

keep it
simple.

Functional Analysis

Life energy and Pulsation

Functional Identity

Connective Tissue from three different points of
view

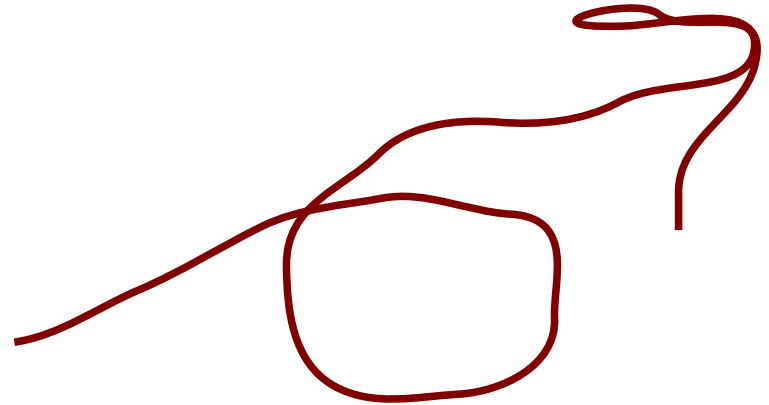
CT's importance for body psychotherapy and
Functional Analysis

Functional Analysis

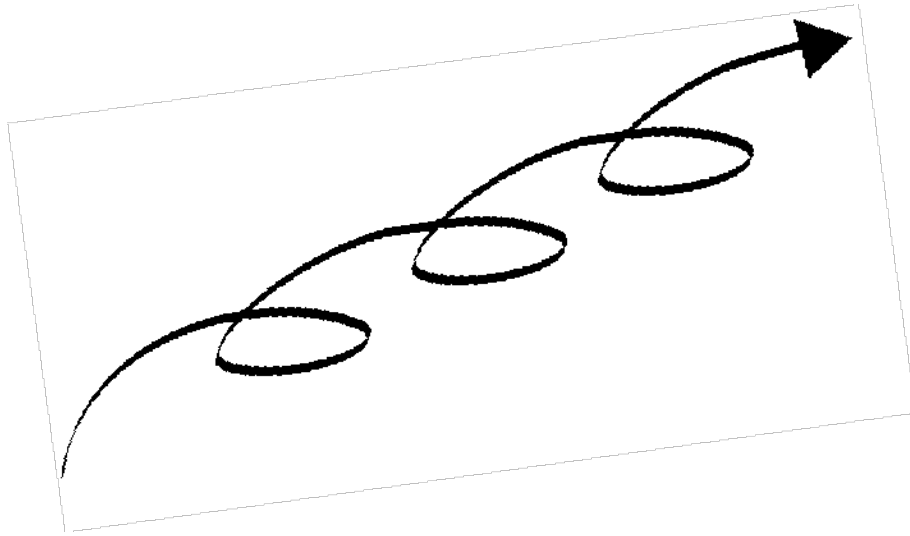


Life – energy acc. to W.Reich

- pulsates
- accumulates
- represents itself functionally identical in Psyche and Soma



The spinning wave represents pulsation in time and space

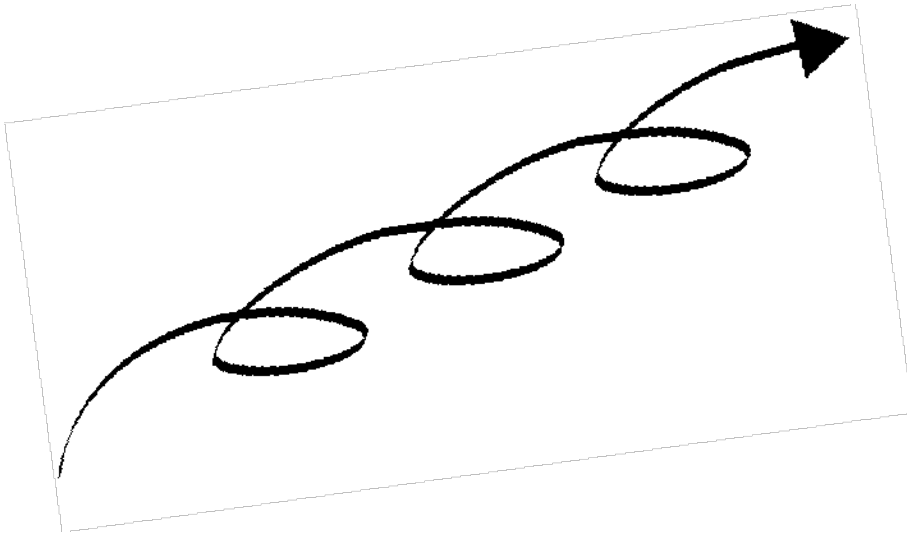


The energy moves forward and ahead « of itself » - in a spiral movement - before it comes back « on itself » , gathers and centers before it reaches out and forward again in order to expand into a new cycle.

In nature an example is a flock of birds during migration

In human life we experience cycles of more inward movement or instroke emphasis , cycles of more outward movement or outstroke emphasis

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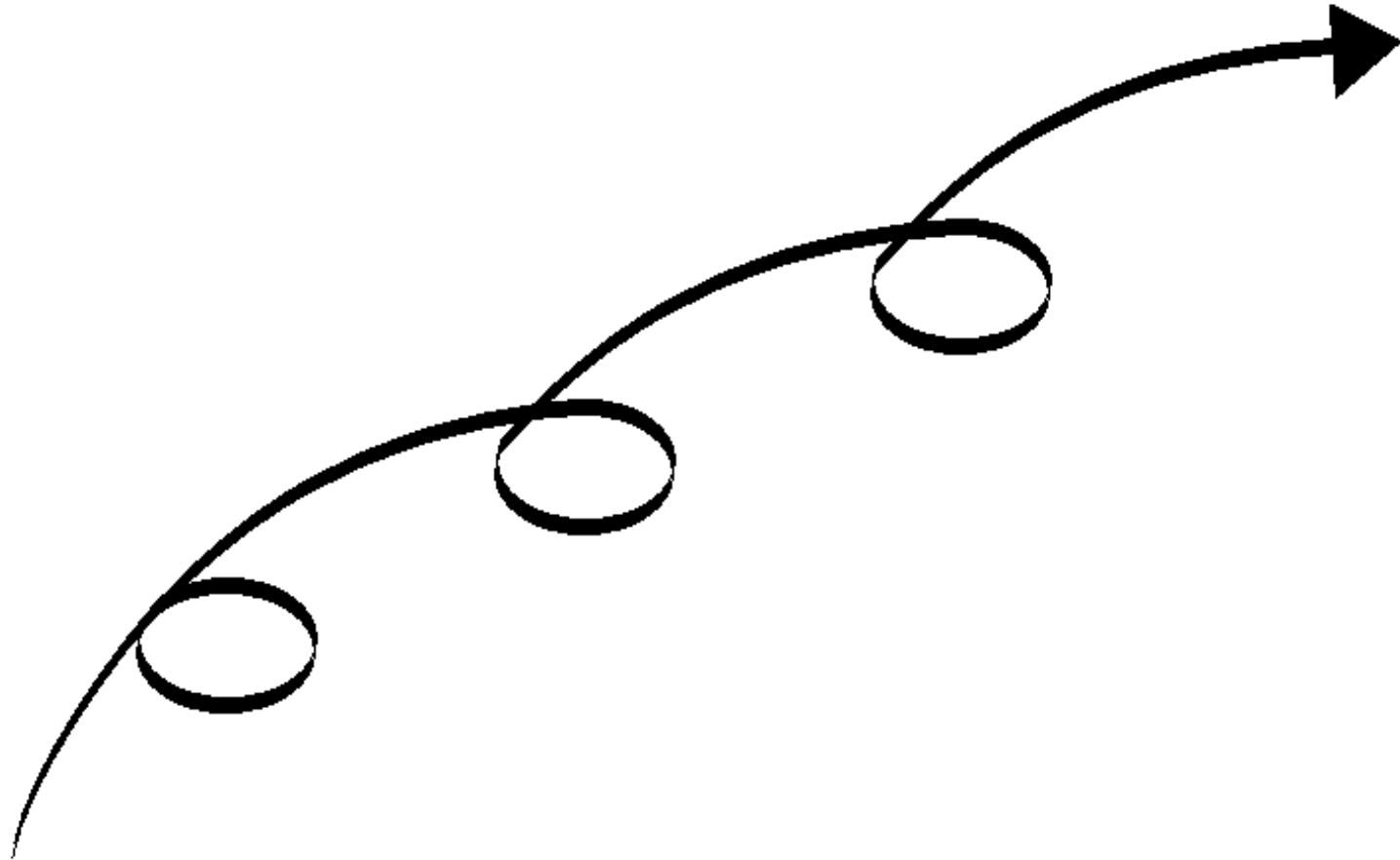
In nature an example is a flock of birds during migration

In human life we experience **cycles of more inward movement or instroke emphasis** , **cycles of more outward movement or outstroke emphasis**

Spinningwave : instroke emphasis
(baby)



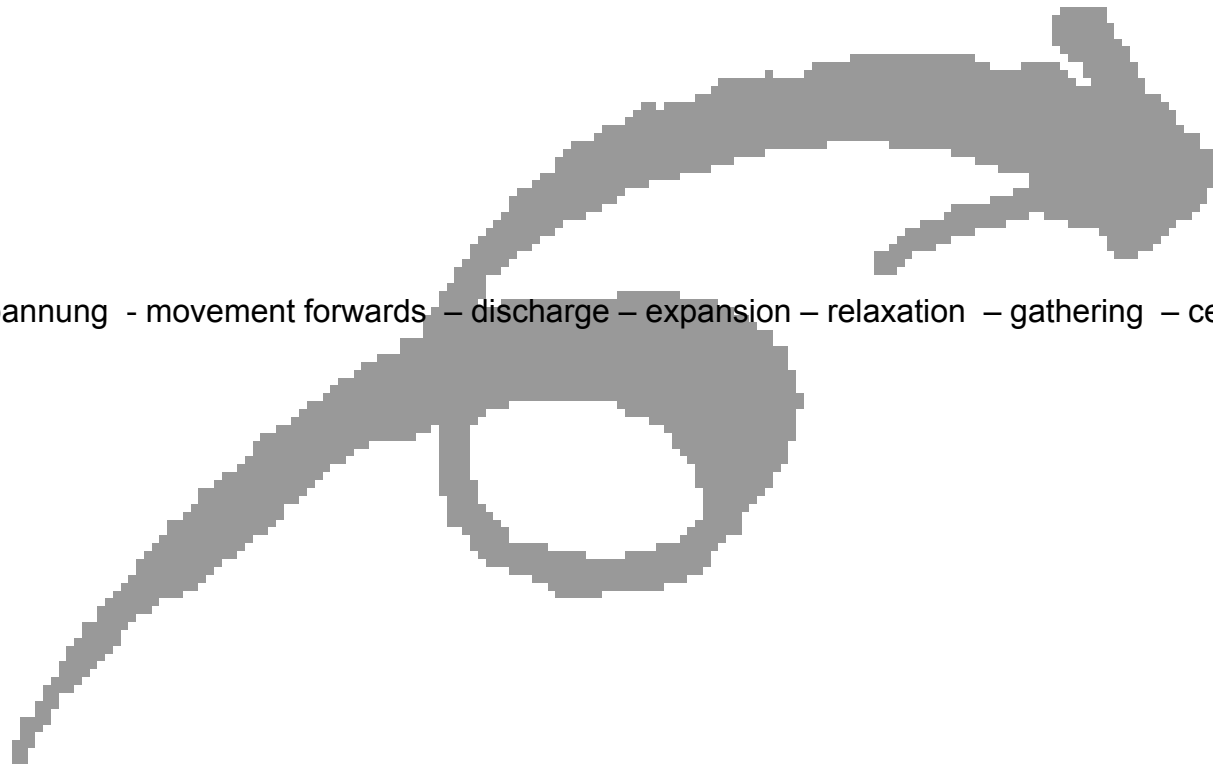
Spinning wave : outstroke emphasis (mama)

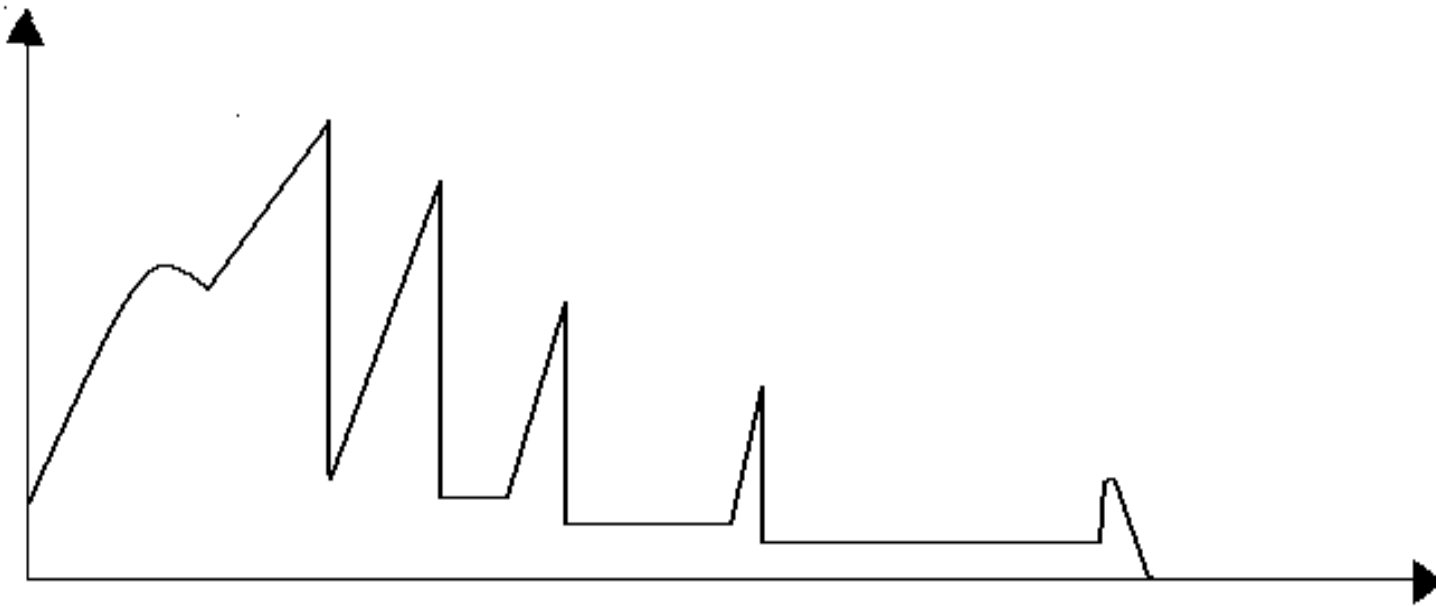


becoming and being oneself happens during the
instroke

Desire

spannung - movement forwards - discharge - expansion - relaxation - gathering - centering - integration





Outstroke without instroke, →

Movement up and forward without the turning
in of the instroke, →

moving forward without reflexion, →

leads to collapse, burnout and depression !

Life energy pulsates.

Instroke

- Inspiration
- Charging
- Centering
- Gathering
- Comprehension
- Taking
- Being

Outstroke

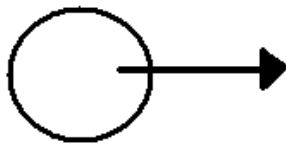
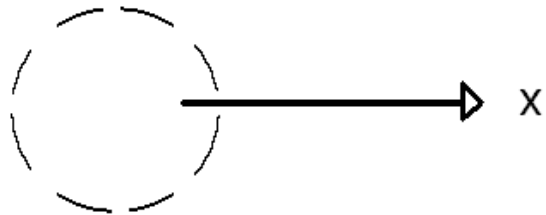
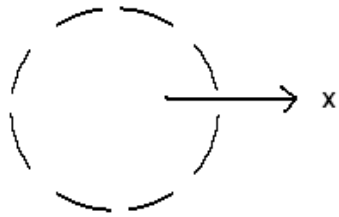
- Expiration
- Discharge
- Expansion
- Dissolving
- Expression
- Giving
- Doing

Life energy **accumulates**
and hereby creates structure and
functioning

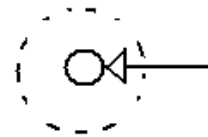
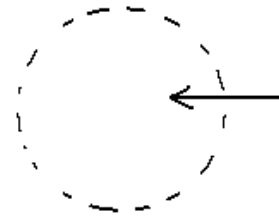
psyche and soma are manifestations,
symptoms of the life energy functions

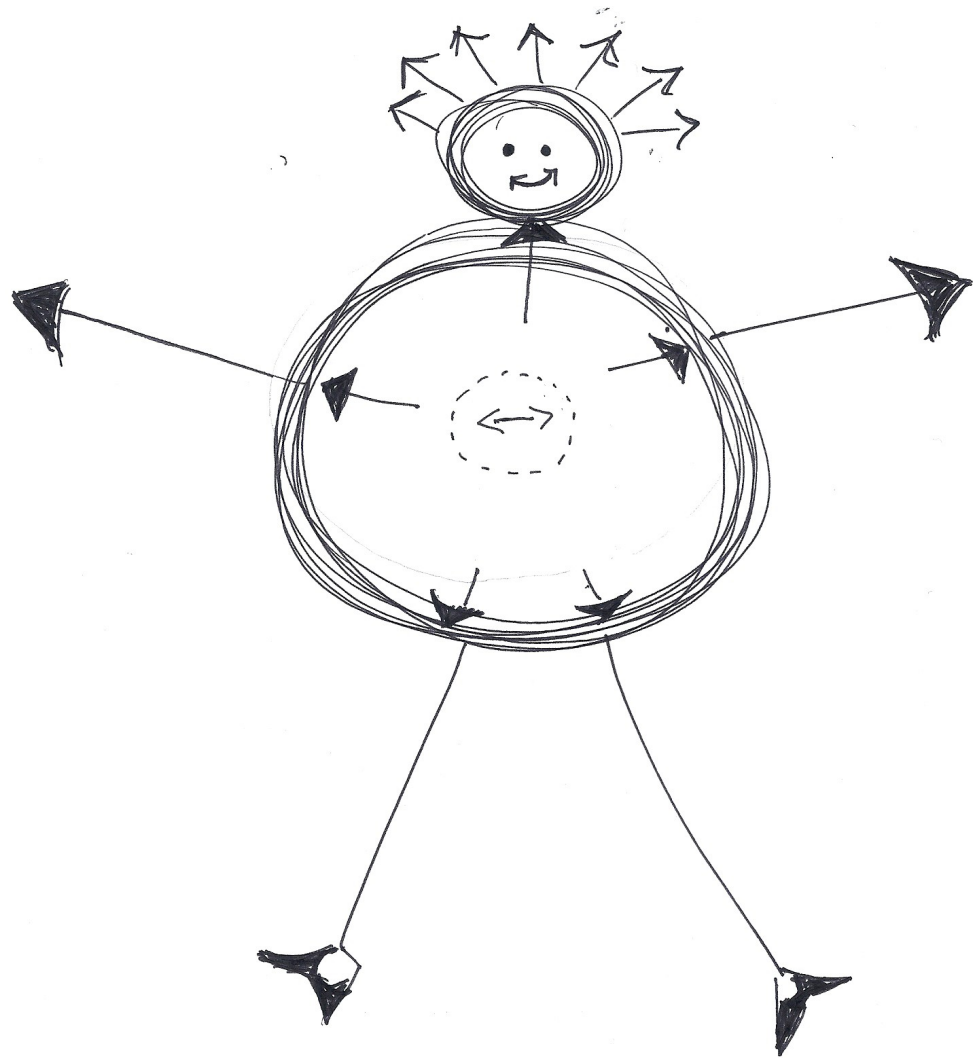
- and form follows function !

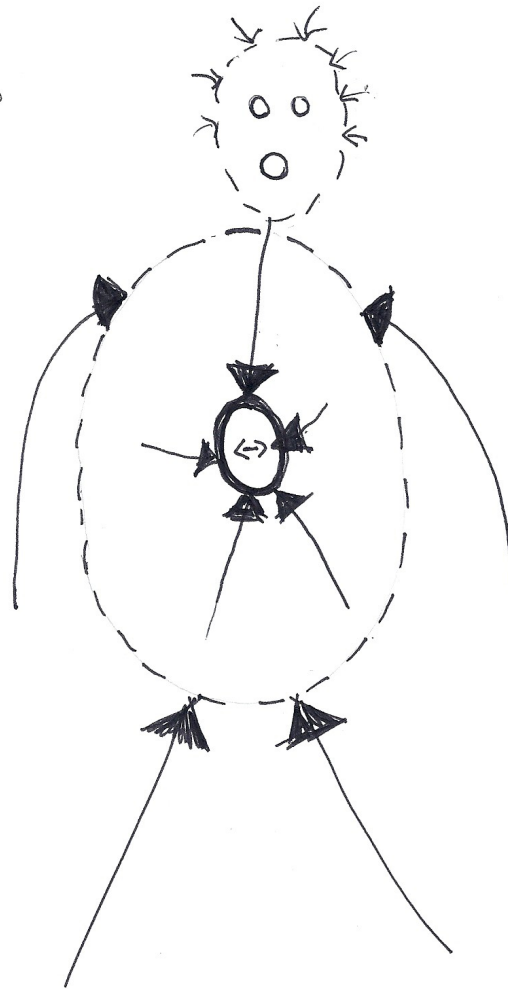
**Outstroke_emphasis_
leads to an
accumulation or a
holding of charge
on the periphery**



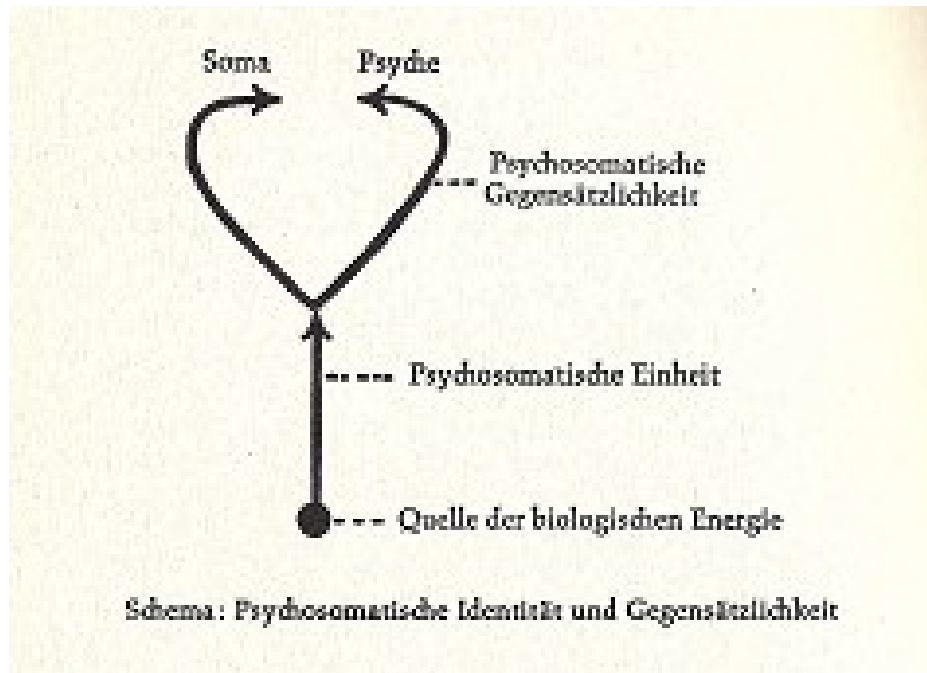
**Instroke_emphasis leads
to an accumulation or
holding of charge
towards the center**







The Functional identity of psyche and soma



« ...what was clear was only that the biological energy dominates the psychic as well as the somatic. There is a functional unity, identity . » ... (W. Reich in Function of the Orgasm, page 236)

The concept of functional identity means that muscular and character attitudes serve the same function as the psychic apparatus; they can influence and replace each other. Basically they can not be separated; in their function they are identical. (F. O., 241)

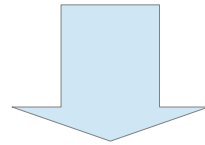
Reich : „ Wir dürfen sagen : *jede muskuläre Verkrampfung enthält die Geschichte und den Sinn ihrer Entstehung...* Die psychische Struktur ist somit gleichzeitig eine bestimmte biophysikalische Struktur...und die Verkrampfung der *Muskulatur ist die körperliche Seite des Verdrängungsvorgangs* und die Grundlage seiner dauerhaften Erhaltung.(F.O.227,228)

Reich believed in a **muscular armor** !

But in reality it is not possible to contract a muscle and hold it tight even for 15 minutes. The nerves de-sensitize and the muscle releases. In addition, if our muscular condition represents our „frozen history“ then injection of a muscle relaxant should not only relax the muscle but also free any repressed historical material held in the muscle tissue....

So how does the contraction continue ?

Es sind nie einzelne Muskeln, die in Spannung geraten, sondern **Muskelkomplexe**, die zu einer **vegetativen Funktionseinheit** werden. (Reich, F.O.229)



Muscle highly contractive = contemporary when „danger“ has passed relaxes and returns to its original state

Connective Tissue though = historical, contains and helps to support the body in a contracted state which is how the **functional units** are created and held together over time!

The BIG Difference :

Muscle tissue:

- Highly contractable
- Contemporary
- Highly enervated and vasculated
- They tear

Connective Tissue:

- „inner holding“
- Historical
- Less enervated and vasculated
- It snaps

*Surrounds and weaves its way through the whole body (muscles **included**, they are just a part of it) !*

What is Connective Tissue ?

Connective Tissue components:

1. Cells (metabolism)

Fibroblasts

Adipocytes

Mastcells

Undifferentiated

Mesenchyme cells

Ostoblasts

Fibroblasts: Throughout our lives, fibroblasts are the only cells that can migrate to anywhere in the body and change chemically in response to local conditions and produce fibers appropriate for that place and those conditions !



Connective Tissue components:

2. Fibres (mechanics)

Collagen

Elastin

Flexibility: the stretching of the collagen allows a constant re-organization of the structure of the CT :



Wie Faszien gesunden

Wenn die Maschen des inneren Netzes locker und zart wie Spinnenfäden verwoben sind, dann gleiten die feuchten Schichten der Muskeln mühelos: Der Körper ist gesund. Endoskopische Aufnahmen (l.) gewähren einen Blick auf die flexiblen Verstrebnungen. Gegen deren „Verfilzung“, die Schmerzen auslösen kann, wirken mechanische Reize nach neuen Erkenntnissen besser als bisher gedacht. Das Prinzip: Dehnung. Sie zwingt die Kollagenfasern dazu, sich neu zu formieren, und löst biochemische Kaskaden aus. Durch dieses Stretching werden Gleitfähigkeit und Wasserfluss in der Matrix verbessert. Wärme, wie bei Fangobehandlungen, wirkt ähnlich gut.

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Connective Tissue Components:

3. Groundsubstance : responsible for the plasticity and viscosity of the ExtraCellular Matrix

Glycosaminoglycan, Water, Ions

Other names are plasma, protoplasm, interstitial tissue....

Viscous liquid like raw egg whites : it is clear, homogenous, sticky, amorphous, generally like a gel, chemically complex and biologically versatile combination of carbohydrates with protein.

GS is a non-living material produced by cells and varies from fluid (blood) to a gelatin (fascia) to a solid as in bone.

The **proportions** of these three components vary from one part of the body to another depending on the **local** structural requirements.

In some areas the Ct is loosely organized and highly cellular; in others its fibrous components predominate, and still in others the ground substance is the most important feature.

The **consistency** of the **ExtraCellularMatrix** is variable and ranges from gelatin to very rigid material. Consequently the CT ranges from **gel-like** substance (blood plasma) to very rigid almost **crystallin** structures as in bones.

Forms of C.T.

Ct is the largest mass in our body and it is amazingly varied :

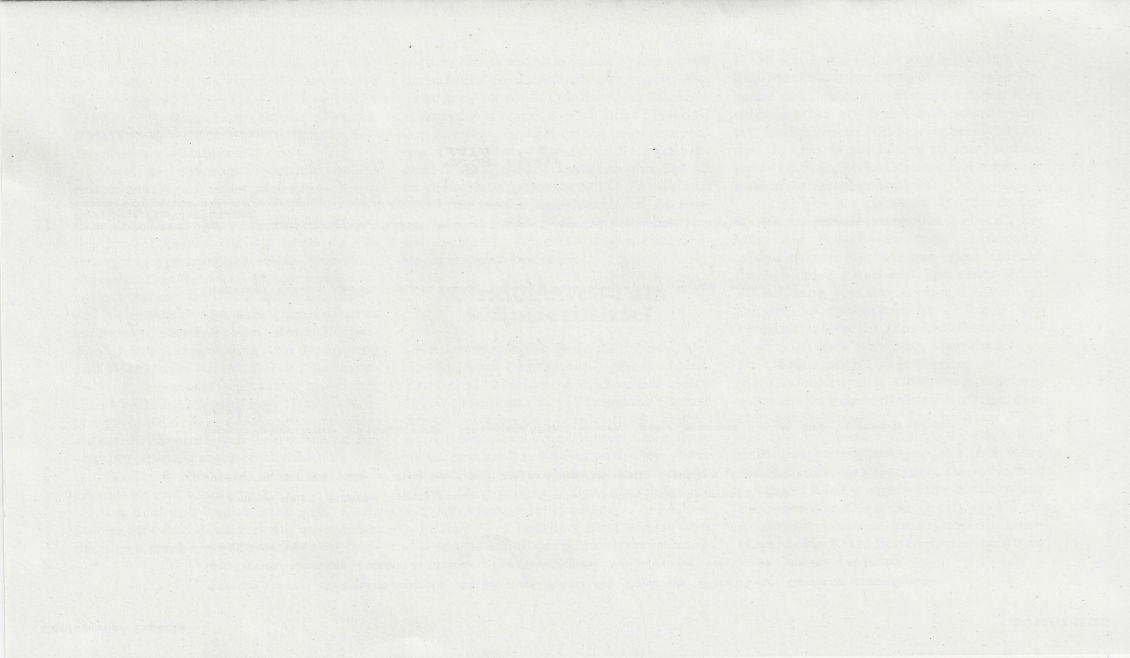
Fascia, cartilage, bone ,tendons ,ligaments ,the cornea of the eye, myelin sheets, synapses, adipose tissue, mucuous membranes, blood plasma.

Connective Tissue Functions

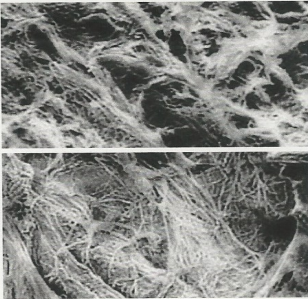
- Structural support
- Connection of body tissues
- Protection of organs
- Metabolism and nutrition
- Storage of Energy
- Regulation of diffusion of substances
- Formation of scar tissue

(C.Stecco,the Atlas of C.T. 2014)


Changes in CT:



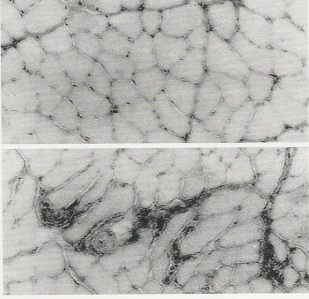
Kollagenfasern
»Fluffig« wie Wolle wirken gesunde Fasern des Bindegewebes (o.). Bewegungsarmut führt zur Überproduktion der Fibrillen und lässt sie regelrecht »verfilzen«



Faszienschichten
Bindegewebe kommt in vielfältiger Form vor: Straffe und feste Lagen (o.) geben Halt. Weiche und lockere Schichten gewähren reibungsloses Gleiten der Körperteile



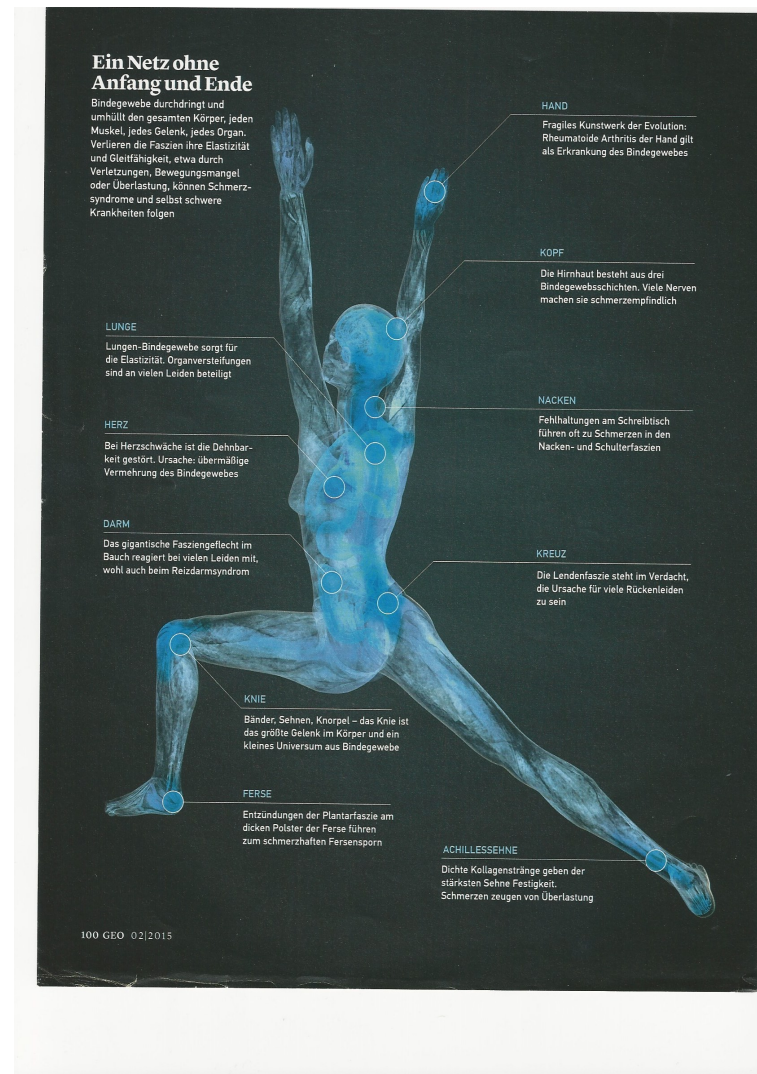
Muskelgewebe
Legt man Muskeln (o.) lahm, etwa durch Bewegungsarmut oder Gipsverbände, »wuchert« das Bindegewebe (u.): Die Kollagen-Überproduktion führt zu Versteifung



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A web without beginning or end !

CT is everywhere: every muscle, every articulation, every organ is consists of and is surrounded by CT If it loses its fluidity, and elasticity we will find the following well known symptoms:



Guimberteau :

The fibrilous, fascial network is a constitutive (creating !) tissue. It is no longer viewed as a passive upholstery between bodyparts : It creates its own architecture. It is the lattice (matrix) within which all bodyparts develop, exist and „find their home“!



Les fibres en s'entrecroisant créent des microvolumes : les microvacuoles, qui sont les polyédres réfringents.

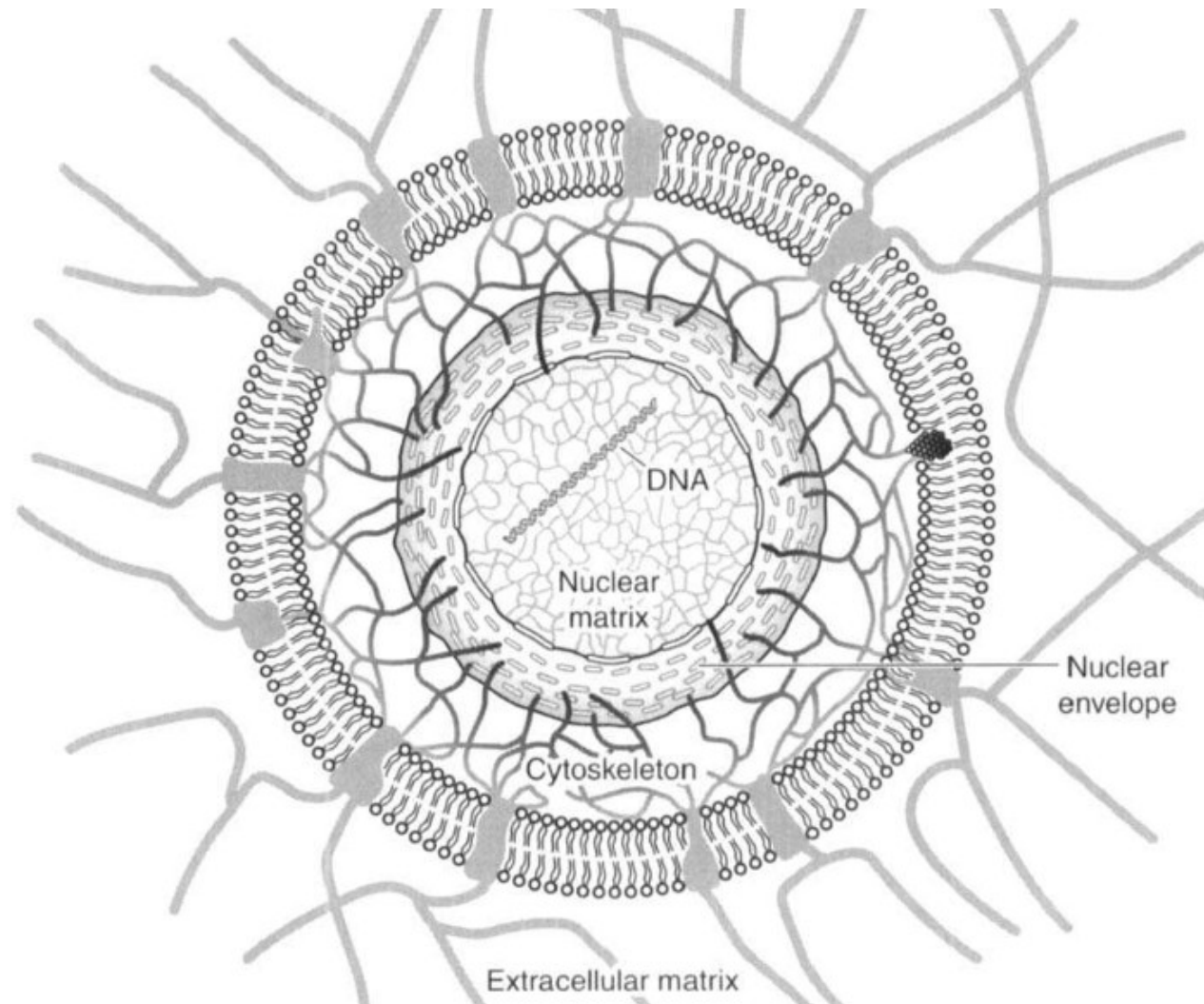
C.T. is a living creative tissue

- The ubiquitous structures made of microfibers and microvacular connective tissue show essentially an irregular and fractal organization.
- A network reassures a continuity throughout the whole body !
- The network experiences a constant change through bifurcation which allows to contain and maintain a certain equilibrium.
- Tensegrity: local mechanic stress calls a multifold response which allows a certain independance of gravity.

C.T. is a living creative tissue

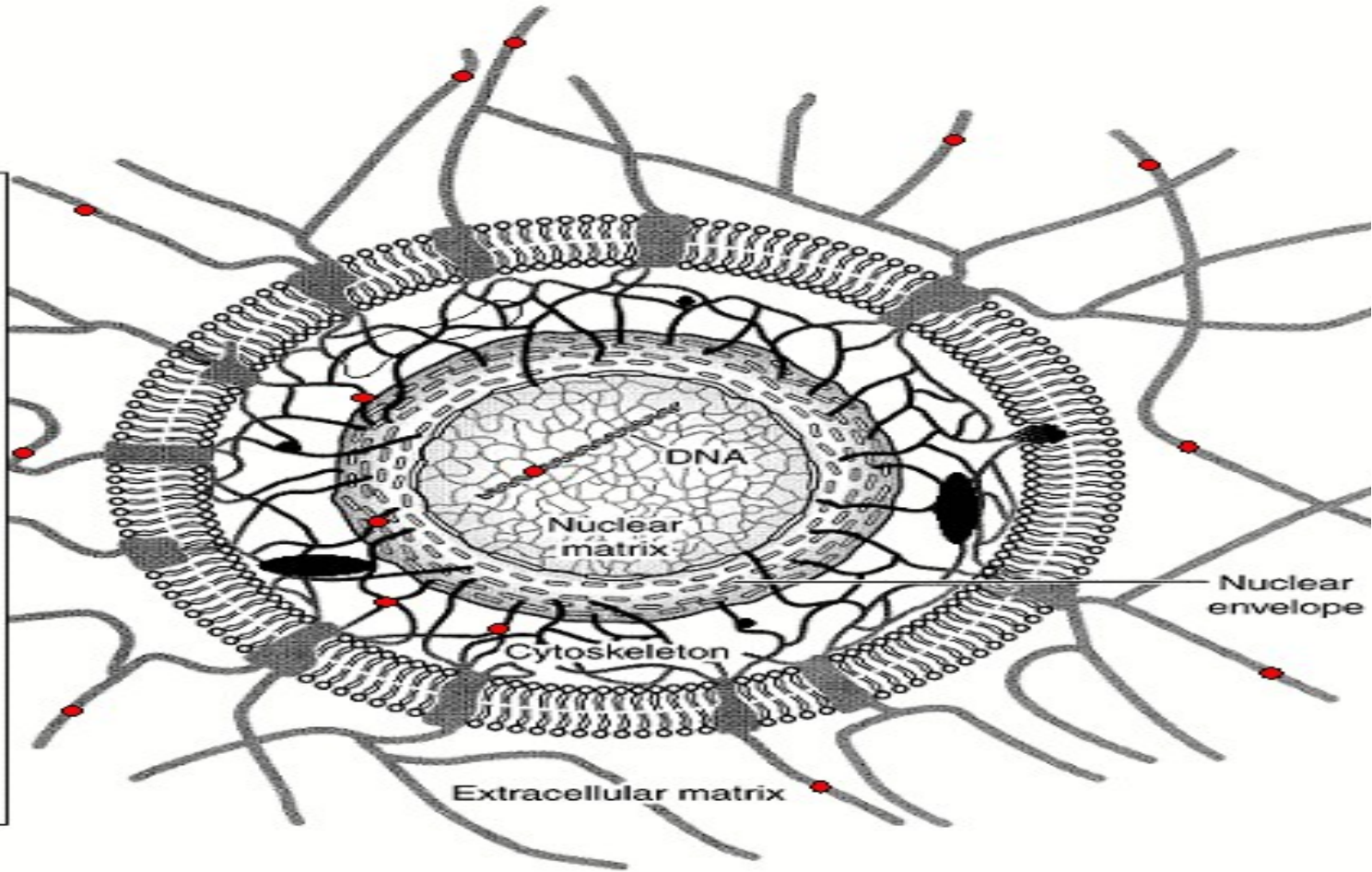
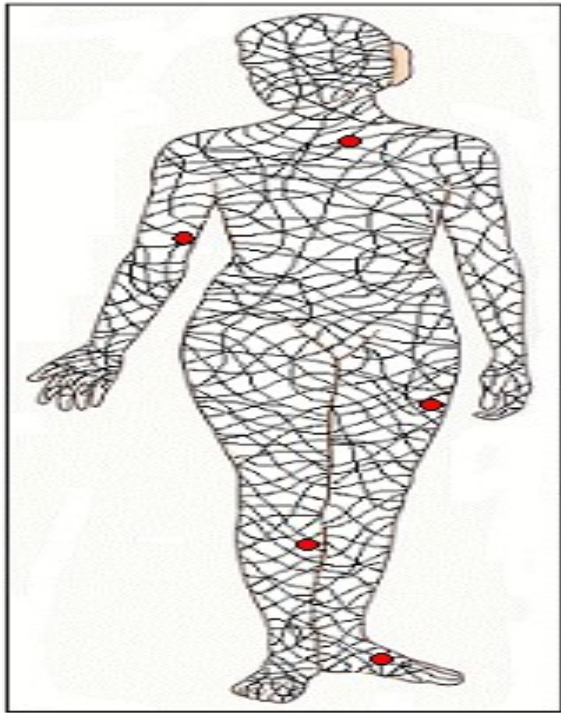
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Contemporary image of a cell which shows the interconnectedness of the extracellular and nuclear matrix (**Oschmann**, Energy medicine,46)



The living matrix has **no fundamental unit** or central aspect, no part that is primary or most basic. The properties of the whole net depend on the integrated activities of all the components. Efforts on one part of the system can and do spread to others. (Oschmann,48)

Connective Tissue Functions



Connective Tissue is involved in growth, healing wounds, immune system activation and disease prevention !

- For example : invasive agents such as viruses and bacteria can be „surrounded“ by CT preventing them from spreading.
- The Closing / healing of wounds is done by creating collagen fibers which lie down over the wound transverse to the direction of the injury closing it, stopping the bleeding and preventing infectious agents to enter.
- Fascia is involved in protecting the body against intrusions, injuries, both physical and emotional. It is a major support system for the body creating bands and belts and cables as well as a certain hydrostatic pressure that aids erectness and the 3 dimensional quality of the body by creating volume.

Connective Tissue connects!

- all parts of the body to all other parts. This results in a unity, a connectedness which allows for co – ordinated, **integrated, graceful** movements, both internal and external, as well as embodied, reality- based perception, movement, emotion and thought !
- A unified state creates a webwork system that can act as an instantenous **communication system, without involving the nervous system !**

Connective tissue separates!

As well as connecting, it separates and creates spaces.

Containing, encapsulating or separating creates the „inner holding“ , den „Inneren Halt“ eines Menschen.

The model of understanding the schizoid structure in F.A. allows to further develop this aspect and to see how the contracted CT „holds the schizoid structure together“ and apart at the same time.

Connective Tissue creates shape and form !

- CT creates a space for every organ and tissue in the body. In the embryo before organs have formed, CT creates spaces for each organ's habitat. An empty cavity or capsule is formed where the heart will be and then the cells which will eventually create the heart will migrate into this place. The same is true for the lungs, the stomach, the brain etc.
- The same is true for each cell. By creating hydrostatic pressure between tissue cells, the cells stay separate and are able to go about their individual business of metabolism. Without this space the cells / organs would collapse onto each other and would be unable to expel their waste and take in their nutrients. The hydrostatic pressure exists within each cell allowing it to stay alive in a 3 dimensional way!

3. Form follows function !



A cat is cat-like because he lives and acts like a cat within a cat-connective tissue, a cat-consciousness and a cat-con-text.....!

We have rarely seen a cow sitting in the grass, slowly moving his tail while waiting for the mouse to show.....and rarely seen a cat who is standing on the prairie all day munching grass.....Their bodies are not made for it.....

- Function = Form = Behaviour = Character

a bear and a snake , - a butterfly and a snail or a fish and a bird....????



Function = Form = Behaviour = Character

The same is true for us humans.....

The CT plasticity can be activated by electricity, magnetism, heat, sound and pressure. One of the main changes that occur when these energies are applied is re-hydration of the CT. Once rehydrated the tissue becomes smooth again and its irrigation helps as well the metabolism as well as the mechanics of its functioning (Sponge) in order to restore form and functioning.

Properties of the living matrix :

All of the great systems of the body :circulation,nerv.system,muscoskeletal, digestive tract,etc. are covered with CT

CT forms a mechanical continuum extending into the innermost part of each cell

The CT determines the overall shape of the organism as well as the detailed architecture of its parts

All movement of the body as a whole or of its smallest parts is created by tensions carried through the CT fabric

Each tension, compression or movement cause the crystalline lattice to generate bioelectric signals which are precisely characteristic of those movements

The CT fabric is a semiconducting communication network that can carry bioelectric signals between every part of the body (Oschmann,Energy medicine)

The Matrix – A Network system

Ct forms a network throughout the whole body that functions as an information/communication system outside all nervous pathways. Reich pointed out that the amoeba, mostly plasma/GS, experiences sensation without a nervous system. It has experiences and subjectivity. *Sensation is the different forms of bio-energies passing through the plasma: these include: heat, sound, light, magnetism and electricity. Some of us would also include a non-material form of energy, a life-force.* These waves of energy pass through the tissues like wind blowing over a grassy field, giving rise to sensation within the organism. The condition of the conducting medium plasma/GS in particular but also all other forms of CT , determine the *quality* of the experience ! If that flow is *distorted* the information will be distorted ! (therapists touch may be experienced very different in a range from seductive to reassuring..)

CT receives, transmits, transports and even amplifies energetic impulses instantaneously throughout the whole body down to and into the nucleus of every cell. It is non-linear, an un-folding quality in all three dimensions at the same time !

There is a direct, physically connected system of CT from underneath the skin into the cell nucleus: from the superficial fascia to the deep fascia around the organs, to the organ capsules into the organs into the organ tissue, into the cell membrane, into the cell, into the nuclear membrane and into the nucleus.

Excited electrons & Oscillations

- Szent Györgyi postulated if a great number of atoms be arranged...in a crystal lattice,...they will form an energy continua along which energy, namely excited electrons may travel a certain distance(1941)
- Molecules do not have to touch each other to interact. Energy can flow through... the electromagnetic field...The electromagnetic field, along with water, forms the matrix of life. Water can form structures that transmit energy. (1988)
- Fröhlich (1969: predicted on the basis of quantum physics, that the living matrix must produce coherent or laser-like oscillations. These oscillations or vibrations occur at many different frequencies...
- Coherent vibrations recognize no boundaries, at the surface of a molecule, cell or organism; they are collective and cooperative properties of the entire being By manipulating and balancing the vibratory circuits we are able to directly influence the body s defense and repair mechanisms.

The CT system connects with itself and everything else. It has the capacity to conduct protons and electrons, which gives a flow of energy - an energy continua - that provides information that controls tissue form and properties.

It is a *semi-conducting communication network that conveys bio-energetic signals throughout the body*. Bioelectric, bio-magnetic, bio-luminescence and bioacoustic signals move through the collagen fibers, groundsubstance and water molecules.

All bodily functions happen within and through this matrix.

A 10-20% decrease in *hydration* of collagen slows the flow of protons by 5000 times. The dehydration produces severe dysfunction within the CT. It disorganizes and slows the flow and distorts the information .

A good flow produces good information, a poor flow produces dis-information!

Functional Analysis proposes a quite unique approach to working with the organism:

We understand the organism as auto-poetic, self starting and self regulating . Insofar we are simply facilitating a healing process that the body is striving to undertake anyway:
We support the self-healing forces !

„ Energetic“, pulsatory **understanding** of the human being in the physical as well as in the psychic realm!
(The Schizoid Character, 1990, W. Davis)

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The emphasis in our work on the inward movement of pulsation or the „ **instroke**“ allows a constant deepening of the **interoception** of the patient in the psychic as well as the somatic realm of his „being“.

We are looking to be mind- and body-full !

We have a unique Connective Tissue orientated physical technique with the Points & Position:

We use“ thixotropy“ :

The CT is in constant movement , organization and re-organization responding to both the local as well as the sytemic needs of the body.

It re-organizes itself in response to internal and external stimuli (touching as in P&P) .

As pointed out earlier the ECM can change from a crystallin to a sol-like state and therefor find „ sol-“utions due to the plasticity of the matter.

We will „touch“ the patient all the way from his consciousness into each nucleus of each cell !

Con-tact within the Con-text

In the P&P we will help the re-arrangement and re-organization of the CT(Physical changes).

We may use the piezoelectric effect : an electric current is created in the tissue when touched; mechanical vibrations moving through the matrix produce bio – electrical fields and vice versa. (Restoring of sensation and emotion)

By touching we re-store the information flow within the system as well as in the communication with the outside world.

Resonance will be created as well within the system as well as with other systems.(Restoring the capacity to be in contact)

Perception, information and communication will be more clear and defined as well as more connected to the context (reality oriented clear mind)

„INTEROCEPTION“

We use this intricate , integrated webwork to allow inner perception, consciousness to form identity
(Am I a cat or a cow or a bear or a snake ?)
to grow and align in order to (re-)create
resilience !

The verbal work we use is not psycho-logical and
problem orientated .

It is functionally orientated
invites present moment awareness and mind-full-
ness

allows to restore confidence into perceptions

of the self
and the other

Last but not least I would like to come back to the beginning of the lecture ,
the functional identity of psyche and soma :

The capacity for interoception of
ConnectiveTissue and ConnectiveConsciousness
will allow to create an alignment of
the two realms of body / mind ,

a more effective and powerful way of life !

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