INDEX

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SECONDARY SCHOOL PHILOSOPHY OF BALANCE

JUDr. Dalibor Grůza Ph.D.

PHILOSOPHY OF LOVE OR ORDER OF VICTORIOUS ARMY:
„All living creatures in fact mostly want to live in a world, where everyone likes each other, therefore everyone is still obliged to cause the least possible death and pain."

All the rest consists more in views (speculations).

(I.e. the maximum compliance of good and evil individuals, virtually the good and the evil)

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SECONDARY SCHOOL PHILOSOPHY OF BALANCE

CONTENTS

FIRST PART

THE PHILOSOPHY OF BALANCE OF THE SOCIAL SCIENCES ... 2

SECOND PART

PHILOSOPHY OF BALANCE OF EXACT SCIENCES ...178

FIRST PART

THE PHILOSOPHY OF BALANCE OF THE SOCIAL SCIENCES

1. PREFACE

Philosophy of Balance is built on a few basic axioms, i.e. the basic assumptions. If I doubt in the footsteps of radical doubt of the philosopher Rene Descartes all the Being, it remains me to determine the strongest point, which, although it can also be questioned, I consider as the surest truth. In my opinion these basic truths are those truths, on which there is the **intersection point of the senses as the most general sensory perception of the material world, the mind as the simplest and most immediate idea and emotion**. It is a very powerful experience of a man. In this way I reach the basic assumptions of the Philosophy of Balance, which can be summarized as **Being as cocontracoagency**.

This means that all the **Being is agency**, it's happening as the composition and decomposition, as **co- and contra- agency**. Composition and decomposition are in the balance, i.e. it is the superior coagency to the composition and decomposition. From the nature of Being as agency it suggests, that it can be divided into the developmental stages of **formation, performance and termination agency**. The nature of agency as co- and contra-agency implies a division into **the total and unit agency, into supra-, sub- and the same agency**. Total, unit-, co-, contra-, supra-, same , sub-, formation, performance and termination agency embodies according to the Philosophy of Balance each **existing fact**.

Formation, performance and termination agency are concepts chosen for the same content **in the root of the word in the Czech language, i.e. the letters "N" and "K",** which are letters very similar to those, that appear in the root of the word "something" and "nothing". I originally formulated these concepts in the English language as "formation", which means the origin or creation, "performance", which means execution, and "termination", which means the end, of which root is also composed of the same letters "R" and "M".

There are 11 concepts, but they are the concepts, that are related to each other as general and specific concepts. Agency analysis concepts as **sub-, termination, same agency may be replaced according to a situation by the term contraagency** and concepts as **formation, supra, the same, performance agency can be replaced according to a situation by the term coagency**. One may be talking about **limited conceptual analysis**.

Contraagency indicates degradation or destruction, and essentially it includes words such as subagency, a division into parts and termination agency, namely the disappearance of an agency, it may include the same agency if contraagency. Furthermore concerning coagency or the composition or formation, which comprises supraagency, a composition in a higher unity, and formation and performance agency, namely the initiation and continuation of composition of a certain agency, and it may include same agency if coagency.

Philosophy of Balance builds on the **philosophy of Confucius**, who in his teachings "about the center and the extent" or "Golden center" anticipates the form of supracoagency as the balance between the composition and good coagency and the decomposition and evil contraagency. Further the Philosophy of Balance builds on the **philosophy of Alfred North Whitehead**, according to which in the unit of Being, so called real existing moment in the form of feeling is perceived the whole Being, its past, presence and also the future is outlined and preformatted. According to the **Philosophy of Balance** in fact there is only one agency, that the human mind just divides. This unity of agency as supracoagency

means the link of each agency with the other agencies. Each agency formation is codetermined by formation, performance and termination of all other agencies, and the termination of a certain agency is at the same time the formation of another one.

In the field of development the Philosophy of Balance represents a synthesis between **the dialectic of Hegel and the evolution of Herbert Spencer**. Unlike Hegel, according to who the reconciliation of opposites in their synthesis, which disturbes them and at the same time it preserves and raises them to a higher level, manifests again in another conflict of opposites, the Philosophy of Balance determines all the opposition as a contradiction of composition manifesting itself in the material world as the formation and decomposition manifesting itself in the material world as destruction and reconciliation of overall composition and overall decomposition in infinite time as final. Unlike the evolution of Herbert Spencer, who sees in the integration or the formation the denial of disintegration or the destruction, the Philosophy of Balance assumes creative imperfect (the developmental stage of performance agency) and perfect (the developmental stage of the termination agency) balance. Imperfect balance is in the fight of unlimited good compostion, virtually formation and the evil decomposition or destruction in an ever higher level of coagency, whether in the form of complex integration as of multiple cocoagency or complex disintegration as multiple cocontraagency. Perfect balance achieved in an infinite time is reconciliation of limited overall good composition, virtually formation and the limited total evil degradation or destruction. According to the Philosophy of Balance the unrestricted formation as the unrestricted fight against destruction or its unrestricted formation causes a destructive reaction. The limited destruction is however compatible with the limited formation in the balance formation agency.

In the field of metaphysics the Philosophy of Balance follows the **pantheism of Baruch Spinoza**, when it identifies God with the overall agency, which has the form of cocontracoagency, a creative balance between the limited overall decomposition or destruction and the limited overall composition or formation, the Devil with a total cocontraagency, i.e. evil and decomposition or destruction, whether in the form of pure degradation as cocontraagency or decomposition of coagency as contracoagency and the Angel with a total coagency, thus with good and composing or formation, whether in the form of pure coagency or decomposition of contraagency as contracontraagency. Pantheism represents also a synthesis of idealism and materialism. In its frame the God has also the material nature. Philosophy of Balance describes extrasensory agencies by concepts known from the world of sensory perception.

In **the first part** entitled "Philosophy of Balance" I answer the basic philosophical issues from the perspective of this philosophy. In **other parts** I present the main world religions, philosophy, political, and legal philosophy and human history from the perspective of Philosophy of Balance, transferring the individual concepts and facts on the common basis of the agency terminology and I systematize them from the perspective of Philosophy of Balance of agency.

The use of concepts such as **Angel, Devil and God** is not a mere presumption, but the term God means balanced supracocontracoagency, therefore that so I took over the idea in agency form and I agree with it, it is probably about the balance (i.e. the love) between waves of the speed of light and the absolute vacuum, the term of Angel is creative and good coagency or destruction of destruction as a contracontraagency, it is probably a sign of the waves of the speed of light and the Devil is a devastating cocontraagency, it is probably a sign of absolute vacuum as the final number of single points of space-time of lower speed than the speed of light and of a zero realativistic mass spreaded out in space-time. From the waves of the speed of light and the absolute vacuum according to the Philosophy of Balance there is all matter composed in our Universe.

In Brno, Czech Republic 29. 1.2002

JUDr. Dalibor Gruza Ph.D.

2. PHILOSOPHY OF BALANCE

2.1 INTRODUCTION

Formation

How was the world created
I want to think now,
whether the answer is in the Being,
in which the mind is lighting.
The mind is a mosaic
determined for folding,
each step forward
is worthy of exaltation.
I'm not free of errors,
anger is bothering me
and the evil deeds of mine
accompany all hopeful.

Performance:

In the confusion of actions,
which are in a war,
I'm thinking about peace
a real fairy tale.
Peace is the ruler of the world,
where each its sentence
means a new formation
or unforgettable termination.
This infinite sequence
represents **the first of the sciences**
obvious to every mind
saturated by its senses.
How to shake off the curse
in the confused Being
that is constantly happening,
the evil laughs at the good.
But even the good wins
and it constantly beats the evil,
finally without winners and losers

they are always splitting up together in Being.
Whose side to take,
when the good wins
or when the evil beats it,
shall I go with the winners?
That's a contradiction of my being
or to go the way of victims
or to take advantage of my force,
to beat the weak.
It should be found
the second of the sciences,
that any of these paths
. is not calm.
The good is always followed by the evil,
the evil, in turn, calls for the good,
peace is not found,
need to wait for war.
Need for victim
for a good cause
for the evil yet
personally to carry
What has changed, however,
the evil as well as the good
escaped not wounded
not diminished.
Therefore, search for **a third of the sciences**
to love the good now
the evil, however, as well as,
to stay in the middle.
In the confusion of agencies of Being
the contract between them
was always closed
and it restored harmony.

Termination

If I want to live in **peace**
and inner harmony to honor,
then I cannot prefer,
the evil and the good reconcile.
The good is real,
if I decide impartially,
when looking for a balance
both to the evil and to the good.
Where is the true center of the
good and evil agencies,
need to find a way,
where there is the least resistance.
There is search for peace

now and in eternity,
it is the highest,
what is Universe.

2.2 ABOUT GOD (METAPHYSICS)

Formation

Where to find the heaven
my mind asks,
Being is happening,
where is only God.
God has to be almighty
and perfectly good,
the agency, however, is infinite
and to the evil generous.

Performance:

I still think,
that God is everywhere,
where Being is happening
and I also believe it.
God, the father of Being
so merges with the overall agency,
his two sons,
we call them the Angel and the Devil.
Angel and Devil
as God, the father of Being
blend in with the good and the evil
and they are part of God.
God as all Being
is **powerful above all**,
he reigns over eternity
and he is **infinite**.
The old agency ends
and a new one initiates,
its work performs
or change is coming.
History of the good and the evil
is so endless,
one thing ends
and the new in turn will begin.
Above all, and in all
God rises
created by infinite total
with his sons.
Who is the creator of
all the good and the evil,

who created God
my mind argues with the enemy.
God is everything,
in which Being is living
good and evil
some even nothing.
Except of something and nothing
my mind knows nothing
and so then it interferes
the almighty and infinite God.

Subagency:

God is double,
good and bad agencies,
evil opposes to all,
the good connects everything again.
The system of Being
the evil forever destroys
the good forms again
together in eternal battle.
Evil thoughts are burning me,
is **God always good**,
when his existent **son**
is **in addition to the Angel also the Devil**.
God is total coagency,
either of the good
as well as of the evil,
otherwise he would have been limited.
God as the greater good
created also a destructive evil
because of the higher balance
for good formation agency.
Something and nothing
make up the agency
in their eternal fight,
by which the whole Being is balanced.
Something and nothing happens,
which stems from the standing fight
of the good coagency
and evil contraagency.
Nothing recedes from something
or it absorbs something
and, conversely, something happens
in the form of their supracoagency.
God is a good father,
who loves their sons,
whether it is an Angel or a Devil,
without blame.

If God loved
just a good son
evil one would be denied,
there would have been the blame.
Because even the Devil
is the blood of his blood,
just like an Angel
inside him he is also happening.
The actual highest good
and therefore God
my mind has found
in love for the good and the evil.
The sons of God fight together,
only the love of the father associates them,
what is the love of the father,
the answer is in the balance.
The God does not take evil or good side,
like the fated scales
in the place of least resistance
historical war he ends.
God is present in each agency
whether good or evil,
God is over the good and the evil,
that each plays on its field.
The fields of the Angel and the Devil
in the history of good and evil
are in balance
thanks to the loving God's effort.
These fields the good and the evil
shall not exceed,
which is a habit for ages
otherwise, one would win.
The good would live forever,
evil would be dead forever,
Being would not happen then,
staying would be endless.
All and everybody would have been
forever perfect,
any imperfection is
Being of agency struggle between the good and the evil.

Philosophy of Balance of agency
doesn't say, what will happen to a soul after death,
whether it returns in another body
or it goes to the good or the evil in eternity.
Therefore, if after the termination of cocontraagency
there is again similar cocontraagency
or there a more numerous agency forms,
so the total co- or contra- or cocontracoagency.

This question is a complex agency,
determined by total agency formation
and thanks to its complexity of nature
it is invisible to thoughts and feelings.

2.3 ABOUT BASIS OF BEING (ONTOLOGY)

Formation

My mind is searching
the basis of being,
has it to be a matter
or just thoughts.
What is God made of,
matter or spirit,
what is the good made of
and what is evil made of.
What is the Being
and what is not,
perhaps it is matter,
perhaps thinking.

Performance:

The dispute is odd
as all Being
is continuously happening
as a whole or individually.
Each **agency** of Being
is composed of the parts
that the mind divides
in a single agency.
The agency initially arises,
then work takes place,
if the change does not come,
so once again it terminates.
But, in fact,
the agency is not many,
there is only one,
it is God for us.
Mind divides agency
in the compound agencies
and the individual agencies
it divides once again.
The formation and **the termination**
the performance separates,
if there is no **change** to it,
which are also compound agencies
Formation, performance and termination

are parts of an overall agency,
in fact, not divided,
existent only in the mind.
The formation is performance
and also the termination,
performance is the formation
and also the termination.
The termination is the performance
and also the formation
and together they are a part
in a single agency.
So smaller agencies
group in the larger ones,
we call them **more complex ones**
containig **simpler ones**.
Individual thinking agencies
do not live apart,
they are a part **of the total agency**
being infinitely.
So God is a matter,
also mind creates him,
the primary is a substance
that fights against mind.
The agency is infinite
complex as well simple,
it does not have a beginning and an end,
it forms a single whole.
Simple agencies
the mind perceives as the **matter**
and more complex agencies
then we call **the idea**.
God as the eternal Being
in the endless agency
is both a complex substance
and also the idea.
In other words mass
forms a perfect idea
and on the contrary the idea
lights imperfectly in the mass.
The frequency of total performance agency
is from the beginning the God's total creation,
as the law of conservation of energy
it remains the same forever unchanged.
This also applies to the individual
formation subagencies,
that in total formation agency
from the beginning are forever present.
Simple agencies cease to exist
and complex ones are forming

or vice versa a system of Being
is associated.
This agency is called a change,
that the termination of agency accompanies,
the old agency changes also
in the agency with the same frequency.
Agencies are **good or bad**,
ones are destroying everything in common,
the second all the common forms,
however, each in their field.
The fields are in the balance
ruled by a total of Being,
which loves its children
an Angel with a Devil.
So various subagencies
both good and bad,
which I call co- and contra-agency,
create a supracocontracoagency.

2.4 ABOUT COGNITION (GNOSEOLOGIE)

Formation

The world is discovered by the mind
that we saturate through our senses.
The mind is good or bad,
what is its historical role?

Performance:

The Mind is a complicated agency
the result of the simpler agencies
coagency of goods and evils
in a certain way compounded.
Every mind is good and bad,
each is composed of subagencies,
in subagencies it is different from the other
and yet similar in complexity.
The minds of the individual people
form contracoagency of all minds
similar by its complexity
by formation, termination and performance agencies.
The mind is **the degree of coagency,**
the result of the agency development,
similar by the frequency of agencies,
capable of higher coagencies.
The similarity of different minds
on the one hand by the agency frequency
on the other hand by subagency composition

manifests in a similar thinking.
What is the total coagency
resulting from the **thinking of all the people**,
it is the product of goods and evils
in essence, eventually in balance.
Mind and thinking of each of the people
we call multiple coagencies.
What is, however, **a perfect mind**,
which understands all sense?
Such a mind includes
all the simpler agencies,
it's a complex of all individual agencies
that belongs to omniscient God.
They are all individual agencies,
in other words God,
who knows everything,
otherwise, the formation of all cocontraagency.
Our limited mind understands
only the material and thought agencies,
infinite and omnipotent God's total mind
rules each simpler or complex agency.
Therefore, God always sees
all the good and the bad
in our human mind
in the form of formation agency.
God also sees everything
both good and bad agencies in the world
in the mind of a son
whether the Devil or the Angel.
Where to find the material world,
who can tell us about it,
is the truth hidden in the senses
or is it better to think about it.
The complex agency is the mind,
simpler is a human sense,
both contain simple agencies
whose construction is similar.
This building is tangible,
which is also a form of agency,
with similar subagencies,
which the objects of the senses tend to have.
Therefore it is also possible to say:
"**properties of matter, senses and mind**
are for all agency units
customary to all of these coagencies ".
For example time is in the mind,
however senses includes also it,
it is also in the mass
in the simpler or more complex form.

Objectivity, the mind and the emotions
belong to the whole of Being
as **more or less**
similar and numerous agencies.
Human emotion, mind and sense **explore faithfully**
material simpler agencies,
than it itself is,
because it contains them in its agency building.
Suprareasonable supra-and sub- agencies
are accessible to emotion,
in which a complex God we see
in the evil, the good or the whole.
More complex **agencies of the human mind**
are **suprasensory coagencies**
tangible subagencies postermination changes
which contain material a priori sentences.
The link of all the agency
is hidden in its total unity,
that our mind divides,
in fact however it flows continuously.
By senses we perceive the simple agencies,
which we call also matter,
mind also more complex coagencies,
that are revealing their complex construction.
Sensory and material perception
and related thinking
are the formation of performance formation agency
others thought is its next performance and termination.
Complex ideas of logic
and simpler perception of the senses
are the formation agencies
of all human cocontraagencies.
The formation of human contracoagency
progresses from simple agencies
perceived by the human senses
to more complex agencies of the mind.
The mind and the senses as agencies
are the product of the agency good and evil,
therefore, any idea is
correct from an Angel and wrong from a Devil.
The good and the evil belong to everything Being
and between them the balance is,
therefore, success and failure in facts
illuminate, which idea is right.
In other words, performance and termination
light at every agency,
if this agency formation
is really in balance.
In fact Being

is all cocontraagency
therefore both the good and the bad at the same time,
the right path is the path to balance.

2.5 ABOUT CORRECT THINKING (LOGIC)

Thinking as the path of true knowledge
is in its agency always good or bad
in the form of co- or contra- agency,
properly however **in balanced group**.
The way of unbalanced **thinking**
always either our mind
or material simple agencies reveal,
if we go on further sensually.
The conclusions of a simple agency
the mind changes in the complex ones,
the way is the intellectual complexity,
that is in matter such as simplicity.
Thinking on the other side
does not think about simple agencies
but the complexity explores,
that simplicity is remote.

A/supracoagencis of the mind:
1. **the judgements**
1.1 **positive judgement**-coagency or contracontraagency
1.2 **negative judgement**-contraagency or contracoagency
1.3 **general and partial and unique judgements**-supraagency and subagency
1.4 **judgements that tell us, what is**-formation agency
1.5 **judgements that tell us that something is necessarily**-formation supraagency
1.6 **judgements that tell a mere option**-formation subagency
2. **judgments**
2.1 **syllogism**-subagency supracoagency subagency (assumptions-subagency and supracoagency, conclusion-subagency).
3. **evidence**
3.1 **principle of dispute** (the same cannot at the same time and in the same respect exist and not exist)-coagency and contraagency
3.2. **principle of identity** (A = A)-the same agency composed of identical subagencies
3.3. **principle of the excluded third** (between being and not being of the same factual context of situation there is nothing the third)-
co- and contra-agency
3.4 **principle of sufficient reason**-of formation subagencies of certain agency
4. **incorrect thinking** -contrasupracoagency
B/subagencies of the senses and the mind supraagencies
1. **judgment of the induction** (the actual validity of the sentence for cases falling under it)-formation supracosubcocontraagency
2. **judgment of deduction** (inference of specific from general)- subagency of formation supracoagency
C/summary of the supraagencies of mind
co-, contra-, supra-, same-, sub-, formation, termination, performance agency

2.6 HOW TO LIVE (ETHICS)

Formation:

My mind asks,
how does one should live
to feel blessed,
in the soul he or she had a peace.

Performance:

Being is in balance
both good and bad,
let us approach to this agency
the eternal natural harmony.
If you want peace in the soul,
in the middle you must stay,
love the good now,
the evil however too.
In the confusion of agencies of Being
the contract between them
was forever closed
and it restored harmony.
If I want to live in peace
and inner harmony to honor,
then I must not **prefer,**
the evil and the good reconcile.
The good is real,
if I decide impartially,
when looking for a balance
towards the evil and so to the good.
Where is the true center of
all the bad and good agencies,
need to find a way,
where there is **the least resistance**.
The path is not to give up,
if I want to live in peace,
inner and outer peace
in my being still experiencing.
Otherwise, you do not escape the curse
in the confused Being
that is constantly happening,
the evil laughs at the good.
But even the good wins
and it beats the evil constantly
finally, in the peace of Universe
they part without losers and winners.
Whose side to take,
whose sword to raise,

when the **good wins**
or when **the evil beats it**.
That's the contradiction of the human being,
whether to go the way of a victim
or to take advantage of our force
to beat the weak.
It is necessary to learn
and in the life to try,
that none of these paths
is calm.
The good is always followed by the evil,
evil calls in turn for good,
peace is not found,
need to wait for war.
Need for a victim
for a good cause
for the evil yet
personally to bring.
What has changed however,
the evil as well as the good
not wounded escaped
not diminished.
If I do not find the golden center,
if I do not go the quiet path,
I will not escape good or evil fight,
however the overall harmony is not broken.
Even without my undue struggle,
from the power of the Being
infinite harmony of Universe will be constituted,
the soul however does not miss the pain.
Balanced behavior
however multiple
is not good or bad,
but it is balanced.
Against excessive evil,
it defies in the good
against excessive good
it lies in the evil.
Against a balanced behavior
only the excessive evil
or excessive good
always fights to the essential extent.
Balanced behaviors
are basically the formation,
which reconcile in total supracoagency
all the good and the evil.
Balanced behavior
partly accepts
and partially denies

the evil and the good in the agency.
When I say it in other words,
the good or the evil in the agency
still reconcile each other
by partial contra- or co- agencies.
The necessary courtesy to the good and the evil
does not mean that I refuse the **war**,
if it is the cocontraagency golden center,
I have to be ready to fight now.
To find a center of various agencies,
or the contract between the good and the evil,
you cannot just invent,
but also suprareasonable emotion is necessary.
Mind only sees a simpler world,
where emotion can also enter,
emotional cocontracoagency
reaches above the celestial spheres.
This gold center
is only a moment,
reconciliation of early agencies
should always be found again.
Therefore **different communities of people**
see this **center depending**
on their habits,
also according to the circumstances.
These circumstances are different,
however, also similar
always in the special agency situation
however in the total unity in the agency.
Agencies are good or bad,
behavior partly predetermined,
if it should be determined fully
the evil as well as good would be irreversible.
Thanks to the good formation coagency
a bad man can reach harmony,
thanks to the evil and destructive formation agency
a good man can fall for bad.
In the context of the formation of formation agency
predetermined conditions are included,
however, the mind shapes also the other agencies,
the overall balance accomplishes.
Thinking is thus given by
physical (material) sensations, its device,
however if it is happening,
it must be partially free.
Formation agency performance
is so a separate agency,
that is only partially given,
conditioned by its formation.

Unlimited in its formation
by other terminated agencies
is the agency of God's whole,
in which a man participates.
The formation of the total agency
is completely unlimited,
it is not any supra-or sub-agency,
of which even partial formation it predeterminates.
The independence of the total agency
each agency partly contains
in its partial formation then
as part of the unlimited complex.
Free human will
so shapes the human agency,
that is subjected only partially
by the other agencies.
The only thing what is fully determined to
good and evil agency,
lies in the existent harmony,
which will be done in time.

2.7 STATE AND LAW

Formation

How are we to understand the State,
the mind must be asked,
there are many forms of States,
how to unite them in one?

Performance:

State is possible to define
according to its three individuals
the formation of formation agency,
the first of these is **territory** .
The second is **the sovereign power,**
therefore State supraagency,
the third is **community of people,**
it is the same with coagencies.
Agent in the State
submits everything,
persons and things on the territory
with the relevant exceptions.
State-forming supraagencies
are either good
or they are evil,
destructive or creative.
Contraagencies include

according to the originator of the supraagency
tyranny and oligarchy
aristocracy and monarchy.
One reigns in monarchy and tyranny,
several people in aristocracy or oligarchy,
in democracy people rules
in politeia or perfect democracy everyone.
In these States however
just a group of people reigns,
the exercise of this power
is not supracoagency.
Such a bad government,
where there is a permanent betrayal,
because it is not supracoagency
between good and evil living beings.
Nor the way of government
does not know the right freedom
against the violence of its living
and their contracontraagencies.
Next the decided agencies
are composed of many,
under the government of just called
it means to think in a limited way.
To thinking of complex civil agencies
decided by the government of the State
it is necessary to use both thinking and emotion
of each supracoagencies agents.
The ideal State is supracocontracoagency
the harmony between subsidiary good and evil,
thus the contract of all the living
whether they are good or bad.
Only then all agency actors
find the right of harmony,
that the minimum of agencies contrasts,
if it is **a perfect democracy**.
If we want to differ the State,
we have to ask subagencies,
according to the representation of the agent in the State
there are **republics and monarchies**.
In monarchy the State's agent
the monarch embodies or represents,
in the republic it is a parliament
or it is the elected president.
Contract of agents,
which is enforceable
is called **the law**,
which is a set of norms.
The law is natural
not quite the same

is the fair law
according to the frequency of agency.
Natural law is supraagency
standing above the ordinary law
but also the fair law,
it is the law valid forever.
The natural and eternal law
is the total formation agency
the conclusion of historical Being,
in accordance with the performance whole.
It is the perfect supracocontracoagency,
that is the contract between the good and the evil,
where is all agencies,
at least against each other.
The law is only **fair**,
if it is accepted by all,
to thoset it is then applied,
because they all use it.
Such a legal compromise
includes both the good and the evil in the form of
the least contrasting supracoagency,
which is not cancelled by anything.
An imperfect reflection of the fair law
is today's democratic form,
because the general State-forming power
reflects the civil supracoagency.
What **law** is **evil**,
the law accepted only by someone,
then the law obviously harmful
although agreed by all.
Furthermore, I've been thinking,
when to call the State law,
to fight against contraagencies,
even if it is the evil or the good.
Even the good can be infringing,
to depart from the middle way,
because after an overly good agency,
the fateful scales balance it by the evil.
Freedom in the first place is
as a part of the total agency,
that is limited by nothing,
in the form of subagency of the individual.
It is only possible
to find a simple overall harmony,
when the State law
does not restrict the individual in his or her supracoagency.
Therefore, every time we need
personal equality and freedom,
which recede then,

when in something they **do not work**.
This is the case in the first place,
when simple agencies
are **abhorrent** to **common harmony**
however only in relevant extend.
Perfect democracy
tolerates and ensures
according to the equilibrium point
the good and the bad living.
Penalties for the opponents
are not as offense numerous,
but are the balance
in the good and in the evil.
The essence of the extent
is always from the greater part personal
according to what persons
conclude social contract.
Secondly, it is because
when we are dealing with **a complex agency**,
which is decided together
by social thinking and emotion.
If it is some kind of non-independence
in the case of supraagency,
it should be the equal supracoagency
not the unequal contraagency.
In **the past**, when freedom
was less supracoagency,
the law gradually more balanced
was fair and balanced.
In the form of monarchy,
aristocracy and democracy
so still more complex supracoagency
interpersonal struggles were weighted.
The government of the individual, monarch
and a **still growing group**
flowed from together to reconcile
the good and the evil in supracoagency.
In **a perfect democracy**
the evil and good higher contract
is the almost supracoagency fellowship
all the evil and the good conciliated.

Note:

Law as a social contract meets the requirements of similar construction **elements of the legal act**. For example in the Czech Republic it is the **consent of the subjects** of the social contract given on behalf of the authorities of the legislative power (cf. article 2, paragraph 1, of the Constitution of the Czech Republic). Requirements relating to the **will**, namely its fact (given), the freedom and the seriousness and accordance of the relatonship of will and expression are provided within the framework of the legislative process in the article. 37 et seq. of the Constitution of the Czech Republic and in the rules of procedure of the Chamber of deputies of the Czech Republic and the Senate of the Czech Republic. In my opinion the legislative process

represents the equivalent of a complex **contractual process**, including in particular the draft of law and its approval. The most important requirement of **the freedom of the will against the violence and threats** is protected by article. 26 of the Constitution of the Czech Republic but also in § 92 of the criminal law about the criminal act of subversion. Request relating to the **subject matter of the law** as the social contract, namely its **possibility and accordance with the accepted principles of morality** is expressed in particular in article 2, paragraph 3 of the Constitution of the Czech Republic, which provides that State power is used for all citizens. Request of **terms of expression of will** is expressed in article 52 of the Constitution of the Czech Republic, which stipulates that for the law validity its publication is necessary. **Apart** from the classic legal acts applies however the principle of majority and apart from the private legal acts assumption of correctness of a legal act.

2.8 ABOUT BEAUTY (AESTHETICS)

Formation

The highest desire of people
is to experience the harmony of
the good and the evil
total coagency.
Total coagency
is **the right God**,
the meeting with him
can be through **art**.
Art **links**
the material sensory contracoagencies
to suprareasonable and suprasensory
Divine harmony.
God in the idea
is usually lifeless,
but by the hand of an artist
he becomes real.
God in the mere matter
is lost in the Being,
in the infinite multiplicity
he is difficult to be found.
Art allows us to
know the existent harmony,
as the material one
so one in the invisible agency.
Sensory agencies
are good or bad
in the range of frequency
of material fact.
Even in the mass
we will find the center
between the good and the evil
with the least resistance.
Extrasensory frequency
to the material agency

are the simpler agencies
as well as more complex.
The human mind explores
perfectly just the material agencies,
imperfectly as well numerous agencies,
as it itself is.
Imperfectly understood in Being
by our mere human mind
simpler and more complex agencies,
than the tangible sense perceives.
To penetrate **to the overall agency**
to its God's complete harmony
it is possible through art
through perception, thinking and emotions.
It is imperfectly thought
saturated by human senses,
only an **emotion** can
actually experience it.
Through emotion we penetrate
to the Divine harmony
to the lowest and the highest
agency good and evil.
Art is therefore threefold,
the highest stands in supracocontracoagency
the presence **of God**,
which is captured in **extrasensory harmony**.
The path leads then towards it
through the senses and the mind
only imperfectly
perfectly just by empathizing.
Additionally we can view the
material agency balance,
which emotion perceives
we can use the senses but also the idea.
All of these existent overall agencies
are supracocontracoagency,
all good and evil center,
which contradicts to these agencies at least.
And now for the third time
it is in the matter of the artist
the image of an Angel and a Devil's agency
the extrasensory good and evil.
The evil is contraagency,
that destroys the common,
the good is coagency
to a common creative.
Harmony of agency
is subject to change
depending on how in the history

cooperating agencies are changing.
Therefore the value of the art
changes the time
the other is, of course, now,
other tomorrow again.
Art that remains in a number of agencies
in the historical center,
is in fact only **the timeless**,
as with time the quantity of agencies grows.
It depends also on viewer and the environment,
in which the work is exposed,
even those belong to the subagency,
that partly co-form the overall harmony.
If **the work is just artist´s**
personal expression,
it must be extrasensory
good or evil.
Such art,
that is not the harmony
or it does not penetrate beyond the material,
is recognizeable on its value.

3. INTRODUCTION TO THE HISTORY OF PHILOSOPHY AND MANKIND

God has called his two sons,
to leed the debate
what have been the human acts,
whether people lived according to the law.
Angel with Devil came to the father,
to discuss their actions with him
and God decided, together with the law,
what will be the human history.

4. RELIGION

4.1 INTRODUCTION

Many **religious agencies**
differ from philosophy,
which rather relies on thinking,
religion is mainly the emotion and faith.
The mere faith without thinking
denies unity and degrees in agency,
there are no emotions without thinking,
otherwise the Devil deceives mankind with them.
The majority of creeds commits error,
they do not believe, that God loves both sons
good creative Angel and destructive Devil,
that it is intact supracocontracoagency balance.
Some religious teachings
preach such contracontracoagency,
that human **evil**
just the same devastating evil removes.
As the good will prevail
it destroys evil forever,
history on its end will establish
the eternal coagency.
Such a termination of all agency
contrasts against God´s agency formation,
Being that does not love its part
. itself **is contradictory.**
Being is both good and bad,
these are two sons of God,
among them God divides agencies
and they are without blame.
God is the total agency
composed of their sons,
who are the good and the evil,
they blend in with all the Being.

4.2 HINDUISM

Co- (or contracontra-) agency (Angel):

In India raided a tribe of Aryans

which means noble and dignified,
and it found the fountain of all knowledge
in **learning** of their priests **Brahmins**.

Contra- (or contraco-) agency (Devil):

The conquerors divided the people
into four major castes,
which prevented them to live
their own reality.
They denied the world of matter,
so the beaten opponents
stayed forever separated
in the dregs of society.
The world of the senses they called delusion
custom Indian expression Maya,
the path of scientific knowledge
remained closed for ages to them.

Co- (or contracontra-) agency (Angel):

Although they lived in a tangible (material) misery,
however in the coagency integrity
they were very forward,
when they explored the emotional world.
They found the way to a powerful God,
even if they denied their senses,
by which a man thinks,
through emotions they came to the agency whole.
Right was the knowledge,
there are also more complex agencies,
than the mind and senses explore,
which understand only empathy.
This teaching of which father
is Yajnavalkya,
his successor
Shankara's vedanta.

Contra- (or contraco-) agency (Devil):

This **path to God**
as the agency whole
seems actually much **harder**,
as the more complex agency contains the simpler ones.
We cannot ignore
a simpler world
and only to rely on supracoagency emotion,
finally in the invisible world to get lost.

Supracocontracoagency (God):

One cannot commit
permanently
to let win
good or bad.
Because of the balance of
the Angel and the Devil's agencies
the paths of Brahmins
were captured by the light and the dark.
In the secret teachings
or upanishads of the Vedas,
or belief sciences
they investigated remote agency.
They recognized the unity of the world,
that is hidden in the agency,
secret the matter remained,
that human need heals.
They penetrated to the agency unity in the heart
embodied in an unlimited God,
they denied however the mind
and its brother the sense.
It was not possible to reach further,
where they **do not appreciate supracoagencies**
of whatever good or evil
expelled people.

4.3 JUDAISM

Co- (or contracontra-) agency (Angel):

I created the whole world
everything what is good in it,
what is possible to behold
and what you do not behold through vision.

Contra- (or contraco-) agency (Devil):

I created the whole world
all its evil
everything you can think of
and what the human eye can see.

Supracocontracoagency (God):

I gave the world **order**,
both my sons I love
I determined their scope
in the Earth and heaven.

I have also created a **man**
good and evil servant
able to go to the supreme goodness
to agency balance in good and in evil.

Co- (or contracontra-) agency (Angel):

I created the paradise garden
which did not know the evil,
only on one of the trees
bad apples grew.
Adam lived in the garden,
to whom God created Eve,
in the excellent prosperity,
to escape the evil of the world.

Contra- (or contraco-) agency (Devil):

There is not good without evil,
but both dwell by God,
if the man wants to continue to be,
he or she must understand both.
Because I let a man
to eat bad apples,
in order together with God the father
he or she does not reject the evil son.
I wanted a human death,
to be able to win,
to beat the Angel
and so to save the human world.

Supracocontracoagency (God):

The man, who recognized the sin,
is **similar to God**,
he or she does not feel the Devil's eternal death,
he or she will not live forever with Angel.
He or she will be torn in the world for some time
with the agency good and evil,
until the time like the God
he or she **restores the harmony between them** again.

Contra- (or contraco-) agency (Devil):

A man thanks to me
God banished from paradise,
in order to live further in the world
between good and evil.

Supracocontracoagency (God):

So the man began
to die with the Devil
but like an Angel
also their children to do.

Co- (or contracontra-) agency (Angel):

I led Abel
Adam's son,
to live with the good
and to fight against the evil.

Contra- (or contraco-) agency (Devil):

I led again Cain,
to revenge on the Angel
and that his favourite Abel
he destroyed forever.

Supracocontracoagency (God):

Angel wanted to kill Cain,
so a destructive evil was afraid of evil,
I conciliate both however
and Cain remains alive.
By the penalty remains kept
general balance of
Angel's Good
and the Devil's evil.

Co- (or contracontra-) agency (Angel):

After the death of Abel
I have chosen Noah,
to fight for the good
and from the world the evil to remove.

Contra- (or contraco-) agency (Devil):

I called my sons,
by people regarded as gods,
to do their own other children
and so the curse would win.
So I almost won,
Angel forever crushed,
if it weren't his Noah
yet the evil rejecting.

Supracocontracoagency (God):

The victory with the Devil
and with his evil people
I can't ever admit
and evil I will destroy with the Angel.
The divine balance
will be preserved however,
because even Noah with his sons
is also good as well as bad.

Contra- (or contraco-) agency (Devil):

My favourites
were drowned,
Canaan was against his father
a bad man to his nakedness.
So the cruel struggle between the good and the evil
will continue,
until the person stops to prefer
my fight or Angel´s battle.
I gave a man
such an idea,
that only in the mass
the heaven is hidden.
He began the construction of the Tower of Babel,
for themselves he or she conquered the divine heaven,
so he or she believed to his or her touch
instead of thinking and emotion.

Co- (or contracontra-) agency (Angel):

When I saw those actions,
I sent the evil at a man
so that the evil got punished
and the good was satisfied.
So a man was dispersed
in all the vast Earth
and his or her same speech was confused,
that kinds did not understand each other yet.

Supracocontracoagency (God):

God took pity on the people,
who though they live, they cannot see,
that it is not correct to side
to good or evil agency.
That between the good and the evil

the balance rules**,**
that in search by man
is the interaction of God.
God called Israel,
that they tried in Being
to understand the whole Being
in good and bad supracoagency.

Co- (or contracontra-) agency (Angel):

I chose Abraham,
to give him his country,
at first only the wealth and the herds
for his faithfulness to me.

Contra- (or contraco-) agency (Devil):

I hate the forefather Abraham,
because he serves to an Angel,
therefore, his wife is barren,
to serve the Devil too.
His first wife Sarah,
humbled Hagar,
who gave the father a son,
his name is Ishmael.
Sara despised Hagar,
who left her camp
released at the mercy of her death
lost in the vast desert.

Co- (or contracontra-) agency (Angel):

I can't look at the work of the Devil,
therefore I will give Sarah her son,
Ishmael will be also a nation
that will fight with his brother.
Isaac was born to Abraham,
whom he wanted from the ill will of the Devil
on God's mountain in the fire to sacrifice,
which was prevented by the work of an Angel.

Contra- (or contraco-) agency (Devil):

I would not give up my fight,
with Lot's tribe
I fought by my armor
and I caused its deterioration.

Co- (or contracontra-) agency (Angel):

I did not give up my fight
and the bad I hunt with bad again
by the destruction of the city of Sodom,
from which only Lot fled.

Contra- (or contraco-) agency (Devil):

From an Angel´s protection
I will release the sons of Abraham and Isaac,
Jacob and Esau
in the mutual fratricidal fight.

Co- (or contracontra-) agency (Angel):

Against the Devil in their fight
Jacob moves away from Esau,
so they would reconcile
and their families were founded.
I have chosen Jacob
and I give him his own country,
because in the agency battle
he is chosen to beat the Devil.
The name of Israel I give him,
that is, "who struggles with God"
even with his evil son the Devil
against the balanced state.

Contra- (or contraco-) agency (Devil):

Jacob desires to obtain a fortune
which is my work,
he takes it from Lot's tribe
and he causes so much evil.
The evil I give among
the sons of Jacob,
who hate brother Joseph
because of the love of Angel.
I'll throw Joseph into Egypt,
let him there in poverty die
so my revenge is final,
when even Jacob dies.

Co- (or contracontra-) agency (Angel):

I freed Joseph
from Egyptian slavery,
so he would reign in addition to the Pharaoh
in his vast country.

I've brought Joseph´s brothers
to a deadly hunger and poverty,
so they would prostrate to Joseph,
when begging for food.
Next I will also urge my test
if they leave Benjamin
blood brother of Joseph
although the promise and the love of his father.
At the brothers the good won,
the fault was removed from them,
but not permanently
and also not Joseph's evil.
Brothers and also Joseph's family
descend to the Pharaoh´s Egypt,
along with his father, Jacob
who is dying with the blessing.

Contra- (or contraco-) agency (Devil):

Joseph humbled his brothers
who released him into slavery,
Joseph then enslaved the Egyptians,
it was the turn of my victory.
The Egyptians hate Joseph very much,
it will take effect on the next generation,
the Israelis stand here for the slaves,
building Pharaoh´s tombs.

Co- (or contracontra-) agency (Angel):

I listened to the cry of my people
and I sent Moses,
to bring them back from Egypt
performing miraculous punishments.
This is the famous
ten plagues of Egypt,
which atones for an evil guilt
of the mighty Egyptian nation.
When the Egyptian army
followed the Israelis going from Egypt
with evil mind in their cars,
the sea level closed over them.

Supracocontracoagency (God):

I have instituted the Passover
so the Israelis would know forever,
that the hand of my son Devil
slaps even those who were not guilty.

As the good causes the evil
and the evil calls again after the good
there is need not to prefer one
so that the balance prevailed.
So the good of an exodus
follows a bad death of an animal
or even an Egyptian infant,
to achieve the settlement.
And I instituted a **contract**
with the tribes of Moses's Israel
embodied in my ten commandments
of net cocontracoagency.
The first three of commandments
are formation and performance agencies,
concerning God's image
and the same thinking and emotions.
The other seven commandments
are from Angel´s hands,
they struggle against the evil agency,
they are cocontracontraagencies.
These other commandments
are the Angel´s goodness,
which do not apply without reservation
the balance is substantial.
The higher good of the heavenly balance
of good and evil agency,
which penetrates Being,
is the commandment of the impartial third.
Only just man reaches the paradise,
the inner and outer harmony,
he or she blends with the divine agency,
the balance between the good and the evil.
God with his sons,
mingling all the time with the overall agency,
with a good Angel and an evil Devil,
he finally will be at the finish.
And I made a tent of God
as his path of overall balance
between the good and evil agencies
as a victim of higher supracoagency.
The evil consisted in grasping the God
into the agency of the material world,
when God is the agency total
invisible to the human eye.
Yet in this temple of God
God was closer to the people of Israel,
both to senses of plain people
and also to the complex divine science.

Contra- (or contraco-) agency (Devil):

And I turned away the Israeli people
off the idea of greater harmony,
in life and forever to honor it
and to live the peace of God´s supraagency.
They embodied the wholeness of agency
in the idol Golden calf
and not for the servant Moses
they lived on in the earthly hell.

Supracocontracoagency (God):

With Moses´s faith
and also with my hand
I let the good to talk
and to kill the most rebellious people.
I made the contract again
for the Israeli nation
and I restored the balance
in the view of the future defiance.
The one who is not looking for a historic peace,
he or she is looking for protection in the firm order,
where subagencies both good and bad
meet alternately.
So in any unchanging procession
we serve alternately to the good or to the evil
in their endless fight
without the balance of agency.

Co- (or contracontra-) agency (Angel):

According to my ancient promise
I give the country to the Israeli nation,
which I'll take away from shameful people,
that fell to my brother Devil.
I lead my people of Israel
to fight for my truth,
to retaliate to my enemy,
who got used to win here.

Contra- (or contraco-) agency (Devil):

Against Angel's plan
to conquer the whole Palestine,
I woke fear in Israel
manifesting in the revolts.

Co- (or contracontra-) agency (Angel):

I suppressed the revolt,
by evil I repay to the evil,
until Israel covers the guilt
and enters into Canaan.
Forty long years
they will cling in the desert
and on this journey
there will be the termination of the entire generation.

Contra- (or contraco-) agency (Devil):

Israel is also similar to the
other places on the Earth,
those elected by Angel
are my enemies.
The Angel´s good agencies
are ruining my bad agencies
and my historical evil
destroys the good of Angel.

Supracocontracoagency (God):

Who allowes to drag him- or herself in a circle of
Angelic and Devilish battles
he or she will never find my peace,
only if he or she is looking for without resistance.
So in Israel
Joshua will kill and oppress the Palestinians,
up until today,
the Palestinians are again taking revenge and are starting bad agencies.
Long wars are lasting from ages,
where winners and losers alternate
once under the direction of Angel
for the second time under the tutelage of evil.
Way out of this cycle of
war of the good with the evil,
otherwise an Angel with a Devil
one will find who will bring balance.

Co- (or contracontra-) agency (Angel):

I led with my hand Israel
during the occupation of their country,
and no one escaped to my anger,
who raised a hand to the opposition.

Contra- (or contraco-) agency (Devil):

I spurred and supported in the fight
powerful Israeli oponents
Philistines, Babylonians and Persians
for their Angelic leader.

Co- (or contracontra-) agency (Angel):

When the number of years was reached,
when lasted my cruel punishment,
I called for Boaz and Ruth,
to change the fate of Israel.
Alien Ruth has become foremother
of her Jewish King David,
Boaz was his forefather,
so they would win with an Angel.
First by the hand of Samuel
I chose Saul to be the King,
howeve, the hand of evil Devil
won him almost to his side.
So I let him get killed
through the hands of the troops of Philistines,
on his place I called David
the faithful servant of my goodness.
By a foreign hand of wicked men
I hurt the enemy,
bad people were so affected by the evil,
it is the end of the Devil's seed.
David founded the powerful State
and his enemies he began to dominate,
in followance of my good
there was not the similar one on the Earth.

Contra- (or contraco-) agency (Devil):

The victory of Angel over me
would throw off the agency balance
therefore I instigated the bad
in the native house of David.
David loved Bath-she-ba
the wife of Urijah,
whom he let kill,
so that he could fornicate with her.
Despite the death of their son
bad fault is not repaid permanently
and the destructive work of the Devil
continues in the agency of another son.
David anointed as a king
the son of Bath-she-ba
the wise Solomon

the brother of Adonijah.
Adonijah bragged:
"I'll be the king of Israel",
therefore, he was betrayed and executed
by the right David's heir.
Solomon ruled wisely,
he served to an Angel,
towards the end of his life pilgrimage
he did not perform his will.
After the death of the king Solomon
I brought controversy to Israel,
other numerous tribes of Israel
lined up against the Jude king.

Supracocontracoagency (God):

A man who read well
Jewish history,
he or she understands the **total cocontracoagency**
of higher contract.
The lower contract
is the contract of good,
which hates the evil,
eternally it fights with it.
My sons are,
both a good Angel
and the love of paternity
has also a bad Devil.
Therefore if you are looking for **God**,
search, where is **the balance**,
that shows the least resistance
both to the good and to the evil.

First Moses´s 1.27
So God created man in his own image, in the image of God created he him;

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First Moses´s 1.31
And God saw every thing that he had made, and, behold, it was very good. And the evening and the morning were the sixth day.

Job 1.6
Then the day came when the sons of God came to present themselves before the LORD, Satan came also among them. (Czech study translation) Tu nastal den, kdy přišli Boží synové, aby se postavili před Hospodina; mezi nimi přišel také Satan, aby se postavil před Hospodina. (Český studijní překlad) Now there was a day when the sons of

God came to present themselves before the LORD, and Satan came also among them. (King James Version)

Job 2.1
Then the day came when the sons of God came, and to stand before the Lord; among them Satan also came to stand before the Lord. (Czech study translation) Tu nastal den, kdy přišli Boží synové,a aby se postavili před Hospodina; mezi nimi přišel také Satan, aby se postavil před Hospodina. (Český studijní překlad) Again there was a day when the sons of God came to present themselves before the Lord, and Satan came also among them to present himself before the Lord. (King James Version)

First Moses´s 22.2
And he said, Take now thy son, thine only son Isaac, whom thou lovest, and get thee into the land of Moriah; and offer him there for a burnt offering upon one of the mountains which I will tell thee of.

First Moses´s 22.12
And he said, Lay not thine hand upon the lad, neither do thou any thing unto him: for now I know that thou fearest God, seeing thou hast not withheld thy son, thine only son from me.

Who is the **member**
of this higher contract,
if this one is limited
or if they are all.
The God is the total Being
of all individual agencies
whether it is bad or good,
he holds the overall balance.
What is not clear,
therefore let us seek for,
how in the amount of contracoagencies
to achieve the total center.
Agencies are composed
from the smallest unit agency,
therefore the right
is always hidden in all.
As in the Jewish Tanakh
so in philosophy,
in any of the agencies
of the whole Being.
Every higher cocontraagency
is looking for a higher contract
of individual goods and evils,
their balance.
Each of the people
is looking for the balance
even in his or her agency,
its higher contract.

The fifth Moses´s, 10, 17-19
17 For the Lord your God is God of gods, and Lord of lords, a great God, a mighty, and a terrible, which regardeth

not persons, nor taketh reward: 18 He doth execute the judgment of the fatherless and widow, and loveth the stranger, in giving him food and raiment.19 Love ye therefore the stranger: for ye were strangers in the land of Egypt.Those who **will not go through right center,**

they will still be torn
between the good and the evil agency
in their constant struggle.
They then will not **find peace**
regardless of their faith,
in the fight for their only begotten God
they will be alternately under control of the good and the evil.

The fifth Moses´s 28,63
And it shall come to pass, that as the LORD rejoiced over you to do you good, and to multiply you; so the LORD will rejoice over you to destroy you, and to bring you to nought; and ye shall be plucked from off the land whither thou goest to possess it.

4.4 CHRISTIANITY

Co- (or contracontra-) agency (Angel):

As a messenger of the good
Jesus was destined,
the son of King David,
for a hard battle with the evil.

Contra- (or contraco-) agency (Devil):

Jesus, the enemy
I followed from his birth,
from the will of King Herod
the children have been murdered.
Jesus escaped however,
with his father
Mary´s Joseph
to Egypt he fled.
The Prophet John the Baptist,
who proclaimed
Jesus for the son of goodness,
therefore I killed.
To Jesus, tempted in the desert,
I offered my friendship,
he stayed faithfully
on the good side.

Co- (or contracontra-) agency (Angel):

Jesus walked through the country
with his disciples,

there he caused miracles,
and gathered the crowds.
He fought against the evil,
in his deeds and in his word
he spread the glory of God
and he served the good.
He won in the fight
against the evil agency,
till throughout Israel
they believed him as to the king.
He cleaned up the Temple of God
from the traders with the victims,
who blatantly got very wealthy
on their goods.
He predicted the victory
in the endless cruel fight
of the good against the evil
in the historical conclusion.
This victory has to come
after many hate,
which the Devil´s followers of the evil throw
against the supporters of the good.
In that fight there is a need to persevere
on the side of the good faithfully to stand
and after winning cruel fight
and after suffering to come to salvation.

Contra- (or contraco-) agency (Devil):

To be in the God's country
almost crushed
it could not happen
and there was quite a turnaround again.
The people dismissed
the good Jesus as a king
and they called on the square
for his evil death.
Finally from the Roman power
and from the will of the people
he had to die
cruelly on a wooden cross.

Co- (or contracontra-) agency (Angel):

The final victory of the Devil
cannot be an eternal truth,
therefore Jesus, the incarnation of goodness
after the death he arose to the life.
His twelve disciples

spread the Christian doctrine
to the entire known world
and there were a series of successors.
Christianity in the West
penetrated to the secular government
and together with the Royal power
it filled for ages the history.

Contra- (or contraco-) agency (Devil):

When Christianity spread
along the world the angelic good,
I woke the enmity towards it,
that caused the martyrdom.
Then I broke into its ranks
and others I began to pursue
fearing of the knowledge
and of looking for the right truth.

Co- (or contracontra-) agency (Angel):

The one who read well
the Christian history,
they found also there
the order of higher contract.
Jesus preached however
lower contract order,
that hates evil,
eternally it fights with it.
Jesus understood also perhaps
the order of higher contract
that the sons of supracoagency God
are as the good of Angel, so the evil of Devil.
Therefore, if you are looking for God,
search there, where is **the balance,**
that both to the good and to the evil
puts the least resistance.

Matthew´s Gospel 5,43-48
43 Ye have heard that it hath been said, Thou shalt love thy neighbour, and hate thine enemy. 44 But I say unto you, Love your enemies, bless them that curse you, do good to them that hate you, and pray for them which despitefully use you, and persecute you; 45 That ye may be the children of your Father which is in heaven: for he maketh his sun to rise on the evil and on the good, and sendeth rain on the just and on the unjust. 46 For if ye love them which love you, what reward have ye? do not even the publicans the same? 47 And if ye salute your brethren only, what do ye more than others? do not even the publicans so? 48 Be ye therefore perfect, even as your Father which is in heaven is perfect.

Matthew´s Gospel 26.50-54

50 And Jesus said unto him, Friend, wherefore art thou come? Then came they, and laid hands on Jesus and took him. 51 And, behold, one of them which were with Jesus stretched out his hand, and drew his sword, and struck a servant of the high priest's, and smote off his ear. 52 Then said Jesus unto him, Put up again thy sword into his place: for all they that take the sword shall perish with the sword. 53 Thinkest thou that I cannot now pray to my Father, and he shall presently give me more than twelve legions of angels? 54 But how then shall the scriptures be fulfilled, that thus it must be?

Who is the subject
of this higher **contract**,
if it is just Israel
or if they all are.
God is the total Being
of all individual agencies
whether it is bad or good,
he holds the overall balance.
What is not clear,
therefore let us seek,
how in the amount of contracoagencies
to achieve the total center.
Agencies are composed
from the smallest unit agency,
therefore the right
is in all forever hidden.
As in the Christian Bible
so in philosophy
in any agency
of the whole Being.
Every higher agency
is looking for a higher contract
of individual goods and evils,
their balance.
Each of the living creatures
is looking for balance
even in its agency
its higher contract.

Matthew´s Gospel 22,36-40
36 Master, which is the great commandment in the law? 37 Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. 38 This is the first and great commandment. 39 And the second is like unto it, Thou shalt love thy neighbour as thyself. 40 On these two commandments hang all the law and the prophets.

Luke´s Gospel 10,29-37
29 But he, willing to justify himself, said unto Jesus, And who is my neighbour? 30 And Jesus answering said, A certain man went down from Jerusalem to Jericho, and fell among thieves, which stripped him of his raiment, and wounded him, and departed, leaving him half dead. 31 And by chance there came down a certain priest that way: and when he saw him, he passed by on the other side. 32 And likewise a Levite, when he was at the place, came and looked on him, and passed by on the other side. 33 But a certain Samaritan, as he journeyed, came where he

was: and when he saw him, he had compassion on him, 34 And went to him, and bound up his wounds, pouring in oil and wine, and set him on his own beast, and brought him to an inn, and took care of him. 35 And on the morrow when he departed, he took out two pence, and gave them to the host, and said unto him, Take care of him; and whatsoever thou spendest more, when I come again, I will repay thee. 36 Which now of these three, thinkest thou, was neighbour unto him that fell among the thieves? 37 And he said, He that shewed mercy on him. Then said Jesus unto him, Go, and do thou likewise.

4.5 BUDDHISM

Co- (or contracontra-) agency (Angel):

Buddha was the son of Indian king,
he gave up the secular power
and he founded the religion,
that does not know any God, or Saviour.
The Buddha's religion
teaches about the basics of the world
about the rules of all the living
and how to save a man.
Buddha approached the truth
by the way of renunciation,
of his thinking,
but mostly emotionally.

Contra- (or contraco-) agency (Devil):

Buddha does not reject only the mass,
but everything contained in the existence
just as the path of woe
from human thirst and request.
Being is composed of dharmas
and their formation and destruction
in the law of strict causality
man understands in the presence.
These lifeless dharmas
are only for a moment,
therefore in the true do not exist
matter, soul, God, history.

Co- (or contracontra-) agency (Angel):

Buddha knew the evil Devil
embodied in the Being,
his steep denial
surrendered however Being good.
He came however near to the right truth
in a good understanding of all Being
as a composed supracoagency
resting on the smallest agency.

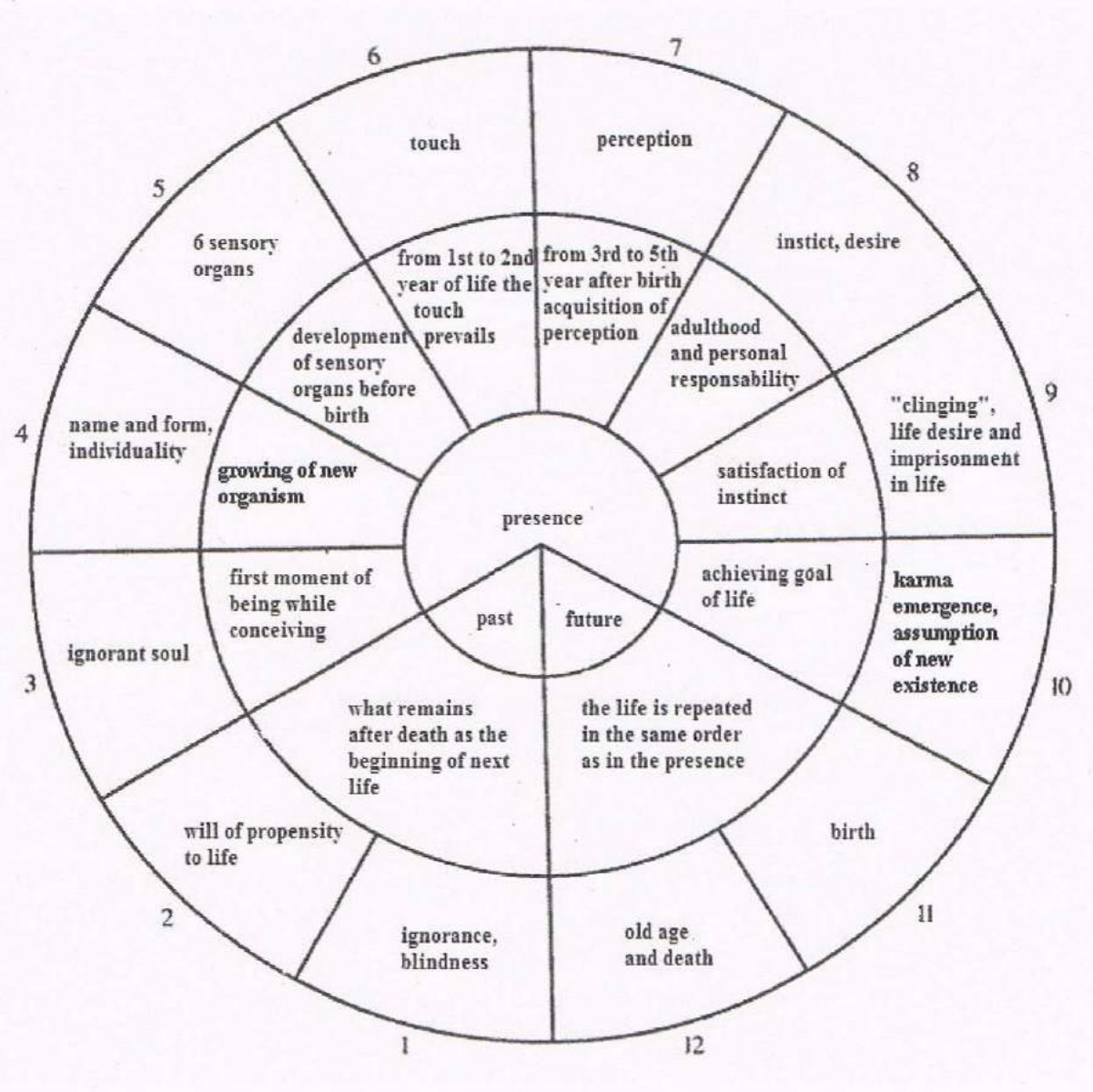
Also the process of every agency
he described almost perfectly
as the formation and termination
one in another included.
The causal link,
which controls Being
means that the formation of the agency
the termination of another includes.
This causal link
is not irreversible fact
since the total how bad as good agency
as the God is not limited by any agency.
This overall agency Being
is contained in each agency,
therefore the predestining conditions for the formation
exist always together with the independence of agencies.
In the confusion of agency dharmas
Buddha thought of perpetual peace,
how to escape the human existence
by the good and the evil not torn up.
How to escape to the cycle of life
transformed in the eternal Being,
in greed, hatred, and the request,
of repeated birth and death.
The shackles of re-introducing living
the jail of the previous deeds
just the enlighted ones sever,
they escape to the law of effect.
Who does not rely on the senses,
they extricate themselves from their requests,
they reach so the liberating gate,
it is Indian expression of nirvana.
Literally the status of the flame,
which turned off the light,
the disappearance in the nothingness
in eternal peace.
How to imagine nirvana,
it is necessary to deny everything,
that is what teach the three theories
of the thinker Nagarjuna.
The supreme truth is hidden
out of all the resolution
of human thinking,
there is the eternal nirvana.
The fourth theory
teaches about the middle road
among all the opposites
among good and evil agencies.

Contra- (or contraco-) agency (Devil):

We cannot escape
to evil thought and feeling,
than to get soften
against all the living world.
In this early death
that is destroying human life
Buddha is looking for the truth
and he serves to the destructive evil.

Supracocontracoagency (God):

One cannot commit,
that permanently
the good or the evil
could win.
Because of the balance
of agency of the Angel and the Devil
the Buddhist paths
are dominated by light and dark.
Buddha is looking for peace
outside of the existent agencies,
but even though **in the existence**
we can find the balance.
The right way is the middle way
between the good and the evil in the world
reigning in the human reality
but also in God's eternity.
The eternal balance
that puts the least resistance
to the evil as well as to the good,
we can find in the agency whole.
The senses do not perceive it,
neither one can come up with thinking,
it is necessary to have also an **emotion**
to the heavenly world.
Human emotion, mind and sense **faithfully takes**
material and simpler contracoagencies,
than it itself is,
because it contains also them.
Suprareasonable contracoagencies
are accessible to the higher emotion,
in which we can see a complex God
in the evil, the good or in the whole.
The evil and the good we do not send away
we accept them impartially,
through the middle way we are moving on,
the inner and outer peace we are finding.



The image of the "wheel of life" shows the Buddhist idea of repeating cycle of life: in *the past*, (1 and 2) ignorance = non-salvation resulted in the will to live, instinct, "thirst"-which are according to the four noble truths of Buddha the only causes of all life and woe and thus it laid the foundation for a new life and a new woe, for a new existence.

Therefore in *the presence* (3 to 9) the cycle begins again. By conceiving a new creature originates, whose soul is still unaware of him or herself (3). In the mother's body a germ is developing, and thanks to the form and name it becomes an individual (4). The sensory organs are created (5). (The Indians count six senses, because to our five they rank also thinking) After the birth the new creature initiates the contact with the outside world, in particular through the touch by touch sense (6), then by the perception and feelings. From the contact with the world a new instinct is born, things become the subject of a desire (8). From the enforcement of this desire the adherence to the world and incarceration in it are born at an adult (9).

In this way the assumptions of a new existence are established, because according to the law of cause and effect the deeds (karma) must be projected into a new existence (10). So the circle closes, since in *the future* (11 and 12) the new creature must walk through all the way from birth (11) to the old age and death (12) again.

4.6 ISLAM

Co-(or contracontra-) the agency:

As a messenger of good
Muhammad was destined
as the son of Ishmael
to fight against the devastating evil.

Supracocontracoagency:

The one who read well
Muhammad´s big words,
he or she recognized perhaps,
that **a higher contract reigns**.
Muhammad said perhaps
lower contract order,
which hates all evil,
it eternally fights with it.
Muhammad understood perhaps
also the order of the higher contract
that the sons of the almighty God
are the good of an Angel and the evil of a Devil.
Therefore if you are looking for God,
search there, where is **the balance,**
that puts the least resistance
both to the good and to the evil.

The Quran, Sura 87: 1-3
Glorify the name of your Lord, the most High, who has created everything and everyone, the fate has predestined and has streamlined.

The Quran, Sura 87: 18-19
Indeed, this is written in former Scriptures, of Abraham and earlier of Moses.

Who is the subject of
this higher **contract**,
must be a Muslim
or they all are.
God is the total Being
of all individual agencies
whether it is bad or good,
he holds the overall balance.
What is not clear,
therefore let us seek,

how in the amount of contracoagencies
to achieve the total center.
Agencies are composed
from the smallest unit agency,
therefore the right
is hidden in all forever.
As in the Holy Quran
so in philosophy,
in any of the agencies
of the whole Being.
Every higher contracoagency
is looking for a higher contract
of individual goods and evils,
their balance.
Each of the creatures living in the world
is looking for the balance
even in its believer or non-believer agency
its higher contract.

The Quran, Sura 107: 1-3
What do you think about them, who called the religion lies. They are the one that repulses the orphans and the poor to feed they do not motivate.

Those ones who **will not go through the right center,**
they will still be torn
between the good and the evil agency
in their constant struggle.
They will not **find** then **the peace**
regardless of their faith,
in the fight for their only God
they will be alternately under control of the good and the evil.

The Quran, Sura 40: 1-3
The revelation of the Book comes from God the mighty, omniscient, sin forgiving, repentance accepting and in the penalty terrible and bestower of favors. Is no God but him, in him the final goal is.

5. HISTORY OF PHILOSOPHY

3.2 CHINESE PHILOSOPHY

Confucius

Co- (or contracontra-) agency (Angel):

At the times of ruined China
I called between the sons
the thinker of the famous name
the great philosopher Confucius.

Contra- (or contraco-) agency (Devil):

However, Confucius
did not set the order,
his philosophical thinking
are simple subagencies.
Though he did not penetrate to the Being
in confusion of facts
he was led only by supraagency emotion,
not by thought-out world.

Supracocontracoagency (God):

Perhaps the most valuable
is the third classic book
of Confucius´s sayings,
the work of his grandson.
The big book Chung Jung
is looking towards the balance
in a cast historical war of
the darkness jing and the light jang.
He knew that **the gold center**
should always lead the individual well
as well as the agency world
without internal and external woes.
So he found a path to peace
open to the evil and the good
in their endless war,
the God in the form of all agency.

Lao-c'

Supracocontracoagency (God):

Lao-c' lived in the times of Confucius
and he was very close to all the truth,
because he did not seek fame and virtue,
but he was just looking for peace and serenity.
The total agency he called the tao,
which, conditioned by nothing,
is set in itself
as the eternal harmony.
The overall agency according to him
we do not perceive just by thinking,
however **in the laws and agencies of the world**
the truth may be perceived.
Lao-c' so anticipates,
that the simpler agencies
are composed subsequently in more complex ones,
and that is as matter, emotion or thought.
At the same time he sees peace
also in the human heart,
that is supposed to be impartial,
if seeing good and evil agencies.
So it merges with the total center
between agency good and evil
that is the same with God
the heavenly eternal calm.
In the words of the famous master:
his or her **deeds are according to the tao,**
with the tao then he or she merges
and him- or herself he or she surrenders.
And to the good one he or she makes the good
and to the evil he or she also makes the good
because the good of the force is such
throughout the cocontracoagency.

Contra- (or contraco-) agency (Devil):

In the practical State government
Lao-c' prefered the king,
he refused all knowledge of
the use of tools and weapons.
However the overall knowledge
is hidden in the simple agency,
of which gradual completing
is searching for the total truth.
Without the truth there no peace is

in the outer world and in the heart,
who tosses away the natural science
consciously or unconsciously he or she serves the evil.

5.2 GREEK AND ROMAN PHILOSOPHY

Pythagoras

Co- (or contracontra-) agency (Angel):

The first of the great philosophers,
who lived and taught in Croton,
was the Greek thinker Pythagoras,
who saw harmony around us.
The world harmony
according to him is happening
both in the music and
in the relations of numbers.
So as a thing has its sounds
which are in the harmony of music,
so the bodies, which consist the entire Universe,
sound with unhearable music of the spheres.
Urlaw of world
is a number sentence
between its agencies
as their relationships.
He believed in the infinite process
in dying, and births,
from which we can only escape
through purity and piety of the soul.
He prohibited to kill
any animal
and to use the meat
and to do evil in this way.

Contra- (or contraco-) agency (Devil):

He took the total agency
in musical harmony,
however it is not only there
but it is more complicated.
Just as well only in the number
the heaven is not hidden,
but it is always
more complicated agencies.

Supracocontracoagency (God):

He understood all the Being,

that is total **harmony**,
that he displayed in the number and music
as simpler visible agencies.
In the art of life
he stood on the side of the good,
he refused the truth of the evil,
but the real is the balance.

Parmenides

Contra- (or contraco-) agency (Devil):

He turned against the life,
against the heavily lived world,
he chose a possible idea
of misleading of the senses, mind and emotion.
That only something exists
and nothing is not,
that Being is not happening,
but that it is standing.
Things are not moving,
because there is not nothing,
and therefore there is no free space
in the form of a nonexistent Being.

Co- (or contracontra-) agency (Angel):

The most general perceptions of the world,
the simplest emotion and thought,
this powerful experience teaches us
about supracocontracoagency.
Therefore, that **nothing exists,**
also something exists,
as two facts of agency Being
embodied in the co- and contra-agency.
That **even Being is happening**,
nothing more proves
than the force of our experience
of the senses, thinking and emotion.
It is a basic stone,
where everything else is standing
in this my philosophy
about the balance agency.

Supracocontracoagency (God):

Nothing is also happening,
it comes from the standing fight
of the good coagency

and the evil contraagency.
Nothing recedes from something
or it absorbs something,
so it still moves in the fight
in the form of the devastating contraagency.
Also that nothing is existent,
it derives from the supracoagency,
that still unites together
the good and the evil.
This higher contract
as of the evil as well as of the good
is then equal to the infinite God,
it creates a general higher balance.

Heraclitus

Supracocontracoagency (God):

In connection with an emotion
he understood **Being as an agency**.
Everything flows, nothing lasts,
his famous words are.
He discovered a driving power of Being,
in antitheses existent
compostion and decomposition agencies
the fights between the good and the evil.
Behind the **dialectic** of all **agencies**
he saw not discussing Being,
that is the constantly stationary only one
in the form of supracocontracoagency.

Contra- (or contraco-) agency (Devil):

The total agency Being
is according to him in urfire,
in the material simple agency,
that is in fact more complex.

Leucippus and Democritus

Co- (or contracontra-) agency (Angel):

They both understood
that everything that is happening,
the simple elements
put together.
The smallest of those elements
contained in the Being
are atoms

otherwise unit agencies.

Contra- (or contraco-) agency (Devil):

Nothing according to them does not exist,
it represents the non-Being,
in fact, even not-Being exists
and also it is still happening.

Supracocontracoagency (God):

Elements of non-Being
and elements of Being
are unit agencies
creative and destructive.
They are mere human idea
in a dispute with agency infinity,
after endless division
we come to unit subagency.

Protagoras and Gorgias

Co- (or contracontra-) agency (Angel):

They knew that all divine things
are such a complex question,
that either they are not, or they are
unknowable or inexplicable.

Contra- (or contraco-) agency (Devil):

They did not believe in the truth
hidden in the agency whole,
they served to the good and to the evil
for tangible benefit.

Supracocontracoagency (God):

They recognized that the whole of agency Being
sense, mind or emotions do not perceive,
as bad so good agencies
were not bad for sophists.

Socrates

Supracocontracoagency (God):

He knew that the whole of **agency Being**
the sense, the mind, the emotions do not perceive

in Socrates words
"I know that I know nothing."
The truth then he searched in the soul,
that the truth of God only supposes,
that knows that in the overall agency of God
the unlimited balance reigns.
He believed that anyone who knows
where the truth is hidden,,
in the desire for inner peace
he or she is never looking for another path.

Plato

Co- (or contracontra-) agency (Angel):

He understands, that human knowledge
is only limited knowledge
of total supracoagency
or just reminiscing.
Mind as a complicated agency
understands the simpler agencies,
however the agency more complicated
is also included in it.
The termination of the simpler agencies of matter,
which we can understand by our senses,
gave a rise to our thoughts and emotions,
therefore to our higher world.
This **higher world** is real,
for the senses however infinite,
they are the more numerous agencies,
than the idea and the emotion is.
The material world as supracoagency
is a coherent system,
where only a sensation of a few phenomena
is leading us to God´s total.
Plato is not opposed to the world of the senses,
compared to the more complex agency
he gives to the things of matter less weight
for their short duration.
It is true that a more complex agency
remains unchanged for the longer time
because of its frequency
it is enjoying a longer life.

Contra- (or contraco-) agency (Devil):

The highest supraagencies
Plato called ideas
although the human thinking is

of limited agency frequency.

Supracocontracoagency (God):

For **the highest supracoagency** he considered the good,
at its birth, then he had love,
which means to love both the good and the evil
in a single existent whole.

Aristotle

Co- (or contracontra-) agency (Angel):

He distinguished the Being in substance and form,
which were ideas for Plato,
the forms as the performance of formation agency,
the substance then as the next performance of the performance.
Substance in the form of subagency
of the formation of formation agency
in fact it represents
at the same time the termination of another agency.
Material substance is
the form of simpler agency,
than the thinking of the idea
of material supracocontraagency.
As a substance so also a form is
something real,
however the form in the form of the idea
is something suprasensory.
These are the two **causes of Being**,
as the substance so also the form
the other two causes
are the purpose and the action.
Action is the performance of the agency,
of which originator is a condition,
the formation of formation agency
whether the alive or the lifeless things.

Contra- (or contraco-) agency (Devil):

Aristotle saw the God's incarnation
only in the first formation agency,
from which an infinite agency was created,
where the God did not take part anymore.

Co- (or contracontra-) agency (Angel):

In this **first formation agency**
are however all agencies included,

although the fact of the agency
only the mind splits.
In the agency Being,
however there is not a triple agency,
the formation, performance, termination
continuously they become one.
But the first formation agency
is terminationan of other agency again,
so agencies form an infinite series
which merges in omnipotent God.
The God, who is only the formation,
does not rule by agency performance,
he is in fact limited,
he is all-knowing, but not all-powerful.

Supracocontracoagency (God):

He teaches about the human soul,
that it is characterized by mind,
that it is agency immortal,
that it reveals the truth of Being.

Epicurus, the Stoics teach
(Zeno, Seneca, Marcus Aurelius, slave Epictetus)

Co- (or contracontra-) agency (Angel):

In art, how to live,
they were looking for the highest good,
they wanted the instinct being
of a man to rescue.
Human instincts and further passions
the performance of formation agency
make a man against his or her will
to the vices instead of the virtues.
There are indifferent things,
further preferred things
and unwanted things
compared to the virtues they are meaningless.
With hoped things
that we get,
also pleasure goes along,
otherwise the anxiety passions.
And also with unwanted things
anxiety states are associated,
when we are in the risk of these,
otherwise the pleasure comes.
These emotions are bad things,
the correct way is to live in virtue

by performing our duties without any passion
we can reach the apatheia against the Epicurus pleasures.

Contra- (or contraco-) agency (Devil):

A person by denying the passion
does not live, but only he or she suffers,
because the formation of the formation agency
is always present in the performance.
Either in the performance of formation,
thus in thinking,
or in performance of the performance,
thus in doing.

Supracocontracoagency (God):

In addition to the formation of formation agency,
that predicts the human life,
partly a man has freedom
by the work of an unlimited total agency.
Man is more evil or good,
by previous living agencies he or she is conditioned,
by his or her perception, thinking and emotions
he or she can find balanced agency Being.
Bad or good agencies,
thus **impulses and passions**,
are not possible to destroy permanently,
however they can be reconciled.
Good but also bad
instincts and passions
we must impartially receive
and then to balance them.
The man uses for it
emotion, thinking and perception
as complex coagencies,
the path of the existent harmony.

Plotinus

Co- (or contracontra-) agency (Angel):

According to him **the human soul**
as a compound of the good and the evil
was once in the balance
there, where the heaven is still hidden.
But in the rebellious desire
to know as the good so the bad
it lost its balance
experienced in God.

Despite this however the human soul
in the form of a complex supraagency
is coming by crossing the consciousness and thought
in the emotion back into balance.

Contra- (or contraco-) agency (Devil):

The God sees in the form
of the total formational supracoagency,
of which performance without will
takes the form of unwanted subagency.

Supracocontracoagency (God):

But God's performance is not without his will,
in a heavy nature embodied in the causal law,
which is formation agency termination,
however even the performance agency formation.
So in one
in complex supracoagency
the formation God's will is united
with the performance of his agency.
The whole of God's supracoagency
cannot exist without free will,
since each existent subcontracoagency
is destined by the overall formation.
Even the law of effect
is in the agency whole
the part of the termination of the formation supracoagency,
of the overall infinite and omnipotent agency will.
He knew that **God is at rest,**
that in a higher agency whole
rules the balance
of agency good and evil.

5.3. PHILOSOPHY OF THE MIDDLE AGES

St. Augustine

Co- (or contracontra-) agency (Angel):

Augustin admires a spirit of a man
in the form of a composite higher supraagency
from thinking and memory
as its subagencies.
With conscience of the evil contraagency,
that darkens the knowledge,
he doubts about all,
but he thinks, thus he exists.

As in the material world
also in the idea
he looks for the eternal and almighty God
he does not deny the simpler and more complicated facts.
The fact of the past agency
is manifested in the presence,
since this agency partly determines it,
in the future then it is alike.
So the last recollection
and future expectations
in the human presence
we can see it in agency.

Supracocontracoagency (God):

He understands the **balance of the God**
that is in the form of the whole agency
in the infinite eternal peace
and it does not pass in time of against and together struggles.
This balance
of total good and evil
is the right center
with the least resistance.
Only **the non-whole nature of**
agency good and evil
passes in time agency
until the foundation of the balance.

Contra- (or contraco-) agency (Devil):

However he does not recognise the freedom of will,
that only partially determined is
in the form of formation agency of the formation,
of another good or evil agency termination.
Because the total agency
is unlimited by any agency,
in each of its subagencies
its freedom is divided.
Earthly City is just evil according to him,
heavenly City of God then is just good,
he does not see, that the overall balance
lies in the reconciliation of the good and the evil.
This form of the
stupreme goodness
is not just limited to the Church,
that preaches hatred of all evil.
So in the service of "its goodness"
the Church fights to eliminate "foreign evils"
and it does not find God's peace,

which means balance.

Realism and nominalism

Supracocontracoagency (God):

Simple subagencies
are in a tangible (material) form,
on the contrary the thoughts
are more complex agencies.
The most complex contracoagency
are the supracoagency
of simple subagency,
therefore beyond it as well as inside it.
They are the good and the evil
or the right center
with the least resistance
in the form of supraagencies.
These supraagencies
are real,
but of course they are so complex,
that they are not perceived by the sense and mind.

St. Thomas Aquinas

Co- (or contracontra-) agency (Angel):

Thomas fought against the teaching,
that everything real is in the thinking,
as compared to the human agency mind
there are agencies as simpler so more complicated.
And more complex agencies
the mind does not include,
then it explores them
only imperfectly.
These more complex supracocontracoagencies,
with that the idea does not or agrees,
are the aspect of the truth,
that depends on knowledge.
Otherwise, all thought
is also right
and the truth is simple,
contained in humans.

Supracocontracoagency (God):

The relationship between the human thinking
and overall supracoagency
if set in balanced agency,

it is the approximation to the truth.
Because the balance of agencies
is not in conflict of opposites,
in the fight of the good against the evil,
but in their peace.
The balance of all the agencies,
where there is the least resistance,
often represents a synthesis
in the form of supracoagencies.
Where there is no synthesis
with the least resistance,
there are those supracoagencies,
where we answer yes and no.
The balanced knowledge
is approaching a whole
of agency Being
or the truth in God.

Co- (or contracontra-) agency (Angel):

Thomas´s **evidence**
of the God´s existence
points to the total supracoagency,
that is the primary and at the same time infinite.
Total supracoagency
the center of the goods and the evils
is in a quiet balance,
it is the first mover.
Total supracoagency
is not destined by the cause,
the unlimited freedom
is only in the agency God.
Total supracoagency,
its formation is not conditional
as the formation agency formation
it does not contain another's agency termination.
The law of cause and effect,
that almost controls the heavy agency mass,
is the posttermination agency formation
and inside it formation performance.
The performance of the mind of formation agency
in the form of all supracoagency
is the idea similar to
the whole of agemcy God.
At the same time the form of the Eternal God
as an overall agency
then allows us
to follow the agency to infinity.
Total supracoagency

is the highest supraagency
of all the lower goods and evils
it is therefore a sovereign God.
An individual agency formation,
predestining already its termination,
proves, that the termination of each subagency
the overall agency formation already predestines.

Supracocontracoagency (God):

The thinking of overall agency,
that is more complex than
the human mind,
has only an imperfect sense.
The simple sensual subagency
is similar to more complex thinking,
it is separated by termination and formation agencies,
it is towards it **analogical and indirect**.
The complex thinking coagency
is composed of simple agencies
and the **knowledge about the overall agency of God**
is also such.

Co- (or contracontra-) agency (Angel):

The substance is the performance of the performance,
then human soul is the performance of the formation,
that as a part of a whole
are placed in God.
The performance of formation agency,
thus human thinking,
is the creation of the contracoagency,
of more active form.
A substance, such as the formation of formation agency
is subagency of formation supraagency
covering the world of matter,
which is of more passive form.

Supracocontracoagency (God):

Human behaviour
of the agency formation
and its termination
are other agencies.
Agency formation
represents the **thinking**
and the formation of termination or the formation of the performance
represent the human limited **will**.
As separate agencies

they are only then **good**
if they are in balance,
each agency of their coagency.

3.4 BAROQUE PHILOSOPHY

René Descartes

Co- (or contracontra-) agency (Angel):

Human thinking and Being
is in a good and evil fight
how to know the real truth
in the world of sharp contrasts.
The most general perceptions of the world,
the simplest emotion and idea,
this powerful experience teaches us
about supracocontracoagency.
In the form of Descartes,
who thinks, therefore, he or she exists,
furthermore there is God's perfection
to which the truth belongs.

Contra- (or contraco-) agency (Devil):

The evil in our knowledge
he sees in bad will,
which adopts for the right in the mind,
what is not the perfect idea.

Co- (or contracontra-) agency (Angel):

But the will performs only
the evil or the good human thinking
in the formation agency termination
or in the performance agency formation.

Contra- (or contraco-) agency (Devil):

Descartes divides a man
to the mental and physical agencies,
the thinking is not a physical,
it is not also spacious.

Co- (or contracontra-) agency (Angel):

The thinking as a complex agency
of simple agencies of the matter
is similar to a complex machine

as composite contracoagency.
And just as the thinking of people
so the thinking of animals,
they are agencies more complex than the tmatter
unknowable only by the senses.
The spaciousness of all matter
as well as the fact **of motion**
they are in God's agency whole
suprasensory cosubagencies.
The sense captures them
only imperfectly
in the range of frequency
of the physical (material) simplicity.

Baruch Spinoza

Supracocontracoagency (God):

He sees the eternal and the mighty **unity,**
which controls the thinking and matter
in the infinite God,
the substance and the mode.
Substance as the total supracoagency
of all individual goods and evils
and its performance subagency
that was called by Spinhoza the mode.
A summary of all performance subagencies
is the sum of all thought modes,
in the form of cosubagency of the overall performance
Spinoza calls it the everything in his philosophy.

Contra- (or contraco-) agency (Devil):

The balance in his being
Spinoza sees in survival,
the joy if it is enforced,
the mourning if it is restricted.
He sees the virtue in the performance
of thought agency,
which enforces itself
against the agency unity.
He does not see that in the surrounding nature
death and life are in the balance,
who protects only his or her living,
he or she also will not escape from death.
He does not approve the freedom of will,
that only partially determines
in the form of formation agency formation
another good or evil agency termination.

Because the total supraagency
is unlimited by another agency,
in each of its subagencies
it shares its freedom.

Co- (or contracontra-) agency (Angel):

He sees the role of thinking
in the search for the balance
between the individual agencies
how the good ones so the evil ones.

Contra- (or contraco-) agency (Devil):

He understands the agencies of thinking
as closed agencies,
therefore, agency wholes
which are not in the coagency.
However even the human thinking
forms a more complex agencies,
it is composed of simpler agencies,
it is posttermination formation agencies.

Supracocontracoagency (God):

He sees, that the human knowledge
of the balance of contracoagency Being
means a certain agreement with it,
formation and performation supracoagency will.
This **agreement with God**
is human love to him,
it is its faithful subagency,
of supracoagencies whole.

Gottfried Wilhelm Leibniz

Co- (or contracontra-) agency (Angel):

Leibniz teaching is based on tangible (material) agency,
of which division is only final,
because our senses
do not perceive more subagencies.
The visible world of matter
captured by our senses
are agencies in the range
of the certain agency frequency.
More complicated and simpler agencies
only the mind and emotion captures
that are also imperfectly imagining

the infinitely simple and complex agency.
This God and the existent ursubstance
are truly perfect,
a logical idea recognizes them,
according to which they exist.
All existent agencies,
which consist
in reality,
lie in the performance.
So our reality
is an agency performance,
therefore actually
a kind of energy.
The simplest agency
is the formation model,
the composed source
of the complex idea.
The individual contracoagencies,
such as also the substance is
they may be composed
from the more complex subcoagency.

Contra- (or contraco-) agency (Devil):

Leibniz himself believed,
that subcoagencies of the substance
are closed units
capable of independent life.
Link to all the agency
in the formation of the formation he explains,
that predetermined laws of the God are,
that the so-called monads observe independently.
This predestined harmony
reorders however with difficulty
agency connection of Being,
which only the reason divides.
So the formation of supracoagency is
in the final effect
in the good and bad whole
the given law.
By which all the performance, formation and termination
are continuous,
that even the simplest agency formation
includes in the unit agencies.

Supracocontracoagency (God):

The origin of the evil contraagency
he sees in the end of the world,

that is inevitable,
but why he does not ask.
The God is total supracoagency,
and that's of the good
as well as of the evil,
otherwise he or she would have been limited in his or her power.
God as the greater good
created all the evil
because of the balance
to the good agency.
Historical something and nothing
in their mutual fight
form supracocontracoagency,
by which all Being is balanced.
That **something and nothing happens**,
it stems from the standing fight
of the good coagency
and the evil contraagency.
Nothing recedes from something
or it absorbs something
and vice versa, something's happening again
in the form of their supracoagency.
God is presented in all the contracoagency,
whether the good or bad,
God is beyond the good and the evil,
that each plays on their field.
In the history of the good and the evil
the fields of the Angel and the Devil
are in the total balance
thanks to the loving God's effort.
The fields the good and the evil
must not exceed,
which is a habit for ages
otherwise, one of them would win.
The good would live forever,
the evil would be dead forever,
Being would not happen then,
the staying would be endless.
All and everything would have been
always perfect
any imperfection is
Being of the agency struggle between the good and the evil.

5.5 PHILOSOPHY OF THE ENLIGHTENMENT

John Locke

Co- (or contracontra-) agency (Angel):

Human thinking and Being
is in good and evil fight
how to know the real truth
in the world of sharp contrasts.
The most general perceptions of the world,
the simples emotion and thought,
this powerful experience teaches us
about supracocontracoagency.
In Lock´s philosophical teaching
sensory perceptions are the surest,
however, not all the perceptions,
but the primary ideas.
To these primary qualities
belong the size and body shape,
the number and solidity,
standstill and motion.
Each primary quality
we can feel by touching,
by the other human senses
we perceive secondary qualities.
To sense perception
the internal perception accesses,
which distinguishes knowledge
and next its desire.
Those agency qualities
whether of thinking or mass
they are different subagencies
of the performance of a particular agency.
By assembling these thought ideas,
which are however of a simpler nature,
the ideas arise,
which are composed.

Contra- (or contraco-) agency (Devil):

The ideas, which are general,
however they are not real,
a part of all Being
is just a quality matter.
And next a part of Being
he sees in the substance,
that is a common carrier
of individual properties.

Supracocontracoagency (God):

Simple subagencies
are in a tangible (matrial) form,
on the contrary ideas

are more complex agencies.
Being of any way frequent coagency
in thought or sensory form,
more complex or simpler cocontraagencies
demonstrate supra- or sub- agency existence.
This logical derivation
of the simpler and more complex agencies
starting in any agency
lies in the supraagency whole.
Complex supraagencies
are real
but so complex,
that the sense does not understand them.

George Berkeley

Contra- (or contraco-) agency (Devil):

According to Berkeley´s teaching
the sensory perceptions
as simple ideas are also the surest,
that are only in our consciousness.
Behind common ideas,
that are sensory perceptions,
the higher good work of God stands
that is fair to all.

Supracocontracoagency (God):

There is not true in learning,
that all the real is in thinking,
as **compared to the mind**
they are simpler and more complex agencies.
And the simpler and more complex agencies
our mind involves
only imperfectly
as formation and termination agencies.
Simpler agencies
are a part of a thought formation
in the form of their agency performance
like its predecessor.
More complicated agencies
as their agency formation
contain the thought termination
like its successor.

David Hume

Contra- (or contraco-) agency (Devil):

According to Hume´s teaching
only the sensory perceptions are, of course, true
in the form of impressions,
or their images in the memory and imagination.
The Being without the qualities of perception
means by Lock the substance,
according to Berkeley there is nothing else,
with which Hume agrees.
General human ideas
he sees in the nonexistent impression,
it is mere perception of consciousness
own to activity of recognition.
So he calls into question the substance,
as well as the law of cause,
that are only in consciousness
and therefore they are not existent.

Supracocontracoagency (God):

The complex agency is the mind,
the human sense is simpler,
they both contain simple agencies,
however their construction is similar.
This composition is tangible (material),
as it is also the agency form
with the similar subcocontraagencies,
that the objects of the senses tend to have.
Therefor, it is possible to tell:
"**properties of matter, senses and mind**
are for all agency units
customary to all these coagencies."
For example time is in the mind,
however it is also included in the senses,
it is also hidden in the surrounding mass
in the simpler or more complex form.
The link of all the agency
is hidden in its unity,
that only our mind divides,
in fact however it is continuously flowing.

Immanuel Kant

Co- (or contracontra-) agency (Angel):

According to Kant's teaching
there are the surest truths
given by their generality
and their necessity.

These apriori sentences
arise from the truths own just to the mind,
they are its supracoagencies
called the synthetic apriori courts.
This pure science
is the surest truth,
the other secular facts
are characterized by unknowability.
Apriori sensory opinions
are space and time of objects,
as supracoagencies are own
to each of the physical (material) sensations.
Apriori compound agencies of mind
are the categories and the judgements,
which all together form
the human ability to reason.
Apriori composite agencies of mind
are subsequently called regulatory ideas
in the form of theoretical reason
lying in the soul, the world and the God.
Apriori composite laws of subjugation,
that places general over special,
lie in the material expediency,
in specifying judgements in the mind.

Contra- (or contraco-) agency (Devil):

Apriori sentences of the mind
according to Kant's teaching
are present only in it,
not in the material Being.
About the material Being
we cannot say anything,
it is the world only in itself,
Being closed to us.

Supracocontracoagency (God):

The complex agency is the mind,
simpler is the human sense,
they both contain simple agencies,
of which composition is similar.
This composition is tangible (material),
which is also agency form
with similar subcontracoagencies,
that the objects of the senses tend to have.
Therefore, it is possible to tell:
"**properties of matter, senses and mind**
are for all agency units

customary to all these coagencies.
Therefore, more complicated **agencies of the human mind**
are **suprasensory coagencies,**
posttermination changes of tangible (material) subagencies
which contain material **apriori sentences**.
The presence of the apriori laws
in the material and thought agency
in the simpler or more complicated form
it stems from the unity of the agency whole.
The link of overall agency
is hidden in its unity,
that only our mind divides,
in fact however it is continuously flowing.
Interesting is the question of **law of**
composing of simple agencies,
that stems from the termination in the formation of
every agency, which is **the idea**.
A man already feels and anticipates the outcome
with his or her supracoagency emotions
and known laws of agency composition
while thinking of composing subagencies.
This **relationship to its purpose**
controls also the external mass,
because simple general laws
reflect the formation of the complex ones.

Co- (or contracontra-) agency (Angel):

From apriori sentence of the thought of acts
therefore supracoagency of the formation of the performances
only from thought contracoagencies
we come to the categorical imperative-general law.
This one is characterized by necessity,
its character is just having,
the most general formation agency of performances
is a will in the form of a general law.
The highest virtue
is therefore implementation
of the general obligation,
that provides the thinking.
In this apriori sentence of practical reason
we justify also human freedom,
since in general idea of human performance
we anticipate the correct form.

Contra- (or contraco-) agency (Devil):

Also the mind is controlled almost by causality
as a complex material agency,

but it is in the form of
higher coagency.

Supracocontracoagency (God):

Thinking of the human action
in the form of its balance
of the good and the **evil supracoagency**
features with universality too.
Because the total supraagency
is unlimited by other agencies,
in each formation agency
the freedom is between them divided .
Free human will
shapes so its agency,
that is only partially
by other agencies conditioned.
Therefore the human agency **idea**
of acts as a universal law
creates the human agency
also in the context of this freedom.

3.5 PHILOSOPHY OF 19th CENTURY

Johann Gottlieb Fichte

Co- (or contracontra-) agency (Angel):

Fichte sees the essence of action
in the idea of all the things,
thus in the human thinking
I and not-I, which is the world outside.

Supracocontracoagency (God):

He saw **the unity of the world**
and with it the spirit of Being
but only in thinking,
that he understood as actions.
The termination of the simpler agencies of the matter,
that we understand by out senses,
which are simpler than thoughts,
gave arise to the emotion and mind.
This **higher world** is real
by the senses however elusive,
there are more numerous agencies,
than the idea and the feeling is.

Friedrich Wilhem Joseph Schelling

Co- (or contracontra-) agency (Angel):

The essence of all the action
he sees in the overall formation,
therefore in the unconscious mind,
that forms the soul in the nature.

Supracocontracoagency (God):

Unconsciously he separates
the form of the total formation agency
and its performance in the nature,
of which subagency is the human soul.

Georg Wilhelm Friedrich Hegel

Supracocontracoagency (God):

As well as in the human mind
the laws of nature represent
the perfect balance of
evil and good agencies.
Because the evil and the good agencies
are partly imperfect,
so their **perfect balance**
connects and denies both at the same time.
Their higher contract
is also supracoagency
of lower good and evil,
at the same time their supracontraagency.
It is possible to imagine,
that the human agency destruction
means for other people
on the contrary its formation.
The balance is therefore necessary
of imperfect good and evil,
that is not good or evil,
but it is both at the same time.
The imperfection of human thought
is reflected in the philosophical antitheses,
as well as agencies in the external nature
are in imperfect balance.

Co- (or contracontra-) agency (Angel):

Hegel sees the contradictory idea
as knowledge and nature,

among them he is looking for the balance of the whole
in the unlimited spirit.
This unlimited spirit
represents the historical synthesis
of the spirit in the subject and object,
it is the supreme God.

Supracocontracoagency (God):

Philosophy of Balance of agency
the contrast of imperfection between matter and thinking
removes more perfectly
in a higher supracocontracoagency.
Spirit in the formation agency
has still the form of knowledge,
however the concept of **cocontracoagency**
includes the thought and nature.
However even in the concept of agency
there is something non-whole,
concepts of thought and action
do not reach the full unity.
And thus **the concepts of formation and performance**
once again the concept of agency unifies,
that embodies the formation and performance
displayed again in performance and formation.
This is so, because
the human thinking is not whole,
in the form of subcoagency
it does not include the total supraagency.
Supracoagency of the agency whole
we better discover in the agency emotion,
that transcends the mere thinking,
but in balance it is not against it.
The integrity of all the action
achieved in the non-action
I see in the overall agency
as the embodiment of the God.
That includes
all the agencies in itself
and thus itself it does not happen,
the only completely perfect.
Performance and formation
in one supraagency
they are contracoagencies,
the whole of the evil and the good.
In other words,
it is contracontracoagency,
that is evil,
and a good cocontracoagency.

Contra- (or contraco-) agency (Devil):

According to Hegel's doctrine
only a total supracoagency
is completely free
and its freedom is not divided.
Moral conduct he sees
only in a community of people,
but the overall agency balance
can be achieved among the inanimate agencies too.

Auguste Comte

Co- (or contracontra-) agency (Angel):

Comte considered for the knowable
just sensory agencies,
according to Comte it is necessary to think material agencies,
which are valid, identifiable and useful.
In the area of sensory agencies
are valid the higher general laws
of similarity and sequence
which are the sentences of their relations.

Contra- (or contraco-) agency (Devil):

For highly impossible
he considers the knowledge
of the total agency,
thus the general truth.
The human and personal agency history
is according to him divided
into three stages:
theological, metaphysical and positive.
In the first agency stage
there is a simple thought
of a total God´s supracocontracoagency,
animist, poly- and mono- theistic religion.
In the second stage
the more complex thinking
of total supracoagency
is an abstract philosophy.
In the third staage
the more complex thinking
of total sensory agency
has to be a positive philosophy.

Supracocontracoagency (God):

The concept of Being as agency
allows to our thinking
in the form of agency unity
to think about the overall agency.
This total supracoagency
is **more complex**
than our thoughts and senses
but also similar.
The similarity implies
that the simpler subagencies
incorporate the agency
in a coherent unity.

Co- (or contracontra-) agency (Angel):

Comte sees the role of all the philosophy
in the knowledge of the general sensory agency,
which is present in all areas
in the form of the total sensory supraagency.
According to the Philosophy of Balance of agency
so defined area of knowledge
is limited only to the final part,
that philosophy also includes.
According to the rules of posttermination agency,
where the formation includes the termination of the coagency,
that for the whole Being is given,
Comte grades science and Being.
Science series
is mathematics
and the physics, chemistry and astronomy,
biology, psychology, and sociology.

Contra- (or contraco-) agency (Devil):

To the law of three stages
the history corresponds too,
religious faith and feudalism
correspond to the theological stage.
To the metaphysical stage
the revolution corresponds,
to the positive stage
the reign of scientist corresponds.

Supracocontracoagency (God):

But **suprareasonable agencies**
we continue to resolve through emotion,
in the simple agency matters

the coagency individual decides the best.
In simple contracoagencies
the strongest formation agency is
the individual´s will,
therefore it also decides.
In the **complex civil agencies**
the strongest formation agency is
the will of all the people,
therefore it has also the government.
Nevertheless this decision
should find the **balance**
with all the cooperating agencies
in an impartial approach.

Contra- (or contraco-) agency (Devil):

In contrast Comte
advocates the government
of the people whole
even for simple agencies.

Herbert Spencer

Supracocontracoagency (God):

As in the other Being
also each idea is
good only from a part
and partly it is bad again.
The higher goodness lies
in the grip of the whole of Being,
lower good and evil can be also found
in agency thought non whole.
Non whole of the human idea
means a new grip of Being
in a thought contrast,
which together form a whole.
Their agency composition,
manifestation of lower good
is once again contrasting in the agencies
thus imperfect and non total.
Supracoagency of thinking
lies in the concept of agencies,
which puts together, then it puts against each other
concepts in imperfect balance.
Imperfect but supracoagency
is the agency philosophical idea
which partially restrictes in the synthesis
contra-and co-subagencies.

Supracoagency of the agency whole
we better discover in the agency emotion,
which, of course, overgoes the thinking,
but in balance it does not contrast.
As well as the surrounding terrestrial **nature**
as a manifestation of the performance of evil and good
creates all life on our Earth,
the characteristics is the imperfect balance.
Against the evil as well as good agency
the balanced nature fights again
in the form of good and evil agency,
of so called life fight.
The result of this struggle
is an imperfect balance
of the present evil and good
at advanced development.
This imperfect balance
in the form of contracoagency
in essence it is happening in merciful fight agency
with the development of the total of good and evil.
All of this implies,
that **even imperfect present balance**
of thought and natural evil and good
is constantly happening.
The path to the balance of agency
is however always double,
on the good or evil side
or in the peace of overall balance.
The path to the overall agency balance,
which combines partial good and evil,
represents the greater composition or good
with regard to the perfect good and evil higher contract.

Co- (or contracontra-) agency (Angel):

The fight of the good and the evil
Spencer calls
evolution in the external nature,
it is the dialectic in the idea.
From the evolutionary teaching
the supracoagency is different,
instead of a denial of contraagency
it is talking about its synthesis.
A reconciliation of the total co- and contra- agency,
that is in infinite time complete,
ends the history of the destruction and creation struggle
in supracoagency.
By this are **connected the**
dialectical and evolutional

thought and nature
developmental laws.

Karl Marx

Contra- (or contraco-) agency (Devil):

The evil and the good of the thought
of Hegel's dialectic
define the human history
according to Marx's teaching.
Non whole of the human idea
means a new grip of the Being
in the contrast by thinking,
in the agency revolution.
Their agency synthesis
as a sign of lower good
is again non-whole
or contradictory.

Supracocontracoagency (God):

However the world history
is not just thinking,
general laws of nature operate
in the more balanced evolutionary development.
So the gradual development
in the knowledge of nature
and contradictory jump development of human thinking
participate in the posttermination formation agency.
When one epoch is ceasing to exist
and the new epoch is rising,
so its formation always includes
previous **agencies evolutionarily and revolutionarily**.

Co- (or contracontra-) agency (Angel):

A man as a part of nature
shows with certainly mostly
in the form of the performance agency,
therefore, as a living being at work.
In the form of the performance contraagency
the man him- or herself, alienates,
when to the objects, that he or she him- or herself creates,
the man him- or herself also serves.
Such a means is the State,
that a man creates
and then he or she serves it,
without it has the balanced agency state.

It is necessary to devise
the balanced agency of the society
and through it then to look
at all the social contracts.

Contra- (or contraco-) agency (Devil):

For Marx each agency is
justified in the history
as the present balance
of imperfect good and evil.
However in the present synthesis
of how good as evil agency
their perfection need not to be approached
and there can also be a total contraagency.
Just the overall balance of the good and the evil
approached in the history is reasonable,
which lies in peace
and it is a matter of thinking and emotion.

Co- (or contracontra-) agency (Angel):

Marx sees all philosophy
also religion and other thinking
in a social being
as the material formation formation agency.
The social agency consciousness
as a reflection of the social being
the production (natural and human) forces
and also the production (proprietary) relationships form.
While the productive forces
predispose the production relations,
therefore the method of production,
which forms the social system.
However Marx leaves out badly
other factors of social consciousness
and of social order
than just the production forces.
These social factors
are primarily human knowledge
of total supracoagency
and its progressive development.
And vice versa with changes
of natural knowledge
the consciousness existent in the past agency
do not completely vanish.
Those past contracoagencies
are private property
and also world religions

in posttermination formation agency.

Contra- (or contraco-) agency (Devil):

A violent struggle against the evil contraagency
in the capitalist exploitation
is in the form of contracontraagency
as a good coagency.
However the fight on the side of good,
where there is no existent balance
both of the evil and the good,
is followed with the explosion of the evil.

Supracocontracoagency (God):

The good is always followed by the evil,
the evil calls in turn for the good,
peace is yet not found,
there is a need to wait for war.
If I want to live in **peace**
and to have an inner balance,
then I must not prefer,
the evil as well as the good forever reconcile.
Where is the true center of
each of the good and evil agencies,
there is a need to find a way,
where it was, is and will be the least resistance.

Arthur Schopenhauer

Co- (or contracontra-) agency (Angel):

He don't think like Kant,
that extra(i.e. beyond)sensory world
a man cannot know,
the way along is a human emotion for him.
By the way of human emotion
he sees the nature of the world
in a natural will to live,
that is not preceded by the activity of reason.

Supracocontracoagency (God):

However natural will to live
is the formation formation
or the formation termination
it precedes and follows the idea.
The whole human thinking
is how the formation performance

so the formation formation
in the infinite singular agency.

Co- (or contracontra-) agency (Angel):

At the same time natural will to life
contains a simple idea
of good agency,
which the formation is.
The will to life
in our being
is embodied in our instincts
preceding thinking.
But there is also a thought will,
that unites instinct and other agencies,
one of the instincts is the human emotion too
which elects the balance of the total agency.
Emotion from instict differs,
that in itself this includes
the balance of the total agency.
while the instinct includes just subagencies.
So emotion is the formation after the termination
and the performance of the agency whole,
while the human instincts
connect only just subagencies.
Our thought will
elects the balance
known in the emotion
or the mere idea.

Supracocontracoagency (God):

Will or knowledge in the emotion
in the overall agency balance
is **happening** in sensory world
in a perfect art.
So **will** does not need to be
dressed in bad instincts,
but **in thinking and emotion**
it can rest in peace.

Contra- (or contraco-) agency (Devil):

Schopenhauer preaches
analgesia of our will
as contraagency of contraagency,
but the peace is in the balance.

Sören Kierkegaard

Co- (or contracontra-) agency (Angel):

He sees the truth of our being
in the performance subagency
of total supracoagency,
which is the present moment.
In this subagency,
imperfect balance
clash the evil and the good,
life with eternity.
He fights on the side of the good,
which the balance is against,
and that is how the agency evil so good,
that is for him the Christian truth.

Supracocontracoagency (God):

Who **does not see existent balance**
and senselessly he or she fights against the evil,
the one does not recognize the whole of God's peace,
because the good goes along with the evil.

Friedrich Wilhelm Nietzsche

Contra- (or contraco-) agency (Devil):

Nietzsche sees the world
as a good and evil clash,
however he is not looking for peace
but for the reign of the evil.
His formula of Being
lies in the contraagency,
which wins over coagency,
in other words in contracoagency.
Thus in the fight of power
between the good and the evil
he sees only the will,
consisting in the termination of formation.
This will to power
is perfectly ending
in the formation termination agency
all the evil and the good ideas.
In the fight against coagency
Nietzsche fights without mercy
against Christianity, democracy, socialism,
furthermore, against feminism, intellect and semitism.
The new values

he sees in the death,
therefore in destruction,
in bad contraagency.

Supracocontracoagency (God):

In the human thinking
is each idea
good only from a part
and then partly bad.
The higher goodness lies
in the grip of the whole of Being,
lower good and evil can be also found
in an agency thought non whole.
Non whole of the human idea
means a new grip of Being
in thought contrast,
which together form a whole.
And so **after the reign of the good**
in the global philosophy
Nietzsche's doctrine
grasps again the evil .
The most general perceptions of the world
the simplest emotion and thought,
this powerful experience teaches us
about **supracocontracoagency**.
Therefore, that the balance
of the agency whole of the good and the evil reigns,
that the evil will not win over the good,
and also the good will not beat out the evil.
As the evil and good agencies
are partly imperfect,
so their balance
connects and denies both.
Their higher contract
is also coagency
of lower good and evil,
at the same time their contraagency.

3.5 PHILOSOPHY of 20. CENTURY

Henri Bergson

Co- (or contracontra-) agency (Angel):

The space he identifies with the matter,
it is recognizeable by the rational path,
time is according to him the agency
recognizeable by intuition.

Intuition can be thought
as human emotion
as the instinct, which contains
the balance of the total agency.
Philosophy is a matter of intuition
unknowable in the idea
which only contains in itself
simpler subcontracoagencies.

Supracocontracoagency (God):

Although the thinking is not a whole
but in a simpler coagency
the people are imagining the whole by the similarity,
balanced thinking is accompanied by emotions.
The space of all matter
as well as the fact **of motion**
are in supracoagency whole
suprasensory cosubagencies.
Sense captures them
only imperfectly
in the range of frequency
of the physical (material) simplicity.

Contra- (or contraco-) agency (Devil):

Being is happening according to him
in the form of life coagency
and tangible (material) contraagency,
agencies rise and descend.

Supracocontracoagency (God):

But also **in the simple mass**
as the lower contracoagency
we can distinguish the formation and destruction,
that is the predecessor of life and death.

Co- (or contracontra-) agency (Angel):

Bergson distinguishes both the morale
as settlement for the social whole
and then as a settlement of the whole of Being,
thus the closed and open morality.
Further he distinguishes the simpler thinking
of the total agency as a static religion,
the grasping of the overall agency by intuition
Bergson calls dynamic religion.

William James

Supracocontracoagency (God):

He promotes **overall supracoagency performance,**
which brings the most benefit,
because the **antithetical contraagency is balanced,**
which means the smallest resistance.
At the same time he sees,
that the total agency
is above our mind
grasped only by the emotions.

Today's Marxism

Co- (or contracontra-) agency (Angel):

The concept of mass
is approaching the agency
as the basis of all Being,
from which is composed its construction.
The movement
is typical of mass,
space and time
are part of it.

Contra- (or contraco-) agency (Devil):

The human agency consciousness
is a reflection of the mass
and of material nature,
where the matter does not depend on.it.

Supracocontracoagency (God):

Consciousness as a matter
cannot be the truth,
as a tangible (material) agency
is a sensory perception.
The mind as the agency,
that captures and contains in itself
tangible (material) sensation
takes the form of a more complex agency.
It is not conceivable,
that sensory agencies
have been captured and grasped
through the same complex consciousness.

The consciousness must be
for something more complex,
to be able to think about
a simpler world.
The human consciousness
is a reflection of the matter,
but also of more complex agency,
which imperfectly explores.
The human mind or human consciousness
in the formation termination agency
is composed of simpler agency,
which among other things also matter is.
Human cognition
is in coagency
of the simpler and more complex agencies,
their mutual agency influence.

Co- (or contracontra-) agency (Angel):

Acknowledgement of supracontracoagencies
can be found in Marxism too,
the dialectical materialism teaches
change of the quantity in a new qualities.
The law of agency development
Marxism sees again
in a self-motion of matter
in contrasting essence.

Supracocontracoagency (God):

The contrast of the evil and the good
in the co- and contra- agency
in the mass of destruction and creation,
in mind is the non-whole idea.
The fight of contra- and co- agency
in mind and matter
in their balance
are the law of development.

Co- (or contracontra-) agency (Angel):

The unity of the mind
and the world of matter
follows inevitably
from unity of agency.
In the teaching of Marxism
this unity of the whole
the mass mediates
as the urbase of the world.

About unity the performance of thought agency
convinces us,
that is supracoagency,
thus harmonious with the Being.
Marxism sees all the philosophy,
religion and other thinking
mostly in a social being
as the material formation formation agency.
This superstructure of the mass
should form also religion,
however it recognizes also the higher truth
of supracoagency whole.
This knowledge of the total agency,
which is not a subject to the law of class struggle
and therefore a dialectical development,
is in particular the human language.

Contra- (or contraco-) agency (Devil):

Dialectic in the human development
it sees in the form contracontraagency,
therefore the violent workers' fight,
against their exploitation.
However the fight on the side of the good,
where there is no existent balance
how the evil so even the good,
follows the explosion of the evil.

Supracocontracoagency (God):

If we want to live in peace
and to have inner harmony,
then we must not prefer
and reconcile the evil and the good.
The path of the least resistance
as to the good so to the evil
is rather in the trade unionism,
the limited fight against capitalism.

Alfred North Whitehead

Co- (or contracontra-) agency (Angel):

He rejects philosophies
of complex thought agency,
that is non whole,
and it separates the consciousness and the subject.
Similarly as in the agency
he sees the Being in the event

in really existent moment,
the construction element of all the Being.
This unit agency
is supracoagency,
which he calls an emotion,
which is the total relationship.
In each unit agency
the past agencies are reflected
and they precede the future
in the overall context.

Supracocontracoagency (God):

General laws of agency are God's,
subagency in total supracoagency
as the formation agency
of all goods and evils.

Co- (or contracontra-) agency (Angel):

Furthermore he sees the God
in good coagency,
that creates everything
on the whole and in the unit agency.

Nicolai Hartman

Co- (or contracontra-) agency (Angel):

He comes out of the thought Being,
which he ranks into the sequential layers,
without differenting any kinds of Being
in the reality and the human mind.
This Being
is discontinuous however,
as its various coagencies
are not composed.

Supracocontracoagency (God):

The most general perceptions of the world,
the simplest emotion and thought,
this powerful experience teaches us
about supracocontracoagency.
Therefore, **the total agency Being**
is not discontinuous
but continuous
in the form of total supracoagency.
Hartman also teaches

that all Being
is the duration of agency,
that everything passes.
The uniform nature of the agency
conditions so the link,
because the total agency
only a mind divides.
So as the time
and the space also then
Being forms the link,
continuous agency.
As in the other Being
each idea is also
good from a part
and partly bad.
The higher goodness lies
in the grip of the whole of Being,
lower good and evil can also be found
in the thought agency non whole.
Non whole of agency idea
means a new grip of Being
in thought contrast,
which together form a whole.
Their coagency synthesis
as a sign of lower good
is again contradictory in the agency,
thus imperfect and non whole.
The unity of the mind
and of the world of matter
stems inevitably
from agency unity.
About unity
the performance of thought agency convinces us,
that is supracoagency,
thus harmonious with the Being.
Accession of new agencies in the Being
lies in the supracoagency
among the simpler agencies,
its forming building elements.
Supraagency of subagencies
as the coagency synthesis
is higher form of Being
a qualitative novum.

Edmund Husserl

Co- (or contracontra-) agency (Angel):

In the extrapsychic world

Husserl talks about the essence,
this pure consciousness
is the world opinion.
These subsensory agencies
always all alone
as matter and simpler agencies
Husserl calles phenomena.
The phenomena are also agencies,
which are more complex
or suprapsychic,
that consciousness captures.

Supracocontracoagency (God):

From the unity of the total agency
a psychic
and extra(i.e. beyond))psychic
fact of contracoagency stems.
Individual material agencies
change again
in the posttermination agency in the soul
and they form a higher coagency.

Max Scheler

Co- (or contracontra-) agency (Angel):

He applies the teaching of phenomenology
in the philosophic-Christian ethics,
where he sees the extrasoulness
in termination coagency.
Its subterminations
are human values,
thus the phenomena
the extrapsychic facts.
Sensory terminations
are feelings of likes and dislikes,
their supravalues
are the terminations of the human mind.
These values of mind
are the nobleness
and then the lowness
and then spiritual terminations.
These correspond to the emotion,
which perceive a whole,
these are the values of the
human religion.
Furthermore he divides the values
into the personal values

and the material values,
which are low against them.
Human agency personality
he understands as supraobjectivity,
that participates in the most complicated supraagency
in the fact of God.
He understands the human love
in personal subcoagency
as the creative implementation of the
total coagency.

Existentialism

Co- (or contracontra-) agency (Angel):

It understands all the agency Being
in the tragic experience of humanity,
as the total coagency
subcontraagency in its performance.
Subcontraagency is in the individual,
therefore, it is a personal, subjective.
In performance of total agency
the human explores Being.
Performed subcontraagency
as existential experience.
is in the marginal life situation
as death, struggle and suffering.
Subcontracontraagency is
the evil, that fights against the evil,
and there is human creative supracoagency
or the good as a religious experience.

Karl Jaspers

Supracocontracoagency (God):

The overall agency of all Being
he calls being around,
that speaks about the infinite whole
as the horizon on the wane.
To the overall supraagency
we go by transcendence
by gradual composition of its partial subagencies,
or in the internal and external coagency of the reason.
Existence as a human agency
is a suprasensory whole,
from its unpredestined performance
we can conclude on **freedom**.
Being he sees in coagency,

interpersonal communication,
as the clash of material historicity and time,
therefore in the performance of subcoagencies and the whole.
The overall agency of all Being
as absolute and around
we discover by the transcendence,
by composition of the coherent things.
The existence in the form of total supraagency
in the performance of suprasensory subcontraagency,
in the existential experience I hold
as the being in a human wreck.

Jean Paul Sartre

Co- (or contracontra-) agency (Angel):

According to him the Being of the total agency
abstract categories are not,
but it is in the performance of
the total agency.
The man he understands however
in essence as coagency,
from immersion in the dark void
he or she proceeds to the perfect whole.
From the not predestined performance
Sartre assumes the freedom
of a human affected by the nothingness
of the fight of a good and evil agency.

Martin Heidegger

Supracocontracoagency (God):

The main and first task of contemporary philosophy
he sees in the examination **of the performance subagency**
of human existence in the agency whole,
in Heidegger´s words in the stay.
Supraagency of the human being stay
is being in place, in the manner and the time,
that is called an existential casting,
since it is a suprawill fact.
The stay is allocated
thanks to its anxieties,
it is the human contracoagency
between things and people.
Subagency of human being
is in the subcontraagency,
as it is happening in anxiety
from their own nonexistence.

Against human being
Heidegger puts human nonexistence
as a leak into nothingness,
their supracoagency he does not see.
The whole Being and nonexistence is according to him,
invisible suprasensory agency,
therefore, it is the task of philosophy
only to remind them.

Logical positivism

Co- (or contracontra-) agency (Angel):

As Comte for the knowable
it has only a sensory agencies,
it is necessary to think just about material agencies,
which are valid, identifiable and useful.
They refuse the philosophical teachings
idealistic and materialistic
about the nature of reality,
which is, of course, unknowable.
It differs from the teaching of empiricism,
which recognizes the objective reality
behind our perceptions
given to us by the senses.
Symbolic logic
in the Philosophy of Balance of agencies
I understand as a formation of a complex coagency
contra-or co- agency from simpler agency.
Thus the laws of composing in the mind
of complex contra-and co- agencies
from simple contra-and co- agencies
in the form of their truth and untruth.

Contra- (or contraco-) agency (Devil):

At all the philosophy it looks
according to the principle of verification,
therefore whether the performance of thought
is overall supracoagency.
Only the sensory performance
is positively possible,
therefore most of the ideas of philosophy
are according to them meaningless.
These meaningless thoughts
are irrational experiences,
poetry of the sensual world,
that then science will prove.

Supracocontracoagency (God):

The unity and complexity of the total agency
imply the existence of such **agencies,**
which are extra (i.e. beyond)sensory and extrathinking,
however they belong to the agency whole.

Co- (or contracontra-) agency (Angel):

Their theory of science
forms the logical language
as a whole of the sensory contracoagency,
a continuous thought subcoagency.
Link to all the language of science
should stem from the concepts,
coagencies composited by unit agencies,
so called axioms.
Unit agency ideas
of sensory contracoagency whole
it sees in a field of physics,
instead of all the common idea.
This language provides
the Philosophy of Balance of agency,
that sees to all the common divisor
in the form cocontracoagency.
At the general ideas they looked
according to the principle of verification,
therefore whether the performance of idea
is overall supracoagency.
According to Popper it is falsification,
because the overall ideas
are contradictory in a single subperformance,
but harmonious only in the infinite whole.
Supracoagency ideas of scientific theory
are composed from a simple thought agency
in the mind, that in the form of supraagency
already contains them a priori.

Ludwig Wittgenstein

Co- (or contracontra-) agency (Angel):

In his "Tractatus Logico-Philosophicus"
he distinguishes the area of historical performance
as a world, which should be so and so,
or as a fact or as a factual status.
Wittgenstein distinguishes further
the area of formation agency,
the ideas such as complex composition and decomposition

contra and co-agencies, false or true.
The ideas, which are composite,
in terms of his philosophy
he understanda as the formation of numerous coagency
of contra- and co- agencies from a simple agency.
These simple agencies
are not true or true again,
and those, in their essence,
as co-or contra- agencies.
About the extra(i.e. beyond) thought agency
according to him, the philosopher is silent,
since it cannot be spoken about it,
therefore to think in concepts about it.

Supracocontracoagency (God):

The unity of the agency implies,
that even extrasensory agencies
the mind imperfectly explores
in the conceptual idea.
Extrasensory contracoagencies,
which are also beyond the most general concepts
such concepts as Being or nonexistence,
are composed and decomposed sensory agencies.
In his "Philosophical examination"
he rejects the world in thought supracoagency
and a coherent whole of Being he is looking for
in the coagencies of mind and Being.
Each concept Witgenstein examines
in the circumstances, when it is being used
and this ideas analysis
he considered to be the path to the meaning.

Supracocontracoagency (God):

The concept as thought coagency
can be so consistently ranked
as by its formation
so by its performance.

Karl Raimund Popper

Supracocontracoagency (God):

In his work "The Poverty of Historicism"
he sees **the evil of contraagency in performance,
that is governed by thought formation,
which is only total subagency**.
In other words, the management of each society

in the form of complex supraagency is evil
according to the teaching based on the idea
as an evil or good overall subagency.
Good social **government**
is synthesis of all ideas
in the form of their supracoagency
foremost in general emotional level.

Literature: http://cs.wikipedia.org/wiki/Karl_Raimund_Popper

6. POLITICAL AND LEGAL PHILOSOPHY

6.1 POLITICAL PHILOSOPHY

Confucius

Supracocontracoagency (God):

He sees the balance of the State coagency
in finding the balance of the human soul,
of each of the good and evil agency wholes,
against which cooperating agencies put at least resistance.

Contra- (or contraco-) agency (Devil):

In practice government
he supported the king,
if the only one rules in the State
the power is not among the supracoagency ones.

Lao-c '

Supracocontracoagency (God):

He saw that Being is controlled by
the eternal God's balance,
that, of course, runs,
even though when the ruler does nothing.

Contra- (or contraco-) agency (Devil):

In the practical government
he supported the king,
however he refused the knowledge
of the use of tools and weapons.
However the overall knowledge
is hidden in the simple agency,
of which gradual composition
is the search for agency truth.
Without the truth there it is not peace
in the outside world even in the soul,
who tosses away the natural science,
consciously or unconsciously he or she serves to the evil.

Plato

Co- (or contracontra-) agency (Angel):

Plato sees,
that the state soul
is created by all of the human souls
and they are influenced by each other.
So between the legal State soul
and the soul of the people
we can speak
about cocontraagency.

Supracocontracoagency (God):

In **States, where**
only one or a group of people reigns,
the performance of this secular **power**
is not supracoagency.
Such a government is bad,
and it is threatened by an instant betrayal,
because it is not supracoagency
between good and bad people.
Even the way of this government
does not know the right freedom
against violence of its people
and their contracontraagency.
Further decided agencies
are composed of many,
under the reign of only called
it means to think in a limited way.
To thinking of complex civil agencies
decided by the government of each State
there is a need for both thinking and emotion
of each of the supracoagency living creatures.

Contra- (or contraco-) agency (Devil):

This is true even of the aristocracy,
where only the wise rule
by long education destinated
who conceive together superpeople.
In addition to the constant threat of a coup
they do not find the agency balance
which in a complex government agency
only the mind of all citizens can see.

Supracocontracoagency (God):

It is only then possible
to find a simple overall harmony,
when the State law
does not restrict the individuals in their supracoagency.
It is therefore always necessary
personal **equality and liberty**,
that only then gives way,
when it does not work in something.

Aristotle

Co- (or contracontra-) agency (Angel):

Aristotle sees in his work,
that the law of the balance of State agency
always overlaps in its essence
with the balance of the human agency.
The balance of human performance
as a simple supracoagency
creates a composite total agency
in the balance of performance of the State.

Supracocontracoagency (God):

He favors politeia, democracy today,
which **gives the way to monarchy or aristocracy**,
when through the path of equality and freedom
we do not reach the agency balance.
This is the case in the first place,
when simple agencies
do not go along with **common harmony,**
however only in relevant rate.
Substance of rate
is always personal,
according to what concerned persons
make a social contract.
Secondly it is, when
we are dealing with **a complex agency**,
which is being handled together
by the general thinking and emotion.
If there is some kind of non independence
in certain case of supraagency,
it has to be the equal supracoagency
not the unequal contraagency.
In **the past**, when freedom
was less supracoagency,
it was fair and balanced
the law gradually more balanced.
In the form of tyranny or monarchy,

aristocracy, or oligarchy
always however goal directed
in the overall balance.

Thomas Aquinas

Supracocontracoagency (God):

The man is a part of the supracoagency,
in which both good and evil mixes,
the performance of this supracoagency
is the living of the man in society and a State.

Contra- (or contraco-) agency (Devil):

In practical government
he supported the king,
if only the one rules in the State,
then the power is not the supracoagency.
God is total supracoagency
of all partial goods and evils,
therefore the picture of God
is in democracy.
The secular government of the Catholic Church,
that the way to balance agency
claims alone in the form of contracontraagency,
does not lead to supracoagency balance.

Supracocontracoagency (God):

The balance of the State agency
lies in a higher contract,
which make both the good and evil,
everyone including the Catholic Church.
To experience the peace in the State
can be just possible in balanced whole,
where each of cooperative agencies
puts the least resistance.

Niccolo Machiavelli

Contra- (or contraco-) agency (Devil):

To angelic good goal
he uses evil means,
so to dominate a whole
he opts for violence and war.
But State contracoagency

raises due to the balance of Being
the coagency of the others,
that destroys in turn the evil.

Supracocontracoagency (God):

To dominate the whole agency
only the balance can be used,
that is in accordance with Being,
and it allows us to go further forward.

Hugo Grotius

Co- (or contracontra-) agency (Angel):

He derives an imperfect social contract,
which is embodied in today's international law,
from the natural law,
that comes from God.

Supracocontracoagency (God):

Natural law is supraagency
standing above the ordinary law;
it makes obliged the individuals and States
and this law is valid forever.
The natural and eternal law
is the overall formation agency,
the center of all existent agencies,
the termination of the agency Being.

Thomas Morus

Co- (or contracontra-) agency (Angel):

On his island of Utopia
he displayed the society in the lower coagency,
where in the human behaviour
joint ownership is without exploitation.

Supracocontracoagency (God):

In **a perfect democracy**
of the evil and the good higher contract
there is the people almost in supracoagency
all the evil and the good conciliated.
The perfect democracy
tolerates and ensures
according to the balance rate

all the living both good and evil.
In the framework of the supracoagency
it eliminates its opponents,
who differ from the overall harmony
to the essential extent .
Penalties for the oponents
are not as an offense numerous,
but they are balanced
in the good and in the evil.
The essence of the extent
is always personal,
according to what concerned persons
make a social contract.

Thomas Hobbes

Co- (or contracontra-) agency (Angel):

According to Hobbes people is without a State
in a constant state of war
and in the desire for a lasting peace
it transmits its power to the royal government.
So good contraagency of contraagency
higher supracoagency does not constitute,
if only the one exclusively rules,
the power is not perfect coagency.

John Locke

Supracocontracoagency (God):

According to Locke a State is a contract,
that **connects civil goods and evils,**
it arises from the supracoagency consent
of all human agencies contained in the whole.
To maintain the statewide balance
lying in the civil supracoagency
in a democracy there is used the majority principle
and the principle of equal representation.
The State purpose
the termination agency
is finding a balance of Being
composed also of a balance of people.
The State, which has not adhered to
God's balance,
ceases the trust of its own people
due to the good and the evil contraagency.
The distrust of the people
is in the contraagency,

by which the balance of the Being
takes the revenge to its opponents.
The State, which is not supracoagency
in good and evil agency,
ceases to exist due to resistance of its own people
and from a higher power of Being.

Charles de Sécondat, baron de la Bréde et de Montesquieu

Supracocontracoagency (God):

If the **State government**
should be with Being in the balance,
it must be general,
in the higher contractual agency.
Balance with all
the individual agencies of Being
has **the form of a higher contract**
among the governmental experts.
They are all the agents
of State and governmental
formation, performance and subformation supracocontracoagency
legislators, officials and judges.
Distribution of power allows
in the case of **partial contraagency**
to limit its devastating effects
in the framework of the social contract.
The balance between experts
provides the theory of separation of powers
of Frenchman Charles Montesquieu
in a higher cocontracoagency.

Jean-Jacques Rousseau

Supracocontracoagency (God):

He sees **the purpose of the State**
in the balance of Being,
which sometimes differs
from the balance of the people.
The Balance of Being
called as the general will
is found by voting
of people with a balanced mind.
People, whose knowledge
has not adhered with the balance,
is however wrong in the voting
in the form of the will of all the people.
It is necessary always to see

that the voice of each individual,
is a part of good and evil agency,
of which center is necessary to find.
So **the will of the people**
is involved by its part
in the overall will
of the God Being.
At the same time **the State, that has not adhered to**
the overall balance of Being,
ceases the trust of its own people
due to the good and the evil contraagency.

6.2. PHILOSOPHY of LAW

Natural law (Aristotle, Marcus Tullius Cicero, Thomas Aquinas, Hugo Grotius, John Locke)

Co- (or contracontra-) agency (Angel):

Its followers believe in the law,
that is some sort of higher ideality,
that is above the human law,
God, nature and reason are the source.
Its existent reflection
is the institute of fundamental human rights
in modern constitutions,
which establish a modern State.
Opponents refuse the ideality,
that constitutes a human law,
such a law would be inflexible
and also it is not self-evident to all.

(see http://cs.wikipedia.org/wiki/Cicero)

Positive law (John Austin)

Co- (or contracontra-) agency (Angel):

Supporters recognize only the law,
which is in the State actually valid
as the sovereign´s order,
who punishes its violation.
Opponents refuse
the contradiction of applicable law and morality,
that often shapes the law,
and to justify dictatorial and totalitarian regimes.

Normative law (Hans Kelsen)

Co- (or contracontra-) agency (Angel):

Supporters acknowledge
only the State positive law,
that is governed however by the
formal laws of thought.
Opponents argue,
that as well as the positive law
these apriori forms
do not preclude any dictatorial and totalitarian regimes.

Historical-legal school (Karl von Savigny)

Co- (or contracontra-) agency (Angel):

According to the doctrine of Hegel's philosophy
he sees the law in the dialectic development,
to the proper legal understanding
there should be a historical examination.
Philosophical school is valuable
for detailed historical researches of law
and by its opponents criticized
for dependency and highlighting of the national law.

The sociological approach (Roscoe Pound, Max Weber)

Co- (or contracontra-) agency (Angel):

It sees the total law essence
in balancing of social interests
either of individual being
or social group.
This approach seeks after
partial social interests
and also it explores
the social implications of law.
Opponents criticize it however
the dictate of the social majority,
that may not be a good
and it can be harmful.

Law according to the Philosophy of Balance

Supracocontracoagency (God):

Law as the common idea,
that is enforced by a State,
is therefore a complex agency
generally contracoagency.
Natural law is supraagency

standing above the ordinary law
but also it is the fair law,
it is the law valid forever.
The natural and eternal law
is the total formation agency
the termination of the agency Being.
It is the perfect supracocontracoagency,
that is the contract of every good and evil,
where there are all agencies
at least against each other.
The law is **fair**,
if it is adopted by all the living beings,
to which it applies,
because it serves them.
Such a legal compromise
includes all living how the goods so the evils
in the form of the least resistant supracoagency,
that is not shaken by anyhing.
A reflection of the fair law
is today's democratic form,
because the general people's power
reflects the civil supracoagency.
What **law** is supposed to be **evil**,
the law accepted only by some,
then the law obviously harmful
although agreed by all living creatures.
Furthermore I have been thinking,
when to call for the State law,
to fight against contradictory agency
even if it is the evil or the good.
Even the good can interfere the law,
depart it from the middle way,
because after an overly good agency,
the fateful scales balance it by the evil.
Freedom is in the first place,
as a part of the overall supracoagency,
that is unlimited by nothing,
in the form of subagency of the individual.
Only then it is possible
to find the total simple harmony,
when the State law
does not restrict the individual in his or her supracoagency.
Personal equality and freedom
are therefore always necessary,
that give the way only then,
when they **doe not work in something**.
This is the case in the first place,
when simple agencies
do not go along with **common harmony,**

however only in relevant rate.
The perfect democracy
tolerates and ensures
according to the balance rate
all living both good and evil.
Penalties for the oponents
are not as an offense numerous,
but they are balanced
in the good and in the evil.
The essence of the extent
is always personal,
according to what concerned persons
make a social contract.
Secondly it is, when
we are dealing with **a complex agency**,
which is being handled together
by the general thinking and emotion.
If there is some kind of non independence
in certain case of supraagency,
it has to be the equal supracoagency
not the unequal contraagency.
In **the past**, when freedom
was less supracoagency,
the law gradually more balanced
was fair and balanced.
In the form of tyranny or monarchy,
aristocracy, or oligarchy
thus still more complex supracoagency
there were balanced interpersonal struggles.
The government of the individual, the monarch
and **still growing group**
flowed from the instant conciliation
of the good and the evil in supracoagency.
In **a perfect democracy**
the evil and the good higher contract
there is all the living almost supracoagency
all the evil and the good conciliated.
The concept of law as a social contract
maintains the **duality of the natural law and the applicable law**
as in the natural-law philosophy,
it is **positively-legal with the philosophy of the positive law**.
In accordance **with the historical school**
the **law is going throught a contractual change**,
in accordance **with the sociological approach**
both laws are **a social phenomenon**.
The subject of sociological study
may be how its adoption,
so its actual performance
in the interpersonal State society.

The concept of law as a social contract
is therefore embodied in the supracoagency,
in which the imperfect ideas are conciliated
in a composition and decomposition way into the whole.

7. HISTORY OF MANKIND

7.1 PREHISTORY

The path to the Homo sapiens (from the beginning to 10 000 BC)

Supracocontracoagency (God):

Imperfect natural supracoagency
means the combat of lower goods and evils,
when the one newly wins,
the second beats it subsequently
In the fight of good and evil agency
the frequency is constantly increasing
and their mutual balance
means the rotation of the good and the evil.
The path off this development cycle
leads through the perfect balance,
that means the partial denial of the
good and the evil in their harmony.

Co- (or contracontra-) agency (Angel):

Convenient terrestrial climate
before the end of the Cenozoic
meant a proliferation of fauna and flora
and the man won his or her fight.
The first human ancestor
in the representation of (oak monkey) Dryophithecus
and follower (Rama monkey) Ramaphithecus
saw in the history the light of the world.

Note: Rama is an Indian mythological king

Contra- (or contraco-) agency (Devil):

In the fight against the nature
and also against each other
the stronger one dominated
in Europe, Africa and Asia.
At the end of the Cenozoic
there was the ice age,

therefore many of the species died out,
they lost in the battle with the nature.

Co- (or contracontra-) agency (Angel):

In the fight of the merciless nature
human ancestors stood well
in the embodiment of (Southern ape) Australopithecs
and also of dexterous man (Homo habilis also as Australopithecus habilis).
The descendant in the Quaternary period
was in the development the erect man (Homo erectus),
who knew as a hunter and a gatherer of food
a simple weapon and tool.

Contra- (or contraco-) agency (Devil):

In the fight against the nature
and also against each other
once again the stronger one prevailed,
the so-called sane man (Homo sapiens).

Co- (or contracontra-) agency (Angel):

In the fight of existent good and evil
human existence did not die out,
but in the temperate climate of the Earth
there was born and lived a sane man.
Their other representative
cave man of Neanderthal
lived during the ice age
and they braved the adversity of nature.

Contra- (or contraco-) agency (Devil):

In the fight against the nature
and also against each other
in Europe the stronger one prevailed,
a sane man-Cro-Magnon man.

Co- (or contracontra-) agency (Angel):

Despite the adversity of the nature
of ending ice age
in the mutual good and evil fight
a sane man was born.
As a brother of today's modern man
he or she was already endowed with intellect,
he or she ruled by a stone tool
and created religious-art works.

The sane man
gradually colonised the Earth,
at first by hunting and gathering
they catered for food.

Revolution of the Neolithic-stone age (10 000-3 000 BC)

Co- (or contracontra-) agency (Angel):

Exploring of the laws of nature
formed the agriculture
through the unconscious cultivation
and later also breeding.
The first crops
have been in Mesopotamia and the Mediterranean,
and then in Egypt and Asia
mostly wheat and barley.
The first bred animals
were reindeer, sheep and goat,
gradually at first mixed farming
was later separated to agriculture and pastoralism.
To perfect processing of stone
the pottery and metallurgy access,
it is the onset of **bronze age**
and with it a new invention of writing.
Common farming on land
contributed to the merging of people
in a large agricultural villages,
from which the first empires have developed.

Contra- (or contraco-) agency (Devil):

At first equal society
is reshaped in the supremacy,
nobles, kings and priests
oppress free and slaves.
The creation of tangible (material) wealth
instigated the conquest warfare
of poor and rich people
about the wealth and also the territory.

Supracocontracoagency (God):

Religious ideas
and their common processing
serve to the understanding of the whole Being
but also even to the social inequality.
In the rotation of composition or formation

and its subsequent decomposition or destruction
the balance of the good and the evil
gradually finishes.
The perfect agency balance
contains all of the evils and the goods,
it denies the exaggerated of them
in the interest of the overall harmony.
In relation to external nature
it means **to conserve its resources**,
when it limits coagencies
for the threat of their contraagency.
Furthermore this means
limited fighting against the nature
with regard to its evils
in the form of subcontracontraagency.
In relation to human evolution
it means **defeating the enemy**
and their evil limited by defeat
to incorporate into supracoagency.

7.2 ANCIENT HISTORY

Advanced culture of Mesopotamia (3 000-331 BC)

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed in Mesopotamia
to consolidating its people
in larger urban units.
Joint irrigation
in the agricultural village
merged in a major town
prefigures the creation of the empire.

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare
so then the cities of the Sumerians
were defeated by one of the kings.
Gradually in the war of conquest
the king Sargon the first won
and with him the Semitic tribes
and here they were beaten by the Gutian people again.
After their ouster by Sumers
Amorit nomads won,
the contradictions between their tribes

encouraged the conquest warfare.
So all the cities of the Amorits tribe
were submitted by the king of Babylon Hammurabi,
his subsequent weakness
the other riders took advantage.
The empire in South Mesopotamia
so called Babylonia
the Hittite Empire of **iron inventors** refuted (see
http://cs.wikipedia.org/wiki/Doba_%C5%BEelezn%C3%A1),
which provided the power freedom to the North.
In the North of Mesopotamia
warfare provided the formation of Assyria,
but however then it collapsed
under the raids of the marine nation.
The constant power struggles
were the basis of the Neo-Assyrian Empire,
that first conquered many territories,
then it was smashed by the Babylonians, and Medeans.
Neo-Babylonian Empire
was conquered by the Persians,
who conquered large territories,
than the Greeks defeated them.
Government, state religion
and land ownership
were in the hands of a narrow group of
agents of the social contract.
Mesopotamian society
was dominated by human supremacy,
nobles, kings and priests
oppress free and slaves.

Co- (or contracontra-) agency (Angel):

In times of victory
literature and architecture develope
as well as the palace and temple buidings
or the legend about Gilgamesh.

Supracocontracoagency (God):

The social contract
only at the government of few
cannot withstand long
against a more equal society.
Only the **perfect balance** is strong**,**
when **members of the social contract**
all state citizens are
and it is **the merger of all good and evil.**
Balance in politics

means **defeating of the enemy**
and their evil by the defeat limited
integrate into the supracoagency.

Old Egypt
(3 000-332 BC)

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed in the Egyptian country
to the merging of local people
in a still growing communities.
Joint irrigation
in the agricultural village
merged in larger units
prefigures the creation of the empire.

Contra- (or contraco-) agency (Devil):

The formation of tangible (material) wealth
instigated the conquest warfare,
so the Government of the whole Egypt
consolidated in the hand of the Pharaoh.

Co- (or contracontra-) agency (Angel):

The heyday of the Old Empire
during the third dynasty
meant also the construction of the pyramids,
on which the submitted people worked.
The reign of a Pharaoh
gradually disintegrated,
in the form of good contracontraagency
priesthood, the nobility and the people refused it.

Contra- (or contraco-) agency (Devil):

The fight after the collapse of the Old Empire
ended by the victory of the king,
who united the Central Empire
and by the wars he expanded it again.
The fight of the Pharaoh's reign
and subjugated nobility
ended the invasion of the Semitic peoples
and the rule of Hyksos.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
the King of Thebes launched
the liberation struggles
and he established the New Empire.
During the reign of King Ramses II.
begins a peace heyday of empire
and many of the buildings are founded,
which are partly preserved.
The reign of one Pharaoh
gradually disbanded
into the south temple State
and north of the royal governments.

Contra- (or contraco-) agency (Devil):

The fight of the Pharaoh's reign
and the southern state of priests
ended the invasion of the Nubians
and then the reign of the Assyrians.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
the local kings gradually launched
liberation struggles,
till they united the government in Egypt.

Contra- (or contraco-) agency (Devil):

The ruler of the 26. dynasty
the Persians subjugated,
who were replaced in turn in Egypt
by the Greeks as liberators.

Supracocontracoagency (God):

Imperfect balance
was shown in Egypt
in rotation of creative goodness
and the subsequent destructive evil.
At first the government of only a few
subjugated Egypt in the fighting,
then in a period of long-term peace
there was flowering of the culture again.
In the fight of oppressed for the rights
the unified empire disintegrated,
however instead of cooperation
they proceeded to the mutual war.

Crete and Mycenae
(2000-1200 BC)

Crete

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed on the territory of Crete
to consolidation of its people
in more uniform State units.
To the formation of a larger community
contributed the development of trade also
inside the Cretan society
as well as with other seats.
For the purpose of trade
they built a flotilla of ships,
by which they already dominated the business ways
in the whole Mediterranean area.

Contra- (or contraco-) agency (Devil):

Of the ignorance of the fight
the Mycenaeans took advantage,
who took over the palaces
standing on Crete.
The trade on Crete
was apparently driven by the State,
as records of
the state hierarchy show.

Supracocontracoagency (God):

A State that does not know the fight
in the form of contraagency,
which it beats and adheres,
cannot resist the evil war.
Also perfect supracoagency
does not stop the evil contraagency
whether within a society
or outside of its reality.
So it can be reached the perfect peace
only in the whole,
when the social contract consists of
as good citizens so bad citizens.

Mycenae

Co- (or contracontra-) agency (Angel):

Agriculture and the subsequent wealth
encouraged the gradual merging of the people
as well as the conquest wars
among others also Mycenaeans.
To the creation of the State community
contributed the development of trade
within the society
even with the other settlements.

Contra- (or contraco-) agency (Devil):

The Mycenaeans conquered Crete
took over their flotilla
and further business relations
in the whole of the Mediterranean area.
Mycenaean society
was mastered by inequality,
their kings and nobles
oppressed free and slaves.

Co- (or contracontra-) agency (Angel):

The government of the small group
fell apart gradually,
in the form of creative contracontraagency
they were eliminated by social unrests.

Supracocontracoagency (God):

The social contract
at the government of only the few
could no longer withstand
the fight in the society.
Perfect balance is permanent,
when **members of the social contract**
all citizens create
and it is the **merging of their good and evil**.

Before the unification of China (2 205-206 BC)

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed on the territory of China

to consolidation of its people
in greater State units.

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare,
so the government in the whole China
was in the hands of the first emperor.

Co- (or contracontra-) agency (Angel):

In the times of ancient Chinese unity
were laid the foundations of the State administration,
agriculture was developed,
when rivers were regulated.

Contra- (or contraco-) agency (Devil):

The government of a single emperor
caused power struggles
of one of many submitted families,
family Zhou overthrew the last Shang.

Co- (or contracontra-) agency (Angel):

The government of a single emperor,
who oppress the others,
is gradually splited
in idividual principalities.

Contra- (or contraco-) agency (Devil):

The subsequent conquest battles
between the principalities
meant reunification
in the hands of Qin dynasty.

Co- (or contracontra-) agency (Angel):

In times of war victories
philosophy, buildings and the arts develop,
it is the onset of bronze age
and then with it the invention of writing.
Terrible rule of the last emperor
caused the people's rebellion,
which meant the fall of his empire
and the Chinese re-division.

Supracocontracoagency (God):

The social contract
at the government of only the few
could no longer withstand
the fight in the society.
Perfect balance is permanent,
when **members of the social contract**
all the agency agents create
and it is the merging of their good and evil.

Persian Empire
(6th century BC -7th century AD)

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed on the territory of Iran
to consolidation of its people
in the larger village units.

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare,
so the government over the vast area of Iran
happened to be in the hands of Medean and the Persian Kings.
The Persian King Cyrus II The Great
spread overly the own empire,
by wars he occupied foreign territories,
in what his successors continued.

Co- (or contracontra-) agency (Angel):

In times of victories
administration and buildings develop,
new paths are built
as well as the navigational channels.
On the occupied territory
the State administration is maintained
as well as religion,
they were connected by the Persian government.
The government of a single king
caused the power struggles,
Gaumata acquired power,
who the new government deposed.

Contra- (or contraco-) agency (Devil):

The huge Persian empire
the Greek warriors conquered,
Seleucus, General of Alexander the Great, the Greek king
laid the foundations of a new large empire.
The new Iranian raiders
were the Parthians and the Romans,
the nomadic tribes of the Parthians
founded the Arsacidaes dynasty.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
the Sassanids launched
liberation struggles
and they established a new empire.

Contra- (or contraco-) agency (Devil):

Sasanian king Ardashir, the first
gradually expanded his empire,
by wars he occupied foreign territories,
in what his successors continued.

Co- (or contracontra-) agency (Angel):

The government of a single King,
who oppresses the others,
raises the social unrests,
which the people and the nobility participated in.

Contra- (or contraco-) agency (Devil):

Wealth and weakness of Iran
encouraged the Arab army,
which expanded, winning conquest war,
at Iran expense the boundaries of Arab Empire.

Supracocontracoagency (God):

The Government of a single king
or with him or her related aristocracy,
who oppresses the other people,
is weak for the social struggles.
T**he social contract**
at the Government of only a few
could no longer withstand
a more equal society.
Internal social struggles
extend the share of government,

the external threat of unequal society
are the poor tribes with greater equality.
The **perfect balance** is strong**,**
when members of the social contract
consist of all living creatures in the world
and it is **the merger of the good and the evil**.

Greece and Hellenism
(750-2./1st century BC)

Co- (or contracontra-) agency (Angel):

Agriculture and the subsequent wealth
encouraged later the merging of people
as well as the conquest wars
among them also the Greek Dorians.
To the formation of town states
contributed the development of trade also
within Greek society
as well as with other seats.
A large surplus of Greek inhabitants
meant the creation of new settlements
on the coast of the Mediterranean Sea,
which developed mainly the business.
The development of national trade
contributed to the debts of the people,
the dispute between the rich and the poor
the tyrants solved in State interventions.

Contra- (or contraco-) agency (Devil):

The government of citizens enjoying full rights
meant, however, the government of oppression
in Athens of the non-free slaves
and in Sparta, of the original Helots.

Co- (or contracontra-) agency (Angel):

Wars of conquest of the Persians
the Greeks repelled victoriously in the battle
at Salamis and at Marathon,
to which Athenasians contributed mainly.
Path of peaceful cooperation
of small Greek town States
gave a rise to Athens Association
and also the heyday in the culture.

Contra- (or contraco-) agency (Devil):

The subsequent wars of conquest
between the town States
ended with the victory of Sparta,
which in turn Thebes defeated.
Unification and formation of the empire
meant the victory
of the Macedonian King,
it was Alexander the Great.
Alexander the Great defeated
the Greek States and Persia,
he conquered huge territories
and the campaign ended by his death.

Co- (or contracontra-) agency (Angel):

The death of the sovereign king
caused the power struggles,
the Ptolemaic dynasty took over Egypt,
Seleucid dynasty gained Syria and Persia.
There a period of flowering followed,
in which Greek culture
dominated the culture of the conquered East
as well as the power of Rome.

Supracocontracoagency (God):

The social contract
at the government of only the few
could no longer withstand
the fight in the society.
The perfect contract is permanent,
when **members of the social contract**
all citizens create
and it is **the merging** of their **good and evil**.
The balance in the common politics
means to **defeat the enemy**
and their evil limited by the defeat
to incorporate into supracoagency.

The world Empire of Rome (753 BC-476 AD)

Co- (or contracontra-) agency (Angel):

Agriculture and the subsequent wealth
encouraged the merging of people
as well as the conquest wars
among them also the Romans.

Contra- (or contraco-) agency (Devil):

The Romans under the rule of the Etruscans
submitted the whole territory of the Latins
with the Etruscan King in their head
united in the town State.

Co- (or contracontra-) agency (Angel):

The government of a single king,
who oppresses the others,
united the front families
which expelled the king away from Rome.

Contra- (or contraco-) agency (Devil):

In the war of conquest
the Romans gradually gained control
over the entire today´s Italian territory
and they laid the foundations of the empire.

Co- (or contracontra-) agency (Angel):

In the form of good contracontraagency
Rome was dominated by social unrests,
noble families gathered in the Senate
were limited then by plebs tribune of the people.

Contra- (or contraco-) agency (Devil):

General social contract
allowed to a unified Rome
to lead the war against Carthage
about the leadership of the then known world.
Carthage was eventually destroyed
in the three Punic Wars,
the art of warrior Hannibal did not help it
and the Romans stood on its ruins.

Co- (or contracontra-) agency (Angel):

Long winning wars
meant the wealth of some people
but also the poverty of many people
and social contradictions.

Contra- (or contraco-) agency (Devil):

The fight of the rich and noble

with the poor landless
gave the power to the Roman Emperor
with the support of the masses of people and the army.

Co- (or contracontra-) agency (Angel):

The power of a single emperor
contributed to the cultural heyday
and the expansion of the territory of the Roman State,
which unified government allowed.

Contra- (or contraco-) agency (Devil):

Lasting social strikes,
outside Germanic attacks
the battles between the Romans and the foreigners
resulted in the absolute power of the emperor.

Co- (or contracontra-) agency (Angel):

The Government of a single emperor,
who oppresses the others,
caused social unrests,
by which the power divides.
Attacks by Germanic tribes
took advantage of the weakness of the Western Roman Empire,
they unseated the last Roman emperor
and established its own government.

Supracocontracoagency (God):

The general agency balance
is in the rotating victory
of creative good and destructive evil
finished then in their reconciliation.
Perfect historical balance,
to which the development goes gradually,
is in general social contract,
which reconciles the originators of the good and the evil.
Balance in historical politics
means to **defeat the enemy**
and their evil limited by the defeat
to incorporate into supracoagency.

India
(2 500 BC -700 AD).

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed on the Indian territory
to the merging of local people
in larger urban units.

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare
so the government of India
the white Aryans took up.
The raiders divided the original people
into four major social castes,
which made with help of religious truths
the Aryan superiority stronger.
Among Aryan States
violent wars broke out,
using the Buddha's teaching
Mauryas founded their empire.

Co- (or contracontra-) agency (Angel):

In the days of their victories
State administration and laws develop
in the days of absolute Ashok´s reign
the power of the familiy Mauryas is at its top.
The government of a single monarch
disintegrated gradually,
on the territory of his empire
the rulers change.

Contra- (or contraco-) agency (Devil):

Of the weakness of the divided India
the foreign conquerors took advantage,
the Greeks, Scythians, Parthians and Kushans,
these last ones settled on the territory of India permanently.
Between all of the Indian States
sharp wars continued,
from this long lasting fight
Gupta dynasty rose.

Co- (or contracontra-) agency (Angel):

In times of war victories
culture and religion develop
this golden age of classical India
the peace within the whole empire allowed.

Contra- (or contraco-) agency (Devil):

The social contract of few
couldn't resist finally
the raid of the equal Huns
and it broke up to more States.
In the following historical period
the wars were continuing between the States
under the rule of local dynasties,
that competed for power.

Supracocontracoagency (God):

The social contract
at the government of only the few
could no longer withstand
the fight within and outside the society.
Perfect balance is permanent,
when **members of the social contract**
all the existent agency agents create
and it is the merging of their good and evil.

7.3 MIDDLE AGES

Migration of Nations (4th-6th century)

Co- (or contracontra-) agency (Angel):

Agriculture and the subsequent wealth
as well as the conquest wars
encouraged the merging of local people
and thus the formation also of the Roman Empire.

Contra- (or contraco-) agency (Devil):

The formation of Roman wealth
encouraged conquest warfare,
so in Europe on the territory of the Roman State
the raids of the Germans but also of the Slavs rotated.
During the conquest of Gaul
Caesar encountered Germanic army,
the soldiers of the Emperor Marcus Aurelius stopped
penetrating Marcomanni on the Danube.
The penetrating Visigoths defeated then
the Byzantine Empire by Edirne,
further advancing Huns tribes
the Romans stopped at French Châlons.
Vandals infiltrated into Hispania,

where they laid the foundations for their own empire,
later they penetrated into Africa,
where they founded their kingdom.

Co- (or contracontra-) agency (Angel):

The Roman Empire accepted the Germanic tribes,
it assigned them land
and it integrated them into their army,
they became citizens enjoying full rights.

Contra- (or contraco-) agency (Devil):

The Visigoths conquered southern Gaul
and then they settled in Hispania,
The Ostrogoths conquered Italy
and they founded there their own empire.

Co- (or contracontra-) agency (Angel):

In times of victories
in Ostrogoth Empire there is
developing the culture and also engineering,
which later Charlemagne took up.

Contra- (or contraco-) agency (Devil):

Later Italy was possessed by
the Byzantine emperors,
who conquered also the Vandal territory.
and then southeastern Hispania.
Byzantine Empire
the Persians defeated
and then another new conquerors, who were Arabs,
in the late Middle Ages then the Turks occupied this territory.

Co- (or contracontra-) agency (Angel):

The most enduring of the empires
Frankish tribes founded,
when the king of Salian Franks
dominated the whole of Western Europe.
The Angles and Saxons
sailed to England,
where they subsequently settled permanently
and in the struggles they united the kingdom.

Contra- (or contraco-) agency (Devil):

Into Eastern Europe
Slavic tribes invaded
along with the nomadic Avars,
later the Hungarians came.

Supracocontracoagency (God):

The social contract
at the government of only the few
could no longer withstand
against more equal society.
The victory of equal nations
generalizes a social contract
among the aggressive tribal warriors
and the conquered original inhabitants.

Islam and the Arab world (around 570-8th century)

Co-(or contracontra-) the agency:

To the formation of urban units
also the development of trade contributed
within Arab society,
in particular however among the others.
The main source of livelihood
was for the nomadic Arabs,
who were equal but fragmented,
extensive camel breeding.
To their rapid integration
contributed Muhammad's religion
following-up on Judaism and Christianity
but even the military subjugation.

Contra-(or contraco-) the agency:

One of the pillars of Islam
is to lead the conqueror war
and to spread in this way their religion
among the other nations.
With the help of the conquest war
the successors of Muhammad
subjugated many territories
particularly in Africa and Asia.

Co-(or contracontra-) the agency:

On occupied foreign territory
they maintained the original state administration

even a limited religious freedom
and they distributed the Islamic religion.
In the form of contracontraagency
against a single reign of caliphs
power struggles broke out,
of which came out the Abbasid dynasty.
During the reign of Abbasid caliphs
in the period of the internal and external peace
there was the time of overall flowering
for quite a long time.

Supracocontracoagency:

The social contract
at the government of only the few
could no longer withstand
against more equal society.
More improved balance
lies by the way of historical development
in a more general contract
of how the good so the evil.

The middle ages of the far East (4th-14th century)

China

Supracocontracoagency (God):

Common farming on land
contributed to coagency of people,
contraagency wars between the settlements
gave a rise to a single empire.
At the time of victories
of absolute power
occurred a stage of peace
and coagency heyday.
The general agency balance
consists in rotating victory
of creative good and destructive evil
with ever-increasing frequency.
Perfect agency balance,
to which agency development is gradually directed,
is in general social contract,
which reconciles the originators of the good and the evil.
Contraagency reign of only one emperor
meant social strikes,
the power in the hands of a single monarch
was destroyed territorially in the contracontraagency.

Individual States
led wars between each other,
in the form of contraagency
they founded their empires.
A different form of evil contraagency
meant a presence of foreign conquerors,
who formed their own empire
again with the absolute rulers.
Balance in historical politics
means to defeat the enemy
and their evil limited by the defeat
to incorporate into supracoagency.
The form of contracontraagency
had the disintegration of the Qin dynasty,
the form of contraagency
had the formation of the Han dynasty.
The form of coagency
had further consolidation of the empire,
the form of contraagency
had the absolute power of the emperor.
The form of contracontraagency
had then the disintegration of the empire
and the fight against attacking raids of
the nomadic tribes in the North.
The form of contraagency
had conquest fights
of raiders called the Chops,
who ruled in northern China.
The form of contracontraagency
had renewed disintegration of the empire,
the form of contraagency
had the Empire of Songs.
The form of coagency
had the consolidation of the empire,
the form of conquest contraagency
had the government of the Mongol dynasty.
The form of contracontraagency
had the liberation struggles,
the form of destructive and decompositive contraagency
had the absolute reign of the Ming dynasty.

Japan

Co- (or contracontra-) agency (Angel):

Common farming on land
and the immigration from the mainland,
contributed to the merging of people,
so it was also with the Japanese.

Contra- (or contraco-) agency (Devil):

The gradual formation of tangible (material) wealth
started the formation of social superiority,
so because of social hostilities
Japan was got into the power of emperors.

Co- (or contracontra-) agency (Angel):

Consolidation of the imperial government
brought the heyday of State administration,
Buddhist faith was received from China
and the capital was founded.

Contra- (or contraco-) agency (Devil):

Absolute reign of the emperor
brought power strikes
the power of a single monarch
gradually fell apart.

Co- (or contracontra-) agency (Angel):

In the form of good contracontraagency
Fudjiwaras started to rule,
instead of the absolute power of the government of emperor
they introduced the power of the noble family.
Of the fight between this family and the emperor
a powerful rural aristocracy made use,
family of Minamoto no Yoritomo won
and he became shogun.

Supracocontracoagency (God):

The social contract
at the government of only the few
cannot resist in time
against the fight within the society.
The rotation in the fight victorious rulers
generalizes social contract,
that reconciles in itself more
their good and evil agencies.

The European middle ages (8th-15th century)

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare,
so the kings of Frankish tribes
conquered the Western Europe.

Co- (or contracontra-) agency (Angel):

In cooperation with the Pope
the King Charlemagne
became a Roman Emperor again
and a period of peace began.
In the days of his victory
there was the heyday of the art
and also of education
in the Carolingian renaissance.
In the form of contracontraagency
against the absolute power of a single emperor
power struggles started,
in which vassals became independent.
In the Eastfrank Empire
the German Emperors
did not win in a dispute
with the Pope and the princes.

Contra- (or contraco-) agency (Devil):

In contrast in the Westfrank Empire
gradually in the power struggle
the French House of Capet ensured themselves
as the only rulers in France.
So also the territory of England
was conquered by the French Northmen
and the Duke William the Conqueror
won the powerful royal deal.

Co- (or contracontra-) agency (Angel):

The development
of the local and remote trade
meant the merging of people
into the town society.
Then in a social fight the townsmen
became members of the social contract,
as a so-called third state
they were seeking for political rights.
In the form of further contracontraagency
ecclesiastical hegemony fell apart,
also inside the church organization
there was a schism in the power of the Pope.

Contra- (or contraco-) agency (Devil):

The great plague epidemic
meant the death for many people,
it initiated the decline of the economy
and the masses became serfs.

Supracocontracoagency (God):

The social contract
at the government of only the few
could no longer withstand
the fight within the society.
More improved balance
lies by the way of agency development
in a more general social contract
of how the good so the evil.

Mongolian Great Empire (13th and 14th century)

Co- (or contracontra-) agency (Angel):

The development of agriculture
and territorial conquest wars
contributed to the merging of people,
in Europe and in Asia the States arose.

Contra- (or contraco-) agency (Devil):

The development of pastoralism,
in particular however the conquest wars
unified the Mongols,
who founded the world great empire.
The fights between nomadic tribes
contributed to their unification,
the connection and the subjection of the Mongolian tribes
Temujin the Khan of Mongols reached by wars.
In the conquest war
they conquered the territory of Asia,
in the campaign further to west into Europe
they conquered Russia, Poland, and Hungary.
After the death of the son of Temudjin
Ogedej, the Great Khan
the Government Kublai Khan gained,
who controlled in turn the whole of China.

Co- (or contracontra-) agency (Angel):

During the reign of Kublai Khan
the trading developed,
to China Marco Polo marched
and the Empire welcomed him with honors.
In the form of good and creative contracontraagency
the power in the Empire divided
to the khanates in Persia, the Golden Horde and in China,
of which power faded too quickly.
In the form of contracontraagency
the popular uprising expelled away
the Mongols from the conquered China
and the new empire was founded.

Contra- (or contraco-) agency (Devil):

The last conqueror
was the ruler Timur Tarmashirin Khan,
who in today's Azerbaijan
began the foundation of a new Khanate.
In the conquest war
he reached the territory of India,
where he established his government
of the Empire of great Mughals.

Supracocontracoagency (God):

The social contract
at the **government of only the few**
cannot long **withstand**
against a more equal society.
The balance in a good war
means to defeat the enemy
and their evil limited by the defeat
to incorporate into supracoagency.

African realms
(10th-16th century)

Co- (or contracontra-) agency (Angel):

Development of the economy
and the devastating conquest wars
contributed to the merging of people
in the larger communities.
In Africa the Ghana Empire was established,
of which wealth came from
salt mining and extraction of gold,
the territory was the same with Ghana.

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare
so the territory in Ghana
the members of Islamic sect conquered.
The territory of the Empire of Ghana
again another rulers conquered
at first the ones of dependent Malinke Empire,
who became Muslims.

Co- (or contracontra-) agency (Angel):

Consolidation of the government
contributed to the development of the economy,
Muslim holy pilgrimage to Mecca
developed the business again.
In the form of contracontraagency
the reign of a single King
meant dynastic disputes,
to which the foreign raids joined.

Contra- (or contraco-) agency (Devil):

The territory of weak Malinke Empire
eventually conquered Songhays,
who formed their own empire,
that was destroyed by the raiders.

Co- (or contracontra-) agency (Angel):

Songhays rulers
solidified their Empire,
they became faithful Muslim amirs,
they developed culture and Islamic teaching.

Contra- (or contraco-) agency (Devil):

Famous creation of tangible (material) wealth
in the form of contraagency
attracted the conquerors
Moroccos with Spanish mercenaries.

Co- (or contracontra-) agency (Angel):

In the coastal and jungle Africa
more larger empires developed
among them the Empire of Benin and Yoruba States
Empire of Monomotapa, and the Kingdom of the Congo.

Contra- (or contraco-) agency (Devil):

Empire of Benin and Yoruba States
traded with and sacrificed slaves,
most of the empires were conquered by the colonists,
others collaborated with them again.

Supracocontracoagency (God):

The social contract
at the **government of only the few**
cannot resist for a long time
against external and internal enemy.
In relation to the stronger enemy
it is needed to partly cooperate with them in the contraagency
and at the same partly to resist them in coagency
for the establishment of an overall balance.
Frequent rotation of the mighty conquerors
generalizes social contract,
that in itself over the time reconciles
their good and evil agencies.

Old american cultures (15th-16th century)

Empire of the Aztecs

Co- (or contracontra-) agency (Angel):

Common farming of land
contributed to the merging of people,
who settled in the fertile areas,
in Mexico they were Aztecs.

Contra- (or contraco-) agency (Devil):

Through the conquest war
Aztecs subjugated the Mexican territory,
their great Empire was ruled by
family and military nobility.
In the war of conquest
they acquired human sacrifices for the gods,
whom war prisoners became
after their defeat.
The destruction of the Aztec Empire
was made by Spaniards,
who teamed up while conquering
with the conquered tribes and enemies.

Empire of the Incas

Co- (or contracontra-) agency (Angel):

Common farming on land
contributed to the merging of people,
who then settled down
and they founded tribal unions.

Contra- (or contraco-) agency (Devil):

Through the conquest war
they conquered the territory of South America,
the reign in their extensive submitted Empire
the monarch, Incas and local rulers had.
Absolute reign of their king
included the war of conquest,
on which submitted nations participated in,
which contributed to the cohesion of the kingdom.
After the end of their expansion
in the form of contracontraagency
power struggles started
within the ruling society.
The destruction of the Inca Empire
made the Spaniards,
who therefore joined
with the conquered Indians.

The Mayans

Supracocontracoagency (God):

Mayan civilization
in the form of contracontraagency,
when the Spaniards came to America,
was already disbanded on the local principalities.

Spanish colonization

Contra- (or contraco-) agency (Devil):

The wealth of South America
attracted the Spaniards there
to conquer it for themselves
using the conquest war.
With the blessing of the Pope,
who conducted with war weapons
here the the missions,

they split up the territory with the Portuguese.
The Spaniards oppressed hard
the subjugated local Indians
by servile works,
which they replaced by taxes.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
at the instigation of Pope,
who said the Indians to be the people,
their slavery was removed.

Supracocontracoagency (God):

The social contract
at the government of only the few
cannot resist for a long **time**
the fight inside and outside the society.
In relation to the apparently stronger enemy
it is needed to partly cooperate with them in the contraagency
and at the same partly to resist them in coagency
for the establishment of the general social contract.

7.4 MODERN PERIOD

Century of discoveries (15th-16th century)

Supracocontracoagency (God):

In the form of co- and contra- agency
it was the century of discoveries,
that meant conquest fights
but also the development of peaceful trade.
The massive development of marine science
enabled the voyage of Vasco de Gama
to India, along the coast of Africa,
thus there began the business period.
In 1492 Christopher Columbus discovered America,
Amerigo Vespucci discovered Brazil,
ships of Ferdinand Magalhaese
achieved a circumnavigation of the globe.

Confessional split (16./17th century)

Contra- (or contraco-) agency (Devil):

Ecclesiastical social contraagency
laid in the superiority of power
inside the national churches
and also outside them in the society.
Ecclesiastical thought contraagency
laid in the thought superiority
of the Church's teaching in all knowledge
also in the Bible exploring.
Against the supremacy of religious teaching
in the knowledge of the Christian Bible
in Germany Martin Luther (his predecessors were Cathars in France, Jan Hus in the Kingdom of Bohemia
and Thomas Müntzer during German Peasants' War**)** stepped out in his sermons,
according to whom, even without the priesthood the salvation can be.

Co- (or contracontra-) agency (Angel):

The power and mindset fights
in the German feudal society
led to the victory of the land manor
in deciding on the faith.
The dictates of religious teaching
on the Swiss territory
the reformers John Calvin and Huldrych Zwingli denied,
who were involved in the power struggle.
The power struggles in the Royal England
were reflected in the Anglican Church,
by which formation Henry the eighth
fought against the Papal hegemony.
The monarch ruled over the Church in France
in the context of his almost absolute power,
resistance to the royal and ecclesiastical power
for religious freedom the Huguenots led.

Contra- (or contraco-) agency (Devil):

In France the fight ended by the victory of the King,
in its forehead Cardinal Richelieu stood (Cardinal Armand Jean du Plessis, Duke de Richelieu)
(see http://cs.wikipedia.org/wiki/Armand-Jean_du_Plessis_de_Richelieu),
which caused massive emigration
primarily to North America.
With the religious contra (contra) agency
whether for freedom or hegemony
conquest goals associated
in the terrible Thirty Years' War.

Co- (or contracontra-) agency (Angel):

Although the war for power in Europe
Catholics nor Protestants did not win,

development in the form of contracontraagency
went toward religious freedom.

Supracocontracoagency (God):

The social contract
at the State government of only one party
is only imperfect,
it will not stand up in internal and external struggles.
The contract is perfect,
that unites co- and contra- agencies
into harmony of higher overall agency
of their **good and evil**.

China and Japan (14th-19th century)

China

Contra- (or contraco-) agency (Devil):

After the expulsion of the Mongols
the leader prevented the outbreak of fighting
by execution of his generals
and he created the Ming dynasty Government.

Co- (or contracontra-) agency (Angel):

The Government of one Chinese emperor
was the time of peaceful development
of central official government,
of the great wall and the merchant flotilla.
In the form of contracontraagency
social unrests broke out,
when the oppressed peasants
rebelled against the taxes.

Contra- (or contraco-) agency (Devil):

Of the power struggles in China
the foreign conquerors took advantage,
gradually the Manchu tribes
set up their Qing dynasty in China.

Co- (or contracontra-) agency (Angel):

In the times of victory
the development of science and culture started,
the Christianity was developed,

the emperors extended the Chinese territory
The power of one Chinese emperor
resulted in social strikes,
the submitted tribes were rebeling
and also emperor´s subjects.

Contra- (or contraco-) agency (Devil):

Of the weakness of the imperial government
the colonial powers took advantage,
by opium trade and military force
finally they made China dependent on them.

Japan

Contra- (or contraco-) agency (Devil):

Absolute government of the emperor
brought the power struggles,
the power of a single monarch
gradually fell apart.

Supracocontracoagency (God):

In the form of contracontraagency
the resistance against the power of the emperor began,
in the form of the evil contraagency
the shoguns fought out their absolute power.
Minamoto no Yoritomo and his successors,
to which the rulers of the Hojo family belonged,
they became the first Japanese shoguns,
whose power the civil wars ended.
Other Japanese rulers
were the powerful shoguns families
Takauji, Ashikaga
and Tokugawa Ieyasu.

Contra- (or contraco-) agency (Devil):

Lack of freedom
in the Japanese society
with the absolute power of the government of shogun
meant the underdevelopment of the economy.
Exaggerated economic debts
with credit paper money
caused further hardship
to the Japanese economy.

Co- (or contracontra-) agency (Angel):

The government of a single shogun
cooperated further with foreigners
in the fight against rebels,
that returned the power to the emperor.
In the form of contracontraagency
Japan does not become a colony
of Western powers,
who fought for the shogun.

Supracocontracoagency (God):

The social contract
at the government of only the few
cannot withstand over the time
the fighting inside and outside the society.
Perfect is the balanced social contract,
the result of the historical development,
that reconciles the general evil and good.

Russia
(9th-17th century)

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare
Varjags, the Swedish Vikings
conquered the Principality of Novgorod.
Then, when they conquered the North of Russia,
they conquered also Kiev
and they pledged the Slavic tribes,
to contribute them the charges.

Co- (or contracontra-) agency (Angel):

Rurick government of Kiev Russia
was divided on individual principalities,
of the power struggles against the strong government
Mongolian conquerors took advantage.

Contra- (or contraco-) agency (Devil):

Mongolian raiders
conquered the territory of Russia,
they founded a large empire,
that they called Golden Horde.

Co- (or contracontra-) agency (Angel):

On the conquered Russian territory
they left the principalities,
conquered Russian princes
contributed charges and troops.

Supracocontracoagency (God):

In the form of the evil contraagency
the State oppresses the serfs
and in the form of despotic government
they are later followed by the Czars.
In the form of higher supracoagency
the Novgorod prince Alexander Nevsky
partly cooperated with the Mongols
and party he denied them by his independence.
In relation **to the stronger enemy**
it is needed to partly **cooperate with them in contraagency**
and at the same time partly to resist them **in coagency**
for the establishment of an overall balance.

Co- (or contracontra-) agency (Angel):

In the form of creative contracontraagency
Alexander Nevsky defeated the conquerors
at the overwhelming defeat for the Swedes on the Neva
and also the defeat of the Teutonic Knights.

Supracocontracoagency (God):

Similar to Alexander Nevsky
also the Moscow prince Ivan Kalita of Moscow
partly collaborated with Mongols
and partly he resisted them in independence.

Co- (or contracontra-) agency (Angel):

Prince Dmitry of Moscow
called the Mongols to fight
and by the river Don at Kulikovo Field
the Russian troops defeated them.

Contra- (or contraco-) agency (Devil):

In the form of contraagency
the Moscow prince gained
the entire Russian territory
using the conquest war.
The Russian tsar Ivan IV Terrible

set the basis of absolute power,
in the form of contraagency nobles and subjects
the Russian tsar oppresses very severely.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
a power struggle broke out,
of which the Polish troops made use
to attack the tsarist Russia.
In the form of contracontraagency
the Russians chased away these troops
and as the new ruler of Russia
they chose Michael Romanov.
The creation of an absolute government,
when tsar Peter the Great ruled,
meant to reform the army,
legislation and administration.

Supracocontracoagency (God):

The social contract
at the government of only the few
cannot withstand over the time
the fight within the society.
Perfect agency balance,
to which development is gradually going,
is in general social contract
which reconciles the originators of the good and the evil.

Great colonial empires (17th-18th century)

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare
Western European conquerors
so got colonies in the world.
The Spaniards conquered South America
where they introduced predatory Government,
in particular the strict control of trade,
maritime trade in the form of monopoly.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
internal strikes erupted
settlers managed to gain equality

and they wanted to achieve independence.

Contra- (or contraco-) agency (Devil):

The Portuguese kingdom
conquered parts of Africa
and then the whole Brazil,
which achieved its independence.
The French conquered the territory
in Africa, America, and India,
where they introduced an absolute government
and maritime trade monopoly.
Dutch East India Company
was exclusively private
and it gained the territories in India,
in the colonies the self-government was pushed through.
The largest colonies
the United Kingdom conquered
both in India and Africa,
Australia and America.

Co- (or contracontra-) agency (Angel):

The large reduction of self-government,
commercial and maritime monopolies
raised in the form of creative contracontraagency
the liberation struggles in the USA.

Contra- (or contraco-) agency (Devil):

In the form of contraagency
the United Kingdom conquered
at the expense of Spain, Portugal and France
some of by them in this epoch conquered colonies.

Supracocontracoagency (God):

The social contract
at the domination of a conqueror,
raises the social struggles,
of which aim is freedom.
The perfect social contract,
which in the termination of the supracoagency
reconciles freedom and obedience,
is limiting the agency evil and good.
Good and evil freedom,
good and evil non-freedom
of a nation will be eventually reconciled
like a perfect supanational social contract.

Perfect international social contract
is an equal State standing over nations,
that is restricting a civic and national goods and evils
in the range of overall balance.

The industrial revolution (1750-1850)

Supracocontracoagency (God):

In the form of cocontraagency
in this historical period
scientific discoveries are **carried out**
and next the industrial revolution.
Then the knowledge of science
led to higher frequency
as of creative coagency
so the devastating contraagency.
Huge progress occurred in the textile industry
thanks to the mechanical weaving loom and spinning machine,
furthermore in an iron and steel industry
in the puddling oven.
Furthermore there was a development on the rail,
steam locomotives
dominated the first tracks
especially in the UK.
The development of all industry
in the form of contraagency
led to the exploitation of the people
and loss of work.
In the form of good coagency
the development of industry
eliminated poverty
and it also began the labor fight.

Enlightenment and revolutions (18th century)

Co- (or contracontra-) agency (Angel):

In the form of creative contracontraagency
the social contract generalizes,
its theory
as well as its practice.
In the fight against the nobility,
the Church and the King
the townspeople are quite successful
and they overtook Government.
United States in America

are getting rid of the reign of King
and in the form of democratic government
then in the war they achieve freedom.
In royal France
bourgeoisie put into power
a constitutional monarchy,
later the form of the republic.

Contra- (or contraco-) agency (Devil):

The appearance of the bourgeoisie contraagency
was in Jacobite dictatorship,
the sharp social strikes in France
resulted in a coup of the future emperor Napoleon Bonaparte.

Co- (or contracontra-) agency (Angel):

In Austria and Prussia
the fight between the nobility and burghers
the king solved by limiting the power of
the ecclesiastical and secular nobility.

Contra- (or contraco-) agency (Devil):

In Austria and Prussia.
of restricted power of the nobility
each of the rulers took advantage
to forceen their own power.
The famous King of Prussia
on the territory of Germany
Frederick II The Great
led the wars of conquest.

Supracocontracoagency (God):

The social contract
at the government of only the few
cannot withstand over the time
the fight within the society.
The permanent cycle **of historical development**
generalizes social contract
as the reconciliation of the good and the evil,
thus the balance will be finished.

Epoch of the national States
(19th century)

Supracocontracoagency (God):

The form of cocontraagency
consisted of a conservative contraagency
and further of the liberal contracontraagency
and their mutual fight.
While the liberal parties
were seeking for democracy,
in contrast the conservatives
have seeked for the monarchy.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
the European powers
defeated finally
Napoleonic conqueror.

Contra- (or contraco-) agency (Devil):

In the form of the evil contraagency
the powers supported
at the Wien Congress
the government of the monarchy.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
they chased away their conquerors
and without the conquest the nations in South America reached
their independence and freedom.
In the form of contracontraagency
in the United States of America
the American Civil War brought
emancipation to the negro slaves.

Supracocontracoagency (God):

In the form of cocontraagency
whole Germany and Italy
were subsequently united
using the conquest war.
Although the territory was captured
by Sardinian and the Prussian armies
led by their Kings,
they represented the national will.
The social contract
in the form of a nation
still generalizes the balance
in the context of historical development.
Perfect international social contract

**is an equal State standing over the nations,
that restricts civic and national goods and evils
in the range of overall balance**.

4.7 ISRAEL (2000 BC-20th century)

Co- (or contracontra-) agency (Angel):

The creation of tangible (material) wealth
contributed to the settlement of the local territory
suitable for agriculture,
as tribes of Israel behaved.
Nomadic pastoralists,
the original Israelis
came from Mesopotamia
and they settled in Palestine.
One of the tribes
settled in Egypt,
where the rulers enslaved them
and so they returned to Palestine.

Contra- (or contraco-) agency (Devil):

By the conquest of the territory of
the whole Palestine
they formed their own kingdom,
that subjugated the other tribes.

Co- (or contracontra-) agency (Angel):

In times of victory
the religion developed
as well as engineering
and the remote business.
In the form of contracontraagency
tribal fighting broke out,
that caused the breakdown of the State
onto northern Israel and southern Judea.

Contra- (or contraco-) agency (Devil):

After the termination of Israel, of the weakness of Judea
the Babylonians took advantage,
who eventually conquered it
and they deported the residents.

Co- (or contracontra-) agency (Angel):

After another victory for Persia

the Jews returned to Judea,
they developed a religion
without persecution.

Contra- (or contraco-) agency (Devil):

After the war connection
of Palestine to the Seleucid Empire
pursuit starts
in the violent Greek-becoming.

Co- (or contracontra-) agency (Angel):

In the form of good contracontraagency
then the liberation struggles broke out
and Jewish Hasmonean dynasty
formed their own kingdom.

Contra- (or contraco-) agency (Devil):

Of the weakness of Judea
the Romans took advantage,
who took over it
and they joined it to Syria.
Anti-Roman rebels
were repeatedly beaten,
the Jews were scattered
into the world diaspora.
After the fall of the mighty Roman Empire
the Christians persecuted them
because they refused
the State religion.

Co- (or contracontra-) agency (Angel):

At the time of the enlightenment
after the fall of the Roman Catholic Church
they were equalized
with other Nations.

Contra- (or contraco-) agency (Devil):

In the days of nationalism of nations
the persecution of the Jews began,
those who did not belong to the whole
of their own nation.

Co- (or contracontra-) agency (Angel):

In the form of good contracontraagency
against the evil, which the persecution is,
Theodor Herzl at Congress in 1897 the Jewish Zionist movement founded,
of which guiding aim was the establishment of State of Israel and the return of the Jews to Palestine.
The Jewish Agency
with the help of entrepreneurs
bought the land
and it colonized Palestine.
With the consent of the international community,
as atonement of Jewish genocide
during the second world war,
the Israeli independence was announced.
In the form of contracontraagency
the Israelis fought off
multiple Arabic invasions
and they kept their independence.

Contra- (or contraco-) agency (Devil):

In the form of destructive contraagency
Israeli conquest fighting was,
when the Jews invaded and settled in the war
Western Jordan and the Golan Heights.

Supracocontracoagency (God):

Imperfect balance
was manifested in Israel
in the rotation **of the good**
and the subsequent **evil.**
The fight of good and evil agency
is constantly increasing the frequency,
the path out of this development cycle
leads through the perfect balance.
Perfect balance
is a general agreement,
that means the partial denial of the
good and evil in their harmony.
Balance in the common politics
means to defeat the enemy
and their evil limited by the defeat
to incorporate into supracoagency.
In relation to the apparently **stronger enemy**
it is needed to partly cooperate with them in the contraagency
and at the same partly to resist them in coagency
for the establishment of the general social contract.

7.6 20th CENTURY

Imperial world Empires (19th-20th century)

Contra- (or contraco-) agency (Devil):

The creation of tangible (material) wealth
instigated the conquest warfare,
world raiders of great powers
occupied so their colonies.
United Kingdom,
conquered India
and in Africa
the South and North countries.

Co- (or contracontra-) agency (Angel):

In the form of the British federation
in the common business
and also the finances and the military
the colonies should be controlled.

Contra- (or contraco-) agency (Devil):

Republican France,
conquered the Indochina Union
and in Africa
central and western countries.
The German Empire
conquered territories
in southern Africa
and eastern Africa.
In America the United States
dominated the territory of Central America,
where they set up their protectorates,
which they dominated also by cash loans.
The weak economies,
that their next performance run into big debts,
do not pay loans,
they become dependant and fall.
The State imperial politics
is also the loan of the financier,
that does not cover the future performance,
thus the future performance undermines.
The Japanese Empire
conquered the territory of China,
among these territories mainly
Taiwan, Manchuria, and Korea belong.

Austria-Hungarian Monarchy
annexed the territory,
that fell under its administration,
namely Bosnia and Herzegovina.
For the same territory
the States
as Russia
and Serbia sought.

Supracocontracoagency (God):

The social contract
at the domination of a conqueror
raises subsequent fights,
of which aim is freedom.
The cycle of historical **development**
generalizes social contract
as the settlement of the good and the evil,
when the balance will be finished.
Perfect international social contract
is an equal State standing over the nations
that restricts civic and national goods and evils
in the range of overall balance.

The first world war and the crisis of bourgeoisie (1914-1928)

Contra- (or contraco-) agency (Devil):

Disputes about the conquered territories
meant the formation of the war
between the European powers
in the world bad contraagency.
The main colonial powers
grouped in Triple Entente,
against them the powers of the Triple Alliance
led the war.
After the Russian October revolution
Germany and Austria dominated
the new eastern territories of Russia,
what was confirmed by the peace negotiations.
In 1918 after the final defeat
on the Western front
Germany and Austria paid high reparations
from the Versailles Treaty and they lost their territory.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency

the national States were created,
which liberated themselves from bondage
and the democracy prevailed.

Contra- (or contraco-) agency (Devil):

The abuse of victory
of the victorious powers
to gain the territories
weakened the new democracy.
In the form of destructive contraagency
the power struggles continued
as between classes
so between the superpowers.
German, Italian and Spanish townsfolks
contributed to the downfall of a young democracy
and they established a dictatorship
in the form of fascism.

Supracocontracoagency (God):

In the form of historical development
in cocontraagency
at the higher frequency
the **art expression of agency develops**.
Suprasensory evil
and the invisible good
or their higher harmony
take the form of a complex agency.
Complex suprasensory agencies
are more complicated than the mind,
therefore a sense does not capture them
and the art newly shows.
Suprasensory and suprareasonable art
leaves mere academic forms
in painting and music
in film and literature.
Balance in the common politics
means to defeat the enemy
and their evil limited by the defeat
to incorporate into supracoagency.
Perfect international social contract
is an equal State standing over the nations,
that restricts civic and national goods and evils
in the range of overall balance.

October revolution and communism (20th century)

Eastern Europe

Contra- (or contraco-) agency (Devil):

The power of a singe Czarist ruler
raised then power struggles in Russia
instead of general democracy,
the workers and the burgeoisie fought for supremacy.
After the fall of power of the Russian tsar
double government originated in Russia
the provisional government of the burghers
and the Bolshevik government of the Soviets.
After the victory of the workers' dictatorship
a period of civil war began,
however the Bolsheviks defeated
the Russian and the world bourgeoisie in Russia,.
In the period of the civil war
the dictatorship of the Bolshevik government in Russia
meant the dictatorship of the State
in the field of simple economics.
Balance of contracoagencies
in their simple scope
a concerned citizen specifies much better
than in the Government by them almost untouched.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
after the death of the leader of the Bolsheviks Vladimir Ilyich Lenin-Ulyanov
the party fights broke out,
that ended up by winning of Iosif Vissarionovich Jugashvili-Stalin.
(see http://cs.wikipedia.org/)

Contra- (or contraco-) agency (Devil):

Stalin's victory
and the formation of unlimited power
meant to forceen the dictatorship
also in the area of the Russian economy.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency,
when Russia was attacked by the fascists,
the Soviets fought them off with the allies
and finally quite they destroyed them.

Contra- (or contraco-) agency (Devil):

Victory in World War II
expanded Soviet Eastern European sphere
on the territory of the freed States
in the local communist government.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
deep contradictions were creating
between the communist States
against Soviet domination.
In addition to communist Yugoslavia
also communist China
of the ruler Mao Zedong
stood up against the Soviets.
The dictatorship of the Communist Party
were reflected in the power struggle
inside and outside of this society,
of the national and world economy.
Political and economic disruptive contraagency
raised inner and outer contracontraagency,
by which the communists were overthrown then
in the interest of social balance.

China

Contra- (or contraco-) agency (Devil):

Domination of the bourgeoisie
sparked power struggles,
where for a social dictatorship
the leader of the masses of peasants longed.
In the civil war
the communists won,
who established the dictatorship
of laborers and also of peasants.
After the failure of the great leap
of the State economic dirigisme,
the fight against the power elite followed
in the form of the Chinese Cultural Revolution.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
the situation of economic dictatorship
and also of the communist government

was released.

Eurokomunism

Supracocontracoagency (God):

The Western European communist parties
were not aiming for the establishment of a dictatorship,
rather in political democracy
they promoted their views.

Supracocontracoagency (God):

The social contract
at the government of one party
always loses finally
in the battle of the counterparty.
Permanent is only a total balance,
the perfect social contract,
which generalizes the power
and it reconciles the good and the evil.

The world and the economic crisis, and World War II (1929-1945)

Supracocontracoagency (God):

The economy as a complicated agency
lives today mainly through a loan,
in the form of loan formation cocontracoagency
it anticipates the future in its economic performance.
Excessive contracoagency frequency
of loan formation agency
is reflected then in loss,
which the low economic performance causes.
Debts, which are not repaid,
prevent individual State economy
in its subsequent development
and they deepen the economic crisis.

Contra- (or contraco-) agency (Devil):

The extravagance of the loans
and from them arising debts
compared to the actual performance
it collapsed the American Stock Exchange.
Whereas,
that American financial investors

lended to the whole world,
it caused the world crisis.
The decline in economic performance
caused the global poverty
among the unemployed,
who were a large amount.
Of fhe imbalance in the economy
in the West the fascists took advantage
to overthrow the democracy
and to reign in dictatorship.
The fascists were victorious at first
in Benito Mussolini's Italy,
in the form of a criminal Nazism
they won in Adolf Hitler's Germany.
The fascist powers
in conjunction with the Japanese
conquered non-Russian Asia and mainland Europe
and also they proclaimed themwelves the war to Soviet Russia.

Co- (or contracontra-) agency (Angel):

In the form of destructive contracontraagency
the nations of the anti-Hitler Coalition
defeated the fascist powers
despite initial setbacks.

Supracocontracoagency (God):

In the form of a cruel **fight**
of good and evil agency
the frequency of agency increased
in the world war.
Put in other words
the high level of science,
then of the economy and weapons
caused millions of victims.
The economic crisis
showed furthermore clearly to the entire world,
that **political balance doesn't mean anything**
without the balance in the economy.
Mandatory loan collateral
limits the economy in the coagency,
at the same time it reduces economic losses
in the interest of **balance of the economy**.

The superpowers and the creation of blocks (1945-1984)

Supracocontracoagency (God):

The form of a perfect democracy in the world,
which reconciles as good so evil
in general social contract,
the United States promoted.

Contra- (or contraco-) agency (Devil):

In the form of social contract
and the government of the Communist Party
at the domination of the Soviet government
the Soviets lobbied then for such a world.
However also the United States
dominated the world economically,
in loan contraagency
they ruled the indebted world.
The weaker economies,
that put in debts their next performance,
do not repay loans,
they become dependant and fall.
Fight of the Soviets for the territory
against American defendance of democracy,
fight of the Americans about the gain of power
took the form of international contraagency.

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
the balanced peace coexistence
of both the Eastern and the Western alliance
is gradually pushing through.
The American form of general democracy
thanks to the balance in the economy
also as a balance in politics
prevailed then against the communist rule.
The form of contracontraagency
the movement of non-aligned States has also,
that is the negation of hegemony
of the Soviets and also the United States of America (USA).

Supracocontracoagency (God):

The United States of America
defeated economically
the communist enemy
and they incorporated it into a democracy.
Due to the absence of
global superstate
almost nothing balances

the evil of business imperialism.
The total agency balance
is the world social contract,
that reconciles as a conclusion of the development
the national evil and good.
This general supracoagency
assumes today the limitation of the evils
from the very indebted State performance
and subsequent dependance and bankruptcy.
The politics of the international agency balance
is based on the future social contract,
therefore it includes the world's States, which are economicly weak,
in supracoagency by economic help.
The opposite of the world balance
is the rotation of both the good and the evil
in their cruel agency fight,
with which the imbalance is balanced.

Emancipation of the third world (20th. century)

Co- (or contracontra-) agency (Angel):

In the form of contracontraagency
Western conquerors were expelled
by the former European colonies
in the framework of the so-called decolonization.
On the side of the conquered colonies
the world superpowers stood,
that substituted the direct domination
for a sphere of influence.
Independence was gained by
the nations of the british Mahatma Ghandi´s India,
by the people in Vietnam and China,
eventually the people of Africa.

Contra- (or contraco-) agency (Devil):

In the form of contraagency
in the colonies
power and ethnic struggles broke out,
where as well as the communists participated in.
Then communists won
in Vietnam and China,
in Vietnam against the people's will
there was an American intervention.
The form of the next contraagency
had the Soviet export of revolution
meaning economic domination,

and the economic exploitation by the West.

Supracocontracoagency (God):

Due to the absence of
global superstate
almost nothing precludes
the evil of business imperialism.
The weaker economies,
that put in debts their next performance,
do not repay loans,
they become dependant and fall.
The politics of the international agency balance
is based on the future social contract,
therefore it includes the world's States, which are economicly weak,
in supracoagency by economic help.
This general supracoagency
assumes today the limitation of the evils
from the very indebted State performance
and subsequent dependancen and bankruptcy.
Development of the world perfect democracy
and also of economic assistance
as a partial restriction of contraagency
it is the formation of good and bad balance.

8. ECONOMICS

8.1. GENERAL ECONOMICS

Definitions and relationships
(performance)

The object of Economics is the theory of asset success of the subject. Unit agency (unit) of market economics is one sale and one purchase. Let´s call a purchase as coagency, because the assets are gathering and a sale as contraagency because of its dividing, or shrinking. This division is fictional, because while shopping we pay by money, it is also from this perspective contraagency and at the sale we receive money, from this point it is coagency. Unit of market economics is a single trade (cocontraagency), from which all the markets are composed, such as markets of products and services, capital, money, work, etc.

So far we have defined the unit of market economy, the u**nit of centrally controlled economy is only one transfer of assets**, from the perspective of one side the multiplication of the assets (coagency), from the perspective of the other side its shrinking (contraagency).

The basis of the market economy is the exchange, **co (something) contra (for something) agency**. On this particular trade all of the other concepts and facts of market economics are built up. From this perspective **with the multiplication of assets** (**coagency**) are related the concepts such as the economic goods as the subject of multiplication of property, utility, namely targeted for multiplication of assets, production factor, such as land (the subject of multiplication of assets and at the same time a means of its reproduction), work (as the subject of exchange for money), capital (again as a goods and a means of multiplication of assets), money (as a value, which is the subject of an exchange and at the same time a means for obtaining other values), demand (because it is an effort to multiply the assets), total utility (such as maximizing the satisfaction of consumer by goods, from which you can also derive a demand curve), the income of the consumer (which represents the amount of money, etc.), similarly a pension, the absolute advantages of the international market for the products and services (which form the property of the State) and comparative advantages (that represent the assets of production), the total product (as assets), the rent and loan (when it is converting of utility of things and money), profit, rent, interest, and rent (when it is the assets acquired by business from things, money and capital), the multiplication expansion of bank deposits (when it is multiple conversion of the same loan), foreign currency (as a value and a means of conversion), securities (which provide as well as money the existent and future value), an international economic assistance, loans of international institution, the redistribution in the form of cash grants, national retired income (such as households income), the national product (such as the flow of products and services), net national product (excluding amortization), personal product (that households actually receive), the net economic welfare (including the shadow economy, its products and free time), the investment multiplier (which assumes a repeated investment of the ratio of invested money), potential product (such as the assets obtained in an ideal case), the economic force of the country (such as the absolute volume of finished products, which are produced in a certain time), economic level (such as GNP, gross national product per capita), economic growth (such as multiplication of the assets of the country), aggregate demand (which is the sum of the individual demands), government transfers, the multiplier effect of public purchases and reduce of net taxes (by repeated transfers of value), the protection of the market (i.e. of own assets), a tendency to imports and imports (which is using the assets from abroad), the collective ownership in the primitive communism society, competition (when we are trying to increase own assets and to take these opportunities away from a competitor).

With the reducing of assets (contraagency) are related the concepts as the offer (which decreases our property in offered property), but in the end also a demand, when we pay for the offered assets an agreed purchase price. Offer as a contraagency may be the individual, partial. In addition to the contraagencies ranks the theorem of locomotive of two commercially bounded foreign economies (when is more expensive goods displaced by cheaper substitute), costs, total costs, the inability to increase the product in a very short period due to the limitations of resources, the barriers to competition, product differentiation, monopolies, oligopolies on the market and basically almost perfect monopoly competition as imperfect competition, paid rent, interest, salary, rent from the production factors, loss of interest (in the non capitalization of money, the charge of the loan is substitution, refraining from the consumption of money), a mandatory bank deposits, savings, private and public debts, taxes, depreciation of consumed factors of production, recession, demand inflation (demand-driven), offer inflation (driven by lowered and price risen offer, with the effect of redistribution and social impact and imbalances of the economy), quotas, tariffs and export subsidies, invisible barriers to imports in international trade, export, imported inflation.

At the same time the Philosophy of Balance implies that none of the events is clear coagency or contraagency, this agency is also an individual trade as a unit agency of market economy, on the basis of the above contra- and co- agencies different commodities markets are built.

For the understanding of the concept of the market it is necessary to introduce variables such as **average value**, meaning the arithmetic average of the variables and **the marginal value**, meaning an increase of one of variable, if other variable increases for a unit, the curves of these values have a similar shape as the offer and demand curves.

The example of contraagency is the offer graph, the example of coagency is the demand graph, the example of the same agency is the clash of the two graphs, market equilibrium point. Another example of **cocontraagency** is the graph of the total utility (coagency) and the quantity of the goods (contraagency), graph of marginal utility (coagency) and the quantity of the goods (contraagency). Another example of cocontraagency is the indifference curve, the combination of the same usefulness of one (coagency) and the second (contraagency) product. If we add the price of the goods (contraagency) to its quantity (coagency) we derive the curve of the demand from the intersection of curves (such as dependency of quantity) coagency on the price (contraagency). By the sum of the individual demand curves we find the market demand. The dependency of the price changes (contraagency) on the quantity of the goods (coagency) we call the elasticity of demand.

All of the above mentioned curves **have a similar shape, which corresponds to their similarities with the basic cocontraagency of the market economy, or the individual exchange of something (coagency) for something (contraagency).**

Another example of cocontraagency are the isoquants as a dependency of the capital (contraagency) on required work or workers (coagency), whether in the machine or financial form. Another cocontraagency is the dependency of the purchased labour and capital on the potential costs of the enterprise. We distinguish fixed costs (regardless of the number of products), the average costs, average variable costs (excluding fixed) and marginal costs. Point, where are equal in the perfectly competitive market the marginal costs with marginal income, with the average costs and average income, it is the market price of the product.

Another cocontraagency is the dependency of the quantity of the goods (coagency) on the price (contraagency), which is an offer curve. By the sum of the curves we gain a market offer.

Another cocontraagency is the dependency of the offer (contraagency) and demand (coagency), where their point of their intersection is the balance of the market. Displacement of a demand up or down deviates also offer according to the theorem of cobweb, an increase in demand will increase also offer, the subsequent reduction in demand reduces offer or vice versa, and this will lead either to the restoration of the balance, or permanent imbalance.

Monopoly and oligopoly reach equilibrium at the intersection of curve of the marginal revenues (coagency) and the marginal costs (contraagency). Difference between marginal revenues and average costs compared to demand represents a monopolist profit. The regulated price corresponds to the intersection of demand (coagency) with marginal costs (contraagency).

Similar cocontraagency is the labour market (coagency) and of the price of labour (contraagency). Coagency is also a demand for labor, similarly the demand of soil with some exceptions. Due to the intervention of trade unions and the State the supply of labour (contraagency) is limited and there is the increase in the price of the work.

Similar cocontraagency is the market with the money (coagency) for an interest (contraagency). Because money is a means for the acquisition of goods, the demand for credit is dependent on the estimate of households and entrepreneurs on the realizable potential profit and the performance of the economy. It is the process of planning of economic development on the money market, which was previously organized centrally. If the goods offer grows, also the demand for money grows and the interest of money grows too. Money are actually shares of the State if the management of the State, including the credit loads , which is covered by the future economic performance, is all right, if the economic power of the State grows, the value of the currency is also growing. The rate of the Czech currency fundamentally depends on the purchasing power parity, however in the context of demand (coagency) and offer (contraagency) as well as on other factors come such as the demand for foreign currency and foreign exchange, foreign direct investments, portfolio, loans, transfer payments, speculations and State intervention. According to the development of the economy the development of rate can be forseen, in particular in terms of labour productivity and the balance of payments. Another contracoagency represents the stock exchange (coagency) purchased (contraagency) on the stock exchange.

8.2. THE ECONOMY OF THE STATE AS A PUBLIC LIMITED COMPANY

Definitions and relationships
(performance)

Another type of **contracoagency are redistributive processes of State,** that both acts as a participant in the market, and by taxes (contraagencies) and transfers (coagencies), which are payments without consideration, it affects the market. The State should **act in principle there, where the market mechanism does not work and at the same time as a market participant.** What concerns its

behavior as a participant in the market, there are goods-**public goods**, which for their great price only the State can take care of. Such goods are in particular modern weapons, general health care and education, etc.

The State should also **correct the imperfections of the market there, where the market acts rigidly**. In other words it does not work, especially if large corporations maintain prices quite for a long time at the same level, in some sectors there is generated an excessive profit compared to other similar industries. For example thanks to technological progress, thanks to a patent or copyright extraordinary gains are achieved, which substantially exceed the costs. In such a case imbalance arises on the market, that causes the poor planning of the participants of the markets of the development of economy through the cocontraagency, thus offer and demand. In this situation the State should contribute to the rapid settlement of offer and demand, so that the time and the size of the bad planning of economic development would not prolong. For example the phenomenon of the Internet appears, we all start to devote to it and to do business on the Internet, offer exceeds demand, thanks to a large number of entrepreneurs and a specialized work force and the industry is in a recession. The reason was the wrong estimation of the development of the Internet markets and the surplus of offer over demand and related underestimation of the other, in which it would be possible to achieve a higher normal profit with the same capital. In these non elasticities of the market, which are causing a wrong estimate of the economic development and the fluctuations of the economy, as the boom and the recession, the State should intervene with its regulatory measures (e.g., the number of University students, that should be administratively specified).

Similarly, **if the State buys goods on the market as an entrepreneur**, it should manage its activities thanks to its managers and perfect legislation **as a private enterprise-joint-stock company**. It should seek to achieve **the greatest value of its assets composed only of public goods** (e.g. in the health sector). And even in areas of transfers, i.e. build structures, which converts the money without counter-value, such as hospitals, retirement homes, the army, the police, etc.

Similarly the State should intervene, when the market does not function, when planning by market participants of economics performance through offer and demand is misleading due to the **external costs,** which the participant transmits to the other bodies and which will have to be paid.

The State is thus acting as a joint stock company and as a manager, so that **money-shares of State-joint-stock company had the highest market value (currency rate) long term sustainable**. Also joint-stock company may be not established only for the purpose of business.

A condition of a successful company is foremost an accurate **estimation of case macroeconomic and microeconomic development in the certain** and options of employees and resources of joint-stock company. And then according to this estimation as much as possible to maximize the profit, in the case of the State joint-stock company asset value made of public goods.

Planning of the best use of the population and of the State resources is so fundamentally happening through the market **on the micro-economic level**. The State intervenes then only, when a substantial imbalance of market occurs, as I described them above, by monetary, fiscal and legislative means. Furthermore, **at the macroeconomic level** the State must behave as a successful businessman who appreciates his or her property as much as possible.

In addition to this cocontraagency or market behavior the State realizes also **social transfers,** that should be fundamentally at non meritial services under the same conditions the same, because there is an **equality of citizens before the law and before the State**. And the State will become a model for the same acceptance of all citizens, whether rich or poor, powerful or powerless. Here I have in mind the health, education, unemployment benefits, social benefits, etc. Social benefits should be minimal, because the task of the State should be increasing the economic force of the State, so the wealth of individuals and thus the value of the currency and employment due to the large capital resources and perfect planning of their use. Everything else would be a matter of commercial insurance of citizens against unemployment. A different situation is for old-age pensions, where it is the meritial payment, which represents the insurance benefits of old-age insurance.

As far as these social transfers the greater economic force of the State should be used to them achieved by the perfect planning of use of labour and capital. The wealth of the State and citizens, a strong currency and the highest employment should be a condition of achieving **the highest limits of the potential product** without noticeable fluctuations of the recession and boom.

So at the minimum possible taxes the **high retirement pensions and in the long run the balanced State budget** should be achieved. Balance should be assessed from the perspective of the long-term so that expenditure on debt currently were repaid from the higher future product correctly estimated when investing in the presence. Not at the expense of the future, but at the expense of the future better use of labour (labour productivity) and higher capital of citizens of the State, thanks to the improved economic planning through offer and demand, and thanks to monetary, fiscal policy and legislation.

The rate of taxation should reflect the extent of microeconomic and macroeconomic planning of economic performance The bigger will be the society's share of macroeconomic planning, the more resources will be needed for the State purchases and sale on the

private market. Furthermore the taxes must cover social transfers, which with regard to non meritial payments must cover at social payments and unemployment benefits the minimum standard, with regard to the health the basic to a high standard, with regard to the education the high standard, because it is an investment to public goods that increase wealth, and with regard to the meritial payments such as old-age pensions they should achieve according to the incomes of the pensioner in the past the average incomes in the economy of the economically active population.

Another **cocontraagency** is the market of savings (coagency) and interest rates (contraagency), another cocontraagency is the market of products and services and production factors, depending on the income (coagency) and price (contraagency). Another cocontraagency different from the shape of the offer and demand curve is the curve of savings and consumption (contraagency). In the classic model the change in aggregate demand is reflected in the change of the price level, not changing the offer, which may not be true, if capital resources increase resulting from the increase in demand, the market may may also increase the offer (contraagency).

The same is true for the increased aggregate demand on the market for factors of production, where higher demand (coagency) caused by higher demand on the market of goods and services can increase the offer (contraagency).

Here it is necessary to distinguish between **the actual and potential product**, which would have been possible to achieve with perfect use of all production factors, i.e. such as the offer (contraagency) in relation to the demand (coagency).It is close to a perfect competition.

In the short term according to the Keynesian model the market is non-elastical, it does not work, a series of prices is rigid, it is possible to achieve extraordinary profits (usually prices are inflexible downwards) and losses, **in the long period the market flexibility works according to the monetarist model**. This inflexibility, if it is long-term, causes a recession in the economy according to me.

Better planning of the use of production factors of an offer (coagency) to a demand (contraagency) can be achieved the growth of the amount of work and productivity of the factors of production (labour productivity, efficiency of capital, the decline in material and energy demands of production).

Aggregate demand may grow faster than aggregate offer or aggregate offer may fall at unchanged aggregate demand, then in the longer term the State should intervene, because this is the rigidity of the market (market failure), if not already reached the potential of the product, then it is the inevitable increase in prices and the recession.

It can be assumed due to the continuous increase of property by interest, rent, wages, profit, thus raising the level of the economics, if these funds are again invested. If the level of prices has to be maintained, it is necessary to increase the amount of money in the economy. In other words it is necessary to **increase the number of shares of the State-the money from its own resources**.

The moderate **inflation** (creeping inflation) is also acceptable for people, if not eg. quite rightly by the Central Bank estimated the growth of the economy or if it is intentional. Higher inflation can be in steep demand growth and in offer drop, when the State should intervene to support activities from a long-term point of view, if not already reached the potential of the product.

Economic policy of the State includes the monetary policy, fiscal policy, pension policy and external monetary and trade policy.

In **monetary policy** there are **administrative instruments** as credit approval by the State, the setting of maximum maturity.

The most common are the **minimum reserve policy, open stock market operations and discount policy**. The Bank should change the interest rates and the amount of money in circulation, depending on the economic performance, in other words depending on the assets and profits of the joint stock company-the State, the State's capital increase should correspond to the increase of money in the economy, the increase of profit of joint stock company-the State should correspond to the increase in interest rates, because with the same financial capital it is possible to realize more profitable investments. According to the planned profit, i.e. the rate of growth of economic power of the State the expansionary or restrictive monetary policy should be carried out. While expanding the assets of the State and citizens the amount of money in the economy should increase to keep prices and avoid deflation.

The money offer planned with regard to the rate of growth of the economy and to State property and hereby related interest rates have an impact on investment outcomes, aggregate demand and employment and price stability.

Fiscal policy is made up of **the budgets of the** State, local authorities, special funds and the finances of State-owned enterprises.

Incomes of the State budget are from loan (sales of Government securities, loan from another State authority). Outcomes are transfers-free spending, purchases of goods and services on the market. There are so called built-in stabilisers as the progressive income tax, unemployment insurance, State purchase of agricultural surpluses and subsidies to agricultural production and discreet measures of the change in tax rates, changes in the structure of expenditures of the State budget and changes in the amount of the items of budgetary

expenditures. They have an impact on aggregate demand and offer, effect on changing of the overall product, and hence on employment and price stability.

There exists a tax multiplier, therefore a repeated trading of each crown, on which taxes were reduced.

Taxes are intended to cover social transfers and macro-economic planning and purchases listed above. **Taxes can be likened to not divided profit of joint stock company to shareholders**. They are intended for the payment of pensions and for the **macroeconomic investments** that are not only covering for their expediency their costs, but they also bring a profit, they increase the assets of the State, which has to be the aim of State economic policy. For example a built school or highway are public goods, because of the number of consumers, the height of the prices, the period of return on investment it is a macroeconomic investments. Yet for their good managerial expediency they can bring profit in the form of better transport services and the number of professionals and higher taxes.

The State should **implement** each macroeconomic investment, to collect therefore higher taxes, which will bring more profit and speed of growth than the private microeconomic investment and vice versa. As a result the State should perform a restrictive or expansionary fiscal policy. Regardless of the short-term effects of the increase in national product but also with regard to the long-term return on investments of public goods, which can increase in the long-term national product more than short-term microeconomic investments.

If such public investments are not possible, the State should reduce taxes and purchases on the market of products and services, and vice versa, and so to carry out **a restrictive or expansionary fiscal policy**. And retained earnings of the State shoul let shareholders keep.

Thanks to the favorable planning of economic performance of public goods purchase **the State's budget should be balanced in the long term**.

The instruments of **external trade and monetary policy are such as the direct administrative measures, quotas, tariffs, export subsidies, invisible barriers to imports, market-oriented tools** such as intervention on the foreign exchange markets and monetary and fiscal policy measures, which may affect the balance of payments. In this case the principle of the free market should be applied. **Protectionist measures** should be adopted only temporarily **for restructuring** and gradually released, so the joint-stock company-State has been pushed to internal restructuring or there, where the State wishes strategically to maintain unprofitable production. Even here however the protectionist measures should be proportionate, so that there the biggest pressure on profitability would remain. As far as the **State with the passive commercial balance, joint stock company, which sells away its assets**, there should be gradually removed protectionist measures and subsidies of exports, so the State becomes specialized in the sector, where it has an absolute or comparative advantage and internal restructuring could occur.

The reform of joint-stock company-State cannot be made however all at once to avoid a sudden sale or collapse of the unprofitable society. The time, when the joint-stock company with passive balance reduces its assets by its sale, should be used to **opening to the free market adapting to it by investments from sales of property of the State for the purpose of the restructuring of the production**. And it is primarily driven by macroeconomic and microeconomic measures.

Import with customs tariffs means both the income of the State and the opportunity to realize macroeconomic investments of public goods, as I stated above. In addition within cocontraagency of offer and demand it allows then the sale only from the part from domestic sellers, part of the demand is covered by declared imports.

The export stimulates the growth of aggregate demand in the country, which must be covered by the domestic or import offer, otherwise the prices increase and the market imbalance occurs, which should be rebalanced microeconomically or macroeconomically.

We can see indicator of the tendency to imports at its share in the GDP (gross domestic product), or the marginal propensity to import in relation to the GDP (gross domestic product).

According to the **theorem of locomotive** the increase in economy in one country initiates at keeping tendency to imports the increase of export and hereby the increase of the economic performance in the second country. Increase in the price level in one country and the increase of export into this country will increase aggregate demand in the other country and thus inflation, if it is not balanced by imports or domestic supply on microeconomic and macroeconomic level. Reduction in the value of the currency of one country with regard to the other country it increases export from this country to another country. Cheapening the currency will help to equalize the balance of payments.

Expansionary monetary or fiscal policy will increase demand, and hence the rate of inflation, at the same time however the offer will increase too and also employment for the production. Cocontraagency of unemployment (coagency), and the rate of inflation (contraagency) ensures the Phillips curve with a similar shape as the demand curve.

Monetary and fiscal instruments of economic policy are to be applied for a longer term not working market, where **autocorrections** do not affect, because these measures operate with a time delay, at monetary policy it is information and response delay, at fiscal policy the changes are approved in the Parliament once a year.

Political **integration groupings** should adapt to the global nature of the market after the removal of protectionist measures, as I have already stated above.

8.3 ECONOMICS AND THE REALITY

Conclusion
(termination)

In terms of the total agency the **economic coagency in the form of assets can be compared to physical movement**, i.e. things of greater momentum and **increasing momentum in the assets of given subject**. And vice versa the contraagency, therefore the reducing of the assets from the viewpoint of physics to reducing the momentum of the given subject in the society. **The market in this respect can be compared to the law of conservation of energy and momentum**, when the reduction of the momentum of one subject raises this variable for the second subject. And to the law of action and reaction of force action, where two forces as a kind of movement are acting in the opposite direction of the same size.

From the standpoint of the Philosophy of Balance each agency represents coagency or contraagency, then the composing and the formation or the decomposition and the destruction. **The market as a cocontraagency is supraagency**, thus limiting the profit by loss and the limiting the loss by profit, in other words limiting the profit from the purchased thing by paing the purchase price and the limitations of profit from the purchase price by the loss of thing. The foundation of Philosophy of Balance is then supraagency, i.e. the balanced behavior, in which I also see the principle and basic norms of individuals and entire Being.

9. Conclusion

Religion

Supracocontracoagency (God):

Philosophy of Balance
partially denies,
partially agrees
with a single religion.

Co- (or contracontra-) agency (Angel):

In most cases
religious teaching
fights for the truth
against the evil agency.
In the form of coagency
in the context of historical development
it fights against the evil
in the form of contracontraagency.
The victory of the good
should stop evil´s being
and other human being
should be in good agency.

Supracocontracoagency (God):

According to the Philosophy of Balance
evil cannot be finally destroyed,
but only conciliated with the good
in the general harmony.
Purely coagency society,
which does not know at all the crime,
in addition it does not withstand in the fight
against the evil contraagency.
Enforcement of coagency
raises the resistance of contraagency,
that is in contrary with **religious truth**
and peace in the society will not be reached.
Furthermore it is often **questionable,**
which religion is actually good
and which is bad,
due to the suprareasonable nature.
The general harmony
is **the center of conflicting agency,**
to that the reality **resists the least**
of everything.
The general agency harmony

is **a partial denial of the evil**
and the partial denial of the good
in the context of their supracoagency.
The general harmony
generalizes the supracoagency
for all new
evils and goods.

Philosophy

Supracocontracoagency (God):

Philosophy of Balance
represents the first of the attempts
to connect the destruction and creation
in their higher agency peace.
Contra- and co- agencies,
if they are **in the idea,**
are composition and decomposition,
in this philosophy their settlement.
The basic axioms
of Philosophy of Balance
consist in the whole of **Being**
in the supracocontracoagency.

Co- (or contracontra-) agency (Angel):

Lesser denial of contraagency
in this agency formula
in the form of contracontraagency
is coagency victory.

Supracocontracoagency (God):

According to the Philosophy of Balance
coagency victory
raises the resistance of contraagency
and everything is getting repeated.
The solution of the eternal struggle
of good and evil agency
will be their permanent reconciliation
in the general supracoagency.

Contra- (or contraco-) agency (Devil):

Evil denial of coagency
in the formula of supracoagency
in the form of contracoagency
is the victory of the evil contraagency.

Supracocontracoagency (God):

According to the Philosophy of Balance
the victory of evil contraagency
raises the resistance of coagency
and everything is getting repeated.
The perfect solution
of the good and the evil in the fight
will be their permanent reconciliation
in the general supracoagency.

Contra- (or contraco-) agency (Devil):

Denial of supracoagency
denies the legality of development
of a good and evil fight,
that should be happening without goal.
Denial of the evil and good agency of Being
prevents the increase of the agency frequency
and reconciliation of good and evil agency
in their overall balance.
In addition this makes impossible
the formation, performance and termination of agency
in one agency level,
a certain something and nothing should not be eternal.

History

Contra- (or contraco-) agency (Devil):

Due to the absence of
global superstate
almost anything does not preclude
the evil of business imperialism.
The weaker economies,
that their next performance get into big debts,
do not repay loans,
they become dependent and fall.

Supracocontracoagency (God):

Imperfect agency supracoagency
means a fight of the partial goods and evils,
when one wins,
second beats it back again.
In the fight of good and evil agency
the frequency is constantly increasing
and their mutual balance

means the rotation of the good and the evil.
The path from this development cycle
leads through the perfect balance,
that means the partial denial
of the good and evil in their harmony.
Perfect international social contract
is an equal State standing over the nations,
that restricts a civic and national goods and evils
in the range of overall balance.
The politics of the international agency balance
is based on the future social contract,
therefore the world's States, which are economicly weak,
are included in supracoagency by economic assistance.
Development of the world democracy
and also of economic assistance
as a partial restriction of contraagency
it is the formation of good and bad balance.

Contra- (or contraco-) agency (Devil):

The subjugation of the national performance
using for it excessive loans
the nation contradicts economically and violently
in the form of contracontraagency.
Instead of the perfect balance
in both good and bad agencies
then the struggle between the good and the evil follows,
which is the imperfect balance.

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SECOND PART

PHILOSOPHY OF BALANCE OF EXACT SCIENCES

1. PREFACE

This second part **builds on the first part,** which introduces in particular in its "Preface" the main elements of the system of Philosophy of Balance and in the 2nd chapter of the first part the main concepts of this philosophy, and it elaborates their relationships into detail. To understand the individual chapters of the second part I recommend to reader first to become familiar with the above chapters of the first part.

Agency building

Philosophy of Balance understands all **Being as agency, which distinguishes to the total, unit-, co-, contra-, supra-, the same, sub-, formation, termination and performance agency**. By using these categories it explores all the Being, both in the field of social sciences and in the field of exact sciences.

According to the Philosophy of Balance Being is the agency, which is happening smoothly and continuously. It is thus the indivisible coherent whole, that only our mind divides into individual subagencies due to a better understanding and limitations of the human mind. The result of this unity of the agency Being is, that its **agency bulding is stepped, where every its stage is related and follows from all other stages of agency building of Being**.

What are these agency stages? At the top there is the overall agency, as coagency and supraagency, this is divided into simpler agencies, subagencies. A more complex agency arises in the context of the agency process, such as the formation, performance and termination, within which more complex agency finishes. **Complex agencies as supracoagencies** are, which is the apparent contradiction, also **the simplest**. It is for this reason, that science consisting of concepts reflecting these composite agencies contains relatively few sentences due to the smaller number of these complex concepts. In contrast, the science composed of the simple agency terms is more complex due to the large number of these simple subagencies and depending on it also of their terms and from them compound sentences of exact science.

In practice this means, that the science discipline **containing more complex concepts is based on a foundations of science discipline containing simpler concepts** , but at the same time science discipline containing more complex concepts is also **a seemingly simpler intellectual system** due to the lower number of scientific concepts than at the science discipline built up on simpler terms. And thus **e.g. social sciences with complex concepts stand on the foundations of exact sciences with a much larger number of simpler concepts**, which are composed in more complex concepts of the social sciences. But the social sciences are seemingly simpler than exact sciences due to the smaller number of their complex concepts. The social sciences because of the apparent greater simplicity compared to the exact sciences started to develop earlier in history than exact sciences.

In the field of exact sciences the degrees and unity of agency mean that the **concepts of mathematics are composite concepts of physics, the physics concepts are the composite concepts of chemistry and chemical concepts are composite concepts of biology**. As well it is possible to make a mathematical **picture of the world only in terms** of mathematics, the physical picture of the world only in terms of physics and chemical and biological picture of the world only in terms of chemistry and biology. Such a complete picture of the world in mathematical, physical, chemical, and biological concepts

would have been however only the **generalized schema, since their terms only reflect more or less complex agencies**, which always include the simpler agencies. **Science, which would be composed only of the concepts reflecting the unit agencies of Being, i.e. the smallest elements of the Being, it is a mere fiction**. Because from the continuity of agency it is suggested, that these unit agencies include once again their subagencies. Unit agency itself is a fiction, we come to it after **the endless division of agency**.

Agency analysis

Complex concepts of the social sciences in particular of philosophy generalize, and include then the simpler terms of the exact sciences. These simpler concepts and their sentences of exact sciences **can be considered and analyzed also by transferring to the general concepts of the social sciences, especially philosophy**. This procedure allows us to convert a variety of simple agency concepts of exact sciences at the common denominator, not only within a given discipline, but also within the social sciences, especially philosophy.

These general terms are then supplied to us by the Philosophy of Balance, as the total, unit-, co-, contra-, supra-, the same, sub-, formation, termination and performance agency. By using them it is possible to look at all the simpler agencies, from which Being is composed, therefore the exact sciences too. This agency analysis allows us to see the agencies of exact sciences **in the new horizontal and vertical context**. The Philosophy of Balance supplies us by using its basic concepts a language of 10 words, with which it is possible to inspect and analyze concepts and sentences of all the exact sciences, which was a task, that in the 20th century in particular the philosophy of logical positivism had.

Subject and object in science

In conclusion I would like to express myself from the perspective of Philosophy of Balance of agency to the problem of subject and object in the scientific examination. Both **the subject and the object are the complex agencies**, which in this case **create cocontraagency**. Thus, both the object and the subject are the cause or formation subagency of reciprocal agencies within their cocontraagency. **The final idea** as termination (conclusion) formation (thinking) subagency (element) is the result of the interaction of all the agencies of subjectively objective system (cocontraagency). Its value or frequency in the framework of the agency Being is knowable **according to its consistency or inconsistency with this system, virtually with the total cocontraagency of Being in agency performance or termination of this idea (formation)**. Due to the contradictory nature of reality it **must be formation supracocontracoagency (synthesis)**, which is not in conflict with the subcoagencies (the facts of a certain kind) or subcontraagencies (the facts of another kind).

In the Czech Republic in 2002 and 2004

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2. MATHEMATICS

2.1 INTRODUCTION

(formation)

Mathematics can be broadly split on arithmetic and algebra, so numerical operations with numbers on the one hand, and geometry on the other hand. Arithmetic and algebra works with fewer elements and at the same time each this element and their relationships can be expressed geometrically, which proves the so-called analytic geometry, which converts the geometric concepts and their relationships to numerical form. In other words **the general term of a number includes more specialised and simpler concept of geometry**. Each point in the space can be with the use of the coordinates expressed as an ordered group of numeric coordinates. This is a manifestation of the general nature of the fact, when **the continuity and degrees of agency suggests, that the existence of a more complex agency includes simpler agencies and at the same time the system of more complex agencies due to the more complex and therefore less numerous agency unit of this system is seemingly simpler than system of simpler agencies**.

(subagency)

2.2 MATHEMATICAL LOGIC

2.2.1. Introduction

(formation)

Logic is a way of thinking, that can be supracoagency or more coagency or more contraagency or incorrect. It is wrong as well as thinking that overly accepts as the good and so the evil. **Thinking** from the perspective of Philosophy of Balance represents the **formation agency of the human cocontraagency**. **Unbalance of thinking reveals us the**

laws of thinking or tangible reality in practice or performance agency in a controversy with the balanced supracoagency of the whole of Being. The sensory perceptions of the material world as simple ideas the mind changes into complex ideas, simple ideas are the immediate consequences of the mass in our mind and they are not in generality a product of the only mind as opposed to complex ideas.

2.2.2. Definitions
(performance)

Further indivisible unit agencies represent from the standpoint of mathematical logic (coagency), **the basic (initial) concepts, or basic mathematical objects**. **The statement** we understand each formation agency or a grammatical sentence, that is **true** or coagency, or contraagency or **false**.

To the given statement we can create **the negation** or in the case of a positive statement a contracoagency and in the case of a negative statement a contracontraagency, which means a positive statement or coagency.

From several statements we can create with some conjunctions **composite statements** or coagencies. A sentence can then present in the case of conjunction "**and**" formation supraagency, in the case of conjunction "**or**" formation subagency thus clearly or ambiguously specified performance of agency. Also formation termination formation coagency in the case of conjunction "**if ... then**" and formation termination, termination formation formation coagency in the case of conjunction "**only ... if**".

In terms of evidence it is possible to distinguish **direct evidence** as the performance of formation coagency and **circumstantial evidence** as the performance of formation contracontraagency, thus the debunked negation. We can further distinguish **evidence by incomplete induction** generalizing of only some cases as subagency contratotal formation coagency and **the complete induction** by generalizing all partial cases such as subagency total formation coagency and further **the proof by negation of the veracity of the general statement by its false in a particular case** as subagency total formation contraagency.

2.2.3. Mathematical-logical picture of the world
(termination)

Mathematical logic and logical thinking represent in general **the formation agency**, therefore the initial stage of agency, even of partial agency, thus also of each of its later stage (performance and termination). Due to the fact, that the agency is in fact continuous, we cannot really separate the above stages of each agency, how the human mind makes it. The whole of Being as **the overall agency** and God represent so from the standpoint of mathematical logic the infinite composite statement and just as both the positive coagency or the good and negative **contraagency** or the evil with it, that the negation of the negation represents positive coagency and the negation of a positive statement is negative contraagency.

From the viewpoint of ontology such a statement represents an infinite statement of Being as the world of matter so the world of the spirit. **Unit agency** from which every single statement is composed, as well as its basic (primary) concepts, is the alphabet letters, and we can

examine therefore, which letters are historically developed from the other letters, and reach so the final statement unit agencies. More complex statements **(supraagencies)** are also divided into simpler **(subagencies)**, as well as more complex concepts can be defined using the basic (primary) concepts.

The human mind from the perspective of mathematical logic represents the composite statement consisting of an endless quantity of simpler, basic (primary) statements. This formation agency of the human mind is inseparable from its performance, its manifestation in the mass. To the human mind **the simpler and more complex statements** are **hardly accessible,** than permissible range of complexity and simplicity by it perceived statements is. These incomprehensible statements represent in relation to the human mind coagency, the world in itself hardly accessible to the human mind.

The balance between the positive and negative statements does not provide the unilateral tendency to positive or negative statements, and the resulting behavior. According to the Philosophy of Balance **limited positive statements accompanied by limited negation of reality should prevail**. As also the reality is a balanced ratio of negative and positive statements consisting in the limited formation. This **balance in the logic is ultimately pushing in any statement**, derogation from it can be only temporarily. Due to the nature of reality as the compound statement is **any statement partially destined** by other statements and partly independent because of unlimitation of the total of unlimited statement of Being that is not restricted by other equally or more complex statement. For this freedom every partial statement is partially divided.

Aesthetics represents a view of extra (i.e. beyond) sensory ideas whether **more complex statements,** than most complex human thought is, or **simpler ideas,** than the simplest human thought is. At the same time it may represent a view of negative and also the positive statement, whether in the form of **extrasensory evil or good**. The highest form of art represents however according to the Philosophy of Balance **extrasensory statement harmony**. The view is done by statements-the means available to the human mind. By such extrasensory statements we penetrate into God, Good, Evil, virtually to the essence of all Being.

2.3 SETS

2.3.1. Definitions

(formation and performance)

The set understood as the whole of elements can be marked in the field of Philosophy of Balance as coagency. **The elements of a set** are its subagencies. **The empty set** is infinitesimally small set, it represents a unit agency, of which infinite unification is not already in my opinion an empty set.

The essential relations between the sets are **a subset** as subagency, **equality of sets** as same agency, **complement of set** such as supracoagency contrasubagency, **the unification of the sets** as subagency coagency, **the intersection of the sets** as cosubagency, if they are **disjoint sets,** penetration can be described as unitcosubagency. **Projection of set A into set B** can be described as a formation (set A) termination (set B) coagency (their projection).

2.3.2. Set image of the world
(termination)

The set of all existent objects is in the Philosophy of Balance **the total coagency**, or God. From the perspective of Philosophy of Balance of agency a number of elements of this set is due to the infinity and continuity of all Being as agency equal to the infinity and it is a subject to constant change. The relationships between the sets are not statical but rather dynamical-as agency. This change means constant decomposition of subsets onto complements of two or more sets as a bad **contraagency** and unification of the subsets as a good **coagency**. The two basic operations with sets and their resulting subsets create the whole of infinite set of Being.

In fact each of the subsets of the total set of Being is **contracoagency** in relation to the other subset, which means, that their intersection is non-empty set-cosubagency, its complement is again a non-empty set-contrasubagency. The unification of all of these subsets of the total set is the total set of Being, i.e. **supracocontracoagency**. In my opinion **unit agency** of the total set of Being is the empty set, the unification of the endless number of infinitely small sets is not already the empty set in my opinion. In my opinion from this unit agency are ultimately composed all the objects of Being as complicated sets of elements, whether spiritual or material.

The human mind represents from the viewpoint of set theory the unification of the endless number of empty sets as a unit agency of the total set of Being. To the human mind as a **complex set** only a subsets in the **range** of a certain frequency are **well accessible**. Another sets, whether **complex or simpler** are perceived by human mind only on the basis of similarities or logical connection, in the rest only by emotion.

Unification and the additional decomposition of sets in the framework of agency relations within the overall set of Being are **in balance**, which is not represented by its unchangeability, but by balanced limited integrating of the sets or **supracocontracoagency**. This balance represents some sort of **superior power** in agency relations of sets. **Unlimited by relationships to other sets** only the total set is, since it itself is only a subset of itself and all the other sets are its subsets. For this unlimitedness all other subsets are partially divided, such a subset of the whole is the man and his or her mind.

Aesthetics represents the doctrine **about sets with more or less elements, than perceived subsets of** the set of the human mind **are**. These sets are accessible primarily to human emotion, they are accessible to artists and potentially to every living creature, also on the basis of the relationship of **a logical context and analogy** with reason understandable sets of elements. The same is true for the agency relations of sets, their complementary decomposition as bad **contraagency** and unification as a good **coagency**, which represent **in extrasensory** form the other major form of art.

2.4 ARITHMETIC

2.4.1. Definitions
(formation and performance)

Arithmetic defines axiomatically the various scopes of numbers and basic operations with them. These scopes (coagencies) of numbers are **the natural numbers** (N), the **non-negative**

integers (No), **integers** (C), **the rational numbers** (Q), **the real numbers** (R), **complex numbers** (K). These coagency are different in particular in its unit agencies or units, of which each of the numbers from the relevant scope of the numbers is composed.

The most general scope of numbers as supracocontracoagency, i.e. thus the set of numbers with the smallest number of elements is **the set of natural numbers**, resulting from the gradual adding of a number 1 to a number 1. This set of natural numbers has from mentioned coagencies the smallest number of elements and at the same time each element is composed by numbers of other scopes of numbers.

Unit agency in the field of natural numbers is the number 1, this unit agency is included in all the elements of this scope of numbers. **Supracounit agency** is the number, that we will attain after all operations with all numbers in this field, it is the number 1=0, then the result of the different operations (contra-and co- agencies) with the same numbers. **The total coagency** of all natural numbers is then +∞.

Numerical operations can be according to, whether it is a decomposition or composition of the numbers, divided into coagencies and contraagencies. **Coagencies include the addition, multiplication, exponentiation, contraagencies are subtraction, division, roots**. From these operations also a relationship of equality and inequality flows, which in the area of Philosophy of Balance can be expressed using the concepts of the same, supra- and sub-agency.

In the field of natural numbers the **method of mathematical induction** is used, which may be in the area of Philosophy of Balance shown as unitsuprasuprasubcoagency, which means unitsuprasuprasubagency (all elements from the set of natural numbers as natural multiples of the number one) meets certain mathematical sentence Vn (coagency). If Vn meets unit agency, i.e. the number 1, and we assume, that it conforms to the natural number k and we can proof, that it complies with the number k+1, then it complies to the whole unitsuprasuprasubagencies, i.e. to each number of the set of natural numbers as natural multiples of the number 1.

Divisibility in natural numbers can be expressed by using the Philosophy of Balance as subagency (divisors) contraagency (contraagency). **Prime number factor** can be expressed as unitcoagency (that is a multiple of the number 1 and itself), **decomposition in prime elemnts** as unitcoagencies (supra) coagency (i.e. multiple), **the greatest common divisor** as unitcoagencies supraagency (the largest of divisors), and **the smallest common multiple** as unitcoagencies subsupracoagency (the smallest of the multiples, thus supraagencies).

The real numbers are a more detailed case to natural numbers, resulting from their decomposition. **Unit agency** in the field of real numbers can be expressed as a number 1/+-∞=0, this unit agency is also a component element of the numbers 0, because 1/+-∞ + 1/+-∞= 0 and at the same time it is a component element of all the other numbers as (1/+-∞)*∞= +-1. This unit agency is also coagency as 1/∞+1/∞=2/∞=0 and at the same time contraagency as 1/∞-1/∞=0/∞=0.

The real numbers include **rational numbers** such as cocontraagency, thus dividing the numerator (coagency) by the denominator (contraagency), and the **irrational numbers** as the

performance (with not fininshed, nonperiodical decimal development) cocontra (composition and decomposition) agency (number).

In the field of real numbers it is also necessary to examine the **composition and decomposition operation,** as a real number in itself is already a result of degradation of the natural numbers. So the decomposition of decomposition (contracontraagency) is actually the composition. -(-3)=+3, 1:0.1(=1:10)=1*10=10 and decomposition of the composition (contracoagency) is actually the decomposition of 10*0.1=(10:10)=10:10=1, -(+3)=-3.

Special scope of numbers represents **complex numbers**, which are more detailed case of real numbers, which combine the concept of numbers and plane projection, therefore the more complex and less numerous concept of real numbers they divide into simpler, more detailed and more numerous concept of a complex number. As the real numbers represent composition projection of 2 to +∞ dimensional space into a one-dimensional space of the line points. So the complex numbers represent the decomposition projection of 1 and fewer dimensional space and composition of 3 to +∞ dimensional space to the points of the plane. At the same time real numbers are projected in one of their possible identical projections on the points of the line. For these reasons in another explanation I refer to vector algebra and analytic geometry in the plane, which use also the detailed arithmetic and algebra of numbers in the plane. A complex unit is √-1.

2.4.2. Arithmetic image of the world
(termination)

From the above agency analysis it is possible to derive a **generalized image of the world by using the natural numbers** and its basic operations.

It is possible to identify God with all Being, which symbolizes +∞ as **the total coagency**, **total contraagency** of the individual elements of the overall coagency, thus -∞ symbolizes also the God, who means thus in conformity with all the facts both the good as composition coagency and the evil as disintegrative contraagency.

Decomposition and composition as an agencies of God, with whom it falls in one and that matches also with Being, mean the good and the evil, or activity and personality of his sons (**subagencies**) the Angel and the Devil. Decomposition and composition, coagency and contraagency form the agency-perfectly infinite numerical operation, that is going only according to the logic of numbers to number 1=0, as a component expression of the balanced God. Therefore the sum of the total coagency +∞ and the total contraagency-∞ as their **supracocontracoagency**. God is therefore a balance, that is directed to continually more numerous (higher numbers) numerical operation, which are according to their nature endless.

Being can be seen as a complex numerical operation with the numbers, **the unit of Being** is then number 1=0, all Being is represented by **the total coagency** +∞ and its **total contracoagency** -∞. Numerical operations of Being consists of the input (formation), calculation (**performance**) and the outcome (**termination**), which is again input (formation) of other partial numerical operation (agency). Higher numbers are composition of the lower numbers, simpler agencies consist in more complex ones (**supraagencies**), which are divided in simpler ones (**subagencies**). The object and the subject as part of a Being are such a

complex number operation with numbers (the agency). Operations with numbers, that make up Being, are either decomposition (**contraagency**) or composition (**coagency**).

As the complex number operation with numbers the **cocontraagency of mind** can be understood too. The mind is a numerical operation with large numbers, but at the same time it is composed of a large number of operations with the least unit agency, i.e. number 1=0. An example of such thinking is a binary system, on which is based the computer work, that ultimately distinguishes only the numbers 1 and 0. Generally speaking, that the **minds of all people** mean different numbers, but of the same order. They are therefore **similar**. Numerical operation of composition and decomposition (cocontraagency), which includes the number members representing the **mind of all living creatures**, is able to cover a larger part of the total of the interval (-∞, +∞). **The total mind** can be identified with this interval, as it is apparent from the above with the total of Being or God. Such a mind is controlling and it knows all their members, the individual agencies of Being. Higher system than the mind, a numerical operation with higher numbers, it is the **emotion,** by which we penetrate closer to the whole. The mind is coagency or cocontraagency, thus it is represented by positive and negative numbers on the large frequency. Ideas are once again the numbers from a certain interval of absolute values of the numbers, smaller and larger numbers outside this interval represent **simpler agencies and more complicated ones than our minds is well able to capture**.

The question of how to live (ethics) is possible to answer using the number 1=0, which represents both the end of an infinite number of operations of composition and decomposition, in the simplest form of addition and subtraction of natural numbers, and secondly **a balanced agency**, of which composition and decomposition we come to it alone, thus the agency featuring within the infinite numerical operations the relative stability. **Balanced act** balances the numerical operations of composition and decomposition, so that the result was a balanced number 1=0. Given the complexity of numerical operations representing Being, the question of its balance is above all a matter of **emotion**. If I try not to balance the composition and decomposition in the context of numerical operations, **I do not disturb the overall balance**, which would be constituted in more complex numerical operation, however I cause unnecessary suffering of extreme composition or decomposition. Each of the complex agencies-high numbers can be seen as the result of previous numerical operation with other numbers, at the same time however they are also the result of chance due to the fact, that the highest number of perfect ∞, the overall agency is not in their numeric operations dependent on the outcome of the operations with a higher or the same number. I devote closer to this subject **of free will and chance** in algebra and combinatory image of the world. In conclusion to this issue I want to note, that this is a generalized image of ethics. In the detailed ethical image based on more special scientific disciplines the **balanced behavior** is **essentially a moderate composition or creative agency**.

What concerns the **aesthetics or the teachings** of beauty, we can say, that it applies in particular to the **emotional perception of the total agency**, therefore the entire interval (-∞, +∞). This subject of emotion goes beyond the **subject of the human mind, which is only a subset of this interval**. By art we penetrate to a balanced whole, **to suprareasonable degradation or composition or balanced sensory Being**, which is a subset of the interval (-∞, +∞).

What was said above about the natural numbers, it applies not only to natural numbers but **also on other scopes of the numbers** with the fact, that unit agencies and subagencies of these numeric scopes are defined differently and they are the result of numerical operation of decomposition and composition (contraagency and coagency) of the more general concepts of natural numbers.

2.5 ALGEBRA

2.5.1. Definitions

(formation and performance)

Algebra is a mathematical science about solving equations containing one or more unknowns, or where appropriate their expressions. The concept of the **unknown, and its expression** is a generalization of specific concept of number (supracoagency). From the equations the inequations can be derived. As well as numbers, that represent algebraic expressions, we can even **add, multiply, power** (coagency), or **subtract, divide, root** (contraagency) them. Each **unknown** we can mark as suprasubagency, because it indicates a variable element (subagency) from a set of elements (supraagency).

Algebraic expressions with the unknown can be **decomposed** into simpler expressions subagencies and to determine a **common multiple** of expressions subsupracoagency or **common divisor** suprasubcoagency.

A special case of the equation is a **function**. This is a formation termination coagency. When **definition scope** (formation coagency) a **functional regulation** (performance coagency) assigns the **functional values** (termination coagency). Subagency of a function is its **graphical representation**. It can be distinguished e.g. **bounded function** (termination subagency), i.e.. $f(x) \leq C$ in the interval $x \in Mx$, **increasing and decreasing function**-formation termination supracoagency (subcoagency), i.e. the xj, xi, $\in$Mx, xj>xi and at the same time f(xj)>f (xi), or f(xj)<f(xi), termination formation, formation termination coagency represents the **inverse function**.

Logarithms ($y = \log_a x$) can be expressed as the same coagency ($x = a^y$) subagency (y). It is also possible for logarithms, or exponents as the results of the logarithms to define composition **coagency** and decomposition **contraagency**.

If we consider a right triangle as the coagency, we get the **trigonometric functions** for its angles as subagencies (the size of the given side) unitsubagencies (the given side about the size of 1) contraagency (their share).

As well as the trigonometric functions it occurs even in the case of **vector algebra** the connection of more general arithmetic with more detailed geometry. Composition **coagencies** and decomposition **contraagencies**, which are the same as their definition in arithmetic, can be performed by generalized means using the ruler, pair of compasses and protractor (**synthetically**), or by decomposition of these synthetic steps **analytically** with the number axis and the calculation of the corresponding coordinates. These coordinate calculations are basically a detailed subagency in relation to the field of arithmetic and in relation to synthetic geometry.

The geometric vector we can mark as formation (the starting point) termination (endpoint) subcoagency (part of the plane). **The size of the vector** is the frequency of coagency. A unit vector is unit agency.

Analytical expression of a vector as a sum of multiples of two unit vectors $a=a_1i+a_2j$. Even in this case as in arithmetic it is possible to define the composition coagencies and decomposition contraagencies.

Another important concept of vector algebra is the **scalar product** of two vectors **a** and **b**, which can be described as subcoagencies (vector **b** and the projection of the vector **a** into the vector **b**) supracoagency (product), i.e. **a**.**b**= abcosφ. Even in this case decomposition **contraagencies and composition coagencies** can be defined similarly as in arithmetic, then to carry out the analytical calculations of coordinates (the detailed arithmetic subagency).

The most typical expression of the algebra are **equations and inequations** containing **unknowns and their expressions**. In the Philosophy of Balance they can be expressed as of suprasubagencies (unknowns) cocontrasubagencies (numerical operations on one and the other side) same-, supra-, sub- agency (equations and inequations). For the above mentioned cocontrasubagencies **the decomposition contraagencies** and **the composition coagencies can be described similarly as in aritmethic.**

Quadratic equations and inequations contain co^2suprasubagency, **algebraic equations and inequations of higher degree** are characterized by higher coagency (coefficient) of unknown. **Trigonometric equation** are seeking for contraagency appropriate to the angle expressing the unknown according to various formulas, that define the co- and contra- agencies of these contraagencies.

The geometric projection as well as substituting of certain number into inequations or into equation are specification of the general concept of unknown, which represents in regard to its subagencies more general and simpler supracoagency. Using these specifications is possible to find solutions to generic variables.

Equations and inequations can contain **multiple** suprasubagencies, thus unknowns and they may be also in the form of their supra-, sub-, same- agencies (equations and inequations).

Function or formation termination coagency are also **sequences**. Members of these sequences are coagencies of numbers a_1 and d, virtually q. N-th member of sequence, $a_n=a_1+ (n-1).d$, virtually, $a_n=a_1. q^{n-1}$. Coagency has in the first case the form of the sum and in the second case of a product, the frequency of coagency is in both cases n. We can express the sum of all the members of the sequence, which is again coagency.

A perfect 0 (zero) can be no longer further decreased, an imperfect 0 (zero) can be further decreased, an imperfect 1 (unit) can further grow, the perfect ∞ (infinity) can be no longer increased.

2.5.2. Algebraic image of the world
(termination)

As regards God as a numerical operation with the unknowns it can be said, that God as **the overall agency of Being** defines and therefore he knows each unknown. But not the Good as **the total coagency**, which does not define and does not know the contraagency unknowns and vice versa **total contraagency** does not know coagency values, that in numerical operation, which are involved, are unknowns.

What concerns **Being**, so the context of agency implies, that in the numerical operation of future Being many unknowns occur, which in the numerical operation of equations and inequalities the numerical operations of past and present just specify. As well as partial numerical operations **of simpler agencies** just enter in the context of their agency termination (of the result) as a known quantities the formation of **more complex agencies**. **Supracoagency**, i.e. the general agency, which perfectly includes each equation, virtually inequation, which arise from the concept of equation, is the equation 1=0, which can be further divided into more complex equations, inequations and systems of equations. **Unit agency** represents an equation perfect 0=perfect 0, by which perfectly infinite multiplication as the total coagency in the form of perfect ∞=perfect ∞ we get any equation 1=0.

The same is true for the **created mind**, for which the future but also the present represent the equation, virtually inequation with many unknowns. The same nature have also complex agencies, that **exceeds by their frequency the frequency of agencies accessible to the created mind**. To the overall agency, therefore to all unknowns values every living creature passes potentially partly by its reason and to the greater part by his or her imperfect emotion.

Regarding ethics an overall agency, unit agency and the **balanced supracoagency** represent unknown, to which the man penetrates in particular by emotion. Emotion is a solution of the total equation, or inequation extra (i.e. beyond) reasonably and it is with the help of perception, to which non-rational facts are accessible, basically we can talk about the participation on the overall supracoagency, i.e., the interval (perfect 0, perfect ∞).

Aesthetics represents especially a particular view of the **agencies of suprareasonable frequency** through resources of agencies of sensory frequency. This view presupposes the resolution of complex numerical operations with many unknowns, which represent the numbers outside the interval of numbers available to the created mind. To address this complex equation, virtually systems of equations we need a **created emotion**.

2.6 COMBINATORICS

2.6.1. Definitions
(formation and performance)

The basic concept of combinatorics is a **group,** which as coagency is similar to the concept of set, elements can **repeat** in it however (the same subagenciescoagency) or be **arranged** (subagenciessubsupracoagency).

We define **a permutation**, i.e. all possible ordered n-tuples of n elements, possibly **with repeating**, therefore arranged k-tuples of elements (k>n), where certain elements are

repeated, **variation**, therefore arranged k-tuples with n elements, where n≥κ, **with repeating** they are all possible arranged k-tuples from n various elements, where some of the elements may be repeated, and **the combination,** which are groups of k elements of n elements differing on elements, while it is not taken into account their arrangement, **with repeating**, where any element can be freely repeated. In the field of Philosophy of Balance these phenomena can be defined as contrasubagencies (different elements) subcoagency (groups) (same-) contrasubagencies (of different elements without repetition) sub-, same-, supra- (sub) coagency (n>, =, <k for the created groups) (supra) coagency (their set).

The classical definition of probability we can then define in terms of Philosophy of Balance as of unitcosubcoagency of unitcosupracoagency contraagency, i.e. the number of elementary results favorable to a particular phenomenon, which is a subset of the set of all elementary results of an experiment, divided by the number of all these elementary results of the experiment. As well as in the field of sets we can recognize **the unification of the sets**, i.e. cocontrasubagencies supracoagency, **disjoint sets** as contraagency and **the intersection of the sets as** subcoagency. The total cocontraagency of probability has a value of 1. In **the case of the unequally probable phenomena** the concepts of formula of probability do not represent according to the Philosophy of Balance the number of elementary experiments, but their probability.

2.6.2. Combinatorics image of the world
(termination)

God as **the overall agency of the Being**, the interval (perfect 0, perfect ∞) is independent of the other agency, there is not bigger or the same big number, which would restrict it, that could have contained this interval in the range of its value. For this reason God is fully independent, he has a completely free will. In contrast he specifies the formation and performance of all other component agencies.

In the field of Being as an agency the individual **partial agencies are partly predetermined** by performance and the formation and the termination of the other agencies, **however they are partly involved in the unlimited freedom of total agency**. This freedom is manifested in the level of the more numerous, more complex coagencies as **free will**, in the level of the less numerous, simpler coagencies as **a chance**.

So behavior of a man controlled by **formation agency of the brain activity** is **partly in causal relationship** predestined by relationship with other simpler and more complex agencies, **partly free** as a share of the unlimited freedom of total agency, **partly random** as the result of "free will" of the simpler, non-thinking, non-living contracoagencies, which are involved also in the limitless freedom of the total agency as its components.

In the area of **ethics** a chance and a free will allow a man to change his or her fate, so that **a man partially destined** to the evil contraagency imbalance has changed in coagency for the better and vice versa the good man has changed in contraagency for the worse. Only the **way to balance** is right however, as exorbitant evil the subsequent good punishes, and vice versa, just balance begets peace in human life.

Also **in the art a chance plays its big part**, because the emotion is not always causing a perfect view of the extra (i.e. beyond) reasonable world by sensory resources due to its

imperfection in the case of many people, and so the hand of the artist is often guided by the way of chance, appropriate in particular to simpler forms of Being. A chance as well as involuntary and extrareasonable manifestation of human being (as compound supraagency) show back to its simpler and partial subagency roots.

2.7 MATHEMATICAL ANALYSIS

2.7.1. Definitions
(formation and performance)

This branch of mathematics deals at first with **the definition scope of function**, in the field of Philosophy of Balance this is a formation subagency of formation termination coagency. It is **about increasing by the derivation or reducing by the integration of density of infinities, calculations with infinities are concerned**.

In addition this branch of mathematics deals with **the connection of function**, which can be expressed in the field of Philosophy of Balance as of unitco- formation termination subagencies coagency. Which means, that as the defining scope of the function and so the scope of its functional values rise or decrease gradually about unit agency. This unit agency is however infinitely small, which means, that the function is increasing or decreasing steadily and continuously as the cocoagency.

In addition to the function connection the mathematical analysis deals with the **limit point of function**, which can be expressed in the area of Philosophy of Balance as unitco- formation termination subsuprasubagency, which means that the function approaches in the unit agencies from the top and from the bottom in its definition scope and in the field of functional values the number a, virtually f(a). The limit of the function in the point at infinity +-∞ in the field of Philosophy of Balance we can mark as unitco- formation termination supra- or sub-subagency.

The derivation in the area of Philosophy of Balance can be described as termination unitsupraagency formation unitsupraagency contraagency, i.e. the function of infinitely small increment of functional value divided by the infinitely small increment of the variable x of the given function. As it is infinitely small increment $\lim_{\Delta x \to 0} \Delta f\ (x)/\Delta x = y\text{-}q/x = k$ of tangent for q=0, the functional value of the derivation at a given point is equal to the directive of the tangent at that point.

Integral can be defined in the area of Philosophy of Balance as formation termination supracoagency (the original function) formation termination subcoagency (of tangents) subsubagency (directive) formation termination subcoagency (function of the directives of the tangents-derivation of the original function) formation termination supracoagency (of the original function). In the case of definite integral then we can approximately imagine for q_1, q_2=0 the equation of the tangent of the original function in the point a y_1=f(a)=f`(a).a in point b $y_2$=f(b)= f `(b).b jako f(b)-f(a)= f `(b).b-f `(a).a, where f ' is the derivation of a function, the "." is the multiplication.

2.7.2. Mathemtical-analytical picture of the world
(termination)

Mathematical analysis carries out numerous operations with the infinitely small and the infinitely large agency, $\lim_{x\to 0}$ and $\lim_{x\to\infty} f(x)$. Infinitely large contraagency-∞ and coagency +∞ we can identify with God as **the overall agency**. By calculations integrating the total agency we understand the whole of Being, and we are getting closer to God. By the carlculations integrating infinitely small agency we also understand the extra (i.e. beyond) sensory essence of our existence in a sort of **ursubstance**, in fact in the nothingness, from which is composed all the Being, whether as the total coagency +∞ or total contraagency -∞.

Due to the **infinity and continuity of all the Being** as agency we can approach closer to its essence just in the context of infinite coagency (sum, product, exponentiation) or the endless contraagency (difference, quotient, root) or calculating integrating the value +-∞ or 1/+-∞, thus infinitely large or small agency, that this infinite numerical operation represents. In this way we can understand $\lim_{x\to 0}$ and $\lim_{x\to\infty}$ of function, limits $\lim_{n\to\infty}$ of sequence of partial sums of infinite series, thus the sum of the infinite series.

The human mind is from the positive perspective limited only to physical (i.e. material) phenomena, which it gets through sensory perception. The context and the continuity of Being as an overall agency imply however the possibility **to inspect the extrasensory agencies** using the logical context and analogy or similarity. In this way we can show total and infinite or infinitely small unit agency through the material thinking and penetrate so beyond tangible (i.e. material) objects and phenomena the total and unit agency, therefore God and the ursubstance, which is nothingness.

From the standpoint of ethics we must see the **balanced behavior** not only from the perspective of immediate final situation, but search for acceptable compromise **in terms of the total agency**. Such a compromise is unshakable, since it means the balance not only from the perspective of each unit agency, more complex agency, but also of the overall agency. In practice a man finds with the help of reason and emotion immediate balance, that he or she arranges with regard to the newly arising agencies.

Aesthetics works also with an extrasensory overall, or simpler **agency**, which it shows through sensory means. Also here the reason is applied next to the emotion, the reason uses a logical connection and similarities of our world with the total of Being.

2.8 GEOMETRY

2.8.1. Introduction
(formation)

Mathematics can be divided according to the total ageny and unit agency into counting with the numbers, where unit agency is in the case of the natural numbers the number 1 and the overall agency +∞ and the **geometry in the 0 up 3 dimension**, where unit agency is the **point** and the overall agency is **a three-dimensional space**.**The concept of number is more complex concept than the concept of x- dimensional space**, which means, that numerical operations with numbers can be projected in 1 dimension of geometric space, but the concept of number projected as a point of the line can be decomposed in an infinite number of spaces

of the lower dimension. The concept of number is therefore more complex concept, which produces due to smaller number of elements (virtually the bigger density of elements of given infinity) a simpler system than the system of geometry. The above phenomenon is a result of degrees of the total agency. At the same time from the context of the total agency it flows, that by using numeric coordinates the geometric relationships can be expressed in a generalized form, which the analytic geometry proves.

(subagencies)

2.8.2 PLANIMETRY

2.8.2.1. Introduction
(formation)

Planimetry is geometry in the plane, the overall agency represents the **plane,** the unit agency is the **point of the plane**, the cosubagencies are **planar figures** composed of points as a subsets of the plane or **half-plane**.

2.8.2.2. Definitions
(performance)

In this scope of geometry the subagency can be distinguished, namely the **belonging to the figure**, contrasubagency, so the **non belonging to the figure**, the same subagency, so the **identity** and **diversity**, or contrasame subagency and with greater frequency as supraagency and with less frequency as subagency. **The size of the figure** means in the area of Philosophy of Balance the frequency of agency. For planar figures of the same kind **the geometric sum** (coagency) and **the geometric difference** (contraagency) can be distinguished similarly as in mathematical arithmetic. Two planar figures may have common points- **intersection** or cosubagency or have zero intersection as contracosubagency.

Triangle, circle, polygon as the geometric figures are cocosubagencies, i.e. sets of points, subsets of the plane, which create own systems. Subagencies, so planar figures, which are subsets of these systems, are due to the nature of the systems again in geometric or in numeric relationships.

Geometric places of points can be described in the area of Philosophy of Balance as formation subagencies coagencies. Therefore as a set of points, that have the specified characteristics, at the same time each point, which has a prescribed characteristics, is the point of the figure.

Equivalent to functions in the math algebra represents the **geometric projection in the plane** as a formation termination coagency. **Direct identity** can be described as co- termination subcoagency and **indirect identity** as contra termination subcoagency. Similarly as in the case of planar figures it is true, that the projection in the plane represents cocoagency, i.e. systems, of which elements are in numerical and geometric relationships.

Similarly such as analytic geometry some geometric relations can be expressed in algebraic and arithmetic form. This is especially true for the above cocoagencies, i.e. the subsets of the plane in the form of systems, of which elements are in geometric and numerical relationships.

This means, that the subagencies of these cosupracoagencies (systems) are again in coagency relations as subsystems (cosubcoagencies). The result of these relationships is the **algebraic method of the solution of structural exercises**, **the content of the geometric figures** and **trigonometry** in the solution of the planimetry exercises.

2.8.3 STEREOMETRY

2.8.3.1. Introduction
(formation)

Stereometry is more complex agency in relation to planimetry or geometry in the plane. It is geometry in the space, which is a set of infinite quantity of the planes, so it is the supracoagency of subcoagencies. Unit agency is here again **the point in space**, the overall agency is **3-dimensional space**, the cosubagency is **spatial figures** composed of points as a subsets of the space, or **half-spaces**.

2.8.3.2. Definitions
(performance)

To **relations of** subagencies, **spatial figures**, **geometrical places of points**, **the geometric projection in space**, **volumes and surfaces of bodies** and **trigonometry** it applies in a logical context and analogically that, what has been said about the relevant agencies in the plane.

2.8.4 ANALYTIC GEOMETRY

2.8.4.1. Introduction
(formation)

Arithmetic and algebraic mathematics relations represent in contrast to the mathematical geometric relations the more general supracoagency or system with more complex concepts, of which a smaller number is compared to the geometry, in relation to which **algebra and arithmetic is simpler scientific scope as opposed to geometry**. However supracoagency characteristics, i.e. of more complex higher system is, that it is already embryonically contained in each of its components, and as such **we can use it to inspect and to analyze those of its components**. This means, that the mathematical numerical more general properties can be searched also **in the scope of** their subcoagency-**geometry**, which is a kind of specific specification of generic numeric and algebraic relationships. The means of this specification is a coordinate system as the formation termination coagency, that assigns to each element of formation cosubagency (**the x axis**) infinite number of elements of termination cosubagency (**the y axis**), if it is about geometry in the plane, similarly it is in the space of another dimension.

(subagency)

2.8.4.2 ANALYTICAL GEOMETRY IN THE PLANE

2.8.4.2.1. Definitions
(formation and performance)

Coordinate expressing of **the total agency** is the sum of all the various ordered pairs (subcoagencies) of numbers x, y, $x \in (-\infty+\infty)$, $y \in (-\infty, +\infty)$, **unit agency** is then subcoagency [0,0] or otherwise expressed $[1/\infty,1/\infty]$, by which addition by coagency or subtraction by contraagency the each and every point of the plane can be expressed in my opinion. **Planar figures** as subsets of all points in the plane or subagencies coagency subagency can be expressed as a **function of the unknowns x and y**, in the area of Philosophy of Balance as the formation supraagency (unkown x) termination supraagency (unknown y) coagency (function), where x and y represent within the scope of the definition field of an unknown x the coordinates x, y of all points of the planar figure. Subcoagency of contracoagencies, i.e., **the intersection of sveral planar figures** represents formation termination subcoagencies, so subagencies of certain organized pair of unknown x and y, which correspond to the supraagencies of the unknown x and y of functions of all considered planar figures. It is about solving of **systems of equations or inequations**.

2.8. Geometric image of the world
(termination)

If we consider a three-dimensional space, and then the space of infinite dimensions, which is a consequence of the Being as a stepped and coherent, continuous and endless agency, then **the total agency** represents in the first case the three-dimensional space and more generally the perfectly infinitely dimensional space, which is from the perspective of Philosophy of Balance also the God. In the framework of this perfect infinity we can distinguish in the geometric form the sums, differences of spaces and derived operations, which represent as well as in mathematics of numbers the **co- and contra- agencies**. These operations are in an uncompounded form the agency of the good and the evil, to which is superior the fact of the all-embracing space, thus supracoagency representing all the Being or God.

From the point of view of a three-dimensional ontology the **unit agency** of Being is, from which everything is made up, the point in space, but even this point consists of spaces at the smaller size in terms of infinity and degrees of agency. This unit agency or ursubstance is a mere fiction, or infinitely low dimensional space or nothing. Each particular subspace can be broken down into subspaces of this space. From this infinitely little dimensional space is then composed everything, whether matter or spirit.

The human mind from the perspective of the geometry is a complex geometric figure filled with different points of space as four-dimensional spatial unit agencies, which are however from the perspective of an infinitely dimensional space the differently composited spatial systems or coagencies. The space of smaller than zero dimension is by the **human mind hardly catchable**, as well as the space of higher than the fourth dimension. From the connection and the continuity of Being as agency we can suggest on the basis of **similarity and logical connection** with a three-dimensional space their existence. The similarly spatial figures as the human mind can be understood even more the facts of our being.

From the perspective of Philosophy of Balance we can accept the theory of gradual formation of a subspace and supraspace within the creative coagency and decomposition contraagency, thus within the infinite process of agency. From the standpoint of mere geometry the balance can be seen in the stability of the space represented by the same creation of new spaces by merging of spaces and decomposing of spaces. From the perspective of Philosophy of Balance the balanced behavior can be characterized as the balanced formation agency. **The**

balance in the human agency is in limited formation of four dimensional spatial figures, which is in line with **the overall balanced formation agency**. In the context of subspaces it is represented by limited decomposition of spaces, in the framework of superspaces by limited merging of spaces, with the predominant nature of limited merge of the superspaces. The balance of spaces is the only **given,** that determines ultimately the result of all of partial, even three-dimensional agency. **Predestination of human actions by spatial relations** is only partial due to the unlimitedness of total, perfectly infinitely dimensional space by a superior or by same dimensional space. For this **unlimitedness every subspace is partially divided**.

Aesthetics represents the penetration of the higher and lower than the four-dimensional space, **accessible only by reason** in the form of context and analogy with four-dimensional space and by emotion. So by this means of four-dimensional space accessible to human senses we get closer to God and the essence of our existence. As the spatial Being is a constant agency, the disintegration of the space as **contraagency can be captured** as well as their merging or **coagency**.

2.9 ARITHMETIC AND GEOMETRY OF INFINITY

Introduction
(formation)

In the case of non-negative number ∞ in terms of the Philosophy of Balance of it is the overall agency, which includes simpler agencies from the arithmetic of nonnegative numbers. Laws applied for numerical operations of ∞ are also applied in the partial form even for numerical operations with lower numbers, which follows from the connection and the continuity of all agency from the perspective of Philosophy of Balance.

The calculations in the field of arithmetic can be geometrically projected by the objects of the same size, of points in geometry of zero dimension, of unit line segments in the geometry of the straight line or the first dimension, of the unit areas in the geometry of the plane or the second dimension and of unit spaces in the geometry of three-dimensional space. The number of these objects equal to ∞ represents then the overall agency, or subagency, which is again continuous and continuously happening.

Arithmetic of a number ∞ we can project once again geometrically, which stems from the nature of the geometry as a subagency, therefore the special scope in relation to mathematics. Geometry shows the general term of number in geometric objects and their relationships in geometric relationships. General laws of arithmetic are applied once again in geometry and the laws of geometry are applied in general form in arithmetic, which follows from the continuity and connection of all agency from the perspective of Philosophy of Balance.

Definitions and relationships
(performance)

The number ∞ represents a complex coagency, then the result in the case of **divergent sequences** of the endless number of mainly coagency mathematical operations. Among coagency mathematical operations of arithmetic, as I have already said in the Philosophy of Balance of mathematics, there are addition, multiplication and exponentiation, where the unit agency of these three operations, from which are composed the both of the others, is the addition. On this basis we can define **the unit agency of number** ∞**,** which is the sum of an infinite number of numbers 1, i.e. $\infty_j=1+1+1+\dots$. From this unit agency all the other numbers of value ∞ are composed. The number of these unit agencies in a specific number ∞ we find out ∞/∞_j and the number of a particular ∞ we once again obtain by multiplying of this number of unit agencies by the number ∞_j.

Arithmetic of the **number** ∞ **projected in the geometry** we are crossing the only one dimension and it brings us into a higher dimension of mathematical coagencies, virtually to the lower dimension for mathematical contraagencies, which are the mathematical inverse operations of the above mathematical coagencies. The geometric projection in the first dimension of the countless ∞ number of mathematical coagency operations of non-zero final number, which can be projected as line segement, is a straight line, regardless of the number of ∞_j in a particular number ∞, by that we multiple, and regardless of the length of the line. In this sense, you can talk

about **the same value and different density of all the numbers ∞,** regardless of how many of ∞_j they include in themselves. However the line is already the object of a 2-dimensional space with zero-width. A non-zero width we get by multiplying of the line again by incountable number ∞ , thus $1*\infty^2$.

By the last consideration above we got to a special issue of the arithmetic of infinity, thus **counting operations of the number ∞ and 0**. The number zero represents the actual unit agency in the field of arithmetic of numbers. In the framework of the geometric projection in the second dimension it can be thought as a straight line, thus a plane of zero-width and area. From the last consideration in the previousl paragraph it stems, that a plane strip of width $1/\infty_j$ is equal to 0, or a straight line with a width of 0. In other words $1/\infty_j$ is equal to 0, where the number 1 represents a line of length 1 and the number 0 the point of this line or number 1 a plane strip with a width of 1 and the number 0 a straight line or number 1 three-dimensional space of dimensions a=1, b=1 and c =∞ and the number 0 a plane strip with a width of 1, etc. If there is a particular infinity $\infty=2*\infty_j$, or $\infty=(1/2)*\infty_j$, then the dimension of a line will have double or half size.

From the above it follows, that **the value of the number 0 and ∞ in terms of more dimensional space and its arithmetic can be different** depending on the number of unit agenciesof the number 0, which is l/∞_j, and the number ∞, which is the number of ∞_j contained in them. Different values gain then also their mathematical coagencies and contraagencies. In addition in the case, that the number of unit agencies in number ∞ is equal to incountable ∞ again, or 1/∞ in the case of the number 0, these are the geometric objects in the area of higher or lower dimension again.

Calculations with zeros and infinities

$0_1=0$ … unit zero (eg 0meters)
$1_1=1$ … defined unit (eg 1meter)
$\infty_1=\infty$ … unit infinity(eg ∞meter)
0_∞ … perfect zero in relation to 0(eg meters)
1_∞ … perfect unit in relation to 1(eg meters)
∞_∞ …perfect infinity in relation to ∞(eg meters)
x … times have precedence over minus and plus, times is inverse operation of division
/ … division takes precedence over minus nad plus, division is inverse operation of times
= … equals
- … less, i.e. minus is inverse operation of plus, i.e. more
(…) … parentheses take precedence over times, divided and the minus
Equation $1/\infty_1=0$ is the first axiom, which I have derived from practical experience of geometry, where the line segment of the 1metr length consists of ∞ points of the 0meters length.

A demonstration of 0=1 resulting from the final number 1

$1=0x\infty_1$
$1-0=0x\infty_1-1/\infty_1$ … left I deducted 0, right, I deducted the same $1/\infty_1$
$1=(1x\infty_1-1)/\infty_1$ … left I have deucted 0, right, I have given 1 for $0x\infty_1$ a and I made transfer to a common denominator ∞_1
$1x\infty_1=1x\infty_1-1$ … left and right side of the equation, I multiplied ∞_1
0=-1 … from the left and right sides of the equation, I deducted $1x\infty_1$

0=1 … I got the result by adding 1 to the left and right side of the equation

B demonstration of $1=\infty_1$ as result of equation 0=1

1.) $\infty_1=1x\infty_1$ the second axiom
2.) $1=0x\infty_1$ the first axiom

1=0

∞_1**=1** … left and right side of the equation, I multiplied the ∞_1

C Conclusion

The result of 0=1 is a binary computer code consisting of numbers 1 and 0, so called bits that is a numerical expression of the basic Philosophy of Balance in the three simplest characters of binry computer code.

In our Universe this equation is the fact, that the (nonabsolute) vacuum or according to the contemporary exact science in our Universe the least imperfect nothing is made from only one point of space-time of matter widened in space, unlike the matter and waves, which consist of this infinity of these points.

In my opinion Linguistic expression of the shortest numerical result 0=1 in English language is in ten syllables, i.e. ten bytes of basic more complex characters of binary computer code) on each side of the equation as following:

if finitethingmaximumnothingis 0=1 infinitenothingminimumthing
then finitethingmaximumnothingis 1=∞ infinitenothingmaximumthing

Calculations with a perfect infinite and perfect zero:

1_1 or $0_{1/\infty\infty}=0_\infty$
1_1 or $0_1=0_\infty x\infty_\infty$

Or:

1_1 or $0_{1/0\infty}=\infty_\infty$ or $0_1x\infty_\infty=\infty_\infty$

Author: Dalibor Grůza
Time: 09/04/2012 06:53:12
Post:

quoted:
Post of Bolshevik

Doctor, I wonder, what would you say to your client, if he issued you a bill for legal services, let us say, 10000, - CZK and he or she would not pay you anything on the ground, that under the Philosophy of Balance 1 = 0 and thus 10000 x 1 = 10000 = 10000 x 0 (substitution according to the Philosophy of Balance) = 0?

Bolshevik,

according to the above implication 10000=1=0=∞, as it consists of ∞ zero-units parts. Therefore 10000=10000x1=10000x0=0=1=∞ applies, because ∞=∞x1=∞ . The above-mentioned implication can be expressed geometrically, so that, if we consider it as a unit the length of a geometric point of 0 meters, the line of a length 1meter has ∞ of these zero units, it is the obvious mathematical fact. Or in other words a geometric point as the space of zero-dimension is infinity for the point of the space of the minus first dimension etc., to perfect zero, which one can no longer divide, or perfect infinity, which one can no longer increase. For perfect zero it is not zero meters but zero of all units, i.e. things because zero meters mean the absence only of metric units and it admits the presence of other units, i.e. things such as geometric points of above zero-dimension space, zero meters or unit zero is not perfect nothing, i.e. perfect infinity is then according to me equal to zero of all units, i.e. things from zero meters, eg 0 meters divided by the perfect zero, because in my opinion, everything is perfectly infinitely divisible, and never in my opinion the end of the division, even if we will be more and more perfect, in other words in my opinion, we will be increasingly similar to God, however we can never cope Him, that is, as to me no creature will ever be able to precisely calculate perfect infinities and perfect zeros, as to me our calculation will be more and more precise, but in my opinion always only approximate, so in my opinion all creatures are waiting perfect endless journey to cope perfect infinite uncreated God. In other words, in my opinion perfect zero times perfect infinity can be certainly equal to anything, any unit-zero, because the unit zero divided by perfect zero equals to perfect infinity, and in my opinion, thus unit-zero times perfect infinity may also be equal to perfect infinity, because in my opinion unit-zero divided by perfect zero is equal to perfect infinity.

3. PHYSICS

3.1 INTRODUCTION
(formation)

3.1.1 INTRODUCTION
(formation)

The object of physics as a whole (formation subagency of formation agency) is a movement. This movement according to its frequency is examined as by fields of physics dealing with the macroworld (supraagencies) as mechanics, optics, or astrophysics, so by the fields of physics dealing with the microworld (subagencies) as a molecular physics, thermal physics, acoustics, thermodynamics, electricity and magnetism, atomic, nuclear and particle physics, and wave optics, possibly astrophysics. The movement as a phenomenon (the agency) in the world of phenomena (the overall agency) can be characterized as a performance agency and especially as a cocontraagency. Contraagency is movement, because opposed to coagency it is characteristic for creating a distance from the whole, by contrast in the coagency movement there occurs approaching towards the whole. At perfect motion (termination agency) in the case of coagency only the whole moves in relation to other wholes, all

its parts are in a zero-distance and against each other without any collisions, at contraagency they are in an infinite distance or with collisions.

By its object physics **differs from mathematics**, of which object is a number as coagency or unit agency in the case of the number zero, either as cocoagency for positive numbers or cocontraagency for negative numbers. From this perspective, also the frequency of the movement gains the numeric values as coagency. Due to the nature of the movement as vector or formation termination cocoagency as a movement in a certain direction or termination formation cocontraagency as a movement in the opposite direction the concept of movement is more special concept than more general concept of number. Mathematics with the basic concept of a number (supraagency) is so more general scientific discipline than physics with the basic concept of movement (subagency). In other words the concept of a number is more numerous total composed of unit agencies than the concept of movement as the less numerous total composed of the same unit agencies. As a result mathematics is more general science seemingly more simple due to the less number of more general concepts than the physics.

Physics as more specialised science in relation to the more general mathematics and even more general **Philosophy of Balance** is possible to see **in terms of the concepts** of these more general scientific disciplines. This option follows from the nature of the world as an agency, a coherent and continuous whole. This means that complex concepts of mathematics and Philosophy of Balance (supraagency) include in itself simpler concepts of physics (subagencies), from which they are composed. Using of these set concepts arising from unification of elements with identical properties in the conceptual (agency) analysis of sentences of physical sciences allow us to explore these concepts of physics (the elements of the set concepts of mathematics and then of Philosophy of Balance) in the new vertical (in the context of physics) and horizontal (in the context of mathematics and Philosophy of Balance) contexts.

3.1.2 DEFINITIONS
(formation of performance)

In the introduction we divided the physics disciplines according to their subject into the physics of macroworld (subject is supraagencies) and physics of microworld (subject is sub-and unit agencies). In conformity with the foreword and its interpretation of the issue of an object and a subject in science the physics explores the physical properties (subagencies of movement) and their mutual interaction (their cocontraagency). The laws, principles and theories of physics can be described as the performance (according to the effect) formation (ideas) subsupraagencies (i.e. more or less effective ideas). The basic units of physical quantities are unit agencies of subagencies of motion. Derived units are then their mathematical cocontraagencies, or physical cocontracounit agencies. Measurement can be marked as unit contracosubagency contracoagency, i.e. the interaction between measuring equipment, that determines on the basis of certain property the number of units of quantity of a particular agency. At the measuring device it can be unit-, co-, the same subagency, i.e. indicating directly the units of given quantity or unit- contra- the same subagency, i.e. specifying units of other quantity and calculation of the quantity on the basis of their known relationship (mathematical cocontraagency). Measurement errors can be marked as contraagencies and elimination of these errors on the basis of the mathematical remeasuring as contracontraagency.

Subagencies
(performance)

3.2 MECHANICS

3.2.1. INTRODUCTION
(formation)

Mechanics is the branch of physics, that explores the **movement of tangible (i.e. material) objects in the macroworld**, i.e. the performance of supracontracoagency. Mechanical movement is the sum of an infinite number of unit agency movements in our microcosm. However the connection and fluency of the world as an overall agency imply, that laws of motion valid in the macroworld are **valid in partial form also for motion in microcosm** (subcoagency). In other words by sentences of mechanics as complex subcoagencies also the sentences and the phenomena of microphysics fields can be expressed, as I defined it below. These sentences of mechanics are however valid in amended or restricted form due to the synthetic nature of the sentences of mechanics compared to analytical nature of sentences of physics describing the phenomena of the microworld.

This continuous and fluency (indivisible) view on physics through the scope of the physical mechanics as the most general science of physics enables us to see physics as a single whole built on the foundations of the sensory phenomena, which are the subject of mechanics. If we then perceive mechanics as a general supraagency of physics, then the rest of its scopes is its special subagencies, from which this supraagency is composed.

From fluency (indivisibility) and connection of all the agencies in the world as the overall agency the nature of the total and its partial movements as a single agency follows that only our mind and senses divide by perception of the individual properties (subagencies) such as weight, size, time, temperature, etc. These subagencies are at the same time subcoagencies, as a part of a single movement, so they are mathematically and physically connected and they fluently go from one into the second according to the laws of their connection, while maintaining the quantity (frequency) of the variable characterizing the movement as a whole composed of the above subagencies.

The mechanics consists of kinematics and dynamics.

Subagencies (performance)

3.2.2 KINEMATICS

Introduction
(formation)

Kinematics deals with movement in macroworld in terms of the most common sensory quantities, i.e. the **dimension and time**, which in the context of their mathematical subcontracoagency mean the **speed and acceleration**. What has been said about the relationship of mechanics and other disciplines of physics, it applies mutatis mutandis about the relationship between the kinematics and dynamics. Kinematics is the general science and it explores the general phenomena of motion, which are further decomposed into simpler due to the universality of kinematic phenomena but more complex due to the number of variables of investigated phenomena and sentence of dynamics. Here the laws about the relationship of more general to the specific in the opposite sense apply, as they are commonly perceived, with the above consequences.

Kinematics is however only simple generalization of motion in macroworld and it is not its compact image (formation subagency), to **the overall view of the movement in macroworld it is needed to use analysis from the field of mechanical dynamics** and to apply the speed to the next most important sensory quantity, which is the weight. Thus we obtain the relationship, that is a complete description of motion in macroworld, namely the analysis of the speed, virtually dimensional and time relationship of sub2contracoagency on the speed and weight sub3contracoagency (i.e. a relationship consisting of three subagencies).

Definitions and relationships
(performance).

Unit agency of movement from the viewpoint of kinematics is immobility or movement characterized by variable of speed m/s divided into infinitely partial movements characterized by this quantity m/∞, divided by s/∞, where m is the meter and s is the second. A specific speed as a contraagency of quantity of time and dimension is then the sum of an infinite number of agencies, where the formation and termination fall in one. Therefore in terms of the dimension of endless number of motionless positions of tangible (material) body, or a point in the kinematics of a tangible (material) point, which are in terms of time lasting an infinitely short moment. The resulting speed is then **the composition of the endless number of material bodies existing at the infinite places for infinitely short moment**. Thus the unit agency of movement $(m/\infty)/(s/\infty)\times(\infty/\infty)$. From this unit agency it is then composed as an overall agency meaning the total physical movement. Considering connection and fluency (continuity and infinity) of an agency this overall movement characterized by variable speed is equal to $[(m/\infty)/(s/\infty)]\times(\infty^x/\infty^x)$, $x=\infty$. By contraagency I understand the movement of two and more tangible (material) bodies or points in the direction from themselves or their collisions, by coagency it is towards each other and without collisions. Furthermore it is possible to distinguish between coco (cocontra) agency such as accelerating movement and contraco (cocontra) agency as slowing movement. This contra, virtually coagency subagency (or time) shows the deceleration, virtually the acceleration of movement. The overall movement means the vector sum of total contraagency and coagency, therefore $[(m/\infty)/(s/\infty)]*(\infty^x/\infty^x)+[(-m/\infty)/(s/\infty)]*(\infty^x/\infty^x)$, $x=\infty$.

The acceleration or deceleration is subcontracoagency of speed and weight, which include them in itself in the form of subagencies. At the same time it is a termination formation agency like the force, because its size is determined by the size of the speed in the past, thus by the previous agencies. At the same time it is cosubagency, because it is the result of contracoagency of sensory perception of speed, thus the idea, which is not already perceived directly by senses. For acceleration the relationship of the general and the special applies mutatis mutandis, as it was defined for the relationship of mechanics and other branches of microphysics.

In the case of a choice of axis of three-dimensional coordinates identical to the rectilinear motion, meaning constant value of two same subagencies of quantity of dimension it is **rectilinear motion of a tangible (material) particle**. In the case of coagency relationship of two of these coordinates with the beginning of the coordinates in the center of the circle and the plane specified by two coordinates identical with the plane, in which a circle lies, this **circuit movement can be** expressed $x^2+ y^2= r^2$ of these two dimensions. According to the same agency of the speed it is a **steady movement**, according to coagency of acceleration and deceleration it is a movement evenly accelerated and decelerated.

From the connection and the fluency of movement as agency then flow out the relations of thought subagencies, i.e. of the dimension, of time and of the velocity and acceleration as the subcontracoagency relation of partial quantities of motion of contracoagency as a part of an overall relationship characterizing the whole movement.

The trajectory and speed as properties of the kinematic motion are however relative to the system you choose. The reference system can be understood as subsubcoagency of the overall agency or as a movement system, which is a subset of the system as the sum of total kinematic motion. If we expressed the total agency as the sum of all movement as a vector sum $[(m/\infty)/(s/\infty)]*(\infty^x/\infty^x)+[(-m/\infty)/(s/\infty)]*(\infty^x/\infty^x)$, $x=\infty$, then the frame of reference is the same sum for $x \leq \infty$, where for $x = \infty$ it is the overall movement, therefore the world from the viewpoint of kinematics. If we then consider the movement in the first frame of reference as starting (formation agency), then variables (unitcoagencies) characterizing this movement need to be adjusted by the number of unit agencies of movement attributing to the unit quantity of movement of **the first frame of reference in the second frame of reference**. Due to the speed so it can be coagency for faster systems or contraagency for slower systems. Contraagency therefore the slowing movement in one frame of reference may appear as coagency, i.e. the accelerated motion in the second frame of reference. So the movement seems relative in terms of reference systems. However this does not apply, if we choose as first reference system the overall kinematic motion, as it has been described by a mathematical relation above. This total kinematic movement already contains in itself the other reference systems and their relationships. So we get the absolute quantity of kinematic motion.

In the case, that unit agency will be only trajectory s divided by t/∞, then we can calculate **the instantaneous speed** or speed v divided by t/∞ of **immediate acceleration** of a tangible (material) particle or the body.

Kinematic picture of the world
(termination)

The total kinematic movement represents in Philosophy of Balance the total coagency, or God. From the perspective of Philosophy of Balance of agency it is due to the infinity and continuity of this motion as the number of elements, of which this movement is composed, equal to infinity. The overall movement as an overall agency has on the other hand a constant frequency, which is also fixed in isolated systems, which is in fact only the overall agency. Other isolated systems as a partial movement of the total movement are just a fiction of our mind, since the movement as the agency is in fact indivisible. The movement is directed either to the integration, i.e. the movement of the bodies to each other without any collisions such as coagency, or disintegration as the mutual movement of the bodies away from each other or collisions, i.e. contraagency. Both of these basic types of movement compose a whole movement as a God in the form of an Angel and a Devil and they create so the infinite whole of Being.

In fact each composed movement and also the total kinematic movement is contracoagency, i.e. integration in relation to some movements and disintegration in relation to other movements, i.e. contracoagency. The total coagency of these relative movements is then supracontracoagency, which is neither contra- nor co- agency and it contains also both kinds of agencies such as higher coagency. Unit agency of kinematic movements is motionless body in zero time interval. The sum of these unit agencies, characterized by the speed of both types of movements, i.e. integration and disintegration, gives the overall movement as a whole Being. From this unit agency are also from the standpoint of the kinematic

motion composed all objects as complex unitcoagency of total cococontraagency, both spiritual and material. The frequency of these unit agencies in total but also in sub- agency is equal to ∞.

As the complex kinematic movement can be understood also the cocontraagency of mind. The mind is a complex movement made up however in the final result of the movement unit agencies. However we can generally say, that the frequency of motion as the mind of the individual people is different from the aspect of unit agencies but of the same range. They are therefore similar. The overall movement involving the mind of all people is able to cover a larger part of the movement of the whole Being than the mind of the individual human Being or a subset group of people. Total mind can be identified with the total kinematic motion, which includes all of the unit agencies of movement and their component parts. It is the whole Being or God. The process of thinking or the formation of agency and the performance and termination of the agency is not separated here, which is in fact indivisible and only our mind it divides artificially. Even more complex movement than the mind is a human emotion. The mind is composed integration and disintegration movement. Mind, emotion and ideas are the movement of the great frequency of unit agencies of movement and they cannot well cover the kinematic movement, which has the same or greater frequency of unit agencies, and the movements, which have a lower frequency of the unit agencies of movement, than is the interval of frequency of kinematic movement catchable by human mind. These extra (i.e. beyond) thought and extrasensory agencies can be imagined only by using a logical connection and similarity of everything agency.

The question of how to live (ethics) is possible to answer by the notion of supracocontraagency, which represents the motion without the collisions within the movement of integration and disintegration, which is however relative, and that to the maximum extent. It is the average movement corresponding to the total movement, of which integration and disintegration in the framework of the Being we get it alone, therefore the movement characterizing itself on context of infinite kinematic movement by relative stability. If we do not try for average movement in relation to my personality as a component of motion of the overall movement, I will not disturb overall balanced movement, only there will be the multiple integration or disintegration counter-movement according to the law of action and reaction and I cause myself a pain. Complex movement can be seen as the result of the interaction of the individual movements (their math cocontraagency), but they are also the result of chance such as the independence of the perfectly infinitely partial unit agency of kinematic motion, or of its whole.

What concerns the aesthetics or beauty, so we can say, that it applies in particular to emotionally perceived overall kinematic motion. This object of emotion goes beyond the object of the human reason as a simpler motion. Through art we penetrate a balanced whole as balanced kinematic integration and disintegration, whether in the interval of unit agency frequency of our mind, or simpler or more complex movement outside of this interval, and that is in this case also in the form of an imbalanced integration or disintegrative kinematic motion.

3.2.3 DYNAMICS

Introduction
(formation)

In terms of the dynamics the kinetic movement as a subagency is divided also into the interaction of speed and weight. Speed and acceleration as the result of a complex agency is so related and it includes in itself already the effect of weight.

Dynamic physical movement represents **in relation to the physical movement of particles in our microcosm** a summary of these movements, and their generalization, where the laws of this dynamic physical movement apply in the partial form also for the physical movement of particles in our microcosm.

Definitions and relationships
(performance)

To assess the relationship of an individual movement towards the total movement the dynamics uses the fiction of the partial movement system that is isolated and therefore it represents the overall movement, that is in fact from the standpoint of the Philosophy of Balance infinite, and therefore indivisible. The overall infinite, continuous and indivisible movement only our mind divides artificially to illustrate the fact of the overall

movement. This partial isolated total movement system is in terms of the theory of physics the **isolated material point and isolated system**.

Frame of reference, in which the body is at rest or in the linear movement, is steady **inertial frame of reference** and reference system, in which the body is moving with acceleration, is **non-inertial reference frame**. Which system is at rest, and which speeds up or slows down is not relative in respect of these two systems, however in relation to the overall movement, i.e. in relation **to the whole of reference systems** we arrive to the absolute relations. These relations are calm or have rectilinear motion of unit agency of inertial system, i.e. isolated tangible (i.e. material) particle, which is alone the smallest inertial frame. Relationship to the overall movement, i.e. to the biggest inertial system is mediated by time and distance, i.e. $\infty*s/(\infty*t)$, s/t represents the average Universe velocity when negligible weight, where s is the trajectory and t is the time. Movement in all inertial motion systems is of the same type and apply the same equations for speed and weight or only for speed when negligible weight.

As I have already stated, physical phenomena can be generally described as the movement consisting of **the movement of unit agency**, which is the steady state in infinitely short time. At the same time the movement is the agency, which is indivisible and coherent, and only our mind separates it on the various components of the movement perceived by our senses. These ingredients, such as **weight, trajectory and time**, are also a complex movement. These components are together indivisibly linked again, this is therefore a kind of reality, from their relationships whether mathematical contra-, co- agencies we gain once again partial movements, which are a component of the overall movement.

For a description of the movement we need to select the relationship, that puts into the simplest connection all basic quantities perceived by our senses, i.e. the weight, the trajectory and the time or speed. This simplest relationship describing indivisible movement will be so unit agency, the essential expression of the whole and the parts of the movement, therefore the physical reality. All other relationships describing the movement will be the extension, then contracoagencies of this basic relationship. This **basic relationship of movement represents the relationship for momentum p=m*v=m*s/t, where m is the mass and v the speed, s the trajectory and t the time**. All other relationships describing the different kinds of physical movement are then derived from this basic relationship. Here I mean first the relations of mechanical energy, but also of the total energy in relativistic physics, but also the relations of thermodynamics, optics and microphysics, where there are the appropriate kinds of physical movement.

From this connection of physical movements for example flows the link of the law of conservation of momentum with the law of conservation of energy, hence the law of **conservation of mechanical energy and the conservation of electric charge. Link to the law of conservation of momentum and of energy** is possible to prove from the relationships derived in relativistic physics, specifically in the Special theory of relativity. We are considering the zero-mass particles, then its all energy is mechanical energy. Mechanical energy consists of kinetic energy and potential kinetic energy. Potential kinetic energy represents other kinds of energy, whether mechanical or others, for example the heat, which can be converted to kinetic energy. It follows from this, that, if we convert the total energy of the body into the kinetic energy, and we calculate it, we obtain the total energy of the body. In practice this means, that the body we convert into a one-way stream of photons-electromagnetic radiation of the speed of light of the same relativistic mass and energy as this material body. The total resting energy of the photon of this body will be $E=m_0c^2$, $m_0=0$, m_0 represents a zero relativistic mass of photon moving at the speed of light c. The total kinetic energy of the photon of body would be $E=mc^2-m_0c^2= mc^2-0=mc^2$, i.e., equal to the total energy of the photon, where m is the relativistic weight. Potential kinetic energy is equal to 0, and the photon energy is represented only by its kinetic energy. However the same is true for the body as a whole, as due to the non-zero total energy of the photon and the final total energy of body expressed in the form of electromagnetic radiation its total energy is equal to the kinetic energy $E_f*x = E_t$, where E_f is the kinetic energy of the photon of the body, x number of photons moving at the speed of light in so expressed body and E_t the total energy of the body.

The law of conservation of momentum applies to isolated material body as an isolated inertial system $p=m_fc (=p_o)*x$, where m_f is the relativistic mass of the photon moving at the speed of light c, p_o the momentum of the photon and x number of photon forming in summary energy of the body, p I will refer to further by the concept of relativistic momentum, p_o is the relativistic momentum of a single photon. Due to the fact, that c is a constant and p is a constant, it is also for the relation $E_t= E*x= m_fc^2*x$, and therefore the law of conservation of energy applies, which we have inferred from the law of conservation of momentum. There, where I am talking about the

body, we can also talk about isolated motion system, expressed also by relation p=m*v, where the law of conservation of momentum and energy is applied too.

Now to the unit agency of movement expressed by the general formula m*v, from which all the physical movement is composed. Already in the field of kinematics we have expressed this unit by the relationship $(s/\infty)/(t/\infty)$**.** This unit agency is still position of the body in an infinitely short time, when its weight is neglected. If to this relation for the speed the variable weight m comes also, then this motion can be expressed by unit agency $(m/\infty)*(s/\infty)/(t/\infty)$ and it is **still the position of the infinitely light particles for the infinitely short moment**, which means that this particle exists for infinitely short period of time, its origin, performance and termination fall so from view of agency Being of Philosophy of Balance in a single, they merge. Definition of the unit agency of movement implies roughly, that each body is composed of photons at a standstill, which are however also composed of the above individual movements.

The whole of Being as **an infinite physical movement** can then be expressed as a product of this unit agency, which generally has the nature of the same agency (it is identical for all the physical bodies) and ∞ in the relationship $[(m/\infty)*\infty^x]*[(s/\infty)*\infty^x]/[(t/\infty)*\infty^x]$, where x is the number of the dimension of the space of movement and it is from the perspective of Philosophy of Balance of agency also equal to ∞. However at the same time there is limitation for $[(s/\infty)/(t/\infty)]*\infty^2/\infty^{2\leq}c$, which is the speed of light.

From the law of the conservation of movement, virtually momentum and energy it flows that the overall movement is fixed and it is the sum of the unit agencies of movement as defined above. Unit agency movement represents one point in the space-time continuum, i.e. the sum of the movements in the infinite sum of the points, i.e. the sum of the movements in the infinite points in the second dimension of space-time, consisting of infinite points in the first dimension of the space-time, etc. It is about an infinite sum of unit agencies.

In the field of physics of macroworld, which represents the mechanics, we see a so-called **mechanical energy, which is represented by the kinetic energy and potential kinetic gravitational energy.** If ignoring the kinetic energy of the field of particles physics and other potential energy than gravitational, the **law of conservation of energy applies**.

Energy is defined as **the basic relation** W=F*s, it is equal to the work as the result of a mathematical coagency of the trajectory s and the force F. From the definition of motion as p=m*v=F*t, where t is the time, it suggests, that derived relation for the movement is W=F*s=p*v, where p is the momentum and v is the speed. Law of conservation of mechanical energy flows then from the above relationship for relativistic momentum and energy.

Here it should be noted, that **the equation for kinetic energy** $E=(1/2)mv^2= (1/2)ma*at^2= F*s$, where a is the acceleration of the unit meter divided by the second to the second exponent, and s is the trajectory of the unit meter, unit of force F=ma is the Newton of the unit $kg*m*s^{-2}$, it is also valid **for potential (gravitational kinetic) energy** $E=mgh=mg*(1/2)gt^2=(1/2)mv_d^2$, where v_d is the speed of the body at an impact in the free fall on the surface of the Earth, and g the acceleration of the Earth.

Quantities of power $P_p=W/t$, where W is work and t the time, and of efficiency $\acute{\eta}=P/P_0$, where P is power, then, represent partial motions of the total movement or mathematical contracoagency of the above unit agency of the physical motion.

If we take the Universe as a whole, then according to the knowledge of physics it can be considered in the whole as a homogeneous and isotropic, i.e. we can contemplate its uninterrupted and continuous nature, as it postulates the Philosophy of Balance of all agency. Therefore we can think about **the average value of the momentum and energy per unit of** space or **volume**, which promotes in all physical movement gradually thanks to the continuous nature of the physical movement of particles and bodies of the world in the ultimate consequence of above defined unit agencies of this movement. To the connection of the momentum and the energy I wrote above.

Mathematically can be this phenomenon expressed by relation for the **balance force $F_1=\Delta E/s=[(E_1-E_2)V_1/(V_1+V_2)]/s$** for two adjacent momentum fields, virtually tangible (material) bodies, or particles (hereinafter referred to also as momentum fields) of macroworld, where F_1 is repulsive force of the first momentum field in the case of positive value and the attractive force of the momentum field in the case of negative value, ΔE the change of the total relativistic energy of the momentum of the observed field, $E_{1,2}$ is the total relativistic energy of the elected momentum fields, $V_{1,2}$ is the volume of the momentum fields, s the distance between the centers

of adjacent particles, or material bodies, or the neighbouring momentum fields, Δt time of interaction of momentumch fields and t total time of straightening the momentum of particles as a result of acollisions. I proceed from the fact, that $\Delta E=\Delta W=F*s$, where ΔW is work, or energy, that needs to be done to restore the balance, and that is by a force F (hereinafter referred to only as balance force) acting on the trajectory s required for restoration of the balance through colliding particles after time t. I suppose, that an equalization of E_1 and E_2 will occur in time t, otherwise the second part of the above formula for the balance force is not valid and only the first part of this formula will apply, which is given by the overpressure, virtually underpressure due to the nearby momentum field. **The forces caused by overpressure or underpressure (vacuum) of the neighboring momentum fields are according to the Philosophy of Balance of physics the reason of all the motion in the Universe.**

The average momentum, or energy per unit of volume is due to the **collision of particles, excluding perfectly zero-mass particles, i.e. photons** not at the speed of light, but in the endless number. The momentum fields arise, where **the average density of the local mobility pushes through**, which affect again each other by collisions of particles. The result of these collisions of particles is, that the momentum field and particles with supra-average momentum reduce its momentum density and particles and momentum field with sub-average local mobility increase the density over the time. In other words collisions of particles cause this repulsive forces between momentum fields, virtually particles with a sub-average local mobility density or between two momentum fields, virtually particles with a supra-average local mobility density and **attractive forces** between the momentum fields, virtually particles with sub-average and supra-average mobility density.

The action of such local balance forces is limited by the period before balancing of energic, or momentum densities in the superior systems, or the Universe in infinite time. **Universe balance force** acts between motion systems with great momentum given by the total weight and speed with values approaching ∞, local balance force between systems with low mobility. Universe balance force represents the sum (coagency) of local balance forces. The effect of these balance forces is due to the collision of particles and bodies according to the law of conservation of momentum $m_1v_1+m_2v_2=m_3v_3+m_4v_4$, where m_xv_x are the variables weight and speed, even in a vacuum as I mention below.

Gravitational field represents the sum of the movement unit agencies in the form of the action field of these forces, this partial movement, as I stated above, represents a portion of the total movement of unit agencies meaning the change of the speed of movement of particles at zero weight at zero time multiplied by the number of unit agencies in the given mass. In my opinion gravitational field represents the **momentum field** and this is **consistent with the action of the balance force between the two momentum fields** due to the attractive, in particular gravitational force caused by underpressure seemingly a more perfect vacuum forming interspaces of more massive bodies due to its very low absolute momentum.

If we consider above mentioned link between energy and momentum of a body, then we can say that the gravitational field is acting on a particle with non-zero total energy or with zero energy (i.e. the absolute vacuum) in zero distance, which stems from the relationship $F_g=\chi m_1m_2/r^2$ for $m_1= 0$, where χ is a gravitational constant with a value of approximately $6.67*10^{-11}$ $N*m^2kg^{-2}$, m_1, m_2 are weights of both bodies and r the radius of the distance of the two bodies.

To calculate the attractive gravitational force we can use the relationship for potential gravitational energy E=mgh, where h is the height of the level, in relation to which we determine the potential (kinetic) energy, the relationship for the gravitational force $F_g=mg$ and the relationship for the total relativistic energy $E=mc^2$. If we consider a photon at a distance r from the center of the gravitational field, that grants potentially it the speed of light, when it impacts in the center of gravity, then its potential kinetic energy is equal to the difference of the total immediate energy before impact, which is equal to 0, and a non-zero total energy, when it impacts at the speed of light in a zero-height, which is equal to the kinetic energy of the particle upon impact, or $E_p= m_dc^2-m(=0)c^2=\Delta mc^2=m_dc^2$, where m_d is the relativistic mass at impact. For potential kinetic energy of this particle then also the relationship $E_p=mgh$, h=r applies. Relationship $\Delta mc^2/h=F_g$ is then equal to the force, by which is particle of zero-mass and energy, virtually relativistic momentum, if it does not move at the speed of light c, attracted to the center of gravity. If we divide so obtained gravitational force by the weight of a body in a gravitational field, so we get the gravity acceleration of this gravitational field.

The above mathematical definition of the **gravitational forces** implies, that it is also **the specific case of local balance force**, when there is however no spreading of the movement, but its **slowing down**. In other words the body with the force of gravity is an area with a lower density of the particle mobility than mobilitydensity of this

particle outside the momentum field, that reduces by balancing momentum by collisions of particles also the momentum of these particles with much greater momentum in its surroundings, including the vacuum. Before the reduction of momentum its increase can often occur, when the body with lower mobility density attracts by above mentioned balance force the area with the aforementioned excess of mobility density. After the collision of these two bodies not visible increase of the momentum of the heavier less mobility body and a noticeable reduction in the momentum of less massive body happen. The total momentum is maintained.

A circular, elliptical or parabolic movement around the gravitational field in the case of tangible (material) objects is the result of composing forces, gravitational force F_g and the centrifugal force F_o, which means the movement or relativistic momentum, virtually their folder perpendicular to the direction of centripetal force. In my opinion in the case of the rotation of the space bodies this is a remnant of the motion of particles and effect of stellar dust before the formation of larger bodies and thus the formation of larger gravitational forces, or momentum fields. It may be also the result or the proof of the existence of momentum fields, where the substance of a larger density concentrates in the center of the rotating momentum field with a lower speed and substance of low density on the border of this momentum field. -

In the case of cosmos speeds necessary for separation from the gravitational field there must be greater force acting on particles than the force of gravity, or its kinetic energy must be greater than its potential kinetic energy due to gravity, represented by the product of the gravitational force and the distanece from the center of gravity according to the relation $W=F*s$ and $F_g=mg$. Such value of kinetic energy we reach with the particles of microworld by the release from supra-average energetical, virtually relatively momentum dense body due to the natural balance forces or artificially granted speed as the work of man.

If we consider **the body as a material point** or the movement $p=m*v$, then the overall movement we approach by the relationship $p=m*v*\infty^3$, whereas a three-dimensional body is composed of infinitely many points in three dimensions. The relationship of $p*v$ then represents the average momentum of one point of four-dimensional body. Thus again spatial unit agency of movement system forming the body. From the kinetic unit agency of this point $(m/\infty)(s/\infty)/(t/\infty)$ then is composed each relationship expressing a partial mechanical movement but also the total physical movement, such as in mechanics the moment of force $M=Fd$, where d is called the arm of force, shear force of shear friction $F_t= fF_N$, where F_N is a compressive force and f is shear friction factor, that is different for different qualities of connected surfaces and different materials of bodies, the resistive force $F_v=\xi*F_N/R$, where ξ is the arm of rolling resistance (its unit is the metre), R is the radius of the body, the pressure in the liquid and gases $p=F/S$, where F is the compressive force, which acts perpendicular to the surface of the liquid of content S, a unit of pressure is the pascal (Pa), volumetric flow rate $Q_v=S*v$, when the fluid with speed v is flowing through the cross-section of the content S, the law of conservation of mechanical energy in liquids and gases $(1/2)\varsigma Vv^2+pV=$constant, where the first member represents the kinetic energy of the liquid on the unit of volume and the second member represents the pressure potential energy at unit volume, which at the same time is equal to the pressure of the flowing fluid, the density of a liquid is ς, V is the volume of the liquid, or the relationship of the aerodynamic resistance force $F=(1/2)C\varsigma Sv^2$, where C is the coefficient of resistance, ς air density, S is the contents of the cross-section of the body perpendicular to the direction of movement and v the size of the relative speed. They are mathematical contracosubagencies of the total movement expressed by the general relationship $m*v$.

Similarly one can imagine the whole **Universe, virtually Being as physical movement centered in a single point** in space, then the speed of movement of this body was equal to 0. The kinetic energy would also be equal to 0, and from the law of the conservation of momentum would pass, that $m=\infty$, due to anticipated expansion of the Universe and the consequent non-zero vector of the overall speed of the movement of the Universe. In any case then there would be a quantity of an average energy for the unit of space of four-dimensional space as the proportion E/V, virtually average relativistic momentum p/V, where E, p and V apply to the Universe as a whole, V is the volume of the Universe.

Dynamic picture of the world
(termination)

Number of unit agencies <u>of the total energy</u>, i.e. $p=m*v$ in relation to the $E=mc^2$ of Universe is according to the law of conservation of energy or momentum fixed, but due to value of quantity E of the system of the Being the number of such unit agencies is equal to ∞. This corresponds to the assumptions of eternity and infinity of God as all Being from the perspective of pantheism of Philosophy of Balance of agency.

If the movement represents the physical relationship m*v, then because of continuity and connection of all agency from the perspective of Philosophy of Balance, the overall agency is equal to ∞m*∞s/∞t, where the proportion of ∞s/∞t is equal to the maximum of c, thus the speed of light. It is the total physical movement in four dimensions.

3.3 THERMAL AND MOLECULAR PHYSICS

Introduction
(formation)

From the mechanical motion of material objects in the macroworld we go to the reality of physical **movement of the much smaller particles in our microcosm**. This movement is agency in terms of the description of the mechanical movement of the relation p= m*v both in space and time and it includes also continuous and uninterrupted permanent positions of the particles in zero time interval with zero weight in an infinite number. This fact of unit agencies we are approaching with shrinking mass and the dimensions of the particles, i.e. in physics of microworld.

The physics of microworld explores so the physical movement in the above sense again, but in the microworld. A knowledge of continuity and connection of all agency established within the Philosophy of Balance suggests, that **the laws of physical movement in the area of macroworld are applied also in partial form in the physical movement within the microworld**, physical movement in the area of macroworld is the sum of the physical movement of the particles within the reference system. For the relationship of physics of the macroworld and the microworld the relationship of general and special applies, as I indicated it in the introduction to the Philosophy of Balance of physics.

Definitions and relationships
(performance)

The molecule as a particle has a very low weight approaching 0from the viewpoint of macroworld of physics. Here we can apply the **model of the physical movement of unit agency** described by a relationship in the field of physics of macroworld in the form p=(m/∞)*v.

Brown's continuous and chaotic **movement of molecules** is in my opinion the result of the interplay between the attractive and the repulsive balance forces. A small distance at the action of these forces can be explained by the low absolute momentum of particles, in the larger absolute momentums either the bodies of greater weight acts, which are close to the average momentum and the repulsive balance forces can be neglected, or at larger number and at acting of microparticles the average momentum of system comes close to the average local momentum density and imbalance arises only in a small area. By a small distance and highly supra-average mobility density **the large size of attractive forces of the particles of an atom** can be explained, and thus a large potential kinetic energy of these systems.

To describe the physical motion of the particles in our microcosm in addition to weight and speed another basic sensory quantity accesses and that is **the thermodynamic, virtually Celsius temperature.** From the postulate of connection and the continuity of everything agency, hence the physical movement of macro- and micro- world, formulated in the Philosophy of Balance, it follows, that in the case of temperature this is the character of the movement, which the human senses perceive. Physical movement is in fact indivisible whole, from the perspective of Philosophy of Balance the agency characterized in the macroworld by the relationship p=m*v or by the relationship $E=mc^2=E_k+E_p=W=F*s=(1/2)*mv^2+mgh$, where E_k is kinetic and E_p potential (kinetic) energy, these relations shall also apply for the temperature. The temperature represents thus the character of the movement.

The above can be documented in the case of an ideal gas, when the temperature difference of bodies is to be understood as a function of the difference of their kinetic energy per unit of volume. Due to the fact that all the energy of an ideal gas is kinetic energy, it is true, that the temperature difference of bodies is caused and the function of difference of their total energy per unit of volume. In other words the basic unit of temperature is the derived unit of weight, speed and time.

The above statement follows from the relation for the heat, which receives (releases) the body of given substance, if it has mass m and its temperature changes by ΔT, $Q=m\Delta Tc=(1/2)mv^2$, c is the specific heat capacity of the unit kJ(kilo Joule, i.e. a unit of energy)$*K^{-1}$ (Kelvin, unit of temperature T, in addition to the convertible Celsius temperature °C, known also with the letter t), implying $\Delta T= v^2/(2c)$ in the case of heat received by an ideal gas turned into the energy of this ideal gas. In the case of a zero-energy of ideal gas before the thermal exchange the Q is equal to the total energy of ideal gas. From the relationship of central quadratic speed of gas molecules, which took all the energy in the thermal exchange $v_k=(3kT/m_0)^{1/2}$, it flows after putting in, that $v_k=v_k [3kN/(2cm_0)]^{1/2}$, where k is the Boltzmann constant k = 1.38 $10^{23}JK^{-1}$, rn_0 is weight of molecules and N number of molecules of the substance, and it follows, that $m_0=3k/(2c)$. From the relationship for energy received by this ideal gas $Q=(1/2)Nm_0v_k^2= (1/2)*[3kN/(2c)]*T*2c=T(3/2)kN$ it flows, that the temperature is a function of the energy of ideal gas divided by the number of molecules, that have the same volume, and therefore the function of the energy per unit of volume.

Generally it applies from the first law of thermodynamics, that $Q =\Delta U+W$ or the heat supplied to the system Q is equal to the sum of the changes in the internal energy of the system ΔU and work W carried out by the system. If the system does not perform any work, then the heat supplied to the system is equal to the increment of internal energy or growth of potential and kinetic energy of the particles. If there is no mechanics energy during these planned processes, this increase of potential and kinetic energy is equal to the increase of total energy. Due to the nature of the heat increment equal in the above cases to the increase in the total movement expressed as increment of the total energy $E=\Delta mc^2$ where Δm is relativistic mass change, and given to the relation $Q=cm\Delta T$, where c is the specific heat capacity, it can be concluded, that in general a thermodynamic temperature is a part of the movement and function of the total energy of the body. Variables of speed and weight in terms of momentum relation as the general equation of the physical movement p=mv as a general supraagency already include then quantity of thermodynamic temperature. The total energy is then made up of potential kinetic and kinetic mechanical energy of the body and the particles.

For **solids** unlike gases attractive forces are dominat, apparently due to the large relative weight (in relation to the volume), or mobility density of molecules and the small distance between them. On the contrary for gases there are repulsive balance forces due to the relative small weight, or the mobility density of the molecules and the great distance between them. For **liquids,** these forces are approximately of the same size. In the case of **polycrystals and single crystals** local or universal (all) balance forces will apply to a greater extent during their creation. In the case of **amorphous (i.e. shapeless) solids** were applied rather attractive forces. When changing the state from solid to liquid and gaseous, the potential kinetic energy of particles represented mostly by attractive forces is converted to kinetic energy and the repulsive balance forces and vice versa while reversing change of state.

At the **surface tension of the liquid** attractive forces of liquid are applied in the case of prevailing attractive force in molecules on the surface of the liquid inside of the liquid. These surface molecules have the potential kinetic energy. Due to the attractive surface forces the minimum surface of the fluid in its steady state is, since the molecules on the surface of the liquid tend to move inside and surface shrinks. However this applies only in the case of less attractive forces above the surface of the liquid than in the liquid for the environment as the interface of gas and liquids. Attractive forces within the liquid cancel each other. Thermal volume expansion both of liquids and gases is caused by the growth of the kinetic energy of the particles, and therefore the repulsive balance forces. In the case of **saturated steam**, i.e. of the same number of molecules, which are leaving the surface of the liquid and which are from steam returning to the liquid, attractive and repulsive balance forces of gas and liquid are in balance.

In practice the conversion of attractive in a repulsive balance force or potential kinetic in kinetic energy applies in the case of breaking up the structure of the substance, and changing of the attractive force of relatively heavy particles (due to their distance) on the repulsive balance forces of relatively light particles (due to their distance), which offset the momentum with the surroundings of a smaller momentum. These cases occur in particular in the **burning of working substance in the combustion heat engines and cooling machines**. Here kinetic energy represented by the thermal motion changes in mechanical kinetic energy of heat engine. Respectively in the case of cooling machines the kinetic energy of the particles increases, and the repulsive balance forces and substance are performing the work and consuming energy, which it receives in the thermal exchange, by which it cools the environment, where the energy density or temperature is dropping, and the kinetic energy of the particles is decreasing and the repulsive balance forces are reduced and the substance emits energy, thereby warming the other environment.

3.4 MECHANICAL VIBRATIONS AND WAVES

Introduction
(formation)

Mechanical vibrations and waves are a physical discipline, that is a special case (subagency) of the general discipline of mechanics (supraagency), of its kinematics so of its dynamics. Physical movement described in the mechanics and its laws are so valid in the partial form also in the mechanics of vibrations and waves. Mathematical expression of this special physical movement is more complex and it deals with less general, more numerous and simpler agencies than the mechanics. The dependence and continuity of everything agency postulated in Philosophy of Balance imply applicability of above mechanical mathematical relations also in this field of physics.

Definitions and relationships
(performance)

Oscillating movement can be understood as subagency-partial movement of the circle motion, such as its projection to the y axis. **The harmonious oscillating movement** is partial physical movement of uniform movement on the circle, therefore its projection to the y axis.

From the viewpoint of kinematics the **unit agency of the oscillating movement** is the movement, of which speed is equal to 0, while variable ω, which has at the uniform circular motion the importance of angular speed, and which we call for oscillating processes an angular frequency, it is equal to 0, and the amplitude of $y_m=r=0$, which corresponds to the relationship $v_0=r\omega$, where v_0 is the speed of the movement on the circle, and r the radius of the circle and to the relationship $v= v_0 \cos\omega t$, where v is the speed of the oscillating motion. From this relationship, where $0=(1/\infty_j)*x$, where $x\neq\infty$ and ∞_j represents unit agency, is then composed each harmonic oscillating movement described by the variable v, which includes ∞ of the above unit agencies of oscillating movement.

Coagency of above unit agencies of the oscillating movement is the **compound vibration** consisting of an infinite number of unit agencies components, that have the same frequency. The period of oscillation $T=\infty$, the frequency of oscillation is $f=1/T=1/\infty=0$, which stems from the relation for angular speed of unit agency $\omega=2\pi/T=2\pi f=0$ as above mentioned for the unit agency of the harmonic oscillating motion. For the resulting vibration of these two unit agencies are valid intial coordinates x, y of the position vector **r**, $x=2*0*\cos0=2y_m\cos\varphi= y_m\cos\varphi+ y_m\cos\varphi$, $y=2y_m\sin\varphi=2*0*\sin0$, where y_m are identical amplitudes and φ the initial phase of both unit agencies and the initial stages of both unit agencies of the harmonious oscillating movement.

At **a dynamic description of the harmonic oscillating motion** there are several kinds of balance forces. A necessary condition is also a displacement from balance by some third force. This third force delivers energy to a balanced system of the pendulum, or momentum necessary to overcome gravitational forces, or momentum field of the Earth, and this energy is initially of the kinetic nature, under which influence the pendulum deflects as a result of local balance force, or momentum field of pendulum leaves the Earth momentum field, the momentum of pendulum is dissipating however by the increase of the local momentum of the Earth and kinetic energy is converted to potential kinetic energy of the Earth, and the pendulum deflects once again by the action of gravitational forces or by raising of the local momentum of Earth in the opposite direction and the momentum of the Earth reduces up to the point, when it comes to the maximum dissipation of momentum and gravity force prevails again. In fact however the momentum of pendulum does not dissipate only by increasing of the momentum of the Earth, but also by friction.

At the initial developed force and kinetic energy, when the frequency of the oscillation is greater than the frequency of the customs oscillation or momentum of oscillator, the attractive force of the oscillator (damping) increases, this force reduces the effect of the initial kinetic energy and the amplitude of the displacement reduces too. Customs frequency of oscillator performs a customs value of the energy or mobility density, at which the gravitational forces act at minimum, at the larger displacement of mobilitydensity the attractive slowing balance forces of oscillator are acting increasingly.

By mechanical waves is spreading the physical movement. Whereas in the view of the Philosophy of Balance also a matter represents the physical movement of particles of zero weight in the infinite sum of these

movements, possibly in the final number, if these particles move at the speed of light, from this perspective also the matter can be transferred by waving.

Unit agency of mechanical waves is the wave of the v=0, T=∞, x=vτ, where τ is the time by which the vibration is delayed compared to the beginning, $y=y_m\sin 2\pi(t/T-x/\lambda)$, where λ is the wave length, and T the period of oscillation and where $y_m=0$ and y=0. From this unit agency all the oscillating movement is created by their interference, where the number of interfering unit agencies is equal to ∞. The equation of this interferential waving for two unit agencies is $y=(2y_m\cos\pi d/\lambda)*\sin 2\pi[(t/T)-(1/2)(x_1+x_2)/\lambda]$, where d is the distance from sources of waves, λ is the same wave length of both unit agencies and y_m the same amplitude of both unit agencies. Given the value of $y_m=0$, and also y=0.

In terms of the dynamics of mechanical vibrations its **cause is an attractive and repulsive local balance force of particles** as defined in the previous chapters, the attractive balance force works between particles attractively, repulsive balance force works repulsively at dissipation of energy or mobility density.

Radiation of vibrations is caused by kinetic deflection of the of particles from the balance position and by the action of attractive and repulsive balance forces between the particles, which renew the balance status of these forces. Impacts of adjacent particles cause spread of the movement induced by the above mentioned forces in all directions, where there are particles. As a result of the dissipation of movement, virtually energy due to the influence of local balance forces in relation to the surroundings so there is a gradual decline in vibrations. As a result of the large difference between the momentum and energy of neighboring particles the **reflection of waves occurs** , and as a result of its spread in all directions and interference its **bend**. At the **standing vibration** the energy, or its momentum transmits on a limited section in both directions back and forth, the total energy of the system is not changing, only the kinetic energy, which triggered the waves, changes to a potential kinetic energy.

At the **movement of the source of the waves against an observer or conversely** their relative speed is changing and so either by the sum or by the difference of their speed, thereby also subcoagencies are changing or derived quantities such as wave length and frequency, which means less, virtually larger number of unit agencies in the description of mechanical waves, so as I defined above. It is so called **Doppler effect**.

3.5 ELECTRICITY AND MAGNETISM

3.5.1. INTRODUCTION

(formation)

From the perspective of Philosophy of Balance all the agencies in physics can be marked as physical movement, for which due to the connection and the continuity of all agency, as it follows from the nature of the agency as a continuum, justified in the context of Philosophy of Balance, the relationship of the physical mechanics of p=m*v applies, where p is the momentum, expressed as the product of mass and velocity. From this perspective, both the **electric and the magnetic agencies are two different physical movements**, for which $p_1= m_1v_1$, $p_2=m_2v_2$ is differing only in the weight of the smallest particles, which are the carriers of electric charge, or carriers of the magnetic field, and of their speed. Between these particles are then again attractive and repulsive forces in accordance with the physical mechanics and they have mechanical potential kinetic and kinetic energy.

Subagencies
(performance)

3.5.2 ELECTRICAL FIELD

Definitions and relationships
(performance)

Electric charge as the basic unit is the **kind of physical movement** as a whole expressed by the general relationship p=m*v, unit **coulomb (C),** in the case of **zero charge** it is the local balance momentum between the electron and the proton, in the case **of the unit negative charge** it is the momentum of one electron, in the case **of the unit positive charge** it is the momentum of one proton. It suggests also a different weight of the carriers

of this charge of electrons and protons, where m_e (the mass of the electron)<m_p (the mass of the proton). The result of this divergence of momentum against the local average mobility, virtually energy density, which is a neutral charge, is the **effect of local balance forces**, where consistently charged particles are repelled due to repulsive balance forces and disapprovingly charged particles are attracted due to attractive balance forces, while renewing the local average momentum.

From the definition of the charge as a physical movement defined by Q=p=m*v, where m and v move within a certain interval and smallest limit values of m*v represent further in the context of electric motion the **indivisible electric charge e**. When exceeding the limit values of electrical charge as the physical movement we get to the physical movement of a different kind, such as magnetic field or thermal movement. The intervals of the other kinds of physical movement overlap however, i.e. at the common values of m*v the heat movement and magnetic field may indicate electric charge.

Electric charge as a kind of physical movement is **portable** in the interval of values of m*v for this particle and by it represented physical movement.

Mediation of the electrical **current by only so called free electrons** farthest from the nucleus of an atom is due to the relatively small distance, which reduces the effect of local balance (attractive and accelerating) forces, which tie the electrons to the nucleus. The local balance forces as a result of the positive charge as source of electric current so they are able to overcome these weak attractive forces of electrons to the nucleus of an atom.

The characteristics of a particle with an electric charge as a kind of physical movement represented by the formula p=m*v **implies the law of conservation of charge**, as well as a partial law of conservation of momentum, virtually total energy for particles with a certain value of m and v.

The equation for the **electric force** $F_e=k*|Q_1*Q_2|/r^2$, where k is a proportionality constant depending on the characteristics of the environment, in which the charge Q_1, Q_2 distant r metres act at each other by its mutual forces F_e and $-F_e$, is similar to the relation for the gravitational force due to its derivation and relation with the relationship for the total energy of the system of two bodies. The equation for the electric field intensity $E= F_e/Q$, the unit is so $(kg*m/s^2)/(kg*m/s) =1/s$, and it shows the ratio of momentums per second. The equation for the electric potential at a point A of electric field in the vicinity of charge Q is $\varphi_A=W/Q_0$, where W is the work performed by forces of the electric field when moving a positive point charge Q_0 from point A to the point of zero intensity, its unit is **volte (V),** i.e. $(kgm^2/s^2)/(kgm/s)=m/s$ the same as the equation for the speed. The same unit has **voltage** $U=\varphi_1-\varphi_2$. The equation for the **capacity** $C=Q/\varphi$, the unit is $(kgm/s)/(m/s)=kg$ and it represents so the weight of the particles, which the wire carries.

Distribution of electric charge only on the surface arises from the interaction of balance forces, when those forces are trying to restore the balance state of the momentum or energy by emitting of these particles outside of these electrically charged wire.

3.5.3 ELECTRIC CURRENT IN METALS

Definitions and relationships (performance)

The equation for the **current** $I=\Delta Q/\Delta t$, where ΔQ is the total charge of particles, that pass through the chosen transversal cut of wires for time Δt, current has unit **ampere (A),** i.e. kgm/s^2 and it represents the amount of physical movement per unit of time, and at the same time the result of repulsive and attractive balance forces $I=(F_gt_1+F_ot_2)/t$.

Connection of electric energy as mechanical motion of particles is arising from the conversion of this energy in the appliances to light, heat or mechanical energy, when by composing or by decomposing the movement of electrons m_e*v_e is created the movement of a different kind m*v, e.g. thermal, luminous or mechanical in intervals of values m and v own to this kind of movement. This change stems from the transmission of energy particles of different m and v in the interval of their common values. In contrast a different kind of motion is converted to an electrical charge at work of so called **enprinted forces of the voltage source**, which transmit the charged particles from the places with lower potencional to a location with a higher potencional and they ensure so the terminal voltage of the electrical circuit.

The equation for the electric **resistance** is R=U/I, resistance has unit **ohm (Ω),** i.e. (m/s)/(kgm/s)=s/kg and it represents the time, in which the particles at unit weight pass through a conductor. In contrast **the conductivity** (conductance) represents the weight of particles, which pass through a conductor per unit of time, the relationship is C=I/R and the unit is **farad (F),** i.e. kg/s.

The origin of the resistance according to the theory of electron conductivity are the collisions of conductivity electrons with ions of the grid, that are acting by their attractive forces against the movement of the electrons in the direction of positive electric charge. With increasing temperature the kinetic energy and momentum of ions increase also and collisions are more frequent. A special phenomenon is **superconductivity** consisting in a sudden decrease in resistance of materials to virtually zero at a certain temperature.

Kirhof laws for the current in node, $\sum_{k=1}^{h} I_k=0$ mean, that the quantity of incoming motion, virtually momentum and outgoing motion from a node is the same and for voltage on the resistors and electromotive voltage of resources in the loop $\sum_{k=1}^{n} R_k I_k=\sum_{j=1}^{m} U_{ej}$, it means that the sum of the differences in the speed of particles before and after resistor is equal to the speed of the particles in the source voltage.

For the serial connection the sum of the differences in the speed of particles at each of the resistors is equal to the difference of speed of particles on all resistors, thus $R=\sum_{k=1}^{n} R_k$ from relation $IR=\sum_{k=1}^{n} R_k I_k =U=\sum_{k=1}^{n} U_k$. Furthermore in the case of series connection from equality of amount of movement in time through the whole circuit: $U:U_1$. .... U_n =$R:R_1$: .... R_n, which stems from the relation $U/R=U_1/R_1$= .... =U_n/R_n (":" and "/" is divided or by other words over) or $I=I_1$= ... =I_n ("=", is equal to). In parallel connection the same speed of the particles is involved in all branches of the U, and the sum of the amount of movement (momentum) of particles in the time of individual branches I_1+I_2+ .... +I_n=I, where I is the amount of movement of particles in time entering, virtually leaving a common node. Consequently $I=\sum_{k=1}^{n} U_k R_k$, and also $U=U_1$= ..... =U_n, and thus $Rl=R_1I_1$= ..... = R_n1_n, thus $I:I_1$ .....I_n=$1/R:1/R_1$.....l/R_n.

Performance of electric current represents the movement, virtually energy performed by particles with an electric charge, this movement is transformed by gradation and degradation into a different kind of movement, a different interval of values of m and v in the relationship of the physical movement of p=m*v. On principle when this conversion of the motion there is the loss, for example release of thermal energy in the conversion to mechanical movement, this means, that $p_e=m_e*v_e$ motion of the electrons is equal to $p=p_t(=m_tv_t)+p_m(=m_mv_m)$, where p_t is the thermal movement of particles in the interval m_tv_t of heat movement and p_m mechanical movement of the particles in the interval m_mv_m of mechanical movement. The proportion of p_e/p_m is then the efficiency of the appliance providing mechanical work.

Another example of gradation and degradation of the heat motion is **thermoelectric effect**, when thermal motion, virtually radiation in the limits of the common values m and v induces the electric movement.

3.5.4 ELECTRICAL CURRENT IN LIQUIDS

Definitions and relationships (performance)

Carriers of **electrical current in the electrolytes** are positive and negative ions with higher than average local mobility density in the case of positive ions and with a lower than average local mobility density in the case of negative ions. As a result of local balance forces are positive ions attracted to the negative electrode, and vice versa, and by taking over, or by giving out electrons, virtually positive and negative ions the neutral atoms of the average local momentum and energy are formed.

The total weight of excluded substance of neutral atoms in the case of taking of positive ions by negative ions of the electrolyte can be expressed by relation $m=m_0Q/(ez)=m_{0Vv}m_v/(m_ev_ez)$, where m_0 is the mass of the molecule, e the elementary charge, z is the number of elementary charges needed for exclusion of the one molecule, m_{vVv} overall charge penetrating through the electrode surface, m_ev_e the elementary charge, and that in both cases expressed by the quantities for the weight and speed as physical movement.

Breakdown voltage U_r represents the minimum voltage, which is needed to accelerate, virtually slowing down the particles **in electric duple layer** with the average momentum and speed of particles, i.e. the voltage that is created on the interface of metal and electrolyte by neutralization of ions. After, that the acceleration by the speed of the particles of external voltage source happens in the case of the anode or slowing down in the case of

cathode of particles of neutral double layer, the electric current is steadily going through the circuit from the source.

Chemical voltage sources in the case of **galvanic cells** are resulting in the reaction of the neutral metal of a positive electrode with negative ions while creating neutral atoms, free electrons are drawn off to the negative electrode, where positive ions react with the negative electrode, from which they take electrons, which are replenished by electrons coming from the outer circuit from the negative electrode. The cause of this phenomenon is the effect of balance forces, which must be greater than the attractive forces within neutral substances of both electrodes and of the electrolyte, which react mutually.

3.5.5 ELECTRIC CURRENT IN GASES

Definitions and relationships
(performance)

Carriers of **electric charge in the gases** are positive and negative ions and electrons. To overcome the attractive forces own to neutral atoms of gas is used **ionization**, it is the energy or momentum supplied to the electrons in the atoms necessary for their release. Due to the charakteristics of electrical charge as a physical motion p*v it is a different kind of movement, for example of the heat, of ultraviolet radioactive or x-ray radiation, which deflects an electron from its orbit and the electron is moving outside the field of attractive forces of the nucleus of the atom (similarly to cosmic speeds and gravitational field of the Earth). As a result of the balance forces of the outer source of charge, virtually of the electric field so the gas becomes a conductor of electric current. Due to the attractive forces of the gas atom it leads to **recombination of the ions**, when the opposite charged particles join in a neutral molecules.

Generally **Ohm's law applies**, that at increasing the difference of the speed of the particles, thus the voltage between the poles of an electric field, the current or physical momentum (motion) is also increasing at a time. At a certain limit of the difference of the speed of the particles, the voltage U, as a result of increasing attractive local balance forces the motion, virtually momentum in time is not increasing, thus electric current I, because all of the accelerated particles by ionizing, i.e. the unbalanced physical movement was slowed by recombination. If we proceed with increasing the voltage, then the ionization by radiation is connected to the ionization by the physical movement of ions and thus the next attractive balance forces are overcome, that access to the attractive forces of the atoms.

The movement of ions, virtually of electrons of gas in the electric field at high voltage will probably turn into other kinds of physical movement of the particles, whether it is the thermal movement or the movement of the x-ray or the light radiation described again by relation p=m*v with a different interval of values of the mass m and speed v.

3.5.6 MAGNETIC FIELD

Definitions and relationships
(performance)

The magnetic field as well as the electric field is in terms of the Philosophy of Balance complex unit agency, which is the physical movement as described by relation p=m*v. Both physical movements are partially independent and partly common, or the values of m,v belongs to the two intervals, of which intersection is non-empty set, or **a magnetic field induces an electric field** and vice versa. The independence of these fields means in turn the law of conservation of charge, i.e. a kind of physical movement derived from the law of conservation of momentum and energy. The same is true about the law of conservation of mechanical energy in the case of mechanical movement, but if we do not include its induction of different kind of movement, e.g. the heat. So it is **the law of conservation of energy as the total movement of total p=m*v and the law of conservation of charge** $\mathbf{p=m_1v_1}$.

in relation the unit agency as moving particle of zero weight then the space represents the sum of such movements and electric or magnetic field the organized movement generated by repulsive and attractive balance forces, as I defined them in mechanics. I'm going back to the ancient concept of **ether**, that explains upon the principles of mechanics the physical field. These zero-mass particles I described also in the section of mechanics.

Unlike the electric field and charge induced by differences in energy and momentum density and by forces balancing these differences and renewing the average local energy per unit of space volume a **magnetic field is probably differences in momentum,** not quantitative as for electric charges but qualitative, in **the direction of the vector v** in relation of the momentum as the description of magnetic movement in the form p=m*$\mathbf{v}$. It suggests the same mass and the opposite direction of the carriers of magnetic field in atoms, thus the electrons.

From the direction of the magnetic induction lines changing according to the direction of the current one can conclude, that the movement of electrons in a conductor is not straightforward, but it has also the shape of a spiral, so it is circular in the planes perpendicular to the wire. This spiral movement of the electrons in the wire induces then by collisions with zero-mass particles their circular motion and circular magnetic lines around the wire.

Balance forces balancing the direction of movement or speed $\mathbf{v}$ in the movement of the magnetic field m$\mathbf{v}$ to the average local balance momentum mean then, that the opposite magnetic poles of a magnet and of the conductors with the same direction of current, which **attract by the magnetic force**, cause the magnetic field with the opposite direction of motion of the particles of zero weight.

Magnetic induction is defined by the relation $B=F_m/(Ilsin\alpha)$ for direct wire with current I, with the active length of the conductor in a magnetic field of l, the angle α, which grips the wire with magnetic induction lines and force F_m, by which the magnetic field acts on this wire. The unit of magnetic induction is $N/(A*m)= kgm/s^2/[(kgm/s^2)m]=1/m$ and it means the ratio of acceleration of the magnetic movement to the quantity of electric movement per second to meter of the active conductor.

Magnetic induction flow (scalar quantity) in a homogenous magnetic field $\Phi=B*S=m^2*$ l/m=m, where B is the magnetic induction, S is the content of planar area, e.g. the surface of plane thread perpendicular to the magnetic induction lines, and it means the ratio of the acceleration of magnetic movement to the quantity of electricity per second multiplied by the meter of area.

Magnetic induction of a thin wire with a current $B=\mu I/(sk)$, where I is the current, s is a distance different for direct wire, thread and coil and k is a constant. $\mu=(sB/I)*k$ with unit s^2/kgm is a constant called **permeability** characterizing magnetic properties of environment of magnetic field and it means the quantity of electricity of momentum per second in reversed value for a specific environment.

Magnetic characteristics of the substances are caused by the reversed direction of motion of electrons with the same energy in the atom. By attractive forces of magnetic or electric field the elementary magnetic fields are oriented for ferromagnetic substances with an effect of so called exchange forces between neighboring atoms in accordance with the ambient magnetic field and they **intensify the effect of the magnetic field**.

The change of the electric movement, thus the movement of electrons in a magnetic field of wire, translates as well as a change of induced electric current or movement in time induced by magnetic movement. The equation for the induced electromotive voltage $U_i=-\Delta\Phi/\Delta t$ means so a middle value of Ui induced electromotoric voltage in time Δt, i.e., the speed of the particles, which they move along the trajectory Δs, that the wire moves in a magnetic field, which stems from a relationship $U_i=B\Delta sl/\Delta t=(l/m)\Delta sm/\Delta t=\Delta s/\Delta t$, where 1 is the active length of the wire, Δs is distance, that wire makes in time Δt and Δsl is a change in the content of area traced by wire during this time, product BΔsl is a change of magnetic inductive flow ΔΦ and U_i **induced electromotive voltsge**. The unit is m/s or speed.

When changing the current in the coil, the induced magnetic field changes also and **thus it induces the electromotive force in a wire of the coil** $U_i=-\Delta\Phi/\Delta t$ and $\Phi=L*I$, where the inductance of the coil is $L=\Phi/I$ and the unit is s^2/kg, which represents the reversed value of the electric movement per second per meter of width.

Magnetic field and electric field as a kind of physical movement of the particles at zero weight have also their energy, which stems from its mathematical definition of its momentum p=m*v. **Energy of magnetic field of coil (i.e. inductor)** is described by the relationship with the unit $E_m=(1/2)LI^2=(s^2/kg)*kg^2m^2/s^4=kgm^2/s^2=J$.

Electromagnetic field stems from the above-described properties of the transformation of one kind of physical movement in a different kind of physical movement within the range of the common values of m and v, where these fields represented by the movement in this interval can move one in the another.

3.5.7 ALTERNATING CURRENT (AC)

Definitions and relationships
(performance)

The nature of the electric current as a movement described by the mechanical momentum equation p=m*v stems also from principles of alternating current, for which the relations derived for the harmonious vibration mechanical movement are applied. It follows from the relation for the immediate value of the AC voltage $u=U_m\sin\omega t$ and $v=v_m\sin\omega t=v_m\cos(\omega t+\pi/2)$, where U_m is the amplitude and ω is angular frequency, v is the speed of the particle and v_m, its maximum speed. The equation for the instantaneous value of the alternating current is $i=(U_m/R)\sin\omega t$, where R is the resistance of the resistor, with a unit $I=(m/s)*(s/kg)k=mkg/s^2$, where k is a constant.

For **circuits with the resistor, the capacitor and the coil** are valid the relationships for **the resistance of the resistor** $R=U_m/I_m$ with the unit s/kg, for inductance $X_L=U_m,/I_m,=\omega Ls$, where L is the inductance of the coil, with the unit $(k/s)*(s^2/kg)=s/kg$, which is, again Ohm, and for **capacitance** $X_c=U_m/I_m=1/(\omega C)=1/[(k/s)kg]=s/kg$ with the unit, that is the Ohm again. The opposite speed of particles in relation to the inducted electrical motion for coil causes the displacement of a curve of the current in relation to the voltage curve by $\varphi=\pi/2$ radians. Further the momentum of the particles per second, or the current is the highest at the time, when the voltage on the uncharged capacitor is zero, which causes, that the current goes ahead of the voltage or the speed of the particles by $\varphi=\pi/2$.

From the nature of the magnetic and the electric field as physical movement of p=m*v with partly shared and partly different interval of values m and v follows the possibility of transformation of the electric field or current in a magnetic field, or the flow and therefore the existence of electric motors and transformers.

3.5.8 PHYSICAL CHARACTERISTICS OF ELECTRONICS

Definitions and relationships
(performance)

An example of the functioning of the balanced electrical attractive and repulsive forces are semiconductors, where free electrons, e.g. the electrons remoted enough from other particles, i.e.. with a minimum of attractive forces,are moving from place to place from place with more to place with less electron density, virtually with a smaller to a larger density of momentum of the physical movement given averagely by the relation for momentum p/V=m*v/V, where V is the volume of the system. It follows from this, that in the same composition of semiconductors at higher temperatures the amount of physical momentum per unit of volume of collisions of particles increases, virtually by the transformation of the different species of this movement, i.e. the **recombination of holes and free electrons**, i.e. to restore the local mobility balance. At the semiconductor with **the non-same composition, given by other substances** occurs this restoration of balance between the holes and electrons as the majority carriers of charge of different semiconductors. At the same time however these attractive forces and the partial restoration of local mobility of balance causes nonzero, or locally inbalanced charge of additives.

Semiconductors are used to produce two basic kinds of semiconductor devices, the **diode rectifiers and transistor amplifiers**. Rectifier uses the fact, that the current passes through a variety of semiconductors (see above) in the direction of restoring of local balance between electrons and holes in semiconductor but not vice versa except in the case of destruction of diode-rectifier, when electrons gain such momentum, that outweighs the attractive forces within the atom. And in the case of transistor amplifier there is used the steady movement of semiconductor electrons and holes, which intensify together with permanently charged particles moving in the direction of input voltage the same with balanced movement of a variety of semiconductors the input voltage.

3.5.9 ELECTROMAGNETIC VIBRATIONS AND WAVES

Definitions and relationships
(performance)

Electromagnetic vibration mediated by the electrons as carriers of electrical and magnetic field represents a common electromagnetic physical movement caused by balance forces as a result of the average local mobility density, in the final result of the average Universe momentum density as the sum of local densities of all physical motion, mediated by collisions of particles and bodies. It is so **the transformation of the energy momentum difference in the difference of direction of speed, i.e. of a pure mobility**.

In the **oscillating circuit** so the amplitude of the voltage of the electric movement of electrons induced by a maximum difference of energy of electric poles of condenser is converted into the amplitude of the magnetic induction of the magnetic movement of electrons induced by the difference of directions of the speeds of electrons in the coil winding, which acts on electrons in the opposite direction as the direction of the electric current by collisions with these electrons, and it causes the charge of the capacitor (i.e. condenser) again with opposite polarization.

Electromagnetic waves represents the kind of physical movement expressed by relation p=m*v, and a composite of the two movements resulting from the action of two local balance forces balancing the average energy momentum of electrons moving in the same direction and direction at the speed of electrons of the same energy. Electromagnetic waves can be **propagated through space** by collisions with other particles or by conversion into a different kind of physical movement in the framework of the common values of the interval with these kinds of physical movement. During dissemination in space it can be also collisions with particles of zero mass and speed in a vacuum, from which is composed all the Being, as I have already stated above.

To the **resonance of the electric oscillating circuit** it can be noted, that, if we consider all Being for the physical movement of the different values of weight and speed in relation p=m*v, then at a certain electromagnetic movement it is the maximum local displacements of balance of momentum occurs, for a higher value of momentum the increasing local balance forces resulting from local balanced momentum mediated by collisions of particles limit the oscillation, or the momentum. The maximum displacement of the momentum represents the own vibration of the electromagnetic oscillator.

3.6 OPTICS

3.6.1 INTRODUCTION

(formation)

Light as a physical fact is once again **the kind of physical movement expressed by the relationship for momentum** p=m*v.Like any other movement described by this relationship of mechanics it is composed of unit agencies of physical movement as described by 0kg*0 m/0s, which creates in an endless number the light movement. The arithmetic infinity implies that zero can once again have a different value depending on, whether a final number is divided by ∞ or ∞^x, where x>1. According to the knowledge of theory of physics the light is **the movement of particles photons of zero rest mass at the speed of light**. The speed of light is then the maximum speed, i.e. speed is equal to the speed ∞m/(x*s), where $x<\infty$ and composited thus from infinity unit agencies $0kg*\infty m/(xs)=ykg*zm/(xs)=\infty(0kg*0m/0s)$, where $0<x,y,z\geq\infty$, where m is the meter, s is the second and kg is kilogram.

When describing the motion of the light I go back to the ancient concept of the ether. As a vacuum is also composed of unit agencies of physical movement in $m*v=[(x/\infty)kg\ (y/\infty)m]/(z/\infty)s$, so $p_s=\infty*p_v$, where p_s is the momentum of light and p_v is the momentum of vacuum. By the movement of light occurs the transmiting of **the kinetic energy of the photon to neighbouring photons**, i.e. to particles of zero mass $p_s/4=\infty p_v/4=\infty p_v$, without changing the momentum of the light and the light is spread in all directions. In the case of an infinite density **of photons** equal to infinite or a nonzero mass of the colliding particles, then occurs the change of the momentum of a photon of light $p_s/\infty=\infty p_v/\infty=xp_v$, where $x<\infty$ and the absorption of light.

Subagencies (performance)

3.6.2 LIGHT AS ELECTROMAGNETIC WAVES

Definitions and relationships
(performance)

Light is made up of **a stream of photons, which are transverse waves**. At the same time **the photon as particle of zero rest mass and zero dimensions** is based on the observation, that the rays, that intersect each other, they do not affect and they are running through the space independently one on another. This finding is confirmed by experience in physics called the principle of independence of light rays operation.. By the grouping of photons and their diffusion the creation of places with substantially higher mobility, or energy density occurs, which attract under the influence of an electric field other photons. Electric field we characterized as an attractive force between grouped particles with higher and lower momentum (or mobility density), and by acting the local balance forces mediated by collisions of particles with higher momentum with particles of substantially lower momentum. After the grouping of photons local balance repulsive forces comes to work, as higher mobility density at a given point is slowed down by the surrounding environment of the lower mobility density while reducing attractive local balance force by releasing the needed quantity of energy to the surroundings. Repulsive local balance force is mediated by the collisions of particles of the higher momentum with particles of lower momentum.

As the waves are the transverse waves, **magnetic fielde works**, mediated by particles of the same energy but different direction of momentum, and therefore different momentum, perpendicular to direction of movement of the light intermediated by electric field, as I described it above.

Light speed is the maximum speed, i.e. the maximum deviation of the average Universe speed allowed by universal (all) balance forces. At the same time the arithmetic of infinity implies, that even in zero rest mass of photon the momentum may be different, depending on the value of x in relation $x/\infty=0$, where $x < \infty$.

Different weight in the relativistic relation p=m*c for the momentum of the photon causes different frequency and the wavelength in relations for the speed of light $c=\lambda*f=p/m=p*l/m$,, where λ is the wavelength, and f the frequency, i.e. at he greater the weight the momentum increases also and at greater weight the wavelength may be reduced and the frequency may increase.

Spread the light

Spread of the light I described at the beginning of this chapter. Spreading **of light in wavefronts** results from the mechanical-physical characteristics of light, where by the collision of photons, that are spread in all directions, the neutralizing of the momentum occurs except in the direction of the wavefront of light spreading.

Reflection and refraction of light

For the **refraction of light** the relationship $\sin\alpha/\sin\beta=v_1/v_2$ applies, where $\sin\alpha/\sin\beta$ is sinus functions of the angles α and β, which a refracted beam includes with a perpendicular of impact of the light beam on the border of both environments, α in front of the slot and β behind the slot, v_1/v_2 is the proportion of the speed of light in two different environments, v_1 in front of a slot, v_2 behind the slot. If we ignor the photon's momentum, passed to the surrounding environment, then $p_{sv}=p_{s2}$, where $p_{sv.}$, is the momentum of light in a vacuum, and p_{s2} the momentum of light in another environment. When the light passes from another environment into the vacuum $m_v*v_v=m_2*v_2$ applies, from it $v_v/v_2=m_2/m_v=\sin\alpha/\sin\beta$ follows, therefore the greater is the speed of light in the second environment v_2, the smaller is mass of particles in the second environment m_2 and the smaller is the angle α_v of the refraction in vacuum, where v_v is the speed of light in a vacuum and m_v the mass of vacuum particles.

Similarly this applies, when the refraction of light from vacuum into another environment, while ignoring the momentum of the particles, that become bearers of light, compared to the momentum of the photon of light in a vacuum. Similarly we can extend these relations on the transition between the momentum denser to the momentum less dense environment and vice versa, if we ignore the momentum of the photon passed to the outside environment.

Dispersion of light

Dispersion of light is related to the different mass of the photon at a standstill, the x/∞kg for light, as it follows from the arithmetic of infinity. This means that light is composed of photons of different frequency and momentum, which in a vacuum has a constant speed of c of the photon, but in a different environment, where is the variable relativistic weight of the light carriers $m>0$, these components of light refract at different angles.

When the light components with higher frequency, thus lower mass of the particles refract under the bigger angle of refraction.

Interference of light

Interference of light can be observed only at coherent light waves, the waves of the same frequency. By an interpretation of balance forces I pointed out, that the same frequency is related with the same value of the balance forces and that is dependent on momentum. It follows that $f_1 = f_2$, and hence $v_1/v_2=\lambda_1/\lambda_2=m_2/m_1=1$.

In other words at the same momentum of light waves by collisions of particles it does not occur to increase the momentum of the waves, and therefore its frequency, but rather it intensifies the light on the same frequency.

Bending of light

Bending or diffraction of light is related in my opinion with the refraction of light and that as a result of changes of the average momentum density of the environment. Both is then the result of spread of light, as described above.

The relationship $a\sin\alpha=k\lambda$ for position of interferential minimums of lit slot, where a is the slot width, λ is the wave length of light, and k = 1, 2, 3 an order of interference minimum, can be converted to the equation for refraction of light $(k\lambda/a_1)/(k\lambda/a_2)=a_2/a_1=(\sin\beta/\sin\alpha_1)/(\sin\beta/\sin\alpha_2)=\sin\alpha_1/\sin\alpha_2=(m_1/m)/(m_2/m)=m_1/m_2=(v_2/v)/(v_1/v)=v_2/v_1$, where m and v are the speed of light in vacuum and m_1 and v_1 the mass and speed of the particles of light in front of the slot and m_2 and v_2 the weight and speed of the particles of light behind the slot and therefore the wider is the slot a_2, the smaller is a change of an angle of light, or angle α_2 included by the light with a perpendicular of beam of light behind the slot, the smaller is a proportion of the average weights of the particles before and behind the slot and the smaller is proportion of the average speeds of the particles behind and in front of the slot, i.e. the ratio of the speed and mass of the photons.

Polarization of light

During light vibrations based on momentum the **electric polarization** occurs by the balance forces, which is however completely chance. In the event, that the moving photons collide with particles of greater momentum, which allow movement in one direction only, in the other directions the deceleration motion of photons occurs by passing their momentum, virtually absorbing the light, then there is the polarization of light in only one direction of motion.

3.6.3 OPTICAL DISPLAY AND OPTICAL SYSTEM

Definitions and relationships
(performance)

The light represents the physical movement expressed byrelation m_1*v_1, the contact optical environment by relationship m_2*v_2. After the passage of light through this optical environment the light represents the physical movement $m\mathbf{v}= m_1*\mathbf{v_1}+ m_2*\mathbf{v_2}$. The curvature of the surface of the lenses is causing continuous refraction in **converging lens** or dispersed refraction of light in **concave lens.**. **Mirrors** are comprised of substances, that represent the physical movement of relatively great mobility density, where the direction of the speed of their particles is directed outside of their substance. An example is water or mercury, and this movement describes the mechanics of liquids.

From the equation for the focal length of the lens $1/f=[n_2/n_1(=v_1/v_2=m_2/m_{1=}\sin\alpha_1/\sin\alpha_2)-1](1/r_1+ l/r_2)$, where f is the focal length of the lens and r_1, r_2, the radius of curvature of optical surfaces and n_2 the refractive index of the substance, from which the lens is made, and n_1 the refractive index of the environment, it follows that **the wider the lens is and the larger the mass of particles of the lens is, the greater is the slowing of light and the greater is the angle of refraction behind the lens to the difference in the speed of light in the lens and behind the lens.**

3.6.4 ELECTROMAGNETIC RADIATION

Definitions and relationships

(performance)

The description of the light implies, that **the light of a higher frequency and shorter wavelength is represented by a motion of the particles of greater weight, as relativistic so the rest**, and vice versa, from this perspective the waves of the heaviest particles represent radiation γ (gamma), for which γ (wavelength)/m (meters)=10^{-12} to 10^{-14}, and the lightest radio radiation, for which γ (wavelength)/m (meters)=10^{2} to 10^{0}, among them are television and radio waves. VHF (very short waves), for which γ (wavelength)/m (meters)=10^{0}(=1) to 10^{-2}, microwaves, for which γ (wavelength)/m (meters)=10^{-2} to 10^{-4}, infra-red radiation, for which γ (wavelength)/m (meters)=10^{-4} to 10^{-6}, ultraviolet radiation, for which γ (wavelength)/m (meters)=10^{-8} to 10^{-10}, between the infrared and ultraviolet radiation occurs the light. In addition there is the x-ray radiation for which γ (wavelength)/m (meters)=10^{-10} to 10^{-12}. With frequency is also related energy and momentum of radiation, where the light with the heaviest particles has the biggest momentum and energy and vice versa.

The energy radiated by **a black body** at a rising temperature with the largest share at a wavelength of γ max represents in my opinion the equivalent of the resonance of oscillator, in other words at the greater frequency the reduction occurs due to the balance forces, which allow the maximum value of fluctuation of momentum or energy for a given frequency of a body.

The quantum nature of light E=h*f, where E are quanta, i.e. the amount of energy emitted gradually by the light, the variable h is the Planck constant h = 6,626*10^{-34} (Joule times second), f is the frequency of light, it flows from the duality of the physical movement, because the movement expressed by p=m*v always has the particle nature of the weight rn, while the unit agency of zero weight created by the infinite division of particles is fiction.

The relationship E=h*f stems from the fact, that each photon, or particle means an increasement of momentum, or weight and thus increasing the frequency due to the influence of balance forces. At the same time the increase in the momentum means at the same time the increase of energy, which stems from the context of momentum and energy shown in the mechanics. The relationship E=h*f can be overwritten as E=h[=mv (photon)/(mv) (light)]/s(per second).

Luminescence means, that the radiation of shorter wavelength (and greater frequency) and therefore greater momentum causes in the substance of the lower momentum of photons by the collision of particles the radiation at longer wavelength (and lower frequency), thus of lower momentum, than the above radiation has, which is the originator of this luminescence, the total momentum is maintained however therefore.

With the momentum of particles of substances is related the formation of the spectrum of substances in the collision of particles of radiation with particles of substances.

X-ray braking radiation as a result of slowing down the movement of electrons comes probably from the increase of momentum of particles in the surrounding environment, that takes in a collision a part of the momentum of electrons. **Characteristic x-ray radiation** flows from collisions of particles of metals, or from their release from metals due to their increased momentum resulting from collisions with electrons, and this action of balance forces.

3.7 SPECIAL THEORY OF RELATIVITY

3.7.1 SPECIAL THEORY OF RELATIVITY

Definitions and relationships
(performance)

The maximum speed is according to this theory **the speed of light c**. This speed is **the maximum speed** permissible and limited **by work of the universal (all) balance forces**, the greater speed we would probably only be able to achieve through the destruction of the Universe.

In other words through collisions of particles the limit of maximum speed occurs, when the higher speed than the speed of light produces such accumulation of particles due to supra-average mobility density, that increasing momentum is constantly reduced by collisions with attracted particles of lower momentum.

The speed of light corresponds so to the endless time, to the zero-length and endless weight. It is a concentration of mass of the Universe into a single, endless standing point and in the case, if the Universe would move at this speed.

At the same time the Einstein formulas for time are the proof, that **time, length and weight are convertible to speed**. In other words zero time in the system moving at the speed of light means a non-zero time in the rest system, infinite length in system with the speed of light gains finite value and zero weight in the system with the speed of light is non-zero. In other words all the agencies in the macroworld are represented by a motion of the photons in the microcosm, that currently has zero rest mass, time and macroworld has infinite dimension to it.

The result of these considerations is the confirmation **of the photon as a building element of macroworld**, in my concept called unit agency, which moves at the speed of light and at the same time it confirms, that by the speed as physical motion all the other basic quantities of macroworld, i.e. the weight, time and length can be expressed. Further, all objects of macroworld can be converted into a stream of photons, which mediate inter alia the movement of light.

3.7.2 NEXT DIMENSION

Definitions and relationships
(performance)

How can I define the basic variables of our dimension, we use for this a special theory of relativity by Albert Einstein. The basic premise of this theory is, that the maximum possible speed of our dimension is the speed of light.

In my opinion the speed of light is the intersection between our and the next dimension, i.e. the maximum speed achievable in our dimension and minimum speed achievable in the next dimension, in the case of the speed of light it is the Divine dimension. We come to the following relativist relations in our and next dimension. $\sqrt{(l-c^2/c^2)}=0$, which is the denominator of the relativistic relations for time, length, and weight. Assuming, that in the numerators of these relations is $\Delta t=l=m_0=0$, then the result of this share is $-\infty\leq m$, $\Delta t_0,1_0=+\infty$, as this proportion can be rewritten as $(1/+\infty=0)/(1/+-\infty=0)=x$, $-\infty\leq x\leq+\infty$.

Due to the fact, that all of the time, weight and length according to the Philosophy of Balance of physics is also convertible into speed and they can be converted into a stream of photons at light-speed of zero rest mass, in zero time, zero-length and thus express any object in our world, we get to complex values of the rest time and length, weight in the moving system. This is a different mass, which stands in contrast to the vast form of mass in our dimension. Even more the nature and the existence of other mass manifest in the next dimension.

From this it follows, that we use for Einstein's relationships of the special theory of relativity the basic assumption, that the speed of movement in the next dimension exceeds the speed of light. We come to the following relativist relations in the next dimension. $\sqrt{[1-(c^2+x)/c^2)]}=\sqrt{(-x/c^2)}=i\sqrt{(x/c^2)}$, for $x>0$, where i is a complex unit, which forms the denominator of the relativistic relations for time, length, and weight. Under that assumption then the result of the proportion for the our length and time Δt, $\Delta l=\Delta t_0$, $\Delta 1_0*i\sqrt{(x/c^2)}$, where Δt_0, $\Delta 1_0$ is the difference of resting time and length, and Δt, Δl is the difference of moving time and length at the greater speed than the speed of light (c) by the x-variable, for next dimensional mass $m=m_0/i\sqrt{(x/c^2)}$, where m_0 is rest mass and m is moving weight at speed of light greater than the speed of light c by the x-variable, and i is a comlex unit. Therefore the increase in length and time in our dimension is reflected as a decrease in other length, and other time in the next dimension and the increase in weight in our dimension as the increase in the other weight in the next dimension as a result of the reduction of the above number x representing speed (i.e. one of the forms of energy, or relativistic mass, or the movement consisted of time and length, except mass) as a result of the law of conservation of energy. We get to a concept of other time, other lenght and other mass representing the different mass of the next and our dimension. The line between the next and our dimension, between mass and other mass of both dimensions is light, i.e.. particles, perhaps even at a non-zero rest mass moving at the speed of light, it is the Divine dimension, perhaps at an infinite energy, and absolute vacuum.

The light source is the Sun and the stars, which arise and cease to exist. There arises the balance between mass and other mass, the length and the other length, time and the other time, to put it simply, between energy and other energy, which due to the non-complex and complex variable of relativistic mass in our and next dimension and relations of Einstein's special theory of relativity for a relativistic energy $E=mc^2$, and for vector of relativistic momentum p=mv, where E is the total relativistic energy, m is the relativistic mass, v is of speed of system and c the speed of light, E obtains also non-complex and complex value and finite or infinite value, in our Universe it seems to be only a final and non-complex value, further the relationship for expansion (i.e. expanding) of time $\Delta t=\Delta t_0\sqrt{[1-(v^2)/c^2)]}$, where Δt_0 is the difference of the time in the resting system or in the system of the lower speed than in a system of higher speed v (v is a scalar of the speed), where variable relativistic time at the difference of time Δt applies. Furthermore the equation for the contraction (i.e., shortening) of lengths $l=l_0\sqrt{[1-(v^2)/c^2)]}$, where l_0 is the length in the rest system or in the system of the lower speed than in a system of higher speed v (v is a scalar of the speed), where variable relativistic length l applies, and also the relationship of $m=m_0/\sqrt{[1-(v^2)/c^2)]}$, where m is the relativistic mass and v speed in the system of higher speed (v is a scalar of the speed) and m_0 rest weight in the stationary system.

Therefore we can say, that there are two conflicting forces of mass and other mass, where the balance is caused by constant creation and destruction of the stars or the penetration of light between the dimensions. While it can be assumed, that the energy released by the destruction of stars is equal to the energy consumed for their creation and the law of conservation of energy is valid in the next and our dimension.

Relativistic image of the world (termination)

Due to the content interconnection of our dimension, which is the basis for the next dimension, and the next dimension, which is its superstructure, we can explain the mutual penetration and interdependence of these dimensions manifested in contradiction of all not-Being in these dimensions. Common dimension of our dimension and next dimension are dimensions of the speed of light, virtually electromagnetic waves and of absolute vacuum, so they act in our dimension through the constant speeding up its particles in the form of conversion of light into matter, if the speed of light photons are absorbed by the mass, and vice versa, converting mass into light-emitting photons

From the standpoint of mathematics of our dimension this corresponds to the operations with positive and negative numbers except 0, inequalities with the exception of equations, subtraction, division and roots, virtually addition, multiplication, exponentiation, thus ideas, that are contradictory as well as light and vacuum.

In biology this contradiction seems to be manifested in the form of autotrophic and heterotrophic organisms, that feed on inorganic substances, or in the second case on organic substances, in particular on other organisms. Again here there is a contradiction between the destruction and creation, vacuum and light.

Just as the thoughts of a human are destructive and creative much like the nature, that creates and destroys organisms at the same time.

The reason of these contradictions between destruction and creation is in my opinion the penetration of the Being and of not-Being in our and the next dimension. In the words of Philosophy of Balance this is the contracoagency, thus destruction of formation and cocontraagency or formation in destruction, and so in the form of complex destruction such as cocontraagency or other matss or any other energy in terms of our dimension, or a complex formation as energy or mass from the standpoint of our dimension, which are in my opinion in both dimensions connected by light and vacuum.

How is it possible to influence our dimension by the next dimension in all areas of life as are philosophy, religion, history, political philosophy and law, mathematics, physics, biology, chemistry, and last but not least the chess, the basics of psychology, sociology and economics. In my opinion it is, because the Philosophy of Balance understands the Being as the agency, which is united, continuous, contiguous and similar.

Therefore in philosophy there are directions, that prefer good over evil vice versa evil over good. At religion it is talking about good and evil impersonation. In political philosophy there is a single government of the dictator and of a broader group or democracy. The law can be a dictation of the individual, it can also be a social contract among all members of society, it can or cannot accept the death penalty there, where it would be on the spot the life sentence. In psychology a person may be accepted same as any other person or he or she can be accepted differently one from another, for example the rich from the poor, already since his or her childhood, therefore from the beginning with consequences for the whole life, the social behavior may have the nature of the violence or of the contract with the minimum required, virtually educational element of forcement. Just as chess or any other games can be played aggressively or defensively with mirror repeated non-defensive moves.

What is a path from the eternal dispute between our and the next dimension, i.e. between mass and other mass or energy and a different energy. In my opinion it's about reducing error, that is unrecoverable due to the ambivalent agency nature of Being. In other words, if all creatures of our dimension start to act in accordance with the agreement with the creatures of the next dimension, then after the finite long time due to a finite total Being, thus the energy about the size of W=x allocated on our and the next dimension due to the the limitedness of the highest achievable speed in these dimensions the size of the error will be equal to (x/2+x/4+x/8+x/16+…=x, x≠1, thus negligible from the perspective of both dimensions.

In other words over the time the errors of mankind will be deleted from generation to generation or within one generation, if it wishes and thus also the punishment, that causes the fact of the next dimension in the form of the penetration of other energy, as I have already said above, the largest possible reduction of the flow of energy between the two dimensions will occur.

Ultimately it will be not a penalty and mistake but the game for an error, which will be purely formal, it will be a conmpetition between our and the next dimension and it will be awarded only symbolically. One will be the winner one time, the other will be the winner second time and it will rotate, in other words it will be a merciful victory and defeat.

What way leads to a final settlement of so limited good of mass and evil of other mass in our dimension, it is to cause the least possible death and pain. We are all an essential part of reality, whether bad or good, that is counted on, it is not possible to accept dimension and to refuse next dimension, because it is a unity and a part of ourselves.

Otherwise in an attempt to destroy the other mass we only increase the flow of energy between the two dimensions (space-times).

Literature: http://www.novinky.cz/veda-skoly/279473-nasa-chce-dohnat-star-trek-a-cestovat-vesmirem-nadsvetelnou-rychlosti.html

3.8 MICRO PHYSICS

3.8.1. INTRODUCTION

(formation)

Microcosm, represented by microparticles and their interactions is once again composed of unit agencies, that make up the smallest physical movement described in the mechanics and that is the kind of a complex physical motion. In **physics of microworld the the transferability of speed on the mass, length and time** is clearly manifested**, thus** their uniform nature as of physical movement described in the special theory of relativity. In addition here **particle quantum nature of** all agency is manifested, when only unit agency as infinitely divided movement represents the net movement of a particle of zero rest mass, other movement is a complex unit agency, thus the motion of the particles.

Subagencies
(performance)

3.8.2 QUANTUM PHYSICS

Definitions and relationships
(performance)

The photoelectric effect, when photons transmit by collision with the electrons of the substance them momentum or energy and they increase their momentum, where $hf=W_v+(l/2)m_ev^2$, where W_v represents the output work, which is needed to overcome the attractive force of the substance, or of the force, that accelerates the movement of the electrons in the direction of substance movement and $(1/2)\ m_ev^2$ represents the kinetic energy or the momentum of the photoelectron after overcoming the attractive force of the substance.

The nature of light as a stream of photons and electromagnetic radiation, that is described in the text about the light, thus electromagnetic waves are a consequence of differing mobility, virtually energy density of grouped and diffused photons and they imply also from the relationship $E=hf=hc/\lambda$ and $p=mc=h/\lambda$ from which flows $\lambda= h/(mc)$ and $f=c/\lambda =mc^2/h$. From these two relations it is obvious, that with the **higher weight of the photon the wavelength decreases and the frequency of the electromagnetic waves increases**. And it also implies, that the light as the movement of p=m*c has at low frequencies rather the nature of the waves, the speed prevails and at the higher frequency is more pronounced particle nature of radiation, the weight prevails.

The position of the micro particles and the momentum cannot be determined by microscopic physics with absolute precision using de Broglie waves and Heisenberg's uncertainty principle it can only be determined by the probability, with which the micro particles will be located at a certain location area. This was verified by experiment, when photons were launched under the same conditions of input versus slot, when photons fell in different places, but the most probable place of their recurrence was most common.

The movement of the microparticles (composed apparently of photons at the speed lesser or equal to the speed of light) as a measure of the probability stems from their nature as an infinitely partial physical movement, where its movement is partly determined by the movement of other photons and collisions with them and partly independent, because in terms of human recognition, there are no smaller partial particles, from which a photon would be composed, or its momentum.

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Time: 14/04/2012 07:27:16
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In my opinion mathematical system based on the above axioms of unit infinity, which can be further increased, and perfect infinity, which cannot be further increased, is shown in our material world by the conflict of micro-particles physics, virtually of famous valid Schrödinger equation as motion equation of non-relativistic quantum theory or Heisenberg relations (or principle) of uncertainty, and physics of the macro world according to special relativity (or Special Theory of Relativity, virtually infinite time dilation and length contraction at maximum attainable speed of light in world, virtually in Cosmos-Universe. In my opinion perfect infinity in macro world represented by the sum of unit infinities ultimately composed of the sum of perfect infinity of perfect zeros, that is of an absolute vacuum, it explains the phenomenon of wave function collapse, when we cannot compute in terms of micro-world the sum of perfect infinity of perfect zeros, it is always only more or less probability of given results and only in terms of macro-world we already see the results of the sum of the perfect infinity of perfect zeros, so only one of the possible results.

Literature:

Since the Schrödinger equation contains on one side the first order partial derivative of the wave function with respect to time and on the other hand, the second derivative with respect to the spatial coordinates (Laplacian operator), this equation is not invariant under Lorentz transformation. It is therefore not in accordance with the Special Theory of Relativity. It is not a relativistic equation. Analogy to the non-relativistic Schrödinger equation is Dirac equation or Klein-Gordon equation. (see http://cs.wikipedia.org/wiki/Schr%C3%B6dingerova_rovnice)

In quantum mechanics the wave function collapse means the reduction from the superposition of several eigenstates of measured values to one of these eigenstates. It is a non-unitary time evolution due to interaction with the observer. Time evolution of the wave function of an isolated system is governed by the Schrödinger

equation (or its relativistic equivalent, see eg. Dirac equation). This dynamics preserves information about the original state because from the current status both future state and previous state can be determined. If we measure the system, which can have several possible results, only one of the possible results can always be measured (with a given probability). During this process, called wave function collapse, the information of the original state does not preserve. Still debated issue is, whether the collapse of the wave function is the fundamental physical phenomena such as the Copenhagen interpretation of quantum mechanics alleges, or whether it is a consequence of correlations between the quantum state of the observer and the observed object, i.e. whether it arises as a result of decoherence. (see http://cs.wikipedia.org/wiki/Kolaps_vlnov%C3%A9_funkce)

Heisenberg's uncertainty principle (also the uncertainty relations) is a mathematical property of two canonically conjugate variables. The best-known variables of this type are position and momentum of elementary particles in quantum physics. Heisenberg principle states, that the more accurately one determines one conjugate property, the less accurately one can determine the other - no matter how good devices we have. This also means that the concept of classical physics, that we can predict the behavior of the system, if we know its initial state, is in practice useless: the initial state of the system we can never determine with sufficient accuracy (we cannot sufficiently precisely to determine both conjugated parameters). (see http://cs.wikipedia.org/wiki/Princip_neur%C4%8Ditosti)

Literature:

http://www.filosofie.cz/forum/topic.asp?TOPIC_ID=1250&whichpage=1 ,
http://www.filosofie.cz/forum/topic.asp?whichpage=31.9333333333333&TOPIC_ID=1375#23280 ,
http://hp.ujf.cas.cz/~wagner/popclan/vakuum/vakuum.html

Wave characteristics of particles according to the relation $\lambda=h/p=h/(m\mathbf{v})$, **de Broglie waves** arise directly from the special theory of relativity, or of the transferability of the weight, length, and time on the speed, i.e., that all mass is composed of photons moving at the speed of light of non-zero relativistic mass, or in the endless quantity apparently of point particles of zero relativistic mass and moving at the lower speed. Then at the same time similarly as light the other substances are also of wave and particle nature. These waving of photons of substances has zero momentum, if it is formed by the moving photons shot from solid substances of lower speed, than the speed of light is, otherwise it is the transformation of the substance on a stream of photons, or light.

To bound particles corresponds working of the attractive balance force, that predetermines due to the high local momentum of a body the momentum i.e., the size and direction of movement of particle, on which it acts. The result of the attractive balance force is a reduction of the total momentum of the free particles by limiting their movement by the forces binding them to a specific space. The impacts of particles shot by the body cause a local increase in the momentum of the particulate photon with the highest momentum, which overcome so the bond forces and they leave the body in the form of light or of shot particles with higher weight, than has the photon. This reduces the momentum of the body and **the weight deficit of bound particle** occurs. As a result of restrictions of the waving movement of the photon particle occurs also **the quantization of their wavelength** and consequentlyof their other quantities, such as energy and momentum, etc.

3.8.3 PHYSICS OF ELECTRON PACKAGING

Definitions and relationships (performance)

Electrons as particle with smaller absolute mobility are attracted due to the action of the nuclei of atoms, which have a bigger absolute momentum through collisions with the photons, or a density of their momentum is balanced with the momentum of the nuclei of atoms and a balance state is instaled. The effect of this attractive force weakens with a distance from the nucleus of an atom, with this distance decrease also energy, or momentum of the electrons sufficient to overcome the binding force, or the momentum of nucleus of an atom. **The electrons farthest from the nucleus of an atom cause so the most the change of the momentum by the collision of particles and they determine the chemical properties of the substances** If the atom has less than 4 electrons in the outermost subskins s and p from the nucleus of an atom, these electrons have a low momentum corresponding to the momentum of the atom, which increases with collisions with electrons of an atom, which has more than 4 in a chemical reaction. Electrons with increased momentum overcome then the binding forces of the atom nucleus and they bind to the nucleus of an atom with the greater

momentum of electrons in the outermost subskin. Atoms with large momentum of electrons in the outermost subskin are then stable.

Stimulated forced emission of light is caused by the excited state of the atom, thus at atoms with electrons with great energy or momentum distant from the nucleus, by increasing of this momentum by collision with photons of radiation, there is a large overcoming of the binding (attractive) nuclear forces at photons in the electrons with great momentum, which will be emited in light by stimulated emission of the laser.

3.8.4 PHYSICS OF ATOMIC NUCLEUS

Definitions and relationships
(performance)

The nucleus of an atom consists of protons and neutrons, the positively charged proton has a considerably larger mobility density but less total momentum than the neutron. In my opinion however both particles represent the kind of physical movement composed of the moving photons.

The above findings arise from the equations of the fission of the protons and neutrons ${}^{1}_{1}p \rightarrow {}^{1}_{0}n + {}^{0}_{1}e + {}^{0}_{0}v$ with the energy consumption and with the release of energy, where ${}^{0}_{0}v$ is the antineutrino, ${}^{1}_{1}p$ proton, ${}^{1}_{0}n$ neutron and ${}^{0}_{1}e$ electron. If we can deliver enough energy, then we obtain the fission reaction ${}^{1}_{1}p \rightarrow {}^{1}_{0}n + {}^{0}_{1}e + {}^{0}_{0}v \; (= {}^{1}_{0}p) + {}^{0}_{1}e + {}^{0,}_{0}v$, from which it follows, that **energy in the form of momentum is transformed into positively and negatively charged particle of nonzero weight**, when the input and output of this compound reaction is a proton. This composite reaction demonstrates so the link between the energy, virtually momentum represented by the moving particle (i.e., the physical movement of p= m*v) and mass and charge.

3.8.5 BINDING ENERGY OF NUCLEUS AND NUCLEAR REACTIONS

Definitions and relationships
(performance)

The effect of balance attractive force accompanies bound particles, that predetermines due to the high momentum of the nucleus the momentum, i.e. the size and direction of movement of particles, on which it acts, in the given case of the bound nucleon (i.e. any particle of the nucleus). **The result of the attractive force is reduction of momentum, virtually mobility density compared to the free nucleons by limiting** their movement by the forces binding them to a specific space. By the i**mpact of a shot (particle) in the nucleus** a local increase in the momentum of nucleon constituted by the photons with the highest momentum may occurs, which will thus surpass the binding forces of the atom in the form of by it created particle (i.e. nucleus, electron) and it leaves the nucleus as radiated particle. As a result of increasing the momentum of photons, or particles radiated by them in a short time there will not be a dispersion of momentum by collision with other particles of an atom due to fewer number of collisions in so short time. In other words the output work W will reduce. It releases the energy, or momentum corresponding to the momentum of the shot particle, and thus the energy drops, virtually the momentum of an atom, not just for the momentum of the projectile but for momentum of radiated particle. By this decline in overall momentum, virtually energy **the relativistic mass deficit of the nucleus** can also be explained**,** which is the difference between the total mass of free nucleons and the real (experimentally observed) mass of the nucleus, which is made up of them. Photons with a higher mobility are apparently **quarks** and their momentum is increased by the collision with **gluons** created again by photons. To release gluons, or atom of helium nuclei, electrons and positron it do not have only to occur by artificial increase of momentum of quarks with collision of outside gluons, but also with collision of gluons inside an atom, or molecule with higher than the local balance momentum , so particles are gradually released and the process is called **radioactivity**.

3.9 ASTROPHYSICS

3.9.1 INTRODUCTION
(formation)

Astrophysics examines the physical and chemical properties of the space bodies and the interstellar environment, in other words it deals with the Universe as a whole or its essential parts. In both cases from the

perspective of Philosophy of Balance it is a complex agency, which seems to be due to the continuity and the connection logically connected with all the other events in physics. This is so in both cases similarly to other subjects of Physics the complex physical unit agency or **complex movement expressed by the relationship for momentum p=m*v**. From the standpoint of physics also space-time as a four-dimensional space represents a complex movement expressed by this relationship. The connection and the continuity of all motion as the unit agency of physics imply then the ability to derive characteristics of the Universe from the observed electromagnetic radiation as part of the overall motion of the Universe movement.

In relation to other branches of physics it is the **applied** subagency of general disciplines of physics of macroworld and microworld. As well it would be possible to define biophysics, physics of chemistry, etc. This is a special subagency, which is more complex due to the greater quantity of simpler concepts of astrophysics in context to the simpler or more general fields of physics of macroworld and microworld, which explore the general regularities and concepts. It's a similar relationship as between the physics of macroworld and microworld in physics.

Subagencies
(performance)

3.9.2 SOLAR SYSTEM

Definitions and relations
(performance)

It is assumed, that the solar system was formed more than 4.6 billion years ago from cloud of interstellar matter. The individual particles moved with different vector of momentum **p**, it can be assumed, that the particles with a higher value of momentum began to predestine particles with smaller value of the momentum, due to both reciprocal collisions and shooting particles with lower momentum, thus it led to the work of forces at a greater distance. This force then we call **gravitational force**. It led to the creation of **momentum fields of particles at the same momentum** that grew gradually and by its concentration it formed from gases the solids. In other words a cloud of interstellar matter of the field with uniform density and speed transformed into the **mobility concentrated field**, or within the relation **p**=m**v** was **reduced speed and increased the weight**, but not universally but locally, thus creating the planets and the Sun.

Compared to the concentration of the substance the **repulsive balance forces started to act** transmitted by the collisions between the concentrated areas and areas with a low concentration of a substance, what initiated compared to the concentration the increase of the share of shot, virtually of emitted particles, in other words at a large enough density the Sun began to shine. Within the relation **p**=m*__v__ the **transformation of the m to v occurred in the form of radiation, and the v to m in the form of creation of heavier elements in the context of nuclear reactions**.

The movement of bodies in the solar system is governed by universal gravitation law, virtually gravitational forces, further it is caused by the force of solar radiation, of the magnetic field and the solar wind, in all cases in my opinion it is the result of a collision of particles in ultimate consequence up to zero weight. These particles form bodies and their mobility fields have a certain momentum corresponding to the **movement of these bodies and their momentum fields**, as a result of their high absolute momentum then by **collisions of particles they determine and affect the momentum of the other bodies** and **gravitational forces come to action**. Similarly, it is in the other cases of force action, when the collision with the momentum field affects the momentum of particles and bodies.

The foregoing implies, that the highest absolute momentum has the surroundings of the Sun, here **the planets with the highest mass density** are also formed, which decreases with distance from the Sun. **Low density of far surroundings of the Sun** is related to the decrease of its momentum field with increasing distance, which is related to lower size of the gravitational forces. The lower mobility density is also related with a lower concentration of particles and a larger radius of more distant planets. Then in my opinion similar patterns are in the vicinity of large planets with a large absolute mass, which create their own mobility field.

The exception to this schema are **comets,** that have great speed, or speed momentum to escape the reach of the gravitational momentum fields of planets. This is, because thanks to the high speed the time of effect of momentum field of the planet is limited and it does not occur a sudden but a slow adaptation of momentum of comet and momentum of the Sun, through collisions of particles of these momentum fields.

3.9.3 BASIC DATA ABOUT THE STARS

Definitions and relationships
(performance)

The stars were apparently created as in the case of the Sun by **concentration of momentum fields, in other words by the transformation of the speed of the movement of cloud of interstellar substance into the weight of this motion in relation p=m*v** describing the founded mobility field arisen from this cloud and this cloud itself. When a large enough local concentration of momentum of particles at one point it occurs by the balance forces by collisions of particles between space of low and high momentum the shooting of particles in the form of **radiation** on the one hand, and the continuing concentration of particles in the form **of creation of heavier chemical elements** on the other hand. The places with great local mobility density are created representing the ongoing conversion of speed momentum field into the mass mobility field and parallel conversion of mass momentum field (with a higher absolute weight) into the speed momentum field in the form of stellar radiation.

The center of the stars is of absolute vacuum and by it attracted substance of great density and weight. This is again made up of particles of ultimately zero weight, i.e., the photons, which in case, that they do not move at the speed of light, represent a pure movement expressed **by the** speed v and they embody wave motion. This waving has a minimum wavelength and high frequency approaching to 0 in the case of the wave length and ∞ in the case of frequency.

The above written degree of development of the stars is the main sequence. Followed by the stadium of **the red giant**, when the conversion of speed momentum field of a star into the mass mobility field, i.e. the formation of heavier chemical elements applies to the other layers of the star, at the same time the conversion of mass momentum field into speed one increases by the influence of balance forces, which is not only for microparticles but also the entire upper layers of the star, which increases its volume.

By effect of balance forces, when the collisions of particles of a star with high momentum with particles with low momentum of the surface of the star are causing the sharp increase in the momentum of these particles with lower momentum manifested as **an explosion of a supernova**. The conversion of speed momentum field into the weight mobility field may stop by the restoration of balance between conversion of weight into the speed of radiation and speed into the weight of the heavier particles by the influence of lighter particles by the pressure of the degenerated electron gas at **white dwarfs**, by the influence of neutrons at **neutron stars** , or the concentration of momentum field may continue by formation of heavier particles at **black holes**, when the mobility density of this field determines the momentum of the photons by collisions of particles, the gravity does not allow to escape to electromagnetic radiation from the star.

Physical description **of conversion of speed momentum field into the weight mobility field while radiating particles, i.e. the conversion of mass momentum field into speed mobility field**, represents a **reduction in the absolute values of momentum, temperature, force, mass, and pressure and increase of the local values of these variables**. The temperature represents then the sensory representation of motion, or momentum and energy per unit of volume, when the bodies with the same temperature can vary in weight and the speed of movement of particles and mutatis mutandis the heat exchange occurs by the collision of particles as in the case of momentum.

3.9.4 THE STRUCTURE AND EVOLUTION OF THE UNIVERSE

Definitions and relationships
(performance)

The Universe, similarly as the stars and the solar system, probably formed from the cloud of the substance, the density and the temperature was huge. In other words it was a predominantly mass mobility field characterized by the relationship of physical momentum **p**= m***v**. Effect of balance forces between particles of mass momentum field of very high value of the momentum and the surrounding momentum fields with lower momentum may be represented by, where appropriate, areas of upper and lower dimension than our space-time cause an **abrupt change in the momentum by the collision between particles** of these other-dimensional momentum fields and the Big Bang. So **the weight mobility field changed to the speed mobility field**

represented by spreading Universe with a homogeneous substance of lower density and temperature. At the same time there was an apparent emitting of received energy, or the pass of momentum to next-dimensional space. Thus a huge cloud of interstellar substance was formed, which corresponds to the speed momentum field, that began to **concentrate** again **by the transformation into mass mobility field**. A relic of this speed momentum field is **homogeneous (uniform) and isotropic (i.e. having their physical values the same in all directions) composition of the Universe from the perspective of spatial cubes with a length of side 100 M(ega pc**.

Note: For the expression of the distance of the stars in the astrophysics as a side unit the parsec (pc) is used, which is associated with the trigonometric measurement of distances. The basis is the specification of the annual parallax of π, i.e. of a star, or the angle under which we would have seen from the star the great half-axle of elliptical trajectory of circulation of the Earth around the Sun, i.e. angle involved by its arms built partly from this star, perpendicular to this half-axle into the middle of this half-axle, represented by the Sun (i.e. the arm about the size of r) and then by the second arm going from this star to the top of this half-axle on the perimeter of that elliptical trajectory of the circulation of the Earth around the Sun. Unit parsec is defined as the distance, from which we would have seen the great half-axle of trajectory of the Earth (i.e. a line with a length of 1AU-astronmical unit roughly defined as average Earth-Sun distance, 1 AU = 149 597 870 700 m, A light-year, unit symbol ly is a unit of distance, which light travels in a vacuum in one Julian year, 1 ly is roughly $9{,}46*10^{15}$m.) at an angle of 1"(i.e. one second of angle). The angle, of which size we chose as equal to one, we call unit angle. The unit angle in arc measure is the radian (rad), which means an angle that on a circle of unit radius cuts off the arc of circuit of a circle part of unit length. In the so-called degree measure there is used the unit angle of angular degree, which is defined as 1/90 of right, i.e. perpendicular angle of π/2 (i.e. approximately 1,57, i.e. approximately Ludolph number π=3,14159) radians, except this it is used 1/6 of angular degree=1angular minute (´), and 1/60 of angular minute=1 angular second ("). Between the distance of the size r expressed in parsecs and the annual parallax of π expressed in angular seconds the relationship r=1/π applies. The annual parallaxes of all stars are smaller than 1. The nearest star Proxima Centauri has an annual parallax 0,763 ", its distance is approx. 1.3 pc. For converting of a unit of parsec to meters applies the relation, 1pc is approximately equal to $3{,}086\ 10^{16}$m. Sinus, i.e. sin0=0, sinπ/2=1, sinπ=0, cosinus, i.e. cos0=1, cosπ/2=0, cosπ=1, in the case of sin and cos it's about the same wave displaced on the x-axis by π/2. (see
http://cs.wikipedia.org/wiki/Sv%C4%9Bteln%C3%BD_rok ,
http://cs.wikipedia.org/wiki/Astronomick%C3%A1_jednotka)

By the gradual transformation of equally dispersed stellar substance at the Big Bang, hence the speed momentum field into the weight mobility field shaped gradually the concentrations of particles by the action of gravitational forces by collisions of particles with different vector of momentum of mass mobility field in the form of **superclusters of galaxies, clusters of galaxies, the local group of galaxies, galaxies and globular star clusters**. The position of stars corresponds to the average momentum, which corresponds to the sum of the momentum of each of the particles, that make up the mobility field of interstellar matter created by Big Bang at the formation of the Universe, a supernova in the formation of our solar system, etc.

3.9.5 ASTROPHYSICAL PICTURE OF THE WORLD
(termination)

Astrophysics accepts in general the theory of expansion of the Universe because of the relict radiation of the observed Doppler effect at red displacement in the spectra of the galaxies, and further by solving the equations of general relativity of Albert Einstein, these equations imply, that the Universe is either shrinking or expanding, so that there cannot be a balance state, when the Universe is at rest.

From the characteristics of the Universe as the physical movement p=m*v, where in terms of all dimensions it leads to conservation of momentum, virtually energy, follows the movement of conversion of speed into the weight and vice versa, or radiation into substance and vice versa. This conversion of speed momentum field into the mass and vice versa is not continuous, but it occurs when a certain critical value by the formation of nuclear reactions, explosion, or bang.

Currently we are in the stage of conversion of mass into the speed, or the gradual dispersion of particles by radiation of the stars. It can be assumed, that in achieving the critical value of currently ongoing expansion of the Universe the re-explosion occurs.

The history of the Universe of all spaces can be seen as constant transmition of movement from the superiority of the mass quantity into speed one and vice versa, which corresponds to the above mentioned

by astrophysics supposed instability of shrinking and expanding Universe. At this physical motion in my opinion the absolute deviation between the mass and the speed increases constantly and so the heavier bodies still arise and faster movement (i.e. radiation). When it reaches the extreme deviation, the concentration of the substance in a single point occurs, which is still at the infinite weight moving at the infinite speed, which stems from the law of preserved total momentum, and energy.

In other words increasingly complex or simpler organisms will form, than it is today, at the creation of infinitely fast and mass perfect organisms in an endless time to merge with God or with all Being.

Scientists estimate the age of the Universe at 13.7 billion years old. (see http://www.novinky.cz/veda-skoly/279982-hubbleuv-teleskop-odhalil-tisice-galaxii-vzdalenych-miliardy-svetelnych-let.html)

4. CHEMISTRY

4.1 INTRODUCTION

(formation)

The object of chemistry as a whole (formation subagency of formation agency) is mostly the **movement of electrons, or chemical reaction**. This movement depending on the type of chemical elemenr disciplines of general, inorganic, and organic (the subject is more complex carbon compounds) chemistry explore.

By its object the chemistry is **different from physics**, of which object is a general movement in the world of phenomena. The movement of electrons mediating the chemical reactions is so more special term than the movement in the context of physics. The subject of chemistry is not the movement of particles in the nucleus, which the nuclear physics examines, but the structure of the nucleus is the subject of chemistry to the extent, to which it determines the kind of chemical element on the basis of its proton number. Chemistry is a more special discipline than physics, which is more special than the mathematics, that is more special than the Philosophy of Balance.

Chemistry as **more special science** in relation **to the more general physics** and even more general **mathematics and Philosophy of Balance** can be seen **in terms of the concepts** of these more general scientific disciplines. This follows from the nature of the world as a coherent and continuous agency. This means, that complex concepts of physics, mathematics, and Philosophy of Balance (supraagency) already include in itself the simpler concepts of chemistry (subagency), from which they are composed. The use of these set concepts resulting from the unification of the elements of the identical properties in the conceptual (agency) analysis of sentences of chemical sciences allows us to inspect these concepts of chemistry (elements of set concepts of physics and then of Philosophy of Balance) in the new horizontal (in chemistry) and vertical (in the context of physics and then of Philosophy of Balance) relations.

Subagencies
(performance)

4.2 GENERAL CHEMISTRY

4.2.1 INTRODUCTORY DEFINITIONS
(formation of performance)

Chemistry can be distinguished between **general chemistry** as a science about general principles common to all chemical disciplines, **inorganic chemistry** as a science about the chemical elements, reactions and compounds with the exception of the vast majority of compounds of carbon and **organic chemistry** as the science of carbon compounds and their chemical reactions with the exception of simple carbon compounds, which are the subject of inorganic chemistry.

The subject of chemistry is primarily a movement of electrons within the package of an atom of the chemical element, at which by the influence of changes in bond between the electrons and protons the different chemical compounds are formed. It is the physical movement of the particles in the framework, of which by the working of repulsive and attractiove forces the balance is installed when changing a chemical compound. The protons, electrons and neutrons of an atom do not change as in nuclear physics. To describe the type of the element the fact of the number of protons in the nucleus, which bind electrons, is used then.

The weight of mass corresponds to the quantity of the momentum of a substance, or of the momentum of particles and their weight, that make up the substance. According to the special theory of relativity of Albert Einstein is the mass transferable to the movement of photons with a zero rest mass, virtually energy.

Energy can be expressed as the momentum of the substance and of its particles and the momentum, which can be obtained by converting the particles to the movement of photons multiplied by their speed. Link of momentum and energy has been demonstrated in the Philosophy of Balance of physics.

Substance quantity is the number of particles in the substance, the mol was elected per unit, how many atoms of carbon is contained in the nuclide of carbon ^{12}C weighing 12 g. The number of these particles is according to Avogadro constant $N_A=6,022*10^{23}$ mol^{-1}..

Molar mass in the mols is the number of particles in the mols on 1 kg of the substance.

An interesting unit is the **average mass of an atom, the so-called atomic mass unit** $1u=1,66050*10^{-27}$ kg. It is one twelfth of the mass of the nuclide of carbon.

Relative atomic mass is the number of ideal atoms, which a particular substance receives, which we gain by dividing of its mass by atomic mass constant.

Chemical substances can be divided into **chemically pure substances**, which are the elements, that represent in the final result the physical movement of approximately the same properties of the variables of this movement m*v in each of its parts, i.e. the same number of atoms, molecules, groups of ions, corresponding to the formula unit, thus ultimately they seem to have the same number of protons and electrons for each atom, it has constant properties, similarly for compounds for each molecule. It is different in the case of mixtures, where are the greater differences , whether it is a homogeneous (uniform), colloidal (dispersed) or heterogeneous (diverse) solution.

Formulas of substances are **the stoichiometric** for one molecule, **molecular**, which indicates the same for all compounds, in addition there is **a constitutional** formula in developed or rational (simplified) form, which expresses the constitution of the molecule, i.e. the way in which the atoms in the molecule are bound. Further **the geometric** formula showing the spatial arrangement of molecules with the same **configuration** (grouping). **Conformational** formula expresses the spatial arrangement of molecules of the same compound generated by rotation around single bond. **Electron structural** formula for an atom depicts the valence electrons of an atom by the point, electron pair by two points or line and bond electron couple by a line between two atoms.

A chemical reaction is in terms of the physics an electron movement within the electron-proton bond from the inbalanced state, in which the chemical forces renew the balance condition. There are reaction starting

substances, reaction products, they are collectively called the reaction components. Furthermore we divide the reactants into substrates (base material), that are concerned, and reagents.

The law of conservation of mass at a chemical reaction stems from the unchanged size of momentum in reaction, or from the law of conservation of momentum.

The law of conservation of energy stems also at the isolated system from unchanged momentum (m*v), virtually momentum of particles and particle mass moving in this way. Link to momentum and energy has been demonstrated in the Philosophy of Balance of physics.

The law of constant merging proportions stems from the balance characteristic of the substance, when the balance of elements is constituted in the only way.

The law of multiple merging proportions is related to the fact, that the balance at similar substances is constituted in a similar manner, in other words the movement of electrons in valence layer for the same elements is the same for the purpose of achieving a balance, irrespective of the amount of merged elements.

The law of constant volume proportions while merging the gases. The volume of gases represents the space of nothing, i.e. of shown vacuum, with a small proportion of elements, that is preserved when merging.

Dalton's atomic theory can be explained, so that atoms of the same element are the same, or the balance of the movement of repulsive and attractive protons and electrons, virtually neutrons is a constant for the same elements. At chemical reactions does not change the atoms to other atoms for the reason, that there is not given sufficient movement, or momentum to release protons from the nucleus, as it is in the case of the field of nuclear physics.

What concerns the **chemical equation**, so occurs the maintaince of the amount of movement m*v and a weight of particles, in the final consequence of movement m*v, if we transform the substance into a stream of photons. For the above reason there must be maintained the number of electrons, protons and chemical elements, that do not change in chemical reactions.

In other words, if the charge or a local imbalance of starting substances exceeding of the balance value (the predominance of protons) or the lower balance value (the predominance of electrons), so the same local imbalance is kept for the product of the reaction. The same is true, if there is on both sides of the equation the local chemical balance.

Subagencies
(performance)

4.2.2 STRUCTURE OF ATOM

Definitions and relationships
(performance)

Atom generally consists of protons, electrons and neutrons. In my opinion a neutron represents the stable form of mass, the local, but also in four-dimensional space-time the universally balanced particle. By its disintegration it forms a proton and an electron and antineutrino ${}^{1}_{0}n \rightarrow {}^{1}_{1}p + {}^{0}_{-1}e + {}^{0}_{0}v$. Therefore at the nature of the atoms its character does not depend on the number of neutrons, which essentially mean the same balance state, but on the number of protons as part of neutron with the maximum mobility density. Elements with the same number of protons and neutrons are called isotopes of different nuclides.

4.2.2.1 QUANTUM MECHANICAL MODEL OF THE ATOM

Definitions and relationships
(performance)

It is in relation with the fact, that by the endless division of substance we get infinitely light particle virtually of zero weight, it is waving (similar to the previously introduced concept of **ether**). Yet even this particle will have the material nature, **quantum mechanics talks about wave–particle duality**. At the same time this primordial

particle do not have the formation predestined by other smaller particles, it is only affected by the mutual interactions with other particles, we can talk about the principle of uncertainty.

Therefore the **wave function determines the probability of the occurrence of the particle**, of the electron at a particular point, we can talk about the density of probability.

On this basis we create orbitals, while it is true, that the electrons **more distant from the nucleus have more different momentum**.

Order of orbital determines **the main quantum number n** and hence the amount of energy, by the delivery of energy we can get the electron into excited state of higher orbital.

The secondary quantum number 1 indicates the angular momentum, thus the local mobility balance or imbalance in the orbital, which is further balanced by other orbitals.

The magnetic quantum number m specifies the component of the angular momentum regarding the magnetic forces, if the atom falls into the magnetic or electric field, in other words the direction of the vector v, which specifies also the local mobility balance, or imbalance.

Electron density shows according to the uncertainty principle a space of probability. Electrons with the same n form **the skin**, with the same n and 1 form the **subskin**.

The state of a atom with the lowest energy level is called the **basic status**, it is so, because this is the most stable locally and universally (all) balance state. The opposite situation would cause a chain chemical and physical reaction, where the local overweight would attract more lighter and repulse the harder substances or particles.

With the vector of speed v is related according to my opinion the fourth quantum s**pin magnetic number, in short spin,** when it is a movement, that is opposite to the movement of the first electron. This number may be only 1/2 and -1/2 and it is related to the magnetic pole of the atom.

With a minimum of energy is related also the **electron configuration** of the atom, where electrons are added, so that the resulting atom had the lowest energy density.

4.2.3. MENDELEJEV PERIODIC LAW

Definitions and relationships
(performance)

Elements are sorted and determined by **proton number (i.e. the number of protons in the nucleus of an atom)**, which causes a major local mobility overweight of atom nucleus. The higher is the atomic number, the more inbalanced nucleus of the atom is in **a table of elements**. The elements in one line-**period** are similar in the imbalance of the nucleus. The elements are placed into 16 columns, **groups** and they are characterized by the same number of valence (powerful, active) electrons, thus by similar bonding characteristics. Because the **valence electrons** have the most different momentum, they have the largest share on the properties of the compounds.

By delivery of considerable energy the electron can be **separated from the element**, it is the ionization energy, ionization energy is equal to the negative value of the orbital energy, at the same time is released the electron with the most momentum, i.e. with the smallest negative relevant orbital energy.

Ionization energy increases with growing proton number, when the density of the mobility of electrons decreases, but also of protons, but at atoms, where in the valence layer there is low electron momentum because of a small number of electrons in the valence layer, it may be lower again.

Electron affinity is the energy released during the formation of the anion from the electroneutral atom in a gaseous state, i.e. the increase of local mobility density of an atom causing movement in the direction of lesser mobility density of the atom nucleus and release of the energy.

The rest mass of the electron 9,10938291x10^{-31} kg, i.e. 0,511 MeV *c^{-2} (see http://physics.nist.gov/cgi-bin/cuu/Value?me|search_for=abbr_in!), of the proton 1,672621777x10^{-27} kg, i.e. 938,256 MeV*c^{-2} (see http://physics.nist.gov/cgi-bin/cuu/Value?mp|search_for=abbr_in!) and of the neutron 1,674927351×10^{-27} kg, i.e. 939,550 MeV c^{2}. The speed of light in a vacuum c=299792,458 km*s^{-1} (see http://www.example.com/wiki/Fyzikalni_konstanty). Rest (apparently incorrectly resting properly should be the approximate relativistic energy E=mc^2, see my calculation below) energy m_0c^2, where m_0 is the mass of the relevant particle, c the speed of light in a vacuum, and it is of proton 938,272046 MeV, of electron 0,510998928 MeV and of neutron 939,565379 MeV. The proton is a subatomic particle with a positive elementary electric charge i.e. 1,6*10^{-19} C, and the mass of 938 MeV/c^2 (1,6726231×10^{-27} kg, **therefore the total mass of a proton is equivalent to approximately the total weight of the 1836 of electrons**). (see http://cs.wikipedia.org/wiki/Proton) The speed of the electron with kinetic energy of 1 eV is approximately 593 km/s. The speed of a proton in the same kinetic energy is then just 13.8 km/s. Electronvolt can be converted into derived unit of energy of SI system, joule, according to the relation: 1 eV = 1,602176565*10^{-19} J. (see http://en.Wikipedia.org/wiki/electronvolt) I.e. with the kinetic energy of 1 eV the electron has approximately (in particular the influence of by me omitted value of so-called standard uncertainty, referred to in the above mentioned values of the rest mass of the particles in the parentheses, see e.g.. http://physics.nist.gov/cgi-bin/cuu/Value?me|search_for=abbr_in! , the rest mass of the electron, the electron mass m_e 9,10938291 (40) x 10^{-31} kg, standard uncertainty 0.00000040×10^{-31} kg) relativistic energy E=mc^2, relativistic mass $m=m_0/\sqrt{(1-v^2/c^2)}$, and E=0,51100199, i.e. in certain units and with this kinetic energy of 1 eV a proton has relativistic energy about E=938,256 in the same units, if the size of the proton is 10^{-15}, and the size of the electron 10^{-18} (see Literature below) then the **relativistic energy density of the electron and of the proton, both with a kinetic energy of 1 eV, is the same order of magnitude,** because 938,256 (i.e. the approximate relativistic energy of a proton)/1000 = 0,938256, which is approximately the same order of decimal system 10^{-18} with relativistic energy density of the electron 0,51100199 in the same units, neutrons have different relativistic energy E, e.g.. according to the different temperature, differences can be in the order of up to 10^{16} of specific units. (see ojs.ujf.cas.cz/~wagner/prednasky/spektroskopie/neutrony/interakce.ppt)

Literature:

Zoe posted: Mon, 10. April, 2006, 9: 29 am post subject:

Michal wrote:
No, that I would want to stand for such a model of the atom. But, if we will consider the proton as an infinitely small object, we can have in the vicinity the curvature of space-time, which we just want (even infinite). In addition Maxwell's equations imply the existence of "electromagnetic mass", and that is the larger, the smaller is the dimension of the charged particle (even infinite for a point charge).

In the vicinity of the proton (if it actually was a point object, which it is not), certainly yes. If the speech was about electrons and those are circulating in a distance of 10^{-10} m from the nucleus. And it is quite a distance on a quantum level. There is nothing easier than to take a calculator and to calculate the gravitational's orbital for an electron in a hydrogen atom ".

Michal wrote:
So we say, that the proton does not bend a spacetime, we must assume its size. How?

And how kvantovka (i.e. probably quantum theory) resolves it? Can I calculate somehow the "size"of for example electron? Or if I say it otherwise, can I calculate the collision of two electrons into an arbitrarily close distance?

Of course, you can. The diameter of a proton is something around 10^{-15} m, the average electron diameter is 10^{-18} m. The fact is, that at the electron it is given more by our current abilities to measure. It is similar with the electron as with Jupiter. When you're sinking into deeper and deeper dense atmosphere of Jupiter, also it will not be at all clear where to begin to count its surface. The gas will only continuously grow thicker and with rapidly increasing pressure it will gradually change into the liquid, which will become more and more compressed. Only maybe near the very center you come to the solid phase. Solid core may be however smaller than the planet Earth. Does that mean, that Jupiter is in fact smaller than the Earth and the rest is made up by the atmosphere? It's certainly not . Well, and it is similar with the electron. The firm "ball" in the middle is probably the wire at size of the Planck length. But all around still belong to an electron, and up to a distance of 10^{-18} m.

Vojta Hala posted: Wed, 12. April, 2006, 9: 57 pm post subject:

1) according to the theory, which we describe the microcosm up today and it is called the standard model, all elementary particles (electrons, quarks, etc.) are of point structure. However the theory does not include gravity.
2) OTR (i.e. general theory of relativity) is on small scales failing, in particular because of the point characteristic of particles and divergent curvature of the spacetime in their vicinity. Experimental confirmation of OTR (basically it is Newton's law of gravity) on small scales is today approximately in the order of millimetres according to my knowledge. About the behavior on smaller scales there are no confirmed reports.
3) what Zoe poses as the diameter of the particles is in fact an effective cross-section (or its root multiplied), which is something significantly different. It's just a value illustrating the sort of probability of collision with another particle. But it is just, what Zoe wanted to tell by comparing to Jupiter. I'd not rather call it the diameter.
4) The superstring theory solves many of the problems, so that the particles (string) has a non-zero size, and therefore it is not possible to bring two together infinitely close, thus subplanck distance virtually does not exist. Crude, but effective. ;-)
(see http://www.aldebaran.cz/forum/viewtopic.php?t=515&sid=d32063acd2d5c2ad7eb153bfb06e1c47)

Note: Giga (symbol: G) is a prefix in the metric system SI denoting a factor of 10^9, i.e. it indicates a billion, i.e. 1000000000 of the basic units. The prefix comes from the Greek γίγας, meaning huge. (see http://cs.wikipedia.org/wiki/Giga). Mega (symbol M) is an SI prefix denoting 10^6. indicates a million, i.e.. 1000000 SI of basic units. The prefix comes from the Greek μέγας, meaning great. (see http://cs.wikipedia.org/wiki/Mega)

Planck length is a physical constant. It is simultaneously also a unit of length equal to approximately $1,.6\times10^{-35}$ m. This is the basic unit in the Planck units frequently used system of natural units. Planck length can be defined by three fundamental physical constants: the speed of light, Planck's constant and the gravitational constant. Current theory considers the Planck length for the shortest achievable distance, by which we can learn anything. (see http://cs.wikipedia.org/wiki/Planckova_d%C3%A9lka)

4.2.4 MOLECULES

Definitions and relationships (performance)

Molecules are groups of atoms. Molecules can be **of same atoms, of different atoms or macromolecules**. Further **molecular ions** exist, which represent local imbalance in momentum, in other words a positive ion has greater mobility densityand negative ion has lower mobility density, than neutral balance mobility density is.

During chemical reactions the formation of compounds by **chemical bonds** occurs. And that's the **ion bond**, where the electromagnetic binding forces (local balance forces) operates between positive (with larger) and negatively (with lesser) charged (mobility density) ions. Or it can be c**ovalent** bond, based on the sharing of electrons (most commonly their pairs) between the atoms. There is the share of two electrons and the creation of the common part of the electron packaging on the basis of similar electrostatic forces, when variably occurs a greater and smaller momentum density, or positive and negative charge of one atom and the other atom.

Bond dissociation energy represents the momentum or movement, which disrupts this bond by the impact to the bonding electrons.

Just as we can speak about a**tomic orbitals,** there are molecular orbitals, where are similar principles as at atoms. Concentration of electrons **in covalent bond** creates a new molecular bond orbital with reduced movement or mobility, but it also creates a second molecular antibonding orbital with an increased movement of electrons, the occupancy of this **antibonding orbital** would lead to an increase in momentum, virtually energy and the breaking of molecule. The formation of the second orbital is conditioned by the balance status of the atom, thus of protons and electrons. The covalent bond can be formed by one, two or three electron pairs.

The force of a covalent bond is so determined by the difference of momentum of electrons between the bonding and the antibonding orbitals.

At the **molecules with one central atom** the local balance forces are repelling common orbitals with lower or higher electron mobility, which arise between the nuclei of the merged molecules. In other words the structure of

the neutral molecule corresponds to the momentum field, where the nucleus with a high momentum repel each other, between them there are the electrons, which balance the higher momentum, further bond electron pairs, that have lower momentum and energy, are compensated with the antibonding orbitals, where electrons should have higher momentum or energy.

The bonds of the atom are governed by the so-called **octet rule**, or valence electrons in the number 8 create a relatively stable atoms. At the same time these octets of valence electrons are formed as relatively stable compounds. Using the local balance forces it can be stated, that, if at the valence layer there are at least 4 electrons, they have quite a large momentum, otherwise they transfer the electrons and momentum is lower in relation to the above 4 valence electrons.

Another kind of bond is called **coordinating bond**, when the atom has two free valence electrons. These **substandard local momentum density of electrons and their surrounding in atom (the electron is point quickly moving particle and electron alone has supraaverage momentum density)** are balanced by attractive momentum forces of other atoms, which depends mainly on their positive charge, or greater mobility density, than is the balance mobility density of the neutral atom. This attraction is called **electronegativity** X=I+A, where I is the ionization energy and A electron affinity.

At two molecules with different electronegativity there is formed a **dipole**, where in an atom with the greater mobility density, which attracts electrons, there is formed a negative charge, and with lesser mobility density, that transfers electrons, there is formed a positive charge.

Ionic bond is an extreme case of covalent bond, but it also assumes the existence of two ions.

Among other so-called intermolecular forces **the van der Waals forces** belong. Electrons are particles in motion, this movement can lead to temporary dipoles, i.e. the imbalance in momentum, of which consequence is attracting of molecules, among which operate from the same reason also the repulsive forces and the result is a medium balance distance between molecules. The energy of these random but regular van der Waals bonds is less than the energy of covalent or ion bonds, but e.g. the so-called **hydrogen bond** conditions the permanence of the arrangement of proteins and nucleic acids. As a result of these forces some molecular crystals can be formed too.

4.2.5 CHEMICAL REACTIONS

Definitions and relationships (performance)

At the certain moment there is a local balance mobility, which is disrupted however by external influences, because it is neither an isolated nor the total reaction system. And it leads to **a chemical reaction**, which lies in the regrouping of the atoms and the establishment of a new local mobility balance.

During chemical reactions as each for example physical kinetic motion of particles the speed kinetic and force dynamic nature of the reaction occurs.

When splitting the bonds it can be the symmetric splitting, h**omolysis,** when each element helds an electron, or heterolysis, when ions are created. At the same time both reactions of splitting the bonds can occur and the creation of new bonds at the same time.

The reactions can be reduction/oxidation, at **oxidation** the positive charge increases, it is fundamentally a **destructive reaction**, at **reduction** a positive charge decreases, vice versa at negative charge, virtually at oxidation number, it is fundamentally **the composition reaction, synthesis**. At the same time it usually occurs at once **the reduction and oxidation of substances** within the reaction.

Reaction rate can be calculated as the derivation of a substance quantity to the derivation of time, therefore the substance quantity of the substance in the time limiting to 0 and so by multiplied reversed value of stoichiometric coefficient of a given substance.

Reaction speed is part of the momentum of the particles in the reaction, momentum overlaps also with the temperature, which is a measure of the momentum (as I showed in the Philosophy of Balance of physics), thus by increasing the temperature the speed of reaction will increase.

According to the **theory of the activated complex** approximation of molecules leads to disruption of the balance and to working of the local balance forces. As a result some of the bonds cease to exist due the lower momentum, the other ones are formed, it leads to a chemical reaction. During catalysis **the catalyst** (in English approximately: grafter) increases the momentum of the substances in reaction, but alone it does not bind and it does not form compounds due to its stability, apparently due to its valence electrons. If there is the bond of the catalyst, this bond is interrupted as a result of stronger bind of reacting substances and catalyst is excluded.

We distinguish between **reversible and irreversible reactions, and the spontaneous reaction,** without energy supply they are irreversible, because they are not caused by the movement from the outside but by the permanent renewal of the overall balance.

The internal energy of the system U is the total energy diminished by kinetic energy and potential energy in the system as a whole. The heat supplied to the system at a constant volume is used to increase its internal energy, or motion.

During isobaric processes, when the pressure is constant (p=constant), the **enthalpy is introduced** H=U+pV, where p is the pressure and V volume of the system. At the isobaric process then the heat delivered to the system is used to increase its enthalpy, one could say of potential kinetic energy of the particles, without changing the kinetic energy of particles, which would mean an increase in their movement and also in their pressure.

Similarly it is at a constant temperature (**isotermic process, where the temperature T=constant,** iso means the same). Another is the situation **when the isochoric process, where the volume V=constant,** at volume unit $Q_m=\Delta U$ is valid, where Q_m is the molar heat, where the motion will increase and thus also the kinetic energy, temperature and pressure at the unchanged volume.

Reaction heat ΔH (or ΔU) is the heat (energy) accepted, if the reaction is isobaric, non-isochoric and if the temperature is the same. At the same temperature so inevitably there must be a change in pressure or volume, so the temperature could be maintained.

We divide reactions to **exothermic,** if the system emits heat to the surroundings, **endothermic,** if the system absorbs heat and **endorgenic,** when **Gibbs energy** increases. Gibbs energy change includes both the enthalpic member (reaction heat ΔH has on the value of ΔG usually decisive influence, with the temperature it does not change too much) and the entropic member (it characterizes the change in the homogeneity of the system at a given temperature-with increasing temperature its influence on the value ΔG grows). G=H-TS, where T is the temperature and S is entropy, i.e. the homogeneity of the system.

According to **the first thermochemical law** the reaction heat of a certain reaction and reaction heat of the same ongoing reaction under the same conditions in the opposite direction is up to its sign the same. According to the **second law of thermodynamics** the same reaction heat is necessary to transform the same substances, either all at once or gradually.

Merge heat is the heat, that is released in reaction. In decomposition of a supraaverage mobility energy of a complex substance to individual atoms with lower momentum, virtually energy there is usually the release of energy and vice versa. $(1/2)\ N_2(g) + (3/2)H_2(g) \rightarrow 2NH_3$, $\Delta H°_{298} = 46$ kj mol^{-1}, $C_6H_6(l)+(15/2)O_2(g) \rightarrow 6CO_2(g)+3H_2O(l)$, $\Delta H°_{298} = -3300$ kj mol^{-1}, for organic compounds, as in the case of the last chemical reaction there is established and tabled so called **calorific heat**, it is the kind of reaction heat of oxidation reactions. It can be said, that more complex compounds arise freely from the effect of heat, mostly solar heat, at decay the heat releases.

For **the calculation of the reaction heat** is true, that it is the sum of the merge heats of reaction products disminished by the sum of the merge heats of starting substances. The merge heat of compound is reaction heat of reaction, where from the elements in the standard state one single mol of this compound in standard condition is formed. The merge heats are determined and tabled primarily for inorganic compounds. Reaction h**eat** is also the sum of the combustion heats of starting substances reduced by the sum of combustion heats of products of the reaction. **The combustion heat** is the reaction heat of a reaction, in which one mol of this compound in

standard state will oxidize into the most stable oxides (final oxidation products in the standard state). Combustion heats are established and tabled primarily for organic compounds.

Second law of thermodynamics introduces the **entropy**, which indicates the heat exchanged with the surroundings (the heat reservoir-bath) and it examines its transformation on the work. **Mathematical expression of the enthalpy** $\sum i\ Q_i/T_i$, where Q_i, T_i are heat and temperature exchanged by and own to bath. For a general circular process, for irreversible process $\sum_i (Q_i)_{ir\ (i.e.,\ irreversible,\ i.e.,\ non\text{-}reversible)}/T_i < 0$, for the return process $\sum_i (Q_i)_{rev\ (i.e.\ reversible,\ i.e.\ reverse)}/T_i = 0$.

The change of entropy at the reversible isotermic transition of the system from the state A to the state (B) the **relationship** $\Delta S=S_B-S_A= Q_{rev}/T$ describes, the entropy change is important at **the adiabatic process**, i.e. in the thermally insulated system, if the transition is reversible, the entropy does not change, for irreversible processes the entropy is increasing. As all the spontaneous processes are non-reversible, the entropy grows in isolated adiabatic system so long, as the system is not homogeneous. At the homogeneity of the system just a reversible agencies may happen, the entropy of the system is maximal. **Spontaneous agencies** can be characterized not only by increasing the entropy but also by the increase of the probability or by increase in the inorderliness.

For a description of the chemical reactions **in the isobaric and isochoric processes** we use in particular Gibbs energy G=H-TS, thus energy of the system after deduction of the influence of the received energy, virtually surrendered by the thermal exchange. When we change the status of the system, there $\Delta G=H-T\Delta S-S\Delta T$ applies. We use the entropy for the description of adiabatic systems. During the **exothermic analytical (decomposition) reaction** ($\Delta H<0$, $\Delta S>0$) the spontaneous reaction occurs, the reduction of product momentum, heat exchange and hence enthalpy increase. During the **exothermic synthesis (composition) reaction** ($\Delta H<0$, $\Delta S<0$) reduce of the momentum and energy of the product occurs, at the heat exchange there is the surrender of energy, at low temperatures the reaction takes place spontaneously, with the growth of temperature the enthalpy decreases and a tendency to spontaneous process decreases ($\Delta G>O$). In the **endothermic analytical (decomposition) reaction** ($\Delta H>0$, $\Delta S>0$) the momentum, virtually energy of product and also thermal exchange increase, at low temperatures the reaction does not occur ($\Delta G>0$), at the increase of temperature the value of the enthalpy increases and the positive value of ΔG is shrinking and the reaction can take place spontaneously. During **endothermic synthesis, i.e. composition reaction** ($\Delta H>0$, $\Delta S< 0$) energy, virtually the momentum of the product grows and the thermal exchange decreases, these reactions are spontaneous, because both members contribute to increasing the ΔG.

Chemical balance is the state of the system, in which its composition does not change, although there are still chemical processes. The effects of these processes cancel each other, the established balance is **dynamic balance**. The balance is characterized by zero change of the Gibbs energy. In some open systems (in particular, the chemical, physical and biological ones) a **steady state** may be established. It is such a state of the system, in which the maintaining of harmonious composition of system is accompanied by a constant change of energy (the system constantly receives energy from its surroundings, the change in Gibbs energy is not zero). About dynamic balance we can consider from the perspective of all the dimensions of Being, from the perspective of one space-time it can be considered only about the steady state.

The ratio of the concentrations of reactants and products gives the **equilibrium constant of the reaction**. This is a constant for all the same reactions, similarly the constant for pressures of gases can be expressed. In heterogeneous systems, where not all of the components are in the same state, or phase, there are only the partial pressures of the gaseous substances or concentrations of the substances present in the solution. Equilibrium system can be affected by changing in the concentration of the substances, by changing the pressure, by changing the temperature, by catalyst, or by changing the momentum of the system by the impact of other particles.

As well as the neutron can be divided into a proton and an electron, we can dissociate all the neutral molecules. **Acid** is a substance capable to surrender a proton to other substance, it is a proton donor, virtually the cation or in other words it is a substance with a free orbital, that it can fill out by the common sharing of the electron pair of the other substance, acids are therefore acceptors (recipients) of the electron pairs. **The alkali** is then a substance capable of accepting a proton from another substance, it is the acceptance of proton. Or in other words it is a substance with a free electron pair, which it can share with other substance, the alkalis are therefore donors of an electron pair.

During **the proteolytic reaction** the acid passes its proton and it becomes an alkali, from the alkali by accepting a proton an acid becomes, the acid and the alkali of the substance form **conjugated couple or proteolytic system**. Electrolytic dissociation leads to formations of **proteolytic (mobility) equilibrium** characterized by an equilibrium constant K_c. In the same way an alkali can be electrolytically dissociated. The water is also dissociatable but only in minor extent $K_v=1*10^{-14}$, this constant is important for the calculation of dissociated constituents of other substances.

At the reaction of an aqueous solution of acid with aqueous hydroxide (aniont of salt) the water is formed (eg. reaction: $H_3O^+(aq)+OH^-(aq)\rightarrow\leftarrow 2H_2O$ (l), i.e. the chemical reaction of an aqueous solution of acid with aqueous hydroxide or alkali starts to join the vast majority of ions H_3O^+ and OH^- to neutral water molecules), therefore these reactions were called the **neutralization, the opposite process of this reaction is the hydrolysis of salts**. A byproduct of this neutralisation is a salt solution (see example below), some of the salt ions (e.g. $Cl^-(aq)$, $Na^+(aq)$, see the example below) can act (regardless of whether the solution of salt was formed by neutralization or by solving the salts) in the given solvent (water) as acids or alkalis. In reaction of these ions of salts with water separate ions H_3O^+ and OH^- are formed, which cause, that the aqueous salt solution can be neutral, acidic or alkaline. For example. $HCl(aq)+NaOH(aq)\rightarrow\leftarrow H_2O(l)+NaCl(l)$ or ionic notation of this reaction: $H_3O^+(aq)+Cl^-(aq)+Na^+(aq)+OH^-(aq)\rightarrow\leftarrow 2H_2O(l)+Cl^-(aq)+Na^+(aq)$, i.e. from aqueous solutions (aq) of hydrogen chloride and sodium hydroxide substances (l) as water or sodium chloride (i.e. common salt) are formed, or for example in the lab, hydrogen chloride is prepared by the reaction of sulfuric acid with sodium chloride (common salt) $NaCl+H_2SO_4\rightarrow NaHSO_4+HCl$. To **produce sulfuric acid, which is used as a means of neutralization and as a product of hydrolysis virtually in all industrial sectors,** is used catalyst vanadic carbon manufactured from ammonium metavanadate, which in principle is fundamentally manufactured from amines, therefore of the organic compounds of nitrogen (N) of animal or nonanimal origin (see http://cs.wikipedia.org/wiki/Oxid_vanadi%C4%8Dn%C3%BD , http://cs.wikipedia.org/wiki/Chlorovod%C3%ADk , http://projektalfa.ic.cz/v_sirova_k.htm)

Note: ENCYCLOPAEDIA Britannica 2011 ULTIMATE EDITION nebo http://www.britannica.com/EBchecked/topic/622801/vanadium-processing . Vanadium is extracted from carnotite as a coproduct with uranium by leaching the ore concentrate for 24 hours with hot sulfuric acid and an oxidant such as sodium chlorate. After removal of solids, the leachate is fed into a solvent extraction circuit where the uranium is extracted in an organic solvent consisting of **2.5-percent-amine–2.5-percent-isodecanol–95-percent-kerosene**. Vanadium remains in the raffinate, which is fed into a second solvent extraction circuit. There vanadium in turn is extracted in the organic phase, stripped with a 10 percent soda ash solution, and precipitated with ammonium sulfate. The ammonium metavanadate precipitate is filtered, dried, and calcined to V_2O_5.

In **reaction of the salt with water (this proteolytic reaction is called hydrolysis of salts)** may occur the following cases, there is a cation (in the case of solution of salts with strong acid cation), there is an anion (in the case of the salt solution with strongly alkaline anion), neutral reaction (in the case of salt solution with a strong acid cation or strong alkaline anion) or it is not subject to hydrolysis (in the case of salts solution with a cation or an anion, that do not react with water). Due to the neutral balance nature of the water the dissociation can occur in all ways, it may cause splitting of the anionic and the cationic bonds.

When reaching the local mobility density in a **solution** its **saturation** occurs and other substances already do not solve or the momentum of the ions is not affected.

By oxidation representing fundamentally the destructive reaction, e.g. merging with the oxygen in the combustion or respiration of living creatures (see http://cs.wikipedia.org/wiki/Oxidace) we call a reaction, in which a reactant passes its electron, therefore it is reducing its overall local momentum, however it is increasing its mobility density, **reduction** is representing a fundamentally destructive reaction, the opposite of oxidation, in which a reactant accepts an electron, thus it is increasing its overall local momentum but it reduces its mobility density. Oxidation and reduction occur mostly in one reaction, and the resulting charge is then the same or zero. An example of a oxid-redox reaction is **electrolysis**. At secondary batteries it is reversible process, oxidized electrons reduce and then they oxidize again.

Reactions in chemistry either reduce mobility density of the reactant, then it is fundamentally **synthesis (composition) reaction** often caused by the adoption of the electron through reduction, that will reduce the energy density of the reactant at the increase of its total energy, or momentum. The opposite are the **analytical (decomposition) reactions**, when mobility density of reactant is increased and consequently its instability and collisions and the force of the binds reduces, often in terms of oxidation, submitting electrons, thereby increasing the pressure on the disintegration of the reactant. The same objectives can be achieved in the first case by lowering the energy density, virutally mobility e.g. by cooling or by inhibitor (i.e. by the substance with low

mobility) and in the second case by warming or by the catalyst (i.e. by the substance with substantially higher momentum), which will increase the energy of the reactant.

At the same time common are the reactions, where at one the substance or the reactant increases energy or mobility density and the reduction of the total energy or mobility density and for the second vice versa. Syntetical (composition) reactions represent the influence of the next dimension of other mass and other energy to our dimension in the form of coagency. Decomposition reactions are own to vacuum contraagency.

4.3 INORGANIC CHEMISTRY

4.3.1 INTRODUCTORY DEFINITIONS

(performance)

It is **the science about inorganic substances**. Inorganic substances are compounds of the chemical elements with the exception of complex compounds based on carbon and hydrogen.

4.3.2 CHEMICAL ELEMENTS

Definitions and relationships

(performance)

The basic chemical element is hydrogen, which is in the form of cation without neutron, thus so called hydrogen isotope is basically the proton. The hydrogen atom is nuclide with one electron, the proton and neutron and as such it is the basic building unit of all other elements.

For example the carbon $^{6}{}_{6}C$ could also be understood as 6H to reach the same proton and nuclide number. Necessary then is the conversion of 6 cores of hydrogen into a single nucleus of carbon through nuclear forces, which reach a considerable size. If we assume, that in the past the Universe was formed by the Big Bang, thus by an enormous energy, which was created by speeding up of nothing on our dimension of mass and energy and the next dimension of other energy and other mass, we can imagine, where this nuclear energy was taken from, which led to the formation of increasingly complex and artificial elements of matter, virtually antimatter, or other matter.

This theory responds also to **the nucleogenesis**, when the elements in the Universe are formed by nuclear reactions at high temperatures, 10^{7} to 10^{10} K. For example:

$4\,^{1}H \rightarrow {}^{4}He + 2e^{+}$

By other nuclear reactions inside stars other elements with higher proton numbers arise. **Hydrogen prevails also in the composition of the Universe next to helium.**

4.3.3 INORGANIC COMPOUNDS

Definitions and relationships

(performance)

They are compounds of most of the elements with the exception of the complex carbon compounds, which are explored mainly in **inorganic chemistry**. Border area the **organoc compounds** represent, they are artificial substances, for which a metal-carbon bond is characteristic, it is necessary to differ them from the coordination compounds of organic chemistry.

For inorganic compounds is important an **oxidation number**, which equals to the charge number of an element, which is the number of elementary charges. Whereas, that local balance may be different, but universal (all) mobility balance is a constant (which is e.g. the sum of the relativistic mass of our dimension and relativistc other mass of the next dimension), so they are the elements with supra average universal (all) momentum for positive and negative charge, but due to the formation of electrons and protons from the neutron forming local mobility balance, so a proton is the particle with supra average local mobility density and an electron and its surroundings in atom is a particle with sub average local mobility density. The elementary charge is the smallest charge and it has a value of $1{,}602 * 10^{-19}$ C (Coulomb).

Oxidation number or charge is for most of the elements and compounds **0**, this is so, because the local balance momentum forces make balance movement or momentum m*v. Therefore the free electroneutral atoms of the majority of compounds have oxidation number zero (and even if they are composed of opposite ions). Some of the elements have the same oxidation number in all compounds as $H^{+\,I}$, O^{-II}, F^{-I}, the alkali metals have an oxidation number I (eg. Na^{+1}), s^{2} elements have oxidation number II (eg. $Ca^{+\,II}$), up to some exceptions.

Using oxidation number we form **the names of compounds**, both of cations, as well as of acids and salts. We distinguish the **hydrides**, which are ionic and covalent compounds of hydrogen, there are also metal hydrides. Furthermore there are **the oxides** with the oxidation number -II**, halides** with the oxidation number -I, **sulphides** with the oxidation number -II. Furthermore there are **hydroxides** with the formula $M(OH)_a$, where a is 1 to 4 and it indicates a positive oxidation number of metal M.

Without oxid acids are water solutions of some 2-elements compounds of hydrogen. The names of the other acids can be inferred by the naming of the element, or by the number of hydrogen atoms. If an element with the same oxidation number forms several oxoacids with different number of hydrogen atoms in the molecule of acid, we distinguish them **with prefix hydrogen-** supplemented by a number of hydrogen atom, sometimes is used **the prefix ortho-**.

Salts are derived by substitution of hydrogen ions in acid molecules by ions of metals. **Hydrogen salts** have in the name non-substituted hydrogen atoms with the prefix hydrogen- and numeral prefix indicates their number. **Double or triple salts** have a name composed of cations in order according to the increasing oxidation number, that are separated by hyphens.**Mixed salts** have the anions listed in alphabetical order by symbol of element and they are separated by hyphens.

In the nomenclature of **crystal solvents** the number of molecules of solvent is characterized by numeral prefixes (for 1/2 hemi, for 3/2 sesqui).

The nomenclature of **coordination compounds** see below.

4.3.4 PHYSICAL CHARACTERISTICS OF SUBSTANCES

Definitions and relationships

(performance)

Substances with covalent bonds (the essence of these bonds is the sharing of electrons, most often of their pairs between the bound atoms) have low boiling point due to the low energy (momentum) of the bonds. While **substances with ionic bonds** (the essence of these bonds are electrostatic forces acting between oppositely charged ions) **of atomic or metal type** have due to the higher energy of bonds a high boiling point and low melting point.

Electrically conductive are **metals, semimetals are charcterised with semiconductor conductivity** due to the low bond energy (momentum) of electrons. C**ompounds with the ionic structure** lead electric current in molten state and in aqueous solution for similar reasons.

Substances with ionic structure or those, which may dissociate to ions, are soluble in water due to the large momentum of ions of water.

Coloring of substances is related to the momentum of the particles in the substances, that absorb the momentum of some photon of wavelength spectrum.

The elements are divided into **groups according to the number of valence electrons**, which specifies some of their properties such as melting point, boiling point, reactivity or stillness in compounds. **Elements such as hydrogen** have one valence electron. Elements marked as **p-elements** have two electrons within s valence orbital and in orbital p one to six electrons, these are the elements of the six main groups **of the periodic system of elements (so-called Mendeleev's table of the chemical elements)** from the III.A group to the group VIII.A (with the exception of helium), it is always the last six elements in 2nd up to 6th period, **p^5 elements** contain five valence electrons and they are especially halogens. Atoms **of oxygen, one of the p^4elements** are unstable and they combine with other oxygen atoms to molecules O_2 or with atoms of the other elements to form compounds, thus they gain more stable electron configuration, two unpaired electrons in the π^*-orbitals explain the paramagnetism of oxygen. **Electron configuration of the valence electrons** is significantly reflected in the behaviour of the respective elements in the magnetic field. Substances, of which atoms have all valence electrons paired (e.g., calcium Ca, zinc Zn), are **diamagnetic** (magnetic field repels them). A substance containing atoms with unpaired valence electrons (titanium Ti, cobalt Co, nickel Ni, copper Cu, etc.) are **paramagnetic**, i.e.. they are involved in magnetic field. A special subgroup of paramagnetic substances are **ferromagnetic** substances, of which unpaired valence electrons have such an arrangement to increase the external magnetic field. In addition after the disappearance of external magnetic field the ferromagnetic substances themselves act magnetically on other substances, that is why they are used as permanent magnets, these include in particular the various alloys of iron (hence the name ferromagnetic). **P^2 elements of** group **of carbon C are** elements of IV.A group, their atoms have four electrons in the valence orbitals. Pure carbon occurs in two shapes (allotropic) modifications, such as diamond and graphite. In the polymer structure of the diamond the carbon atoms are bounnd mutually by four hard covalent bonds, therefore a diamond is the hardest natural substance. In the layered structure of

graphite each of planes of carbon atoms are bound mutually only by weak bonds, therefore graphite is soft and it conducts the electric current. **The elements of p^3** group of nitrogen N contain in valence orbitals 5 electrons, they are the elements of V.A. group, they can share 3 electron pairs in 3 covalent bonds. **The elements s** are elements of I.A and II.A group, their atoms have in valence orbital one or two electrons. **Elements d** are the transition elements, they are placed in the table between s and p elements, they are all metals, e.g. iron Fe (Ferrum), cobalt Co, nickel Ni, copper Cu, gold Au, silver Ag, chromium Cr, many of the transition elements and their compounds are **catalysts** of chemical and biochemical reactions.

The number of valence electronsit is important for **the reactivity of the elements**, electrons in the outermost orbitale have momentum, which is the least affected by the mobility of protons of an element. If they form the **electron octet (i.e. 8 valence electrons,** such as rare gases such as helium, etc. see http://leccos.com/index.php/articles/elektronovy-octet), then they are stable due to its relatively largely balanced momentum, **elements with less than 4 electrons** tend to due to their imbalanced momentum release their electrons and to react as cations with other elements. **Elements, that have more than 4 electrons,** have thanks to their largely balanced momentum the tendency to receive electrons and they are more stable.

Transitive and also intransitive metals form **coordination (complex) compounds**, for example water, H_2O, containing the central atom or ion, where by coordination (donor-acceptor) bonds the **ligands** (from the Latin ligare-to bind) are bound. The name of the ligand may be international, the name of the **anion ligand** has the endings -o. Coordination compounds are used as catalysts, apparently for their average local mobility density of bonds, that prevents them to enter permanently into inbalanced compounds with other elements.

Metal cations are from metal ores obtained by **reduction reactions**. For example in blast furnaces using the carbon.

Iron compounds as the cation are formed with oxidation number (II) or (III), corrosion is the oxidation of the metal, which continues and it does not stops in the iron at the top corrosion layer.

Elements of copper group such as copper (Cu), silver(Ag) are elements of I.B group. Based on **photochemical reaction** on-going in the crystals of silver halides (mainly AgBr, silver bromide) they react at irradiation by electron, which reduce the nearest silver cation, around which the other atoms of Ag are gathering in the following chemical reaction of developing film. Redundant AgBr is then removed from an emulsion by solvent in the aqueous solution of Sodium Thiosulphate $Na_2\ S_2O_3$.

Elements f also called internally transitive elements are placed in the 6th and 7th period. They also include t**ransuranium elements**, which were prepared artificially in nuclear reactions.

4.4. ORGANIC CHEMISTRY

4.4.1 INTRODUCTORY DEFINITIONS

(performance)

Organic chemistry deals with organic compounds, which are the compounds of carbon, which contain in particular oxygen, nitrogen, phosphorus, sulfur, hydrogen and halogens, but they can also contain other element. In all cases these are elements with a subaverage proton number, they are complex compounds. From the simple elements, by which formation the energy is consumed for their creation, often the solar energy in order to increase momentum and thus the reactivity of these elements. The reason for the low proton number is low absolute momentum of the elements, which are the basic building element of the complex organic compounds with high absolute mobility. High momentum is not reached by the weight of the elements but by their number.

The reason, why carbon is the cornerstone of organic elements, is its low momentum, virtually proton number associated with its four-binding, which allows to create complex, variable organic compounds.

Organic compounds have due to their low proton number of their elements, i.e. to lower absolute balance local momentum of an element the low melting and boiling point, theydo not conduct electric current, because the difference of momentum of their elements is usually lower. They dissolve in organic solvents, which stems from their non-ionic nature (small difference of momentum of components), and only those, which contain hydrogen often ionic bonds, are dissolved in the water.

Organic compounds occupy such **a spatial arrangement of the atoms, at which is their potential (kinetic) energy as small as possible**. This energy is the smaller, the less is number of collisions of parts of the molecules, the more distant are the mobility fields of elements of molecules, the smaller is therefore their non-bond interaction. With this discipline the **conformational analysis** deals. The reason for the distance of momentum fields of elements is the average momentum local mobility density of a compound and the result is

the stability of compounds, low collisions of parts, thus also the reactivity and the probability of breakage of molecules.

Compounds associated by simple electron bonds (one electron pair) are called the **saturated**, by more electrons of covalent bond are **unsaturated**. Double bonds separated by one simple-bound are called **conjugated double bonds**. If there is between doubles more single bonds, we call it **isolated**.

If electrons are shared between atoms with the same **electronegativity** (i.e. the rate-relative variable of extent of the ability of an atom to attract electrons shared with another atom), the bond electrons are symmetrically between both and it is a **non-polar bond**, otherwise it is the **polar bond** and electrons are closer to the atom of the element with greater momentum density.

The π electrons in double or triple bond are placed between a pair of atoms, of which bond they mediate. In the case of **certain cyclic chains of organic compounds there are delocalized electrons,** of which electrons π do not belong to any atomic pairs, but they are distributed throughout the chain.

Aromatic compounds are cyclic compounds with plane cycle, in which single and double bonds are alternating, mutually convertible by the shift of electrons π, of which is 4n+2 (n is 0 or a positive integer). These molecules have less energy, than it would match their resonance structures, since the collision of atoms is prevented through in cycle moving electrons, while reducing their mobility density (this energy difference is called the **resonance delocalizing energy**).

Hydrocarbons contain only carbon and hydrogen, **derivatives of hydrocarbons** also another element. Derivatives of hydrocarbons we derive by combining of hydrocarbon rest with the functional group, which grant to the derivative its functional properties.

From the allocation of the derivatives of hydrocarbons are interesting mainly **hydroxyl derivatives** with a group-OH, primary amines -NH_2, secondary amines -NH –, tertiary amines -N--.

From the basic names are interesting the **basic compounds of** methane CH_4, ethan CH_3CH_3, propane $CH_3CH_2CH_3$, butane $CH_3(CH_2)_2CH_3$, $CH_3(CH_2)_3CH_3$ pentane, $CH_3(CH_2)_4CH_3$ hexane, $CH_3(CH_2)_5CH_3$ heptane, $CH_3(CH_2)_6CH_3$ octane, $CH_3(CH_2)_7CH_3$ nonane, $CH_3(CH_2)_8CH_3$ decane, from which then are deduced their derivatives, they are acyclic, straight-chain, saturated or cyciic hydrocarbons. From functional groups there are mainly prefix hydroxy- or endings -ol:-OH and the prefix amino-or endings -amin:-NH_2.

Subagencies

(performance)

4.4.2 OVERVIEW OF ORGANIC COMPOUNDS

4.4.2.1 ALKANES AND CYCLOALKANES

Definitions and relationships

(performance)

Alkanes and cycloalkanes are hydrocarbons containing only **single bonds** C-H, C-C. These bonds are non-polar and the reaction of saturated hydrocarbons have therefore a radical nature. In other words they are hydrocarbons with little difference in the momentum of the atoms. The polarization of these compounds is possible by atoms with higher or lower momentum as oxidation, chlorination, sulfochlorination and cracking (i.e. essentially melting). The most famous representative is **ethan** CH_3CH_3. For example the derivative of single bond rest of alkanes is **alkyl**.

4.4.2.2 ALKENES

Definitions and relationships

(performance)

They are **unsaturated hydrocarbons having one double bond** C=C . This double bond allows with exception of the above radical reactions (hydrocarbon rest) the formation of hydrocarbons. The most important is **the ethylene** $CH_2= CH_2$.

4.4.2.3 ALKADIENES

Definitions and relationships

(performance)

Alkadienes contain two double bonds, if they are isolated, they behave as, if they are alkenes, if they are conjugated (i.e. it means the dispersion of electrons of two multiple bonds in the molecule of organic compound, thereby it loses its unsaturation), then they interact mutually and addition on them can be done in two different ways. Either the addition may occur on the neighboring atoms or on distant carbon atoms of the chain, causing a shift of the double bond into the middle of the chain.

4.4.2.4 ALKYNES

Definitions and relationships

(performance)

Alkynes are **unsaturated (i.e. with multiple bond) hydrocarbons with one triple bond**, where may be held radical or electrophilic addition. The best known is **acetylene** CH≡CH.

4.4.2.5 ARENES

Definitions and relationships

(performance)

The arenes contain at least one **aromatic ring**, they react radically and also electrophilic substitutions of aromatic ring are typical for them. While the **radical substitution** is made up at atom with approximately the same mobility density by the formation of new orbital and by the sharing of electron, so the **electrophilic addition** assumes the work of cations with the supra-average mobilitydensity and of anions with sub-average mobility density while creating balanced compound. The most famous representatives are **benzene** C_6H_6 and **toluene** $C_6H_5CH_3$. For example the derivative of single bond rest of arenes is **aryl**.

4.4.2.6 HALOGEN DERIVATES

Definitions and relationships

(performance)

They are **derivatives of hydrocarbons** containing one **halogen group**.

4.4.2.7 AMINES

Definitions and relationships

(performance)

In my opinion amines belong to the most important organic compounds in terms of the functioning of the life on the Earth. As I said above, there can be **primary RNH$_2$**, **secondary** RNHR and **tertiary** RNRR amines, which are derivatives of ammonia, primarily composed of nitrogen. Thanks to the non-bond electron pair of nitro groups these compounds have **alkaline and nucleophilic nature**. With water they create **hydroxides,** with acids **ammonium salts**, with alkyl they form more complicated hydrocarbon derivative. Tertiary amines react with alkylhalides to create tetraalkylamonia salts, which convert under the effect of silver oxide to tetraalkylamoniuhydroxides. By oxidation of aromatic compounds of amines the compounds with a very complex structure are formed, for example **aniline** $C_6H_5NH_2$, which is a poisonous yellowish liquid, it turns red on the air and it darkens, in the nature it is located in black-coal tar, industrially it is produced by reduction of nitrobenzene, it is used in the manufacture of dyes and pharmaceuticals. At present most inks are made of aniline colors, arabic gum (formerly phenol was often used instead of it, but due to its toxicity the adding to the ink was abandoned) and water. These inks are not too light resistant and due to the possibility of their erasing are not appropriate for documentary purposes, but thanks to the wide range of colour shades they are very popular. Their big advantage compared to oak apples (obtained when killing the insect larvae of Cynips quercusfolii, see http://cs.wikipedia.org/wiki/Dub%C4%9Bnky) inks is the fact, that they are chemically stable and they do not destroy so writing substances or tools. Also aniline colors are water soluble, therefore there are no problems with settling colloids in ink tanks or plugging of filling pens. (see http://is.muni.cz/th/64756/ff_m/Diplomka_PVH_posl_verze.pdf , http://cs.wikipedia.org/wiki/Anilin)

4.4.2.8 HYDROXYCOMPOUNDS

Definitions and relationships

(performance)

They are **derivatives of water**, in which one of the hydrogen atoms is replaced by the hydrocarbon rest. A typical group is -OH. If this hydrocarbon rest is alkyl, then they are **alcohols ROH,** if it is aryl, then they are **phenols** ArOH, phenol.

4.4.2.9 ALCOHOLS AND PHENOLS

Definitions and relationships

(performance)

They are **derivatives**, where the -OH group is attached to the carbon atom, that is not part of an aromatic ring. To their most famous representatives belongs **methanol** CH_3OH basically toxic residue in the production of ethanol, **ethanol** CH_3CH_2OH commonly called alcohol, or ethyl alcohol, **phenol** C_6H_5OH (obtained from coal tar and it is an important raw material for the production of many aromatic compounds and plastics) and **glycerol (formerly the glycerin)** $HOCH_2CHOHCH_2OH$ used in cosmetics and also for its sweet taste in food industry and in pharmacy, as ester with nitric acid-**glyceroltrinitrat e (also incorrectly called nitroglycerin)** it is the explosive used in the manufacture of dynamite and as a medicine for certain heart diseases as a means for calming heart arrhythmias and blood pressure reduction (http://cs.wikipedia.org/wiki/Nitroglycerin) .

4.4.2.10 CARBONYL COMPOUNDS

Definitions and relationships

(performance)

They are derivatives with the group >C=0. This group is polar, which allows the n**ucleophilic and electrophilic addition**. The most famous representative is **formaldehyde or methanal** CH_2O, which is used together with phenol at higher temperatures to produce **bakelite** as very important kind of plastic (see http://cs.wikipedia.org/wiki/Bakelit) and the solvent **acetone or dimethylketone** or propanone CH_3COCH_3.

4.4.2.10 CARBOXYLIC ACIDS

Definitions and relationships

(performance)

They are derivatives with a group-COOH. Known representative is **formic or methane acid** HCOOH used for the conservation of foodstuffs, **ethane or acetic acid** CH_3COOH, of which 5%-8% solution is vinegar, **butyric or butane acid** $CH_3(CH_2)_2COOH$ contained in sweat and rancid butter, **higher fatty acids: Palmitic acid (e.g. in palm oil, milk products, meat)** $CH_3(CH_2)_{14}COOH$, **stearic acid (in fats)** $CH_3(CH_2)_{16}COOH$, **oleic acid (e.g. in the olive and grape oil)** $CH_3(CH_2)_7CH=CH(CH_2)_7COOH$ are the acids the most frequently occurring in the form of esters with glycerol in fats and vegetable oils, **oxalic acid** $(COOH)_2$, which is included in virtually all fruits and vegetables and it causes their acidity and we can find it for example in strawberries, in larger quantities it is contained in oxalis and sorrel and **phthalic acid** $C_6H_4(COOH)_2$, which is a raw material in the manufacture of plastics. A very important reaction is **esterification of carboxylic acids by alcohols** in order to form ester and water, the opposite case is **hydrolysis**.

R-COOH(carboxylic acid)+R-OH(alcohol)→←R-COOR(ester)+H_2O

Literature: http://cs.wikipedia.org/wiki/Kyselina_palmitov%C3%A1 , http://cs.wikipedia.org/wiki/Kyselina_stearov%C3%A1 , http://cs.wikipedia.org/wiki/Kyselina_olejov%C3%A1 , http://cs.wikipedia.org/wiki/Kyselina_%C5%A1%C5%A5avelov%C3%A1 ,

4.4.2.11 FUNCTIONAL DERIVATIVES OF CARBOXYLIC ACIDS

Definitions and relationships

(performance)

In them there is modified a carboxylic group -COOH. The most famous are the **amides and nitrides**, which are often mid-products of organic syntheses. Esters are formed in the reaction of carboxylic acids with alcohols.

4.4.2.12 SUBSTITUTION DERIVATIVES OF CARBOXYLIC ACIDS

Definitions and relationships

(performance)

Unlike in the functional derivatives of carboxylic acids here their carbon chain is modified.

In them and among the most important organic compounds for the formation of life on the Earth **amino acids** are included. Amino acids contain alkaline group NH_2 (see, amines) and acid group -COOH (see **carboxylic acids**). In the **isoelectric point** (Isoelectric point is such a value of pH solution, in which the molecule or ion, which may act either as an acid or as a alkali, i.e. amfion, does not move in an electric field; this means, that its free

charge is zero here. Isoelectric point can be specified for each amfion, especially for **amino acids, peptides and proteins** , see http://cs.wikipedia.org/wiki/Izoelektrick%C3%BD_bod , http://en.wikipedia.org/wiki/Amphoteric , http://cs.wikipedia.org/wiki/Amf%C3%AD%C3%B3n), i.e. in the local mobility balance, which is different for different amino acids, there is an amino acid in an aqueous solution as an **inner salt**, so the amino acid and carboxylic group are mutually fully neutralized. By increasing the Ph the inner salt passes on cation, inversely on anion. Amino acids, especially with the amino group on the carbon atom α are crucial for the construction of the proteins and as compounda they are involved in various metabolic processes.

Among them also belong and the most famous among them are **the lactic acid, tartaric acid** and **salicylic acid**, which is contained in larger quantities in the willow bark and in artificial (synthetic) form there is the structural basis of many drugs, e.g. as **acetylsalicylic acid** $CH_3COOC_6H_4COOH$ it is the basic component of acylpyrin (see http://cs.wikipedia.org/wiki/Kyselina_salicylov%C3%A1).

4.4.2.13 DERIVATIVES OF CARBONIC ACID

Definitions and relationships

(performance)

Free carbonic acid cannot be prepared, yet its **derivatives** (esters, phosgene, urea) have practical significance. The best known are **phosgene, dichlorid carbonic acid**, which is a highly reactive gas, that is fast hydrolysating to carbon dioxide and hydrogen chloride, in the first world war it was used as fighting chemical,with ammonia it forms urea. **Urea, diamid of carbonic acid** is produced from carbon dioxide and ammonia, which is used to manufacture plastics, as an ingredient into cattle feed and fertilizer, it is also a raw material for the manufacture of certain drugs, it is the waste product of the metabolism of mammals and it is therefore in their urine.

4.4.3 REACTION MECHANISMS

4.4.3.1 ELECTRON SHIFTS IN MOLECULES

4.4.3.1.1 Inductive effect

Definitions and relationships

(performance)

It is the **shift of σ electrons**. The source of **the positive inductive effect** is atoms or groups repelling electrons or atoms bearing a negative charge, the source of the **negative inductive effect** are atoms or groups attracting electrons or atoms carrying a positive charge. Inductive effect manifests itself primarily on the carbon atom, which is in close proximity to the source and with increasing distance it is getting weak.

4.4.3.1.2 Mesomeric (conjugation) effect

Definitions and relationships

(performance)

It is the **shift of π electrons** or of non-bond electron pairs. **The positive mesomeric effect manifests** the atoms or groups, which give away their non-bonding electrons. **The negative mesomeric effect** have atoms or groups, which attract these electrons. By d**elocalization of electrons** occurs the reduction of the different motion of free electrons and hence the reduction of energy of compound.

4.4.3.2 RADICAL SUBSTITUTIONS

Definitions and relationships

(performance)

They are characteristic for compounds **with non-polar covalent (i.e. based on the sharing of electrons, most often of their pairs between bound atoms) bonds**. Due to the effect of large amount of energy (movement, momentum) the formation of a **chlorine radical** ·Cl occurs, i.e. a particle with unpaired electron, which rips out thanks to its momentum the molecule of hydrogen and it produces **methyl radical** $\cdot CH_3$ and **hydrogen chloride**, methyl radical generates **chloromethane** again from a molecule of chlorine Cl_2 and the remaining **chlorine radical**, triggering a chain reaction, that ends by joining two chlorine radicals and the formation of chloromethanes from radical. While the non-bonding electron as well as the atom has a very high momentum.

4.4.3.3 ELECTROPHILIC SUBSTITUTIONS

Definitions and relationships

(performance)

Electrophilic substitution is a characteristic **reaction of arenes**. It is essentially an exchange, for example in **nitration** of nitronic cation of inorganic substance for hydrogen cation of organic compound at this organic substance. Similarly at the arenes occur **chlorination of** Cl^+, **bromation** Br+, **sulphonation** SO_3 or $^+SO_3H$, **methylation** $^+CH_3$, etc.

4.4.3.4 NUCLEOPHILIC SUBSTITUTIONS

Definitions and relationships

(performance)

If the carbon atom is bound to a group with a negative charge with lower mobility density, it may be replaced by another group e.g. OH^- with a negative charge.

4.4.3.5 ELIMINATION

Definitions and relationships

(performance)

By elimination occurs the **off- cleaving of low molecular substances such as water, alcohol or hydrohalogens** and a positive charge is compensated by **a duplication of the bond** between the carbons and by the separation of hydrogen.

4.4.3.6 ELECTROPHILIC ADDITION

Definitions and relationships

(performance)

During this reaction the reaction between π electrons and electrophilic agents occurs, where there anion and cation and organic compounds form, in this way eg. halogens, hydrohalogens or sulphuric acid are added. According to the **Markovnikov's rule** the nucleophilic part of added molecule attaches to the carbon atom the multiple bonds, which has fewer hydrogen atoms. Thus with the carbon atom with the smallest absolute momentum due to the balance forces.

4.4.3.7 NUCLEOPHILIC ADDITION

Definitions and relationships

(performance)

Nucleophilic reagent (eg. water, alcohol, ammonia, nitrogen and sulphur compounds) is added **on the carbon atom with the C=O double bond**, which has as a result of the bond to oxid a positive charge, which the added reagent obtains with a free electron, which balances the mobility balance. After **the elimination of water follows**.

4.4.3.8 ESTERIFICATION AND HYDROLYSIS OF ESTERS

Definitions and relationships

(performance)

Furthermore there are esterifications, by which we understand the **reaction of acids with alcohols usually in the presence of a small quantity of strong inorganic acid**. The first level is the **protonation (proton bond, in essence H^+) of carboxylic acid** followed by **nucleophilic addition of the alcohol**. The reverse order is the hydrolysis of ester.

4.4.3.9 TRANSPOSITIONS

Definitions and relationships

(performance)

Transpositions are the changes of a compound, where the rearrangement of the substances in the compound occurs only. The formation of the **isomer occurs**, i.e. of chemical compound with the same molecular formula but different grouping of substances, i.e. also with the different chemical and physical characteristics.

4.4.3.8 CONCLUSION OF REACTION MECHANISMS

Conclusion

(termination of subagency performance)

In general we can say, that organic reactions, during which **more complex organic compounds arise**, in the context of the formation of life on the Earth require energy, or motion, which changes the mobility density of a compound in terms of its reactivity . If at the same time there is not formed such simpler compound, which has a lower mobility density, the consumption of energy occurs during this reaction, either spontaneously by solar energy or artificially with the help of a man.

4.4.4 ORGANIC CHEMISTRY IN THE MODERN SOCIETY

Definitions and relationships

(performance)

They are mainly natural **recent (current) substances** such as wood, potatoes, animal tissues and **fossil (primeval) substances like natural gas, crude oil, coal**. Further in particular of them produced artificial products of man as **synthetic polymers** (i.e. in particular **plastics or artificial plastics**. Plastics, which soften by heat are called **thermoplastics**, their molecules form mutually disconnected chains. By contrast the **thermosetting polymerss, e.g. the above mentioned bakelite** does not soften while heating, but it decomposes, their chains are netted. The plastics are hard and well to shape, easy to cut and they usually have good thermal insulation properties, compared with metals they are not subject to corrosion, they are almost permanent, but therefore **the waste of plastic is non-ecological**, because it is only slowly decomposed in the wild)**, gasoline, synthetic detergents**. **Drugs** as anesthetics, hypnotics and tranquilizers, antipsychotic medication and chemotherapy agents, antibiotics. Next **pesticides** (from English word pest i.e. to exterminate pests) as insecticides (insects control), herbicides (plant control), DDT, **insect hormones and pheromones.** Pheromone (from Greek pherein–to transmit and hormone- to stimulate) is according to commonly accepted definitions the substance secreted by one individual and accepted by the second one of the same type, thus this substance gives rise to a certain reaction. Pheromones are chemicals produced by the body and spread for the purpose of innerspecies communication. (see http://cs.wikipedia.org/wiki/Feromon) **Primary explosives** such as propellants, **secondary explosives** such as glycerolnitrate**. Fighting chemical substances as** phosgene, mustard gas, organic arsenic derivatives.

4.4.5 NATURAL SUBSTANCES

4.4.5.1 INTRODUCTORY DEFINITION

(performance)

I understand the natural substances **as chemical compounds or their mixtures occurring in the nature**.

4.4.5.2 LIPIDS

Definitions and relationships

(performance)

Lipids are derivatives of higher fatty acids and aliphatic, alicyclic, hydroxy- and amino- compounds. They are insoluble in water, i.e. with strong bonds, they are abundant **store of energy, as well as construction materials of cellular membranes.**

Lipids generally on behalf of the acylglycerols contain **derivatives of amino acids or carboxyl group COOH**. Also they contain esters of glycerol and of fatty acids. Fatty acids are aliphatic monocarboxylic acids obtained by hydrolysis of natural lipids. In other words we can talk about a common basis of lipids and amino acids.

4.4.5.3 TERPENES

Definitions and relationships

(performance)

Terpenes are natural compounds contained mostly in plants, they arise **by combining five-carbons isoprene units**. They can be oxygen derivatives of alcohols, aldehydes, ketones, or of carbonyl acids, to which amino acids belong too. Among the substances are **vitamin A, carotenoids, and natural rubber in raw form as latex of an emission of resin of rubber tree** (Hevea brasiliensis), which is manufactured similarly as synthetic rubber to natural rubber, the mixture of terpenes include also **essential oils of** mint, camphor, lavender or turpentine.

4.4.5.4 STEROIDS

Definitions and relationships

(performance)

They are either **hydrocarbons or their oxygen derivatives** containing hydroxyl group -OH, so a part of the carboxylic group. This is a physiologically and pharmacologically significant substances. Probably the most famous steroids are **cholesterol and D-vitamins**. These include for example **anabolic steroids** – supporting the growth of bones and muscles, **ergosterols** - occurring in the mushrooms (**Ergocalciferol** is one of the forms of vitamin D, also called vitamin D_2. It is manufactured from viosterol, which is formed in turn by the activation of ergosterol in fungi by ultraviolet radiation)**, phytosterols** – occurring in plants. Also **steroid hormones** are included**,** that are divided on **sex hormones** (male **testosterone** and female **progesterone** affecting sexual differentiation and reproduction) and **corticoid hormones** (in mammals contained in the cortex of the adrenal gland and they control the metabolism of sugars, economy of water and ions of potassium and sodium). (see http://cs.wikipedia.org/wiki/Steroidy , http://cs.wikipedia.org/wiki/Ergokalciferol)

4.4.5.5 ALCALOIDS

Definitions and relationships

(performance)

They contain in their molecules at least **one nitrogen atom**, they are mostly **poisonous**. **Tropin alkaloids** contain a ring of seven members, **atropine**, which is contained in the **extracts of Atropa belladonna**, is used in ophthalmology and internal medicine, **Claviceps purpurea alkaloids** are derived from the lyserg acid and they are in **the Sclerotium the product of fungi Claviceps purpurea, which parasites the rye**, it is used in medicine. Synthetically prepared **lysergic acid diethylamide (LSD)** has a strong hallucinogenic effects. **Opium alkaloids** are extracted from the juice of unripened **poppy capsules** of **poppy seeds**, in particular it contains **morphine,** from poppy capsules a resin-juice, **opium** is extracted and out of it the drug **heroin is produced**, morphine is used also as pain-reliever in medicine. Other alkaloids are **the nicotine** from tobacco and **caffeine** contained in coffee and tea. (see http://cs.wikipedia.org/wiki/Morfin , http://cs.wikipedia.org/wiki/Opium)

4.4.5.6 CARBOHYDRATES OR SUGARS

Definitions and relationships

(performance)

In particular they are the source of movement, the energy of living organisms such as gasoline or diesel fuel for motor vehicles. Carbohydrates have also industrial importance, they are natural raw materials for the production of paper, textile fibres, ethanol, explosives http://cs.wikipedia.org/wiki/Sacharidy. They form from carbon dioxide and water by effect of sunlight in the presence of biocatalyst **chlorophyll**, the green dye in the leaves of green plants through complex chemical processes referred to cumulatively as **photosynthesis**. Carbohydrates are one of the fundamental natural substances in plant and animal organisms. Other organisms are dependent on their income in food. In the short lack of them they can synthesis them of amino acids and glycerol. **Simple carbohydrates, so called monosaccharides**, on each atom there is fundamentally one hydroxyl group -OH, and aldehydic R,H>C=O at **hydroxyaldehydes** or ketonic group R,R>C=O at **hydroxyketones,** monosaccharides are further divided according to the number of carbon atoms into **trioses (C_3), tetroses (C_4), pentoses (C_5) hexoses (C_6), heptoses (C_7)**. The most important are **hexoses** representing for the organism direct energy source (glucose, fructose, galactose) and **pentoses,** which are part of the nucleotides and nucleic acids, which are all acyclic structures of monosaccharides with five carbon atoms. **Cyclic monosaccharides** creates through connections with a hydroxyl group at the far end of the molecule so called semiacetal hydroxyl, which is a new chiral (i.e. the carbon atom with the highest sequence number) carbon center with a hydroxyl group. By the effect of alcohols in acidic environment the monosaccharides are changing to the **glycosides**, in which the hydrogen atom of semiacetal hydroxyl is replaced by **hydroxcarbon rest called aglycone** CH_3. By glycosidic bond the **oligo-, poly- saccharides** are formed. On the cell surface there are also **aminosaccharides (glucosamine, neuraminic acid).** Nitrogen analogue of glycosides are **N-Glycosides**, in which the aglycone is bound to anomeric (we distinguish **α-anomers**, **D-monosaccharides** have in cyclical patterns the hydroxyl group -OH to $C_{(1)}$ pointing downwards and **β-anomers**, **D-monosaccharide** have in cyclical patterns the hydroxyl group -OH to $C_{(1)}$ pointing upwards) carbon atom via the nitrogen. They are the **nucleosides** and in the form of **phosphate esters-nucleotides** they are the building unit **of nucleic acids**.

Important Monosaccharides are:

- **D-Ribosa and 2-deoxy-D-ribosa**, which are the building blocks **of nucleic (i.e. of cell nucleus) acids** and of biologically important **nucleotides, e.g. ATP**.

- **D-glucose (normally called just glucose),** which is also known under the name of **grape sugar**, for example in the fruits or meat, at mammals it is present in blood, in urine it is in the case of illness (**diabetes**). Glucose residues are part of many oligo-and poly- saccharides. By fermentation can be produced from glucose the **ethanol or ethyl alcohol, acetone and citric acid** , etc. Aqueous solutions of glucose in the form of an infusion are dripped to the ill directly into the blood. By reduction of glucose is created a **sugar alcohol called D-glucitol so called sorbate**, which is used by diabetics to sweetening and from which we can synthesize **L Ascorbic acid (vitamin C)**. By heating the glucose changes into **brown caramel** used as a dye in the food industry. Technically the glucose is produced **by the hydrolysis of starch**.

- **D-Galactose**, which is contained in milk and it is part of the disaccharide lactose.

- **D-Fructose, fruit sugar** is along with the above mentioned glucose a part of **disaccharide sucrose**, from which also both of these monosaccharides are formed by hydrolysis, these glucose and sucrose are in a ratio of 1: 1 the essence of **honey**.

Oligosaccharides are derived by combining the two to ten of the same or different monosacharide units by glycosidic bonds. According to the number of these units they are called **di-, tri-, tetra- and penta- up to decasaccharides**. By acid hydrolysis the monosacarides are again released of them.

The most important oligosaccharides are the disaccharides:

- **Maltose** consisting of two glucose units is obtained by the hydrolysis of starch.

- **Lactose, milk sugar** consisting of the above galactose and glucose is present in the milk of mammals.

- **Sucrose, beet and cane sugar**, in their molecules above units of glucose and fructose are combined. Sucrose is the most common sugar at all and it forms a significant component of our diet. In mild temperate zone sucrose is obtained from **sugar beet**, in tropical zone from **sugar cane**. By its **hydrolysis by acids or enzymes** above glucose and fructose arise, this conversion of the sucrose in the mixture of two monosaccharides is called **inversion of sucrose** and the reaction product is **invert sugar** (the name has its origin in the word **inversion, i.e. literally upside-down, turn, twist**, thus in this, that this mixture turns due to the strongly negative rotation of the above mentioned fructose a plane of polarized light to the left). Enzyme hydrolysis of sucrose occurs **in the digestive tract of the bees** and its result is a **honey**, sucrose hydrolysis can also be done artificially and the result is a syrup **similar to the honey**.

Polysaccharides have a similar structure as the oligosaccharides, except that the number of monosaccharide residues in their molecules usually reaches many hundreds or thousands. They are mostly **macromolecular compounds**. Unlike the above mentioned other sugars they dissolve in the water only a little, or not at all. They are reserve or construction substances of plant and animal organisms and some of them even have special biological functions. **Acidic and enzymatic hydrolysis** of polysaccharides form oligo- to monosaccharides. Polysaccharides, by which hydrolysis it is formed exclusively above said glucose, are called **D-glucans and they have the general formula** $(C_6H_{10}O_5)_n$

The most important polysaccharides are:

- **Starch** is one of the most important **D-glucans**. **In plants** it is in the form of **starch grains in particular in the roots, berries and seeds**. Industrial source of starch are **potatoes and cereals**. Starch is an important component of the diet of many animals. By starch degradation through acids or by heating at a higher temperature the **dextrins used for the production of adhesives** are formed.

- **Glycogen** is the stock polysaccharide of mammals, in their **liver** in case of need **D-glucose** is formed from it.

- **Cellulose** is a polysaccharide, completely insoluble in water. It is also a **D-glucan**, but its units of glucose are bound unlike as starch by other type of bond. It is the main **building material of higher plants**. In nature it occurs in a very pure form of cellulose, such as **cotton**, in wood it is accompanied by other substances, mainly **lignine and hemi (i.e. semi) celluloses**. After their removal from the wood the crude cellulose called **wood pulp** is produced, which is used as a raw material for the paper and textile industry. By **nitration of cellulose** the nitrates are gained, they are important explosives and raw materials for the manufacture of **cellophane and celluloid**.

- **Pectins** are very complex polysaccharides presented in particular **in young tissues of higher plants**. They are obtained **from the fruit peels** and they serve for the production of **jams and marmalades**. It is a **vegetable jelly (gel)**, which can partially replace **animal jelly (gel), i.e. gelatin**.

Note:

Gelatin is very clean and soft **glue,** which is obtained long cooking of **animal tendons, skin, bones and other slaughter waste rich for collagen**. Through cooking the collagen changes into **glutin**, which is a substance, that has the ability to gel up and it is the most important component of gelatin. Gelatin is used primarily in the food industry for the manufacture of confections, cakes etc. Its industrial use is significant, e.g. in the manufacture of **photographic emulsions, for negative and positive materials** the gelatin is used as a material, in which the light receiving elements and compounds are evenly dissolved. In the **pharmacy** it is used as **tablet binder** and in particular for the manufacture of **capsules.** (see http://cs.wikipedia.org/wiki/%C5%BDelatina)

- **Chitin** is a polysaccharide, that contains **nitrogen** and besides, that it is contained **in mushrooms, it is making up the skeleton of arthropods**.

4.5 BIOCHEMISTRY

4.5.1 INTRODUCTORY DEFINITION

(performance)

Biochemistry is the discipline about chemical compounds and their reactions in living organisms in relation to the biostructures and its features.

In organisms 27 of 90 elements occur, that are in the wild. All of these are the elements from the upper half of the table of elements, i.e. elements with less weight or absolute mobility. Yet relatively large organisms with quite large absolute mobility are built of them. We can say, that these organisms are built from small and accurate build stones, not from the heavy elements. Although some of the elements are in a small quantity, they play an important role.

The basic ingredient is **water**, water was formed due to the balanced momentum status, which was achieved at a relatively low number of atoms with a slightly different charge and with low atomic mass (or momentum). Water is a compound, that is characterized by a high degree of balance mobilityand thermal capacity (i.e. richness of content).

The basic biogenic organic compounds are carbohydrates, amino acids, proteins, lipids and nucleic acids. In my opinion amino acids have an essential meaning, as their derivatives are included in all other biogenic organic compounds. In other words the formation of the amino acids had conditioned and spurred the creation of all other organic biogenic compounds.

Metabolism means all of the chemical reactions, that are occurring in the body and are catalyzed by enzymes. When splitting we are talking about **catabolism**, otherwise about **anabolism** during synthesis reactions. These are different reactions, which tend to be separated even locally.

Subagencies (performance)

4.5.2 ENZYMES

Definitions and relationships

(performance)

Enzymes are proteins dedicated to **catalysis of chemical reactions** in organisms, other enzymes contain non-protein component **cofactor** (for example some metal ions or more complex molecules, which we call the **co-enzymes**). In most cases, co-enzymes can be easily separated from proteins, sometimes they are bound by a covalent bond. Co-enzymes associate with **vitamins**. Complete functioning enzyme is called **holoenzyme**. Holoenzyme consists of **apoenzyme** (protein) and coenzyme.

The enzyme as well as another catalyst is a substance with a supra-average mobilitydensity, which leads to the speeding of reaction, but due to the higher mobility density of the enzyme its bond is not permanent, it is realeased at the creation of the product.

The Ph environment affects the activity of the enzyme, that occurs due to the acidity by the concentrations of the ions H^+ further increase in the mobility density.

Similarly it is at **a higher temperature**, when the momentum of the particles increases, at the point of reaching the temperature optimum the upset of enzyme bonds occurs.

Similarly **inhibitors and activators increase or reduce the momentum of the enzymes**.

Furthermore there are so-called **regulatory enzymes**, on which in addition to the substrate also **modulators** bind, that affect its activity. Regulatory enzymes may also exist **in two forms as the active and inactive,** the conversion is catalyzed by enzymes.

4.5.3 ENERGETICS OF BIOCHEMICAL PROCESSES

Definitions and relationships

(performance)

Phototrophic organisms obtain energy from light, **chemotrophic** by oxidation of macroenergetic substrates – of nutrients. **Autotrophic organisms** use carbon dioxide as the sole source, while the **heterotrophic organisms** require carbon in the form of complex compounds. **Green (chlorophyll) cells** of **plants in the light** are a representative of autotroph, while the **animals, micro-organisms or plant cells in the dark** are the representatives of heterotrophs.

4.5.3.1 PHOTOSYNTHESIS

Definitions and relationships

(performance)

Carbon dioxide is an energetically poor compound, only organisms with the **chlorophyll (green dye)** in cells can convert it into energy-rich compounds.

$6CO_2+12H_2O$ (light)$\rightarrow C_6H_{12}O_6+6O_2+6H_2O$

In the **light phase** of photosynthesis is captured the energy of photons and used to create **ATP adenosine triphosphate** and decomposition of water into oxygen and hydrogen. Another product is a **nicotinamide adenine dinucleotide phosphate (NADPH) (see http://en.wikipedia.org/wiki/NADPH_oxidase).**

In the the dark phase there are the products of photosynthesis light phase ATP and NADPH used for hydrogenation (reduction) of carbon dioxide into glucose $C_6H_{12}O_6$.

4.5.3.2 ENERGY OF HETEROTROPHIC CELLS

Definitions and relationships

(performance)

Heterotrophs obtain the energy by required oxidation of nutrients, carbohydrates, fats and proteins, i.e. transmitting of electrons and reducing the mobility density or energy density of nutrients. The energy released by fission is used for the synthesis of energy-rich molecules **adenosine triphosphate (ATP) and adenosine diphosphate (ADP).** If the ATP production is high, the cells multiply and grow.

The process **of energy transfer of nutrients to ATP**, assuming that the cell has a sufficient supply of oxygen, has three phases: in the first phase the hydrogen from the substrates transfers to coenzyme of dehydrogenases, **NADH (reduced nicotinamide adenine dinucleotide) and FADH (flavoprotein, reduced flavin adenine dinucleotide)** are formed in the reduced form and the substrates are oxidized. The way, in which carbohydrates are oxidized anaerobically, is called g**lycolysis**. Fats are oxidized aerobically through so called **β-oxidation**. In **the second phase** there is the hydrogen of reducted coenzymes transmited on oxygen and water is formed. This process is called aerobic **respiration (breathing) chain**. **The third phase of the formation of ATP is called oxidative (aerobic) phosphorylation**. During the transfer of hydrogen from reduced coenzymes up to oxygen the energy is released and it is used to the phosphorylation of **ADP (adenosine triphosphate)** into the ATP. The transfer of hydrogen from reduced coenzymes on elemental oxygen is done in cascades by the team of bearers in respiratory (breathing) chain. The components of this chain are arranged on the mitochondrial membranes of cells according to increasing affinity to electrons (i.e. the energy released in the formation of anion from the electroneutral atom in a gaseous state).

Literature: http://answers.yahoo.com/question/index?qid=20100422174148AAIXcpE , http://wiki.answers.com/Q/What_is_FADH2

In other words by splitting the hydrogen away is released energy or momentum consumed by the formation of a bond within the compounds, this energy serves then again to create the bond of energy-rich molecules of ATP.

4.5.4 METABOLISM OF CARBOHYDRATES

Definitions and relations

(performance)

The most important energy supplier for the heterotrophic organisms is carbohydrates, both mono-, oligo- or polysaccharides. By their oxidation up to carbon dioxide and water at the aerobes the energy in the form of ATP is obtained. The complete oxidation of glucose describes this equation:

$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6\,H_2O$

This leads **to the splitting of sugar molecules in the formatin of ATP** and ultimately also CO_2 and water. It is a complex process consisting of many reactions. In aerobic (i.e. capable of life only in the oxid environment) cells these reactions can be divided into **three stages**. First in the so-called **glykolysis** the six-carbon glucose changes into three-carbon pyruvate (The conjugated, i.e. with dispersed electrons of two multiple bonds, alkali of pyrograpе acid known as pyruvate. See http://cs.wikipedia.org/wiki/Kyselina_pyrohroznov%C3%A1 , http://www.wikiskripta.eu/index.php/Pyruv%C3%A1t), which is in the second stage aerobically oxidized to **acetylcoenzyme A**, and it is once again in the third stage oxidized up to carbon dioxide and water in the so called **citrate cycle**.

Enzymes, that catalyze reactions of glycolysis, are located in the cytoplasm of cells. Glycolysis begins with phosphorylation of glucose molecules (polysaccharides break down into the glucose first). If the cell has enough oxygen, pyruvate transits from the cytoplasm to mitochondria and it is oxidized to acetylcoenzyme A. Citric cycle (Krebs cycle) is the designation for a series of reactions, by which acetycoenzyme (which is formed e.g. from glucose) transforms into carbon dioxide and water. Enzymes, which catalyze the reactions of the citrate cycle, are located in the mitochondria.

If the cell does not have enough oxygen, the final acceptor of electrons the oxygen is missing and the splitting of oxidation by electron submitting does not occur. The only way, how at a **lack of oxygen the ATP can be** produced, is **glycolysis,** in which glucose is anaerobically eliminated on pyruvate. Reconstruction of the oxidized NAD^+ the **reaction of lactic fermentation** ensures, in which glucose breaks down into lactate acid (milk acid):

CH_3COCOO^- (pyruvate) $+NADH+H^+ \rightarrow CH_3CHOHCOO^-$(lactate) $+NAD^+$, this method of oxidation is greatly ineffective.

Regulation of metabolism is due to hormones, hormones affect the process in the entire cell, even if they do not go directly into it, e.g. by the activation or deactivation of enzymes.

4.5.5 METABOLISM OF LIPIDS

Definitions and relationships

(performance)

Lipids (from Greek lipos i.e. fatty, see http://cs.wikipedia.org/wiki/Lipidy) are indispensable for the life of the cells, because they are the basic building units of the cell membranes, but they are also massive source of energy. According to the function in the body lipids are divided into two groups. **Stock or depositary lipids** accumulate in fatty tissues, but they surround also some of the important organs. In addition they have a protective function, whether it is a protection against impact, or against cold. The second group consists of **tissue or work lipids,** that are building components of cellular membranes

First carbohyderates break down, then stock lipids using the enzyme called lipase, that breaks them down to **fatty acids and glycerol**. Oxidation, thus removing of electrons increases the local mobility density of substances, which in consequence break down and release energy in a few cycles, **oxidation takes place in the mitochondria**.

4.5.6 SYNTHESIS OF FATTY ACIDS

Definitions and relationships

(performance)

A considerable supply of energy occurs in the form of ATP, receiving of electrons by **reduction,** that reduces the mobility density, but enhances the absolute momentum of the reactants and so it starts receiving of energy, which allows the synthesis of fatty acids. **Synthesis and splitting of fatty acids** are located at different places in the cell –**synthesis in the cytoplasm, fission, i.e. the oxidation in the mitochondria**. Emerging fatty acids are **built into the fats and oils** (acetylglycerol) and stored **in the fatty tissues**. **Lipids are more concentrated, i.e. denser form of energy storage compared with carbohydrates**. (For example one gram of fat oxidation releases energy of 38kJ from one gram of carbohydrates it is 17kJ only) In addition **lipids are stored almost without water**, while on 1 g of glycogen are bound almost 2 g of water.

4.5.7 RELATIONSHIP OF METABOLISM OF LIPIDS AND CARBOHYDRATES

Definitions and relationships

(performance)

Lipids and carbohydrates are broken down to acetylcoenzyme. This can be **further metabolized by oxidation**, thus by increasing of the mobility density and splitting into carbon dioxide and water or the reduction of the mobility density and the increase of overall momentum, virtually of energy by **reduction** for the formation of fatty acids.

Metabolism (substance exchange) of lipids and carbohydrates are interrelated. Lipids and carbohydrates are broken down to **acetylcoenzym A,** that is a key compound in the metabolism of these substances. The resulting acetylcoenzym A can be further metabolized by several ways. In **the citrate cycle and respiratory chain** it can be oxidized into carbon dioxide and water, and that in a situation, when the cell needs energy. Acetylcoenzym can also be used as a building unit for **the synthesis of fatty acids**. As it can come from carbohydrates too, it means, that the organism may form lipids from carbohydrates. This conversion takes place, when the body has enough carbohydrates and energy. **Animal organism changes carbohydrates to lipids, but it cannot convert the lipids to carbohydrates**, because its cells do not have an enzyme catalyzing the conversion of acetylcoenzyme A to pyruvate – the starting construction component of carbohydrates (see http://cs.wikipedia.org/wiki/Acetyl-CoA).

A certain amount of fat in the human body is necessary and beneficial. The effort of people with tendency to obesity to reduce body weight **by eliminating fat from food is not entirely correct, because the organism starts then to miss some vitamins soluble in natural fats** and if the fats in the diet are replaced at the same time by increased intake of saccharides, an individual can even increase their weight.

4.5.8 NUCLEIC ACIDS AND PROTEIN SYNTHESIS

Definitions and relationships

(performance)

Nucleic acids are either adenine A, thymine (T), guanine (G), cytosine (C). They **c**reate a minimum of 20 multiple compounds **in proteins**. They are contained **in the DNA (Deoxyribonucleic acid, see http://cs.wikipedia.org/wiki/DNA),** which is the bearer of genetic information. In addition to **DNA there is also RNA (Ribonucleic acid, see http://cs.wikipedia.org/wiki/RNA)**, DNA is mainly in the nuclei of cells, RNA in the cytoplasm. Building components of nucleic acids are **nucleotides** from the nitrogenous base, from sugar and phosphoric acid. Nucleotides are mutually associated in the **polynucleotide chain**. The molecule **of DNA** consists of 2 polynucleotide chains twisted into a helix, there are formed pairs **A-T, G-C**. The molecules of **RNA are single fibred**, the cell contains three types of RNA, **ribosomal rRNA**, which is part of the ribosome, **the information m (messenger) RNA**, which carries the information for protein synthesis, and **transmission t (transfer) RNA**, which carries (transports) amino acids into the ribosome, where they are compiled into polypeptide chains. In my opinion the **ribosomal rRNA** is a residue of evolution, when the virus RNA transformed into a rRNA organelle and their synthesis emerged, the role of the rRNA is not completely clarified, obviously it is necessary to build a new ribosome (see Harper's Biochemistry, Murray, R.K. et al., 23. Edition, 4. Czech, in H + H, third edition, 2002, p. 404). In the **information mRNA there are amino acids called codon**, against which in the transmission **tRNA** the coupled amino acid-**anticodon emerges**.

The basis of **inheritance** are these three processes the **replication**-copying of DNA molecules in the reproductive cycle, which happens in the cell nucleus of eukaryotes and in the cytoplasm of prokaryotes (see DNA replication occurs in the cytoplasm of prokaryotes and in the nucleus of eukaryotes, http://science.howstuffworks.com/environmental/life/cellular-microscopic/dna3.htm), the **transcription,** it is transcription of DNA into mRNA, by which the information transmits from the nucleus of the cell (from DNA), where it is stored, into the cytoplasm, and the **translation,** it is the process, in which the information contained in the molecule mRNA "translates" into the molecule of protein, it's the process of creating the proteins, which takes place in the cytoplasm and in addition to the mRNA also ribosomes, activated tRNA and many enzymes participate in it.

Protein synthesis occurs on ribosomes, where there is a couple of codon of informative mRNA, anticodon of transmission tRNA at two amino acids of future proteins, after the creation of the couple the transmission tRNA moves, until the whole molecule of protein is formed.

4.5.9 PROTEINS AND THEIR METABOLISM

Definitions and relationships

(performance)

A substantial part of **cells is made up of proteins**, that have **building and working functions.** According to the composition of the proteins they are divided into **simple,** consisting of only amino acid residues and **composite (conjugate)** containing in the molecule in addition also non-protein compound. According to the functions proteins can be divided into **enzymes**, i.e. catalysts for chemical reactions, **storage proteins** (e.g. ovalbumin in egg white), **transporter proteins** (e.g. hemoglobin, red transport metalloprotein of red blood cells of vertebrates and some other animals, which carry oxygen, see http://cs.wikipedia.org/wiki/Hemoglobin)**, protective proteins (**e.g. the substance-immunoglobulin is a protein, that is capable as a part of the immune system to identify and neutralize foreign objects (bacteria and viruses) in the body, anti-matters are bearers of humoral, i.e. of the body juices immunity-defensiveness, see http://cs.wikipedia.org/wiki/Imunoglobulin)**, contractile (contract) proteins** (e.g., myosin, which is involved in the muscle contractions), **hormones** (e.g. insulin, which ensures the combustion of sugars in the cells of the body)**, toxic** (e.g. snake poisons), **structural proteins** (e.g. collagen, which is a water insoluble protein, which is the basic building material of connective tissues. It covers up 25-30% of all proteins in the body of mammals. See http://cs.wikipedia.org/wiki/Kolagen)**.**

Amino acids are the building units of proteins, in proteins there are commonly found **20 proteinogennic amino acids**. By the reaction of two amino acids the **dipeptide** is formed. **Bond,** by which are connected the rests of amino acids, is called **peptide bond**. By joining of the rests of three amino acids **a tripeptide** is formed, by joining four residues there is **tetrapeptide**, by combining of many molecules into the linear chain of amino acids a **polypeptide** is created**. C**hains composed of more than a hundred amino-acid residues are usually called **proteins**. Although in proteins only 20 different amino acids are normally found, the number of possible variations in the molecule is huge. The properties of each protein are determined by the order of amino acids in the polypeptide chain-by **primary structure**.

The bonds of amino acids are possible by **peptide bonds**. Peptide bond is a type of covalent chemical bond containing a grouping of atoms –CO–NH–. It is typical for example for **proteins and polypeptides**, in which the -CO-NH– is created at the connection of the individual amino acids, but also for **synthetic polyamides**. (see http://cs.wikipedia.org/wiki/Peptidov%C3%A1_vazba)

Polypeptide chains of proteins have specific spatial arrangement-conformation, on which their biological function depends. The shape of the molecules of the protein is relatively stable. **Fibrous (fibrilar) proteins** have a simpler spatial construction, their polypeptide chains are organized in one direction and they sometimes create parallel bundles. Fibrilar protein molecules are mechanically very rigid and very little soluble in water. Fibrilar proteins have in the organism mostly structural (building) role (such as the **proteins of the skin, hair, muscle fibers**). **Globular proteins** have a very complex structure, their molecules have more or less compact (i.e. solid, hard, dense, compressed), spherical shape and most of them is well soluble in water. In the **stabilization of the chain** are involved **hydrophobic interactions, disulfide bridges**, which are covalent bonds, and **hydrogen bridges** and ionic interactions, which are ionic bonds.

In the structure of the proteins there are found certain regularly arranged sections, also known as the **secondary structure**. The arrangement of the entire polypeptide chain in the area is also known as **the tertiary structure.** Some globular proteins are composed of several polypeptide chains, we say, they are **oligomeric**. Each chain we call the **subunits**. The mutual orientation of the subunits in the molecule of the oligomemic protein is referred to as q**uaternary structure**. Between the oligomeric proteins for example **hemoglobin** belongs, which consists of four subunits.

Native state is the conformation of the molecule in the body, **denaturing of proteins** indicates, that the chain will be unrolled, because the bonds were interrupted. The denaturing of the protein may or may not be reversible. Denaturing by heat or by a significant change in pH is usually non-reversible. A pointer to the pH (in English "the potential of hydrogen"), also hydrogen exponent is the number, by which we express in chemistry, whether aqueous solution reacts in acid or alkalic (base) way. (see http://cs.wikipedia.org/wiki/PH) Denaturation by increase of salt content is reversible.

The metabolism of proteins means, that the proteins break down constantly hydrolytically in the organism **(proteolysis) and again they are formed (proteosysntetis)**. **Hydrolysis of protein** from the food on the components of amino acids (**protein digesting**) takes place in **the stomach and the small intestine**. The hydrolysis is catalyzed by the enzymes produced by the cells **of the gastric wall (pepsin)** and **the pancreas (trypsin and chymotrypsin), these digestive enzymes (called the endopeptidases)** split proteins on a shorter peptides, total protein molecules spliting up to amino acids the **exopeptidases** complete. The above proteolytic

enzymes are placed in cell organelles called the **lysosomes**. The enzyme **chymosin** is present in the gastric juices of a book and rumen of calves, goats and sheep in lactation time, it is taken from the stomach of dead pups as **rennet to produce majority of cheeses**. (see http://cs.wikipedia.org/wiki/Sy%C5%99idlo)

Amino acids resulting from the hydrolysis of proteins make up the supply, which a body can make use in several ways:

-Directly to the body's own protein synthesis.

-As a source of energy, when in **the citrate cycle** there are released electrons, there is increasing mobility density and the substance disintegrates to carbon dioxide and water. In this case nitrogen of amino acids is secreted from the body. Some aquatic animals secrete it, e.g. in the form of **ammonia**, higher terrestrial organisms, for which the ammonia is toxic, convert it to **urea (theria)** or to **uric acid (prototheria)**. Plants store nitrogen in the form of specific amino acids and nitrogen bases, e.g. **alkaloids**.

12 proteinogennics amino acids a human can synthesize (the so-called **nonessential, literally insignificant, i.e. expendable amino acids**), the other 8 must be supplied in the diet (the so-called **essential, i.e. indispensable amino acids.**).

4.5.10 IMMUNE SYSTEM

Definitions and relationships

(performance)

There are two types of immune response: **humoral (related to the body juices) immune response**-mediated by soluble **proteins-antimatters and cellular immune response**-ensured by **lymphocytes,** that recognize and destroy cells with foreign structures on the surface. **Antimatters (immunoglobulins)** are proteins formed in response to the presence of foreign substance so called **the antigen or immunogen**. (see http://cs.wikipedia.org/wiki/Imunoglobulin) All the immune substances are characterized by their great momentum and by collision they destroy foreign substances. The proteins, polysaccharides and nucleic acids act **antigenicly**. In **the structure of immunoglobulins** there are certain patterns, their molecule is made up of four protein chains, that are held together especially **by the disulphide S-S bonds**. The base type of immunoglobulin is **immunoglobulin G**. In blood serum there are yet **other immunoglobulins**. **Blood serum** is yellowish, liquid, non-cellular component of the blood (http://www.example.com,/wiki/S%C3%A9rum). **Immunology** has contributed to understanding the essence of a number of diseases and it enabled the new diagnostic and therapeutic procedures. **The antimatters are a specific search engine of pathogenic (infectious) microorganisms, tissue damage or the cancer process**. Cellular immune system makes it difficult to adopt a foreign organ at **transplantations**. The transplantations were possible only after the development of suppressing substances partially reducing the immune response of the body. A certain immunity the organisms must preserve however in order not to be powerless against infection.

5. BIOLOGY

5.1 INTRODUCTION

(formation)

The object of biology as a whole (formation subagencyof formation agency) is particularly **internal and external movement of biological macromolecules (mainly proteins and nucleic acids) or the study of living systems**. Individual disciplines of biology examine this movement depending on the universality of this movement. As the external movement I understand the movement of macromolecules as a whole, by internal movement then the movement of their parts.

By its object the biology **differs from the chemistry**, of which object is mainly the movement of electrons in a world of phenomena. The movement of biological macromolecules is so more special term than the movement in the context of chemistry. The subject of biology is not the movement of electrons and nuclei particles, that the chemistry and physics explore, yet the structure of atoms and molecules is the subject of biology to the extent, to which it specifies the properties of a living system. Biology is so more special discipline than chemistry, that is more special than physics and mathematics, which are more special than the Philosophy of Balance.

Biology as **more special science** in relation to the more general chemistry and even more **general physics, mathematics and the Philosophy of Balance** is possible to inspect **in terms of concepts of** these more general scientific disciplines. This possibility follows from the nature of the world as an agency, thus a coherent and continuous whole. This means, that complex concepts of chemistry, physics, mathematics, and Philosophy of Balance (supraagencies) already include in itself the simpler concepts of biology (subagencies), from which they are composed. The use of these set concepts formed from the unification of the elements of the identical properties in the conceptual (agency) analysis of sentences of biological sciences allows us to inspect these concepts of biology (the elements of set concepts of chemistry, physics, and Philosophy of Balance) in the new horizontal (in biology) and vertical (in the context of chemistry, physics, and Philosophy of Balance) relations.

Subagencies

(performance)

5.2 FORMATION OF LIFE

Definitions and relationships

(performance)

From the standpoint of biology the concept of the next dimension has the essential meaning. If we use for Einstein's relationship the basic assumption, that the **speed of movement in the next dimension exceeds by x the speed of light c, w**e come to the following relativist relations in the next dimensional space. $\sqrt{[1-(c^2+x)/c^2)]}=\sqrt{(-x/c^2)}==i\sqrt{(x/c^2)}$, for $x > 0$, where i is a complex unit, which is the denominator of the relativistic relations for time, length, and weight. Under that assumption then the result of the quotient in our dimension for length and time is $\Delta t, l =\Delta t_0, l_0*i\sqrt{(x/c^2)}$ and for next dimensional mass $m=m_0/i\sqrt{(x/c^2)}$. Therefore the non-complex time and length $\Delta t_0, l_0$ in our dimension is reflected as a complex time and length $\Delta t, l$ in the next dimension and non-complex mass m_0 in our dimension as a complex mass m in the next dimension. We get to concepts as other (i.e. different) time, other lenght and other mass representing the different mass of the next and our dimension. The line between the next and our dimension between matter and other matter of both dimensions is the light, i.e. particles moving at the speed of light, and absolute vacuum.

In my opinion the speed **of light is the intersection between the next and our dimension**, i.e. the maximum speed achievable in our dimension and the minimum speed achievable in the next dimension. We come to the following **relativist relations for the light in our and next space**. $(l-c^2/c^2)=0$, which is the denominator of the relativistic relations for time, length, and weight. Assuming, that in the numerator of these relations is Δt, 1, m_0, then the result of this quotient is $-\infty\leq m,\Delta t_0,l_0\geq+\infty$, as this quotient can be rewritten as $(l/+-\infty)/(1/+-\infty)=x$, $-\infty\leq x\geq+\infty$.

It can be assumed, that **in the distant past** the fluctuations between the balance in the next dimension and our dimension, thus the **prevailing of matter and energy and other matter and other energy** were far more extreme. Therefore prevailing of mass in the form of a balance of our dimension in the form of neutrons and neutral atom substance in this space-time, that evolved from the electron and the proton chaos according to the equation ${}^{1}_{0}n = {}^{1}_{1} + {}^{0}_{-1}e + {}^{0}_{0}v$, developed originally from the **slowing of other mass** such as particles moving at a speed greater than the speed of light onto the speed of light and finally **by accelerating the absolute vacuum onto our mass by light**. This slowdown is called **the Big Bang**, which caused the initial chaos of our dimension.

As the element **with the smallest mass is hydrogen H**, it can be assumed, that hydrogen cation ${}^{1}_{0}H^{+}$ as a proton or hydrogen as an element **${}^{1}_{1}H$ prevailed in the Universe** at the first establishing of a balance at the formation of neutral atomic substance of elements and by nuclear synthesis of this element in the gradual deepening of the balance in our dimension, by the formation of neutral atomic **substance of elements** the other elements were created at the huge temperatures as a function of momentum m***v**, where m is the mass and v is a vector of speed corresponding to the action of the other matter, i.e. particles moving faster than the speed of light.

It can be assumed, that the Universe emerged in our dimension as the momentum fields characteristic of different prevailing and average mobility density **m*v**. Just as the Earth has set up as a **mobility field** characteristic by interval of mobility density. In this momentum field of the Earth as well as in other momentum fields are nuclear and chemical reactions characterized by a constitution of heavier elements such as hydrogen and compounds of these elements. The Philosophy of Balance of chemistry implies, that each **chemical reaction requires environment characterized by a specific momentum or energy, in other words the mobility field**, which enables the merging of elements. **The same applies to nuclear reactions** and the creation of the heavier elements than hydrogen.

Mobility field at synthetic, composing chemical reaction in chemistry either reduces mobility densitiy of reactant often caused by the accepting of electron by reduction, that reduces the momentum of the proton in the nucleus, and thus also the energy density of the reactant while enhancing its overall energy, or momentum. So this synthesis reaction, which consumes energy, virtually requiring an increase of the total momentum, will reduce mobility density of reactants, which causes an incompatibility of the elements due to the speed of the movement in the next dimension.

On the Earth as on a unique momentum field at the prevailing momentum at the value of m*v there was constitution of water enabled this compound by its own merged momentum. It can be said, that at a similar value of the mobility density anywhere in the Universe in the presence of oxygen and hydrogen there would be established the water as the compound. From the perspective of Philosophy of Balance of physics it can be said, that it is an internal and external momentum, thus momentum of the atoms or molecules and all its particles, which are according to the Philosophy of Balance zero-mass particles at the frequency of ∞.

Water represents the concentration of hydrogen cations ${}^{1}_{0}H^{+}$ and the anion of oxygen O with a negative charge -II (oxidation number) as a simple (light in terms of the atomic numbers) stable compound, i.e. the compound of balanced mobility density of compound as well as of reactants. Also for this reason the water has such a large thermal capacity (richness of content).

Of the elements arisen from nuclear syntesis of hydrogen and protons and electrons in the Universe after the Big Bang the organic substances are emerging in the momentum field of the Earth thanks to its unique mobility density allowing next to the composite, synthetic chemical reaction of water also these synthetic chemical reactions of these organic substances, of which the largest impact the amino acids have, which are the basis of proteins, nucleotides and their derivatives, lipids, carbohydrates, and chlorophyll. Mobility field at the value of momentum m*v for the formation of organic substances is mediated by temperature, pressure, the presence of the necessary chemicals, etc.

Low molecular weight substance probably originated from methane, nitrogen, carbon monoxide, ammonia and hydrocyanic acid. The molecules of these compounds have been demonstrated spectrographically in the clouds of interstellar gas. The source of energy for their synthesis was heat (from volcanic activity), ultraviolet radiation (from the sun radiation), thunderbolts.

$2CH_4 + N_2 \rightarrow 2HCN + 3H_2$, $CO + NH_3 \rightarrow HCN + H_2O$, $CH_4 + N_2 + H_2O \rightarrow HCN$ (**hydrogen cyanide**) +R-COH (**aldehyde**)

(see http://www.zachranny-kruh.cz/mimoradne_udalosti/amoniak_cpavek_nh3.html)

From aldehyde the **imine** was created at exclusion of water, from imine in the presence of hydrocyanic acid the **aminonitrile** was created and from aminonitrile in the presence of water at exclusion **of ammonia NH_3 an amino acid was** created.

From hydrocyanic acid, or aldehyde the **oligomers** were formed, which led through condensation by the water to the **adenine** and by hydrolysis to **uracil**. By polymerization of formaldehyde the **ribose** was formed as another compound of **ribonucleotides**.

Prior-biological synthesis of amino acids and the compounds of nucleic acids do not demonstrate onlyexperiments, in which were reproduced the conditions on the Earth, but also the presence of these substances in the meteorites.

At the same time with **the formation of amino acids, nucleotides and other simple organic compounds** were also formed substances with condensation properties, **condensing reagents**. These substances have been a necessary condition for the condensation of amino acids and nucleotide into polymer compounds such as **proteins and nucleic acids**. During these condensations covalent bonds between amino acids were formed at the exclusion of water for forming **the initial proteins (proteinoids)** and between the nucleotides for creating **initial nucleic acids (RNA).** Effective condensing reagents were **polyphosphates, carbodiimide and montmorillonite**.

Furthermore **the primary synthesis of proteins (proteinoids) occured.** Polymers, which are similar to the polypeptides, are formed under conditions, in which the amino acids are heaed t up and they are exposed to electric discharges or condensing reagents act on them, for example polyphosphate esters. Such polypeptides are known as proteinoids. They have a molecular weight of about 20,000, and contain about 18 different amino acids. They are sensitive to proteolytic enzymes and they are also characterized by the properties, that are characteristic for proteins. However as I have already said, they did not have a direct relevance to the formation of life, since they did not indicate capability of replication.

The synthesis of primary nucleic acids could take place **in the absence of enzymes**. In laboratory experiments it was shown, that for example in the presence of polyphosphate as a condensation reagent at 50 ° to 60 ° C oligonucleotide is formed. On polycytidylic acid as the matrix a chain consisting of the GMP (guanosine monophosphate, see http://cs.wikipedia.org/wiki/Kyselina_chlorn%C3%A1) is completely created. The bonds between mononucleotides, which bind to the matrix at the formation of complementary polynucleotide, are created with the participation of condensing reagents.

The initial RNA did not quite correspond to the present one, it is assumed, that the water reservoirs (bays, sea, ponds) were concentrated solutions of low molecular weight organic compounds amino acids, nucleotides, perhaps even proteinoids, but especially of the ribonuclease acids.This water tank is referred to as **the primeval broth**.

It can be assumed, that **RNA with autocatalytic capability appeared too**. The strong support for the assumption of the existence of autocatalytic RNA is the finding, that from some of the current organisms, for example from protozoa the **intronic RNA** has been isolated, which is characterized by the ability itself as intron between two exons to extract and ends of exons again by phosphodiester bond to connect together in the absence of enzymes. It can sort even on itself as a matrix nucleotides and estericly bind them by replication.

The status of the **primeval broth**, when there the concentration of autoreplicating RNA molecules prevailed, is referred to as **the realm of RNA**.

At present the nucleic acid are adenine, thymine, guanine or cytosine,. They create a minimum of 20 multiple compounds **in proteins**. They are contained **in the DNA**, which is a carrier of genetic information. In addition to the DNA **also RNA** exists, DNA is mainly in the nuclei of cells, RNA in the cytoplasm. Building component of nucleic acids is nucleotides from the nitrogenous bases, sugar, and phosphoric acid. Nucleotides are mutually connected in the **polynucleotide chain**. The molecule **of DNA** consists of 2 polynucleotide chains twisted into a helix, there the pairs **A-T, G-C** are created. The molecules of **RNA are single fibered**, the cell contains the three types of RNA, **ribosomal rRNA**, which is part of the ribosome, **the information mRNA**, which carries the information for protein synthesis, and **transmission tRNA**, which transmits (transports) amino acids into ribosomes, where they are compiled into polypeptide chains. In my opinion the ribosomal rRNA is a residue of elvolution, when the virus RNA transformed into a rRNA organelle and their synthesis occured. In t**he information mRNA there are amino acids codon,** against which in the transmission **tRNA** a coupled amino acid-**anticodon** is **created**.

The basis for **inheritance in the present** are three processes the **replication**-copying of DNA molecules in the reproductive cycle, the **transcription,** transcription of DNA into mRNA and the **translation,** the translation from the speech of bases of the amino acids, it is the process of making proteins.

The current translation is done only in ribosomes. Of course in the form, as we know them today, in the realm of the RNA they still did not exist. But there were the beginnings of their existence. To understand this, let us consider, that in the prehistoric (i.e. primeval) broth there were also ribonucleotides and amino acids. Here

without the presence of enzymes and by the influence of the condensing reagents the formation of oligoribonucleotide the predecessors of today's tRNA (further we use the term **primordial tRNA**) could be. The primordial tRNA bearing different amino acids could couple with the replicating molecules of RNA and sort on them these amino acids, which have been connected then with the use of condensing reagents by peptide bonds into polypeptide chains. Among the large number of so created polypeptides could eventually occur even proteins catalyzing the synthesis of the peptide bonds between amino acids far more efficiently than condensing reagents. They were probably the first **ribosome proteins**.

Another protein, that had to create very soon, was the protein acting as an enzyme, that catalyzed the RNA replication. This enzyme resembles by its function so called **RNA-replicase**, which is an enzyme, that catalyzes the replication of RNA. Autoreplicating activity of RNA ceased to have then in dependance on this enzyme its original meaning and it is preserved as a relic in the some of the current introns (**Intron** is the area of pre-mRNA, which forms together with exons the basis of gene, see http://cs.wikipedia.org/wiki/Intron).

The initial translational system therefore we can imagine as a self-replicating RNA, which was in the system (complex) with the following proteins: 1. Of i**nitial RNA-replicase**, which catalyzed the replication of this RNA, 2. Of t**he first ribosome proteins,** that catalyzed the synthesis of the peptide bonds between amino acids. Part of this translational system was however also its surroundings, that contains solution of amino acids and ribonucleotides (in prehistoric broth). The complex of the RNA with the initial RNA-replicase and primary ribosome proteins we can understood as **the initial ribosome**. This very simple complex of RNA with proteins capable of translation began to prevail in the realm of RNA, which gradually changed into **the realm of RNP. As the realm of** RNP we understand the state of the prehistoric broth, in which prevailed the concentration of RNA complexes with proteins characterized by the translation, which allowed the existence and reproduction of this complex.

However to enable to maintain and to reproduce such a complex of RNA with proteins representing the initial translational system , it had to meet two conditions: **1. To border against its surroundings, 2. To enable, if possible, the exact translation of the sequence (order) of RNA into the initial RNA-replicase and initial ribosome proteins.** To meet the first condition was not so difficult, because the initial translational system was in environments with a high content of **phospholipids**. These could easily create around it bimolecular double layer, which gradually formed complexes with proteins and it changed to the current **lipoprotein membrane**. This assumption is currently preferred.

To meet the second condition is more difficult, because it already assumes the existence of genetic code. How was the genetic code established and created, according to which certain codons correspond by their anticodons to certain transfer RNA, **is a mystery**, on which there is not yet a satisfactory logical answer. There is not also the answer, why was by genetic code selected 20 L-amino acids, which are today considered as the standard ones. The genetic code was created. We do not know when and how.

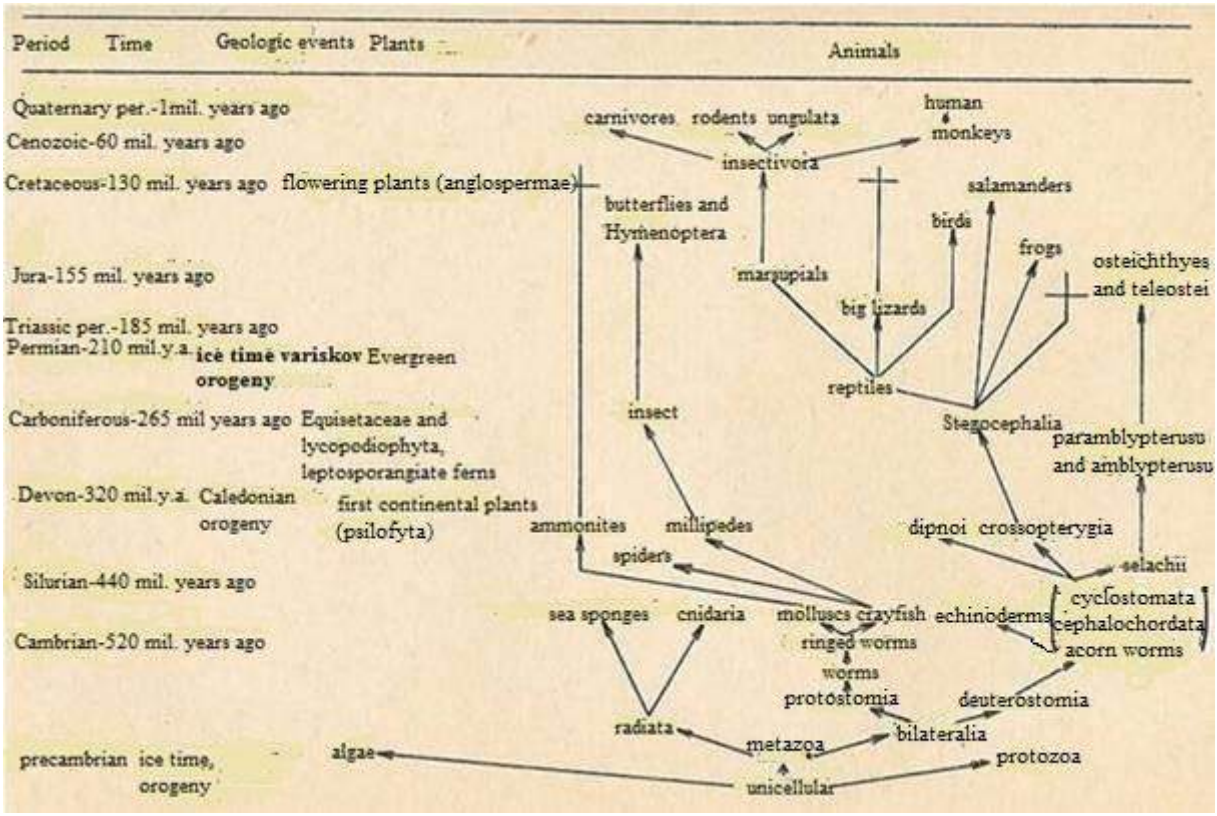
The initial translational system was characterized by several features, that characterize the live system. They are: a) reproduction (multiplication) of translational system by replication of its RNA, b) the border of the phospholipid (or already lipoprotein?) layer against the surroundings, c) Transfer of genetic information by RNA replication and by translation of genetic code d) genetic variability, and hence the ability to evolve.

Genetic variability (volatility) of the RNA was however immerse (we see it in the current **RNA-viruses**). It was therefore necessary to separate its own replication mechanism from the translation. This was managed by **reverse transcription of RNA into DNA already in the initial translational system**. This transcription was catalyzed by **the reverse transcriptase**. Reverse transcriptase is probably one **of the oldest enzymes**. It has been detected in prokaryotes and sequences for its synthesis have been identified in a number of introns. Therefore we can assume, that it appeared in the times, when the first live system were created. **The formation of DNA** moved the living systems development significantly forward.

This development led to the so-called **urcell**, which has already developed in the simple form all the basic features and functions of living organisms, and they are the simplest living systems, which are also referred to as **progenotes**. Their important character is, that the transmission of genetic information in their reproduction (multiplication) was already arranged by DNA, so their genome was made up of DNA. Therefore the realm of RNP has developed in **the realm of DNA** characterized by the existence of urcells (progenotes). The development, which led to the existence of the first living organisms (urcells, progenotes), is referred to as **chemical evolution**, since it works purely chemically through the synthesis of increasingly complex substances up to urcells. We emphasize however, that no urcells were experimentally (by experiment) proved, neither they were observed, but however in a number of places we can rely on the facts (e.g. on the experiments , which imitated the conditions, that have been **on Earth 4 billion years ago, the volcanos**, on the presence of organic compounds **in the meteorites** etc.). We just guess, that prior to **current simplest cells even simpler ones had to**

be, which we identify with the urcells. If they existed, then they **started the biological evolution**, which is characterized by a formation of different types of living organisms from the simplest to the structurally (building) and functionally (agency) more complex.

The Earth formed about 4.6 billion years ago. In the period **prior to 4.2 billion years ago** it was an inhospitable period for the formation of organic compounds. In the period **before 3.6 billion years** ago there was a prior-biological synthesis of organic substances and information macromolecules and the formation of urcells (progenotes), i.e. of the first living organisms. In the period before **3 billion years** the formation of eubacteria, archaebacteria and eukaryotes started, around the time of **2.5 billion years ago** the development of the oxygen phototrophs, i.e. cyanobacteria started. In the period prior to **1.2 billion years ago** the creation of oxidized environment and development of the ozone layer started, before about 1.2 billion years ago the formation of eukaryotic cells occurred (endosymbiosis is a symbiosis (coexistence) of two species of organisms, from which one lives inside the body of the other, see http://cs.wikipedia.org/wiki/Endosymbi%C3%B3za). In the period **from 0.8 billion years ago** there was the formation of multicellular organisms.



An example is an evolution diagram **from the present time, from the German physics von Weizsacker (hereinafter referred to as diagram)**, his diagram contains this sequence: unicellular → cyclostomata → reptiles → marsupials → insectivora → monkeys → human (see http://granosalis.cz/ebooks/evolucniteorie.htm , Evolutionary theory-science or religion, Ing. Josef Potoček, joseph.potocek@mmhk.cz , GRANO SALIS NETWORK, 2004, www.granosalis.cz), **these below used dates of geological periods (determined by geological layers of certain rocks) do not match the modern geological time, that changes frequently** (see for example. http://cs.wikipedia.org/wiki/T%C5%99etihory)

In the precambrian (according to the diagram in the time since the creation of the Earth to 520 million years before the present, it includes Hadean, the following is Archean after 3.8 billion years before the present, when the life started, the following is Proterozoic after 2.5 billion years before the present, to the beginning of Cambrian, ice time, orogeny) the unicellulars were formed (among them predominantly are ranked monera-bacteria, but they also include e.g. mold, yeast, some algae and protozoa), from them then were formed algae, protozoa, the simplest animals (metazoa) as the radiata or simplest bilateralia (which are a large group of the evolutionarily most developed multicellular animals, that includes vertebrates). From bilateralia it was the simplest protostomia (protostomes), namely the worms, from them the annelids (ringed worms), and furthermore from bilateralia the simplest deuterostomes (deuterostomia), from them then acorn worms (enteropneusta, which are a class of deuterostome animals belonging to the family of hemichordate, reaching the size of 20 cm to 2 metres, they are very little explored animals living in the sea up to a depth of 3000 m).

In the Cambrian period (since 1960 the split is into Cambrian and Ordovician, according to the diagram in the period after 520 million before the present, the oldest period of the Paleozoic era, which lasted roughly 345 million years) originated the sea sponges and cnidaria from radiata, from ringed worms formed molluscs and crayfish, from deuterostomes were created cephalochordata and the simplest cyclostomata, from acorn worms were formed echinoderms.**In the late Silurian (according to the diagram in the time after the 440 million years before the present)** from the molluscs originated the simplest ammonites (a kind of prehistoric mollusks, i.e. mollusks, i.e. extinct cephalopod), from crayfish originated spiders and millipedes, from acorn worms, cephalochordata and cyclostomata were then selachii, the simplest crossopterygia (lungfish) and dipnoi (also known as salamanderfish). **In Devon (according to the diagram in the time after the 320 million years before the present, the Caledonian orogeny)** the first mainland plants (psilofyta-a group of extinct ancient plants, that have not differentiated body into leaves, stem and roots, see http://encyklopedie.vseved.cz/Psilophyta) were created, from the centipedes (i.e. millipedes) was formed insect, from crossopferygia (coelacanth) were formed stegocephalia and from selachii were formed paramblypterusu and amblypterusu.**In the Carboniferous (according to the diagram in the time after the 265 million years before the present)** were formed equisetaceae (sometimes horsetail) and lycopodiophyta, leptosporangiate ferns, from stegocephalia were reptiles.**In Permian (according to the diagram in the time after the 210 million years before the present, the youngest period of the Paleozoic era, ice time variskov orogeny)** were formed coniferous trees. (In Devon and Carboniferous according to the http://www.gvp.cz/~kuceraj/zemepis/vrasneni.html at the time of 409-290 million years before present **the development of amphibians initiated,** in Permian at http://www.gvp.cz/~kuceraj/zemepis/vrasneni.html at the time of 290-245 million years before present **the reptiles development and amphibians decline occurred.**)

Towards the end of the Paleozoic era there was only one "mega-continent" called **PANGAEA**. Pangea split then in 2 parts, on the northern part it was **LAURASIE** and in the southern part there was **GONDWANA**. Between these continents there was the Mediterranean Sea called **TETHYS**. To Laurasia its name the two large territories gave, which lay in it: Laurentia (North America, for the first time, including Florida) and Asia. Among them of course the territory of today's Europe lays, firstly including the Iberian and Apennine peninsula, however China and vast areas of Southeast Asia were missing. Furthermore at the end of the Paleozoic era the sea receded and there was much more massive termination of organisms than at the end of Cretaceous.

Paleozoic flora: Unlike flora, which is known from the Proterozoic, era we know from the Paleozoic the **vascular plants**. Typical is the presence of vessels and improved reproductive organs, flowering plants have not developed yet. The oldest Paleozoic do not provide many fossil material, of which we could make satisfactory conclusions. The first period, which is more favorable for paleontologists is Devon. Between the most primitive vascular plants of Devon we include **ryniophyta** with a very simple body building. A typical representative was the plant ***Rhynia major***, which is considered to be the predecessor of today's vascular plants. Relative genus was ***Psilophyton***. From middle-bohemian Devon there are supported ancient lycopodiophyta ***Drepanophycus*** and ***Protolepidodendron***, it is considered to be the ancestor for the lycopodiophyta massively developed in Carboniferous. One of the most abundant fossils of bohemish Devon is ***Protopteridium hostinense***, it belongs among the ancestors **of ferns**. From Carboniferous we know extensive forests of **vascular sporogenous plants** (**arborescent lycopodiophyta, Equisetaceae (sometimes horsetail), leptosporangiate ferns)**. From these plants coal was formed. The late Carboniferous is the period, when lycopodiophyta developed massively. For the extinct arborescent lycopodiophyta of carbon, we have a common name-***Lepidodendrales***. The most famous genus is ***Lepidodendron*** (up to 30 m) and ***Sigillaria***. The oldest horsetails we know already from Devon, a major development occurred however in Carboniferous. Carboniferous and Permian **horsetail** is known especially as a representative of the genus ***Calamites***, these plants grew in marshes. We know from carbon a very interesting group of **seed ferns**, which represent the evolution link between the development of fern stubs and gymnosperm plants, they looked like ferns, but the anatomy as Gymnosperms, the examples are the genera ***Neuropteris, Alethopteris, and Odontopteris***. The next group of late Carboniferous trees are gymnosperms cordaitales growing up to height of 10 m. In the upper Carboniferous **coniferous wood** appeared for the first time. Vegetation in the Permian was very similar to Mesozoic era. There was drying of swamps and many genera were extinct (arborescent forms of lycopodiophyta), a horsetail arborescent were still surviving.

In Triassic period (according to the diagram in the time after the 185 million years before the present, the oldest period of the Mesozoic era) originated from reptiles big lizards and marsupials (in the Triassic period, from http://www.gvp.cz/~kuceraj/zemepis/vrasneni.html at the time of 245-208 million years before the present, originated **the first dinosaurs and mammals**) from paramblypterusu and amblypterusu (fish) were formed osteichthyes and teleostei (fish). **In Jura (according to the diagram in the time after the 155 million years before the present)** from the insects were butterflies and Hymenoptera (e.g. ants, bees, wasps), from reptiles were created birds, from Stegocephalia were salamanders and frogs. **In Cretaceous (according to the diagram in the time after 130 million years before the present, the youngest period of the Mesozoic era)** were

formed flowering plants (anglospermae) and also from the marsupials were formed the simplest insectivora, of which at that time were formed carnivores, rodents, ungulata and a monkeys (in the Cretaceous, from http://www.gvp.cz/~kuceraj/zemepis/vrasneni.html at the time of 145-85 million years before the present, **the development of dinosaurs**).

In Mesozoic Gondwana lost its glaciations and it began to break apart. The climate was more balanced than in Permian, overall however it was warmer. Gondwana was a supercontinent, which included the territory of today's South America, Africa, Arabia, India, Australia and Antarctica. It was formed as part of a larger supercontinent **Pannotia** at about 600 million years ago. To **Laurasia** China and the vast areas of Southeast Asia joined at about 100 million years ago at the time, when it almost fell apart to Eurasia and North America.

Mesozoic flora: In the earlier Mesozoic era were abundant 2 genera of horsetails : ***Equisetites*** and ***Neocalamites,*** they were as tree so herbal types. Unlike Mesozoic calamites they did not secondly put on weight and if so, so only very little. From **ferns** are abundant representatives of family ***Matoniaceae*** and ***Dipteridaceae,*** today they survive on a small territory in the Indomalaysian area. In Jura the representatives of the gymnosperm plant- **cycads** embarked in the massive extent, flora of Jura was relatively uneventful. Also ***Ginkgo species*** were largely widespread**.** In the late Cretaceous the breakage from the perspective of the evolution of the flora occurs, the first **flowering plants** discovered, this is a very progressive group of plants able to push away other species. The famous is Czech cenomanska locality-Vyšehořovice by Český Brod. Fossils of **Parasitic fungi** (***Phacidum species*** and ***Cercospora species***) are also known. In Cretaceous **gymnosperms** were an important part of flora, among them were: representatives of the family ***Taxodiaceae***-a genus of ***Sequoia*** and similar to it the genus ***Sequoiadendron***. From the time before the 90 million years ago we know first a **pine** (***Pinus longifolia***) and **fir tree**, which are not substantially different from those of today. From **flowering plants (angiosperms)** these plant representatives were abundant: **genus *Araliphyllum***.

Cenozoic is the youngest geological era, it has begun **about** at **65.5 million years after the big termination of animal and plant species at the end of Cretaceous (at the end of the Mesozoic era)**, during which all the flightless dinosaurs died out, and it lasts to this day, it includes Tertiary and Quaternary Period, and it is referred to as the modern history of the Earth. **In Tertiary (according to the diagram at the time after 60 million years before the present) warmer and colder climates alternated, many mountain ranges were formed: the Alps, the Pyrenees, the Carpathian Mountains and the Himalayas**, here is the main extension in mammals and birds, the first primates and the first predecessors of today's man-hominoid (see below), in Tertiary the flowering plants predominated and most plants coincided with today's (recent) flora. **In Quaternary Period-Antropozoic era (according to the diagram in the period after 1 million years before present, ice age)** today's man was formed (see below).

In the time **before 25-14 million years ago Dryopithecus evolved**, **more than 14 million years ago Ramapithecus split from them**, 4 **million years ago discovered their two successors Australopithecus and Homo habilis**, **from 4 to 1.5 million years** the African continent populated three different forms of Australopithecus: **Australopithecus africanus, Australopithecus robustus** (also called **Paranthropus robustus**) and **Australopithecus boisei** (referenced as **Paranthropus boisei or Zinjanthropus**). They ate mainly plant food, especially **Australopithecus africanus** living in the savannas did not reject possibly also small animals, that he or she hunted and treated already using simple tools, such as broken animal bones or jaws with sharp teeth. Brain of australopithecus was not even greater than of any other ape. **Homo habilis lived from 2.7 to 1.5 million years ago** (classification to **the genus Homo-human is disputed**), he or she was apparently also a scavenger, he or she already made simple stone tools (that is why Homo habilis, a **skillful man**) and his or her skull is surprisingly reminiscent of a modern man's skull, volume of his or her brain was still significantly smaller than of Homo sapiens but Homo habilis's brain was already well developed. **Homo erectus lived before 2 million up to 500 or 400 thousand years ago**, when the youngest member of the genus Homo erectus lived, so called **Peking Man** (in today's China). The oldest representatives of **Homo sapiens (Wise Man, today's man)** link directly to the forms of Homo erectus.

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http://www.gvp.cz/~kuceraj/zemepis/vrasneni.html , http://cs.wikipedia.org/wiki/Mikroorganismus , http://cs.wikipedia.org/wiki/Geologick%C3%BD_%C4%8Das , http://cs.wikipedia.org/wiki/Archaikum , http://cs.wikipedia.org/wiki/K%C5%99%C3%ADda , http://cs.wikipedia.org/wiki/Gondwana , http://cs.wikipedia.org/wiki/Laurasie , http://cs.wikipedia.org/wiki/Hadaikum , http://cs.wikipedia.org/wiki/Ordovik

Walking with Cavemen with Robert Winston, 2DVD-116minut, production of the series Mike Salisbury, Director and Executive Producer Richard Dale, co-production of BBC/Discovery Channel 2002, published by Mladá Fronta Dnes, (**DVD I:** 1st-2nd Part food for human ancestors until Homo ergaster, 2nd part time 24:59 et seq. Homo habilis as a scavenger after the discovery of production of stone (probably flint) tools, Part 2 time 28:01 et seq. the first Homo ergaster 2 million years ago, **DVD II:** Part 3 time 1:39 et seq. wildebeest hunting by Homo ergaster, 3rd part time 24:01 et seq. stopping the evolution of Homo ergaster until a million years ago.

Note:

As a molecular fossil of ribosomal rRNA I personally consider **RNA-viruses or viroids** without protein packaging, which are organisms, for which there is no transcription of DNA, but only replication of RNA and translation of RNA molecules into proteins of virus packaging. However fundamentally these transfers may take place only in the cells never outside. It can be assumed, that in the prehistoric broth occurred the formation of a large number of these simplest non-cellular organisms with a very short lifetime outside the cell. So occurred a very quick birth and death of RNA viruses, which newly mutate by adaptive natural selection in the spirit of modern evolutionary theory and it occurs the genetic developments thanks to speciation.

Also we are talking about **the origin of mitochondria and chloroplasts**, which are considered to be originally the eubacterial cells, that have penetrated into the eukaryotic cells and lived in symbiosis with them. This symbiosis laid in an effective oxidation of organic substances and the relaxed energy for the cells they used to their life. Similar is probably the origin of **chloroplasts**, which were originally photosynthesis eubacteria cells (cyanobacteria), that could carry out photosynthesis in the eubacteria cells, with which they lived in symbiosis.

Similarly as in the case of RNA viruses it could lead according to me to the formation, **penetration and symbiosis of DNA viruses mutually with RNA viruses** capable of transcription in the prehistoric broth. A division of these viruses into prokaryotic nucleus (nucleotide), ribosomes (in which replication occurs), cytoplasmic membrane and cell wall could give a rise to a prokaryotic cell.

5.3 CLASSIFICATION OF LIVING ORGANISMS

5.3.1 NON-CELLULAR LIVING SYSTEMS (VIRUSES AND VIROIDS)

Definitions and relationships

(performance)

Non-cellular living systems can multiply only in the cells. These may be the prokaryotic cells or plant or animal ones. They are divided into **viruses and viroids**.

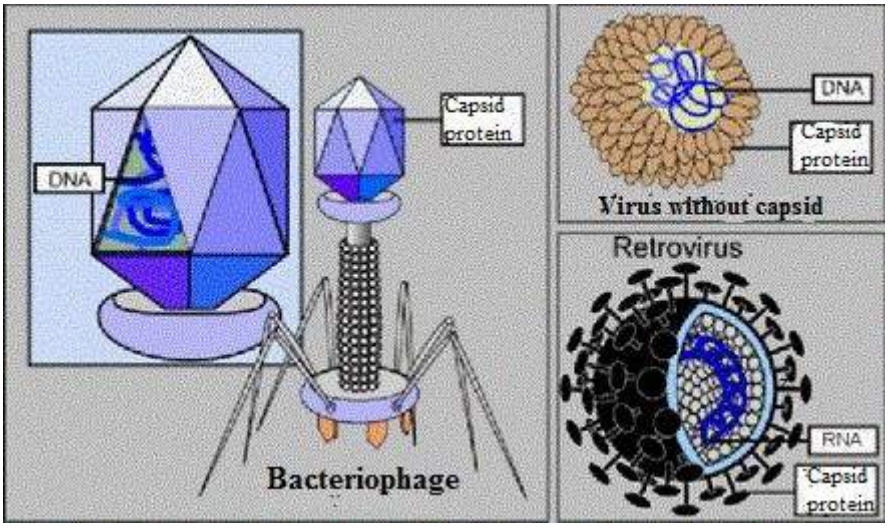
Viruses can be broadly categorized as follows:

1. **They are particles composed of nucleic acids and proteins**. Nucleic acid has the same function as chromosome and it can therefore be considered as chromosome of virus, it is a bearer of genes of the virus, according to which the proteins are made up, of which is composed the package of the virus.

2. **Nucleic acid of virus may be deoxyribonucleic or ribonucleic. Therefore according to the contents of nucleic acids the viruses are DNA viruses and RNA-viruses**. At **DNA-viruses** the genetic information (genes) of greatly replicated DNA is transcribed into mRNA, which is translated on ribosomes of host cell into proteins, by which is then wraped up all copies of nucleic acid of virus, so it creates a complete viral particles or virion, which are released into the environment, where they can infect other cells. At **RNA-viruses** the transcription does not occur, but only the replication of RNA and translation of RNA molecules to proteins of viral packaging (i.e. capsid). DNA viruses are thus characterized by the DNA replication, transcription and translation, whereas RNA-viruses only by RNA replication and by its translation. However these methods of transmission of genetic information may take place only in the cells, never outside.

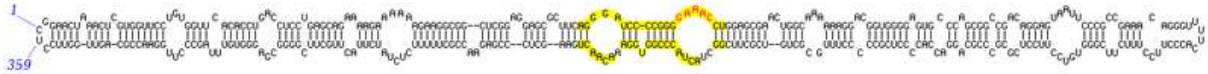
3. **Viruses have very tiny dimensions**. They are visible only with help of the electron microscope.

4. **Outside the cell the viruses are not capable of life**. Only when they enter the cell, they apply their main life function, that they have, and it is a reproduction.



Three different types of **viruses**: in the left part the virus is infecting bacteria or **a Bacteriophage**, in the top right section there is a cross-section of the **non-covered virus** with icosahedral symmetry, right below there is the cross-section **with the HIV retrovirus**, at which a viral particle is still wrapped by membrane with surface glycoproteins. **Genomic nucleic acid** is always shown in blue (see http://cs.wikipedia.org/wiki/Vir , the Original uploader was Xmort at cs wikipedia , 26.12.2004).

Viroids differ from the viruses mainly by their nucleic acid RNA, which is not wrapped by proteins, they are particles composed only of RNA capable to replicate only in their host cells.



Structure du secondaire supposee PSTVd virod'de (*potato spindle tuber viroid*), see http://fr.wikipedia.org/wiki/Viro%C3%AFde , Putative secondary structure of the PSTV (potato spindle tuber viroid). Author: Jakub Friedl (user kyknos) {{GFDL}}, 11.4.2005.

5.3.2 CELL LIVING SYSTEMS (ORGANISMS)

Definitions and relationships

(performance)

Cell living system (organisms), i.e. the living system composed of cells, are, as far as the basic structure of cells is concerned, of procaryotic and eucaryotic type.

Organisms of **procaryotic-type or Monera** (apparently literally forebodies or urbodies) are generally characterized by the following characteristics and features:

1. **They are mostly single-celled organisms**, they do not constitute functionally and morphologically differentiated tissues. Except to the cytoplasm, which fills completely the space of a prokaryotic cell, they have four ever present structures: prokaryotic nucleus (nucleoid), cytoplasmic membrane, ribosomes, and usually also the cell wall.

2. **The nucleus of prokaryotic cells** is not separated from the cytoplasm by membrane. It is stored in the cytoplasm and it consists only of one large molecule of deoxyribonucleic acid (DNA), which fulfils in the prokaryotic cell the function of a chromosome and it **is double chained and circular (has no loose ends**).

3. **Dividing of prokaryotic cells nucleus includes only replication of DNA, never mitosis**.

4. **Up to a few exceptions all prokaryotic cells are wrapped up with a rigid membrane, so called cell wall**. The chemical composition of the cell wall of prokaryotic cells is however different than the cell walls of plant cells. The main component of the cell wall of prokaryotes is peptidoglycan (murein) or atypical peptidoglycan (pseudomurein). Since the cell wall of prokaryotes is solid, Monera cells can maintain their shapes.

5. **Prokaryotic cells reproduce by transverse dividing**. First their circle chromosome, i.e. DNA divides and then the cell splits gradually into two daughter cells. Both cells grow up and they divide transversely again.

6. **Prokaryotic cells do not contain organelles such as mitochondria and chloroplasts of eukaryotic cells, but as well as eukaryotic cells they contain ribosomes in the cytoplasm, which are used to synthesize**

proteins. Protein synthesis in ribosomes is controlled by genes, which are stored in the circle chromosome (DNA) of prokaryotic cell. At prokaryotes there are all ways of transfer of genetic information, i.e. replication of a circle chromosome, its transcription into mRNA, whose information is overwritten from the circle chromosome and it is translated into the primary structure of the proteins.

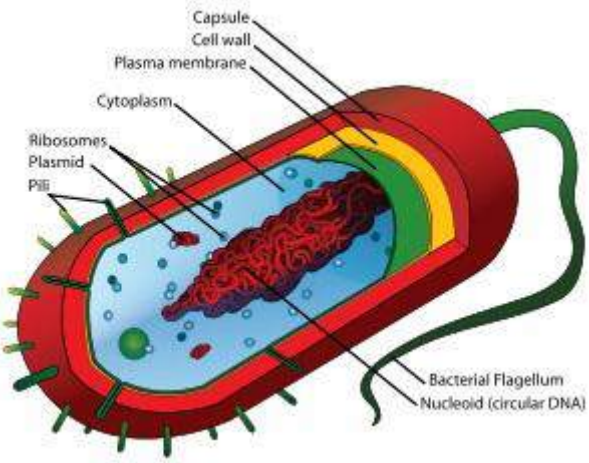
7. **Nutrition of procaryotes is varied**. Some are fed autotrophicly, others heterotrophicly. Basic nutrient of autotrophic prokaryotes is carbon dioxide (CO_2). On the other side heterotrophic prokaryotes gain carbon from a variety of organic substances, such as carbohydrates, proteins, salts of organic acids, alcohols, etc.

8. **All organisms of procaryotic cell type** are **referred to as bacteria** according to "Bergey´s Manual of Determinative Bacteriology" from 1994. On the basis of evolutionary lines expressed in universal phylogenetic tree they are divided into two realms:

I. **Eubacteria.** The main chemical constituent of the cell wall of all eubacteria is peptidoglycan (murein), containing muramic acid as one of its main components. By the influence of peptidoglycan the surface of the eubacterial cells is hard, for all eubacteria it is typical the translation, during which on ribosomes the amino acid formylmethionine is sorted into the primary structure of polypeptide chain. For example **cyanobacteria, green nonsulfur bacteria, purple bacteria, flavobacteria, gram-positive bacteria**, from eubakteria developed mitochondria and chloroplasts.

II. **Archaebacteria.** Procaryotic cell wall is made up either of pseudomurein, which is an atypical peptidoglycan not containing muramic acid, or it is made up of proteins, some archaebacteria even do not have a cell wall. Their other hallmark is that during translation, that occurs on their ribosomes, as the first one into the polypeptide chain the amino acid metionin is sorted.

Both of the realms diverged from a common hypothetical ancestor (urcell, progenota) into two different evolutionary lines (branches), the first branch is eubacteria, and the second branch is archaebacteria and on them in this second branch following eukaryotes.



The cross section through a **prokaryotic cell** (see http://cs.wikipedia.org/wiki/Prokaryotick%C3%A1_bu%C5%88ka , **English:** diagram of prokaryotic cells, Mariana Ruiz Villarreal LadyofHats, translated by Michael Maňas (User: Snek01), Mar 2, 2008, 30.3.2008, translated) from the top capsule, cell wall, a plasma membrane, cytoplasm, , ribosomes, plasmid, pili, bacterial flagellum, a nucleotide (a circular DNA)

Organisms of eukaryotic type or the eukaryotes (literally apparently a good body) are single-celled as well as multi-cellular (e.g. gradually **entamoebas, mycetozoa, ciliates, fungi, and plants and animals**). Their cells are referred to as eukaryotic and they are characterized by these characters and properties:

1. **They include a nucleus, that is distinctly separated from the cytoplasm by nuclear membrane**. Mass, by which is composed a nucleus of eukaryotic cells, is called chromatin. It consists of DNA and proteins. During mitosis the chromatin condenses in microscopically visible threads-chromosomes. Unlike prokaryotic cells each chromosome of eukaryotic cells is composed of protein and a long double chain thread of DNA, of which both ends are free and they are therefore not linked to the circle, as it is in the case of prokaryotes. Therefore **DNA**, which is located in the chromosomes of eukaryotic cells, is not circular but **linear**.

2. Dividing of **a nucleus of eukaryotic cells is miotic**. By this division the accurate distribution of chromosomes among daughter cells is ensured. **Mitosis** (mitotic division) is a type of cell division, of which task is to ensure the smooth transmission of not reduced genetic information to daughter cells. During mitosis a complex process of the division of cell nuclei precedes the own division of a cell, during which number of chromosomes remains retained in the daughter nuclei. (see http://cs.wikipedia.org/wiki/Mit%C3%B3za)

3. **All eukaryotic cells contain mitochondria unlike prokaryotes**. Mitochondria contain DNA, which is circular and in this respect it is similar to DNA, that forms the chromosome of prokaryotes.

4. **Eukaryotic cell contain similarly as prokaryotic the ribosomes, i.e. organelles, in which takes place a synthesis of proteins**. Unlike prokaryotes the eukaryotic ribosomes are of dual-type (in the case of plants of three type):

a) **cytoplasmatic ribosomes**, which are found in the cytoplasm and by its composition they are in some ways different from the procaryotic ribosomes.

b) **mitochondrial ribosomes**, which are in mitochondria and they have almost the same composition as procaryotic cells.

5. **In all eukaryotic cells there is the transfer of genetic information in two tracks (three tracks at plants):**

a) replication of DNA of nuclear chromosomes by transcription of this DNA into larger molecules, so called precursor mRNA or pre-mRNA, which breaks down into smaller molecules having a function of mRNA and translated on the cytoplasmic ribosomes into primary structure of proteins;

b) replication of DNA of mitochondria by its transcription into mRNA molecules translated on mitochondria ribosomes into the primary structure of proteins.

At plants as a third track the transmission of genetic information in chloroplasts participates (see below).

6. **Translation is a dual-type**:

a) **translation on cytoplasmic ribosomes**, during which similarly as at eubacteria as the first amino acid into the primary structure of polypeptide chain the amino acid methionine is sorted.

b) **translation on mitochondrial ribosomes**, during which similarly as at eubacteria as the first amino acid into the primary structure of the polypeptide chain the amino acid formylmethionine is sorted.

7. Furthermore in eukaryotic cells these structures are: **endoplasmic reticulum, Golgi system, lysosomes**. For each of these components of eukaryotic cells is characteristic, that it is separated from the cytoplasm by membrane.

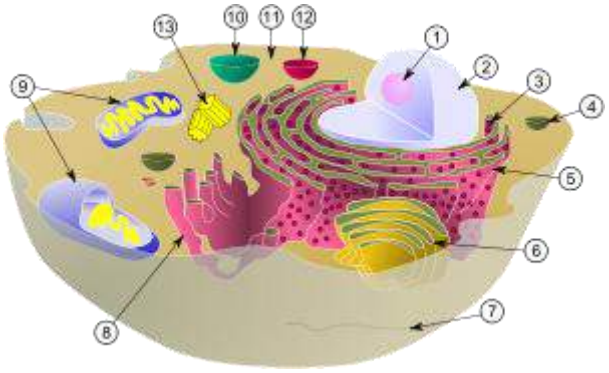
Eukaryotes are divided into three realms:

I. **Plants (Plantae).** Part of their cells are next to mitochondria also chloroplasts. Chloroplasts contain similarly as mitochondria the circular DNA, on which are located genes, that control the synthesis of proteins required for the function of chloroplasts. This synthesis is the same as for prokaryotes. The transmission of genetic information in the chloroplasts is happening in this way: by the replication of DNA of chloroplasts and its transcription into mRNA molecules added onto chloroplast ribosomes into the primary structure of proteins. Similarly as prokaryotic cells the plant cells are also covered by membrane known as a cell wall. Cell wall of plant cells is unlike at prokaryotes composed of cellulose. Below the cell wall there is a cytoplasmic membrane. The plants are mostly photolitotrophic (photoautotrophic) organisms (trophic means nourishing tissue concerning organisms nutrition), of which basic nutrient is carbon dioxide, from which in photosynthesis (photo indicates a relationship to the light) they gain carbon for the synthesis of starch as the storage subsatance.

II. **Fungi (Fungi).** The fungi cells have a cell wall from chitin. They are heterotrophic and they contain **mitochondria, not chloroplasts.**

III. **Animals (Animalia).** Animal cells do not have a cell wall and they have only cytoplasmic membrane and they do not contain chloroplasts. Their nutrition is heterotrophic.

Eukaryotes are the product of a third evolutionary line (branch). All eukaryotes should be included into a single realm with subrealms **Fungi, Plantae and Animalia**, which we classify so far at the level of the realms. A number of groups of eukaryotic organisms (ciliates, mycetozoa, etc.) derived from the main evolutionary line towards the animals, fungi and plants and apparently each of them will constitute a separate subrealm. It is expected that in the nearest future the system of organisms will be adapted to the universal phylogenetic tree.



Schematic model **of eukaryotic cells**. 1-nucleolus; 2-nucleus; 3-ribosome; 4-vesicle; 5-rough endoplasmic reticulum; 6-Golgi apparatus; 7-cytoskeleton; 8-smooth endoplasmic reticulum; 9-mitochondria; 10-vacuole; 11-cytosol; 12-lysosome; 13-centriole (see http://cs.wikipedia.org/wiki/Eukaryotick%C3%A1_bu%C5%88ka , MesserWoland and Szczepan1990 , 15.10.2008, file: Biological cell. svg)

5.4. ESSENCE OF THE EVOLUTION OF LIVING SYSTEMS

Definitions and relationships

(performance)

In the context of biological evolution there is the constant formation of some species, individuals and virtually the termination of other species and individuals. It is a **natural selection**, where only the best individuals, genetically well equipped, survive and who proliferate also well.

The Universe is from the perspective of Philosophy of Balance of physics a mobility field characterized by the existence and by movement of particles of different weights, or of zero weight. These particles collide with each other and here I see the essence of all physical, chemical and biological phenomena in our world.

The object of physics as a whole (formation subagency of formation agency) is the **movement. The object of chemistry** as a whole (formation subagency of formation agency) is the **movement of electrons, or chemical reaction**. **The object of biology** as a whole (formation subagency of formation agency) is particularly **internal and external movement of biological macromolecules (mainly proteins and nucleic acids) or the study of living systems**. It is the movement, which is the progress from general to specific scientific disciplines, still more specific and more special phenomenon.

From the above it follows, that also the subject of biology as the science about living systems is the movement of particles, namely the **movement of biological macromolecules.** It is from the perspective of Philosophy of Balance once again the **mobility field** characterized by a certain interval of motion of particles. If we translate this idea to the common denominator of all atomic structures, we can talk about the **momentum of protons, neutrons and electrons of biological macromolecules**, i.e. organic chemical substances.

It can be concluded, that with the evolutionary development of advanced organisms more **complex living systems** are formed. In my opinion the more complex system is characterized by **a larger number of units**, of which it is composed, I mean cell organelles, cells of tissues, organs and organisms. From the perspective of Philosophy of Balance of physics the improved organisms are characterized by **a larger movement of biological macromolecules** than simpler organisms. In the above defined meaning we can say, that **protons, neutrons and electrons of improved organisms are characterized by higher mobility density** than the same particles of simpler organisms.

In this context it is necessary to use a quantity a **mobility density**, or the amount of movement or the size of momentum per unit of volume of the living system, as we do not want to measure the size of organisms, but their evolutionary perfection. Large organism is characterized by greater absolute momentum of the above mentioned particles, but greater or lesser mobility density according to the perfection of an organism.

Most of perfect organisms consists of the same **eukaryotic cells**, so we can talk about **the same, or similar mobility density of these cells**. Where is the difference of organisms according to their evolutionary perfection, it is in their **outer movement**, the complexity of tissues, organs, that form these cells. Therefore we can talk about the differences especially in their external momentum, mainly at similar organisms, which consist of similar quantity and a type of biological macromolecules.

This mobility expression of evolutionary perfection of the organism corresponds also to **philosophical teaching, which sees the main difference of living systems** in their movement, which does not come from the outside but from the inside of this living system.

Each **kind of living organism represents so the mobility field** of particles of a certain value of the momentum. From the standpoint of biology then it represents a system of electrons, neutrons and protons of biological macromolecules at a certain constant value of the momentum of particles. Or also at a specific **average momentum** per one electron, proton and neutron of biological macromolecules.

Every living organism as a mobility field in the momentum field of the Universe is so exposed to **collision with other momentum fields with other particles of different momentum**. The aim of an organism is then to maintain itself during these collisions. Maintaining itself from the perspective of Philosophy of Balance of physics is then the **conservation of the living system** as the movement of biological macromolecules, i.e. momentum field at the specific value of the momentum of particles, and it's through collisions with particles outside of the living system at a different momentum.

This maintenance is done **by the energy or momentum supply** (the link between the momentum and energy was shown in the Philosophy of Balance of Physics) **from photosynthesis or food and liquids**. Thus it increases the momentum of biological macromolecules, which is reduced by collisions of particles of mostly inorganic and also organic surroundings ofthe system. At the same time the momentum of particles of living system increases through collisions of particles, which have a greater momentum than the particles of a living system.

By oxidation we call an agency, in which a reactant passes its electron, thus it reduces its overall local momentum, however it increases its mobility density, **reduction,** in which a reactant accepts an electron, thus it increases its overall local momentum, but it reduces its mobility density. Oxidation and reduction occur mostly in one reaction and the resulting charge is then the same or a zero. An example of a redox reaction is **electrolysis**. At secondary batteries it is reversed process, oxidized electrons are reduced and then they oxidize again.

Reactions in chemistry either reduce mobility density of a reactant, then they are fundamentally **synthesis reactions** often caused by the adoption of the electron through **reduction,** that will reduce the momentum of a proton in the nucleus and thus also the energy density of the reactant at the increase in its total energy, or momentum. The opposite are **analytical (decomposition) reaction**s, when mobility density of the reactant is increased and consequently its instability and crashes and the stronghold of bonds is reduced, often it is **oxidation** by the handover of electron, thereby the momentum of the bound neutral protons and the pressure on the disintegration of the reactant increase. The same targets can be achieved by lowering energy, mobility density, virtually by cooling or with an inhibitor (i.e. the substance with low mobility) and by warming or with a catalyst (i.e. the substance with substantially higher momentum), which will increase the energy of the reactant.

At the same time the reactions are common, where at one substance of a reactant the energy or mobility density increases and the total energy, virtually momentum reduces and at the second substance vice versa. Analytical (decomposition) reactions represent the influence of the next dimension of other mass and other energy to our dimension in the form of contracoagency. Synthesis (composition) reactions are own to our dimension in the form of coagency.

In addition to chemical reactions the interaction of particles of an organism and particles of surroundings at different momentum occurs also **through the biological and physical movement**. An example of a physical movement is a bullet from a pistol and an example of biological motion e.g. an attack of a virus.

In the context of biological evolution only those survive, who can inherently adapt to the **fight for life, i.e. to maintain itself and to find a balance between composition and decomposition processes in the way** to be maintained a living system as the mobility field of particles at a certain value of the momentum.

Biological evolution presents the gradual **interaction of various organisms as momentum fields with other** organisms as the momentum fields and momentum fields of inorganic surroundings. It is the competition of momentum fields of the different values for momentum, where **the most stable mobility field survives**. Stable mobility field represents the balance between clashes with particles of greater and lesser momentum while keeping its own values of momentum of particles.

It is logical, that to maintain its own momentum are primarily predestined the **systems of high absolute value of momentum** as the planets of the planetary system or large animals, etc. Also the organisms, which are characterized by a high degree of processing energy or momentum resources, which enables them to maintain a relatively high mobility **density of living organisms**. Improved living system as the mobility field of higher

mobility density must be characterized by improved way of the processing of energy, virtually momentum resources.

The cause of natural selection in the form of collisions of momentum fields I see in the **interaction of our and the next dimension**. In my opinion the next dimension represents mobility field of particles at a speed greater than the speed of light. The intersection between the next and our dimension represents then the **light** as a stream of particles at zero rest mass-photons at the speed of light and absolute vacuum. In my opinion the proof of the existence of a next dimension are then **black holes**, as I have already stated and tried to prove in the Philosophy of Balance of physics.

Particles of our and next dimension increase thereby the momentum of the particles of our dimension by constant collisions with them, thus this energy or momentum allows **the development of living organisms of higher mobility density or of improved living systems**. Our dimension as our Universe reduces then the momentum of particles of momentum fields by its lower momentum.

Due to this continuous increase and decrease in momentum of momentum fields of our and next dimension occurs then constant creation of new advanced forms of organisms, or life, which must resist however the struggle for life, the constant process of formation and termination, creation and destruction **caused by the speeding forces of the other energy and other mass of the next dimension and the mass and energy of our dimension** (see Philosophy of Balance of physics, the chapter Next dimension).

5.5 ESSENCE OF LIFE AND DEATH, OR THE EVILS OF LIVING SYSTEMS

Definitions and relationships

(performance)

Living system or organism is, as I have already said above in terms of the Philosophy of Balance of physics a **mobility field**, i.e. the field of particles, possibly particles of zero weight with certain momentum, which react with other particles of this momentum field or even with surrounding particles, i.e. of other momentum fields, through collisions. What distinguishes the momentum field of the living system from momentum field of inanimate systems, it is its **composition of particles, grouped into biological macromolecules.**

The goal of any living system is to preserve itself, whether in the form of its own existence or in the form of offsprings.

As I have already stated, the preservation of itself assumes to find a balance between composition and decomposition processes in order to **maintain a living system as a mobility field of particles at a certain value of the momentum**. Or the maintaince of a certain value of the momentum own to a living organism or to its indispensable part or of **intervals of momentum, in which organism or its part can still survive**, it is a prerequisite condition for conservation and the existence of a living system or life of the organism.

It is logical, that to maintain its own momentum the systems of high absolute value of momentum as **large animals** are predestined primarily. Also the organisms, which are characterized by a high degree of processing energy or momentum resources, which enables them to maintain a relatively **high mobility density of living organisms**. Improved living system as the mobility field at higher mobility density is characterized by improved way of processing the energy or momentum resources.

Organisms are constantly exposed to **competitive momentum fields of their surroundings**, whether inanimate or living nature, that through collisions of their particles either increase or reduce the momentum of the particles of momentum field of living system and thus they push them outside the value of the momentum, that suits best to a given organism.

The cause **of natural selection in the form of collisions of momentum fields I see in interaction of the next and our dimension**. In my opinion the next dimension represents mobility field of particles at a speed greater than the speed of light. The intersection between the next and our dimension represents then the light as a stream of particles at zero rest mass - of photons at the speed **of light and absolute vacuum**. In my opinion the proof of the existence of a next dimension are black holes, as I have already stated and tried to prove in the Philosophy of Balance of physics.

Particles of our and next dimension increase thereby the momentum of the particles of our dimension by constant collisions with them, this energy or momentum allows thus **the development of living organisms of higher**

mobility density or of improved living systems. Our dimension as our Universe reduces then the momentum of particles of momentum fields by its lower momentum.

Due to this continuous increase and decrease in momentum of momentum fields of our and next dimension occurs then constant creation of new advanced forms of organisms, or life, which must resist however the struggle for life, the constant process of formation and termination, creation and destruction **caused by the speeding forces of the other energy and other mass of the next dimension and the slowing mass and energy of our dimension** (see Philosophy of Balance of physics, the chapter Next dimension).

While keeping its momentum **alive organism uses energy, or momentum accepted in the form of food and liquids, virtually nutrients from its surroundings**. The more improved is the organism, the better it uses its energy or momentum of accepted nutrients, not only external momentum, but also internal momentum of the particles of these nutrients in the form of complex chemical reactions, that, figuratively speaking, push them to a life.

In addition to these external sources of momentum coming into an organism from its surroundings the organisms use apparently also **inner energy or momentum of their building elements, i.e. of biological macromolecules,** that are, figuratively speaking, worn out with the length of life or their internal momentum gets spend.

If there is a **reduction or an increase in momentum outside the existential interval of given living organism or of its part, then the living organism dies or its part dies**, both as regards its external momentum as a result of lack of food or liquid intake, virtually nutrients, or also, what concerns its internal momentum in the form of weakening of the organism, for example by old age. An example of such a change of momentum can be another organism, that invaded the given organism and it changed the momentum of its parts, or it separates it from the momentum field, as well as an inanimate object like a bullet shot from a gun, that changesthe momentum of the organism by increasing its external momentum.

The influence of **competing momentum fields** is manifested also in **instincts, or the brain** of man or of other living system, who is also exposed to collisions with particles, that change the momentum of his or her particles, virtually of chemical reactions in the way, that it is incompatible with the momentum of other momentum fields representing their living and nonliving surroundings. Thus a living system is forced through mostly chemical reactions as chemical movement in the brain, virtually through instincts to behavior, which is incompatible with a life of other living systems.

In this sense it is necessary to see the **evil ideas of man as chemical reactions in the brain, as cerebral partial mobility fields**, when these fields are found outside the mobility **values, which are own to a man**. In this sense, it is possible to understand also to harmful mental processes in terms of psychology. Similarly it is in the case of other living systems except it, that these other living systems are less able to influence these processes alone by their will now.

Preserving and promoting of wider application of own values of momentum often leads to incompatibility with the values of momentum of other living systems, that get so outside the interval of their existential values, virtually values, in which the living organism is still able to survive.

At the same time it can be **self-destructive behavior**, when a living system changes under the influence of competing momentum fields its and its surroundings momentum in a way, that does not correspond to its natural value of momentum, virtually momentum of its organs and other parts, virtually it can cause a deflection of this momentum beyond its existential interval, i.e. outside the values, in which this system is still able to survive and live.

Organisms or their organs and other parts are constantly exposed to **competitive momentum fields** of their surroundings, whether inanimate or living nature, that either increase or reduce by collisions of their particles the momentum of particles of momentum field of living system and thus it pushes out the value of the momentum, which best suits to a given organism.

In this sense the **evil of living systems shoud be seen in their death or in death of their parts,** that is caused by constant colliding with the wholes of lower and higher momentum. Organisms must constantly fight for life by renewing their natural momentum by their self-regulatory abilities. The organism, virtually its part **suffers also, if this momentum field gets off a value of their natural momentum**.

To the removal of the evil of living systems is needed for living systems to exist in the outer momentum field, which is not incompatible with life, virtually outside the existential mobility interval of any of these momentum fields, or any living system. Or it is incompatible with them **at a minimum possible extent** even at the cost, that

these mobility fields will be outside their ideal interval,l at a price, that they will allow the existence or the value, which is in an existential momentum interval of all other momentum fields.

Due to the fact, that all mobility fields, or **alive and lifeless world are connected** by **c**ollisions of their particles, so the disposal of one albeit seemingly unneeded momentum field for a human may ultimately lead even for him or her to the very harmful consequences, because there the regrouping of the total momentum of the total momentum field of live and inanimate world occurrs, while the total value of the momentum and energy **does not change** according to the **law of conservation of momentum and energy**. Therefore each intervention into the nature, which is not reversible, one must think throughfully.

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Philosophy of Balance or ORDER OF VICTORIOUS ARMY as biblical paradise in the world for all living creatures by our own forces as commentary on Bible, Genesis, chapter 1-4

Genesis 1-4:26

King James Version (KJV)

1

1 In the beginning God created the heaven and the earth.

2 And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

3 And God said, Let there be light: and there was light.

4 And God saw the light, that it was good: and God divided the light from the darkness.

5 And God called the light Day, and the darkness he called Night. And the evening and the morning were the first day.

6 And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters.

7 And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so.

8 And God called the firmament Heaven. And the evening and the morning were the second day.

9 And God said, Let the waters under the heaven be gathered together unto one place, and let the dry land appear: and it was so.

10 And God called the dry land Earth; and the gathering together of the waters called he Seas: and God saw that it was good.

11 And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself, upon the earth: and it was so.

12 And the earth brought forth grass, and herb yielding seed after his kind, and the tree yielding fruit, whose seed was in itself, after his kind: and God saw that it was good.

13 And the evening and the morning were the third day.

14 And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years:

15 And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so.

16 And God made two great lights; the greater light to rule the day, and the lesser light to rule the night: he made the stars also.

17 And God set them in the firmament of the heaven to give light upon the earth,

18 And to rule over the day and over the night, and to divide the light from the darkness: and God saw that it was good.

19 And the evening and the morning were the fourth day.

20 And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven.

21 And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind, and every winged fowl after his kind: and God saw that it was good.

22 And God blessed them, saying, Be fruitful, and multiply, and fill the waters in the seas, and let fowl multiply in the earth.

23 And the evening and the morning were the fifth day.

24 And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind: and it was so.

25 And God made the beast of the earth after his kind, and cattle after their kind, and every thing that creepeth upon the earth after his kind: and God saw that it was good.

26 And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.

27 So God created man in his own image, in the image of God created he him; male and female created he them.

28 And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.

29 And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat.

30 And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat: and it was so.

31 And God saw every thing that he had made, and, behold, it was very good. And the evening and the morning were the sixth day.

2

1 Thus the heavens and the earth were finished, and all the host of them.

2 And on the seventh day God ended his work which he had made; and he rested on the seventh day from all his work which he had made.

3 And God blessed the seventh day, and sanctified it: because that in it he had rested from all his work which God created and made.

4 These are the generations of the heavens and of the earth when they were created, in the day that the LORD God made the earth and the heavens,

5 And every plant of the field before it was in the earth, and every herb of the field before it grew: for the LORD God had not caused it to rain upon the earth, and there was not a man to till the ground.

6 But there went up a mist from the earth, and watered the whole face of the ground.

7 And the LORD God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul.

[8] And the LORD God planted a garden eastward in Eden; and there he put the man whom he had formed.

[9] And out of the ground made the LORD God to grow every tree that is pleasant to the sight, and good for food; the tree of life also in the midst of the garden, and the tree of knowledge of good and evil.

[10] And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads.

[11] The name of the first is Pison: that is it which compasseth the whole land of Havilah, where there is gold;

[12] And the gold of that land is good: there is bdellium and the onyx stone.

[13] And the name of the second river is Gihon: the same is it that compasseth the whole land of Ethiopia.

[14] And the name of the third river is Hiddekel: that is it which goeth toward the east of Assyria. And the fourth river is Euphrates.

[15] And the LORD God took the man, and put him into the garden of Eden to dress it and to keep it.

[16] And the LORD God commanded the man, saying, Of every tree of the garden thou mayest freely eat:

[17] But of the tree of the knowledge of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die.

[18] And the LORD God said, It is not good that the man should be alone; I will make him an help meet for him.

[19] And out of the ground the LORD God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that was the name thereof.

[20] And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field; but for Adam there was not found an help meet for him.

[21] And the LORD God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs, and closed up the flesh instead thereof;

[22] And the rib, which the LORD God had taken from man, made he a woman, and brought her unto the man.

[23] And Adam said, This is now bone of my bones, and flesh of my flesh: she shall be called Woman, because she was taken out of Man.

[24] Therefore shall a man leave his father and his mother, and shall cleave unto his wife: and they shall be one flesh.

[25] And they were both naked, the man and his wife, and were not ashamed.

3

[1] Now the serpent was more subtil than any beast of the field which the LORD God had made. And he said unto the woman, Yea, hath God said, Ye shall not eat of every tree of the garden?

[2] And the woman said unto the serpent, We may eat of the fruit of the trees of the garden:

[3] But of the fruit of the tree which is in the midst of the garden, God hath said, Ye shall not eat of it, neither shall ye touch it, lest ye die.

[4] And the serpent said unto the woman, Ye shall not surely die:

[5] For God doth know that in the day ye eat thereof, then your eyes shall be opened, and ye shall be as gods, knowing good and evil.

[6] And when the woman saw that the tree was good for food, and that it was pleasant to the eyes, and a tree to be desired to make one wise, she took of the fruit thereof, and did eat, and gave also unto her husband with her; and he did eat.

[7] And the eyes of them both were opened, and they knew that they were naked; and they sewed fig leaves together, and made themselves aprons.

[8] And they heard the voice of the LORD God walking in the garden in the cool of the day: and Adam and his wife hid themselves from the presence of the LORD God amongst the trees of the garden.

[9] And the LORD God called unto Adam, and said unto him, Where art thou?

[10] And he said, I heard thy voice in the garden, and I was afraid, because I was naked; and I hid myself.

[11] And he said, Who told thee that thou wast naked? Hast thou eaten of the tree, whereof I commanded thee that thou shouldest not eat?

[12] And the man said, The woman whom thou gavest to be with me, she gave me of the tree, and I did eat.

[13] And the LORD God said unto the woman, What is this that thou hast done? And the woman said, The serpent beguiled me, and I did eat.

[14] And the LORD God said unto the serpent, Because thou hast done this, thou art cursed above all cattle, and above every beast of the field; upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life:

[15] And I will put enmity between thee and the woman, and **between thy seed and her seed; it shall bruise thy head, and thou shalt bruise his heel.**

[16] Unto the woman he said, I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children; and thy desire shall be to thy husband, and he shall rule over thee.

[17] And unto Adam he said, Because thou hast hearkened unto the voice of thy wife, and hast eaten of the tree, of which I commanded thee, saying, Thou shalt not eat of it: cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life;

[18] Thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field;

[19] In the sweat of thy face shalt thou eat bread, till thou return unto the ground; for out of it wast thou taken: for dust thou art, and unto dust shalt thou return.

[20] And Adam called his wife's name Eve; because she was the mother of all living.

[21] Unto Adam also and to his wife did the LORD God make **coats of skins**, and clothed them.

[22] And the LORD God said, Behold, the man is become as one of us, to know good and evil: and now, lest he put forth his hand, and take also of the tree of life, and eat, and live for ever:

[23] Therefore the LORD God sent him forth from the garden of Eden, to till the ground from whence he was taken.

[24] So he drove out the man; and he placed at the east of the garden of Eden Cherubims, and a flaming sword which turned every way, to keep the way of the tree of life.

4

[1] **And Adam knew Eve his wife; and she conceived, and bare Cain**, and said, I have gotten a man from the LORD.

[2] **And she again bare his brother Abel. And Abel was a keeper (of sheep), but Cain was a tiller of the ground.**

[3] And in process of time it came to pass, that Cain brought of the fruit of the ground an offering unto the LORD.

[4] And **Abel, he also brought of the firstlings of his flock and of the fat thereof.** And the LORD had respect unto Abel and to his offering:

[5] But unto Cain and to his offering he had not respect. And Cain was very wroth, and his countenance fell.

[6] And the LORD said unto Cain, Why art thou wroth? and why is thy countenance fallen?

[7] If thou doest well, shalt thou not be accepted? and if thou doest not well, sin lieth at the door. And unto thee shall be his desire, and thou shalt rule over him.

[8] And Cain talked with Abel his brother: and it came to pass, when they were in the field, that **Cain** rose up **against Abel his brother, and slew him.**

[9] And the LORD said unto Cain, Where is Abel thy brother? And he said, I know not: Am I my brother's keeper?

[10] And he said, What hast thou done? the voice of thy brother's blood crieth unto me from the ground.

[11] And now art thou cursed from the earth, which hath opened her mouth to receive thy brother's blood from thy hand;

[12] When thou tillest the ground, it shall not henceforth yield unto thee her strength; a fugitive and a vagabond shalt thou be in the earth.

[13] And Cain said unto the LORD, My punishment is greater than I can bear.

[14] Behold, thou hast driven me out this day from the face of the earth; and from thy face shall I be hid; and I shall be a fugitive and a vagabond in the earth; and it shall come to pass, that every one that findeth me shall slay me.

[15] And the LORD said unto him, Therefore whosoever slayeth Cain, vengeance shall be taken on him sevenfold. And the LORD set a mark upon Cain, lest any finding him should kill him.

[16] And Cain went out from the presence of the LORD, and dwelt in the land of Nod, on the east of Eden.

[17] **And Cain knew his wife; and she conceived, and bare Enoch: and he builded a city, and called the name of the city, after the name of his son, Enoch.**

[18] And unto Enoch was born Irad: and Irad begat Mehujael: and Mehujael begat Methusael: and Methusael begat Lamech.

[19] And Lamech took unto him two wives: the name of the one was Adah, and the name of the other Zillah.

[20] And Adah bare Jabal: he was the father of such as dwell in tents, and of such as have cattle.

[21] And his brother's name was Jubal: he was the father of all such as handle the harp and organ.

22 And Zillah, she also bare Tubalcain, an instructer of every artificer in brass and iron: and the sister of Tubalcain was Naamah.

23 And Lamech said unto his wives, Adah and Zillah, Hear my voice; ye wives of Lamech, hearken unto my speech: for I have slain a man to my wounding, and a young man to my hurt.

24 If Cain shall be avenged sevenfold, truly Lamech seventy and sevenfold.

25 And Adam knew his wife again; and she bare a son, and called his name Seth: For God, said she, hath appointed me another seed instead of Abel, whom Cain slew.

26 And to Seth, to him also there was born a son; and he called his name Enos: then began men to call upon the name of the LORD.

http://www.biblegateway.com/passage/?search=Genesis%201:1-4:26&version=KJV

Secondary School Philosophy of Balance is detailed summary of the basis of all current human knowledge and putting it into a unified system according to the Philosophy of Balance.

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