.

- 11.-Validity of Causality Principle is uncertain because objetivity of spactial and temporal coordinates is assumed. For exemple, the problem of the hen and egg: Who was the first? Suitable methodology is to look for corrspondances in the Nature supported on association categories which permet to stablish relations among all identified physical objects.
- 12.-Any Physical Theory must acomplish three conditions
- simplicity: to be understood by all people
- efficiency: to be usefull in the life to obtain a lot of practical results
- unification: to be able of explain and include all knowlodge of this cultural periode and to integrate all leaving beings. If Physical Theories include human being, it must solve problems of the life and to contribute to the her spiritual evolution.
- 13.-Science just learnes of the Nature and if we work without prejudices we would understand that any process carried out in the Nature always needs the minimum quantity of energy,that is tosay: simplicity,efficiency and unification.

# THE UNIFIED FIELD . PART II: ALL ENERGY FORMS ARE THE SAME ENERGY

by

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#### INTRODUCTION:

Our technology works with electric energy obtained directly from the Sun (photovoltaic energy) or from water (hydroelectric energy). Electric energy is also obtained from thermal generating stations (carbon, fuel-oil, nuclear...) or from chemical batteries.

Never has been possible to distinguish electric energy depending of its origin.

Therefore, if we can always obtain electric energy and it is undistinguisable, we can think that all energy forms are the same energy.

The aim of this paper is to discuss about this idea.

#### THEORETICAL ANALYSIS:

We are going to analyze the identity of energy fields which Officil Science considers as differente forces: Gravitational, Electromagnetic, Strong and Weak Force.

In order to understand the identity among electromagnetic and gravitational fields we are going to remember gyromagnetic fields:

### 1.-Barnet Effect:

Bodies rotating with uniform angular velocities become magnetized.

2.-Einstein-de Haas Effect:

Bodies hanging up freely begin to rotate when they magnetized.

3.-Stewart-Tolmann Effect:

Voltage appears inside rings which rotate with no-uniform velocity. Therefore an electric current is measured.

4.-Bodies subjected to external forces and consequently subjected to accelerations, show electric fields presence because it is possible to measure electric currents inside bodies.

From these observations, we can conclude that magnetic fields is synonymus of rotation and electric fields is synonymus of linear accelerations. For exemple, big bodies as planets, stars, galaxies, etc have a magnetic field associated because they are rotating around its axis. Of course, intensity and direction of magnetic field depends of bodie composition, size and geometry.

In similar form, litle bodies or very litle bodies (free particles) have a magnetic field associated because they have to rotate to be stable.

Also compressive stresses on matter are synonymus of electric fields and tensile stresses are synonymus of magnetic fields because electric currents are measured .For exemple, we can just remember the so-named electrostriction phenomena or currents measured in bars sujected to pure bending.

To complet our study we can not forget that

- 1.-Electromagnetic and gravitational fields are central fields
- 2.-Minkowski metrics of electromagnetic fields is an aproximation of Schwarschild metrics when radium is very big.
- 3.-Filkestein studied Schwarschild metrics .By means of a coordinates change he obtained solutions which can be analyzed:
- 3.1.- Positive and negative gravitational masses have been found in similar form to positive and negative electric charges.
- 3.2.-When radium of bodies is equal to Schwarschild radium (critical radium),then positive and negative gravitational masses also exist,however if we are very far of these masses, fields observed are negligible. That is to say ,we are speaking about neutral particles: They present strong interactions in spite of no-electromagnetic interaction is observed.

We conclude that electric charge of free particles (protons, electrons, muons....) is a very dense mass which any external observator always "sees" with the same radium because of its size is lower than Schwarschild radium. That is to say, electric charge is a very dense and litle mass creating very high intensity fields and it is always observed with the same radium. Spin of particles is associated to rotation motion. For that reason, neutrino particle can not exist.

Finally we can coment some aspects of thermal energy concepts:

- 1.-Temperature gradients generate electric currents. Therefore, thermal gradients are electric fields. For exemple, Thomson Effect assumes this assertio but if we speake about vectorial fields this conclusion is always valid.
- 2.-When bodies are subjected to temperature scalar fields, electric currents conduction increases or reduces depending of material and thermal level inside solids. For exemple, high temperature plasmas of metals behaves very different of metals at room temperature.

### CONCLUSION:

Electromagnetic fields ,compressive stresses fields, thermal radiation fields , gravitational fields, fields created by particles are of the same nature.

All energy forms are the same energy and, therefore, the Unified Field is a Central Field.