

In 2015, 195 nations agreed with the United Nation
that they can change the world for the better.

This can be accomplished by bringing together respective governments, businesses, media,
institutions of education, local NGOs etc.

The overall goal is to improve quality of living in physical conditions on the Earth
and overall quality of people lives
including harmonious relationships in their countries

which will support optimal individual self-development
in optimal physical and social environmental conditions.

Quality of life of the people can be improved through human social interaction and
communication :

1. Inclusive societies promote equal and equity social conditions for all differences between people and thus better interpersonal relationships

2. Equality of people's rights and freedom through mutual personal respect and respect of human rights of people to develop optimally in respect to their genetic differences.

SDG goals can be achieved through activity of many public channels in argumented communication and specially in school places,

where emphasizing importance of the role of human understanding of social and physical life conditions on Earth and Universe requires activity to keep natural conditions necessary for quality life existence.

Raising awareness of necessity to keep our Planet "blue and green" raises also question how schools should be organized so that such a heavy task of raising human awareness could be done.

United Nations agreed that children have priority and that governments should act in the direction of the best interests of the children

through the idea of EFA (Education for All) and inclusive education.

Fundaments for inclusive education can be found on

WORLD CONFERENCES, UNESCO, UNICEF, SDG

documents which should be realized till the year 2030.

For understanding inclusive education we have to understand how human beings function.

ZIPOC IS THEORY OF INTERNAL AND EXTERNAL BALANCE OF HUMAN KIND

The basis for thinking about ZIPOC is thinking about living in balance with oneself, with other people and with nature (compare NSOV, 2016).

ZIPOC is sufficient and necessary (personal and/or team) integrity of the individual (2016)

to meet the organization criterion of balanced integrity necessary for survival.

Trstenjak's thinking (1957: 79, in NSOV 2016) about man,
his life, the search for balance between himself and the environment,

about factors for understanding such as e.g. thinking, feeling, acting, ...
can influence the achievement of a harmonious and happy life.

In this way, we realize that, among other things,
man strives for his own balance in all areas
and therefore also balance in society and the whole of nature.

We can also add that maintenance of balance can be extend
to the planetary system and the whole Universe.

Trstenjak asks: who is a man anyway?

Depending on the object of research, ZIPOC defines the sufficient and necessary integrity of an individual and understands man in the following dimensions:

- body balance
- spiritual balance
- the art of living (man as a social being)
in which the individual tries to achieve a balance of life and survival,
- professional work development
and social integration by creating economic stability.

The listed conditions should define the bio-psycho-social BALANCED functioning of the individual in private and professional life,

including personal techniques for improving the balanced functioning of the individual.

Listed conditions should represent important factors
in achieving physiological and psychological WELL-BEING,

respect of other stakeholders, human rights
and ethical behaviour (Compare NSOV 2016)

Knowledge about the functioning of the individual and society
as a group of more or less interactively-communicatively connected individuals

can be raised through understanding of personal and social balance,
through their creativity which makes trials to balance natural conditions of life
within HUMAN social interaction and communication.

Such an understanding can be achieved through a comprehensive
consideration of the structure and functioning of the human being in the natural environment
(compare Hartman 2016).

A comprehensive treatment of the balance of the individual
in his physical and social environment

is possible by comprehensively integrating scientific knowledge
and other knowledge produced by mankind through thinking, feeling, imagination, etc.

Integrating scientific knowledge into an understanding of the
"comprehensive sustainable picture of the world"

can make it possible to direct the individual's "desired" performance
to a balanced survival.

The central question is how the organism or Living System create
and maintain bio-psycho-social balance
and how they act goal-oriented towards balanced states (Hartman 2016).

We need a scientific explanation of how living beings, especially humans, achieve and maintain bio-psycho-social-natural balance and thus quality survival?

Any limitation of knowledge to uni- or semi-scientific or non-scientific thinking could mean unnecessary obstacle to certain complex multiscientific understanding of human kind,

because of serious loss of important information in understanding of the complexity of human functioning in its environment through purposeful behavior.

With nervous subsystem, human is the most complex creature in the Universe known to mankind.

The complexity of the nervous system is probably the most responsible factor for the human constant structure and homeostatic (balanced) functioning as Living system.

Cybernetics is one of the most complex scientific possibilities of knowing and understanding the comprehensiveness of the environment's effects on the individual and her/his bio-psycho-social balanced actions on the environment.

Cybernetics is a New Science (Wiener 1948, in 1960) that deals with the bio-psycho-social balance of an individual in a multi-dimensional, multi-disciplinary and trans-disciplinary manner.

Original Title of Cybernetics is

"Control and Communication in the Animal and the Machine" (N. Wiener 1948, in 1960)

CYBERNETICS is thus a New Science ABOUT CONTROL in Living Systems and Machines

offering explanation how balanced integrity of Living Systems can be achieved and maintained in physical and social balanced conditions of the Earth.

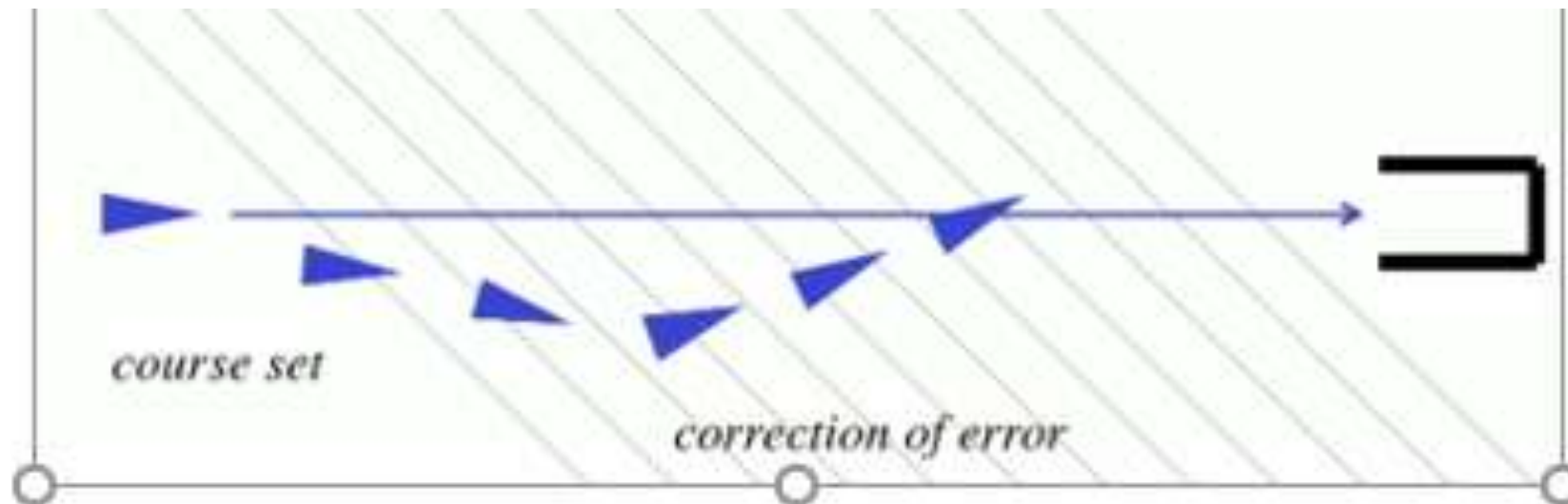
Cybernetics derives from Greek word "kubernetes" meaning "ship pilot".

The beginnings of Cybernetics and thus goal-seeking (orientied) human behavior

goes most likely back to the date in 1943 when Rosenblueth, Wiener and Bigelow published "Behavior Purpose and Teleology".

Article is about purposeful (goal) oriented and anticipating (planning) behavior as a result of human thinking and decision-making.

Diagram from Paul Pangaro (president of ASC) – the essence of Cybernetics



Cyber-historian Peter Asaro attributes the beginnings of Cybernetics to the psychiatrist W. Ross Ashby,

who was supposed to implement the initial concepts from Cannon's Homeostasis (1932)

and brought together the basic concepts of Cybernetics somewhere in 1940.

Physiologists (e.g. Guyton, 2021) refer to the state of physical and bio-chemical balance in a Living system as an almost constant internal environment - homeostasis,

which is maintained by control mechanisms to some equilibrium (balanced) point (compare Ashby 1960)

Powers attributed the work of the engineer Black to the beginning of Cybernetics for invention of negative control loop or "feedback" circa 1930.

A control loop with "feedback" actually represents the skeleton of cybernetic thinking.

Some cyberneticists cite Claude Bernard for the beginnings of the cybernetic understanding of closed functioning of living organisms.

French doctor, who pointed out the closure (preserving constancy) of the internal environment ("Milleue interier") around 1850,

pointed out also how organisms maintain a constant anatomical structure and temperature.

Closedness (constancy) of Living system

is important for understanding the control functions of an organism,
which is structurally and functionally separated from the external environment.

Control mechanisms (loops) keep biochemical balance (closedness) in organisms through feedback loops (negative, positive) and feedforward.

Organisms create their own internal (closed) environment through metabolism, which is performed by different control loops (Hartman 2021).

Homeostasis (balance) is achieved through billions of control loops through both environments

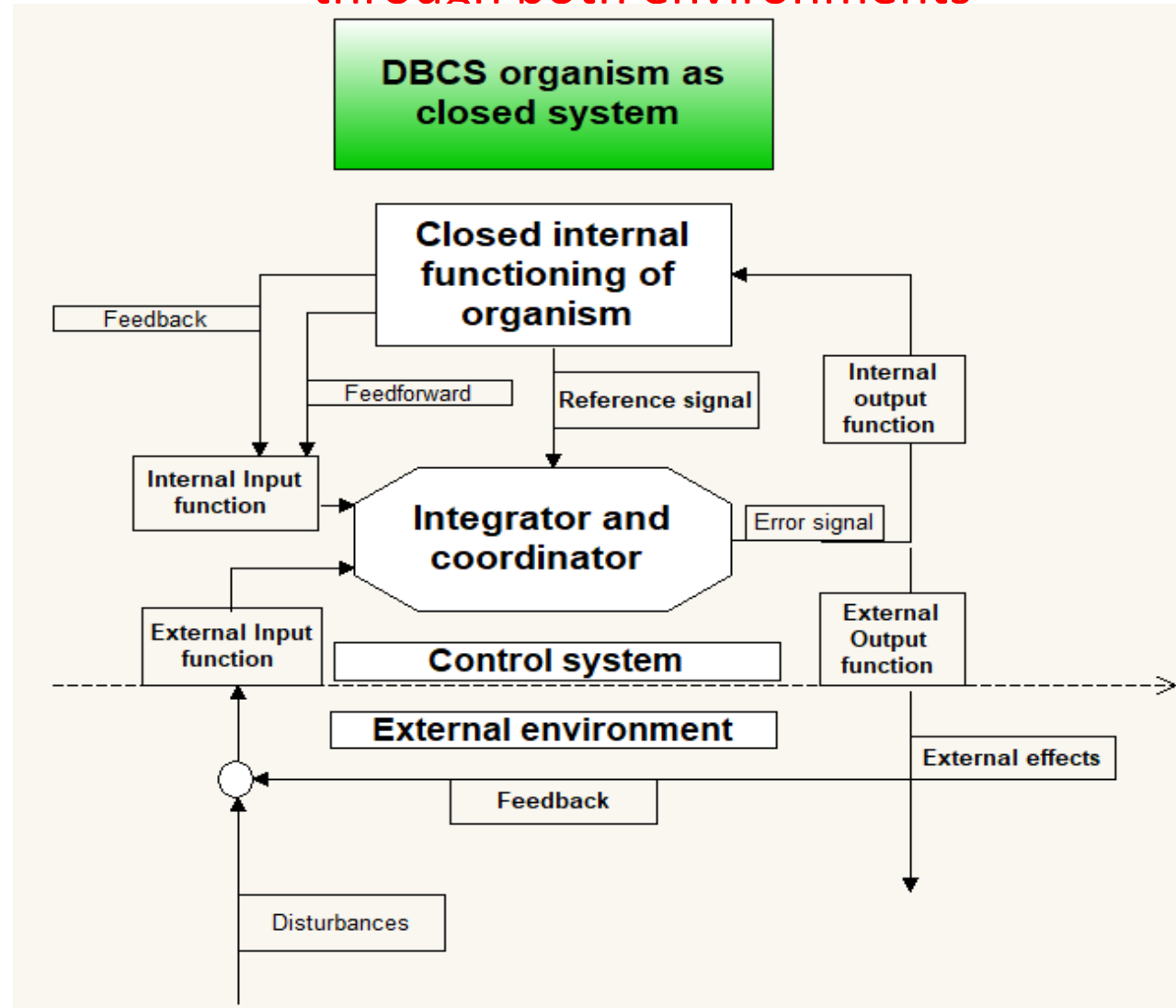


Diagram above shows the way how Living System achieve homeostasis or internal balance which is part of Cybernetics theory **DBCS** or Dynamic Biological (Living) Control Systems (Hartman, 2021).

DBCS is coined from terms which are representative for one of the aforementioned giants of cybernetics.

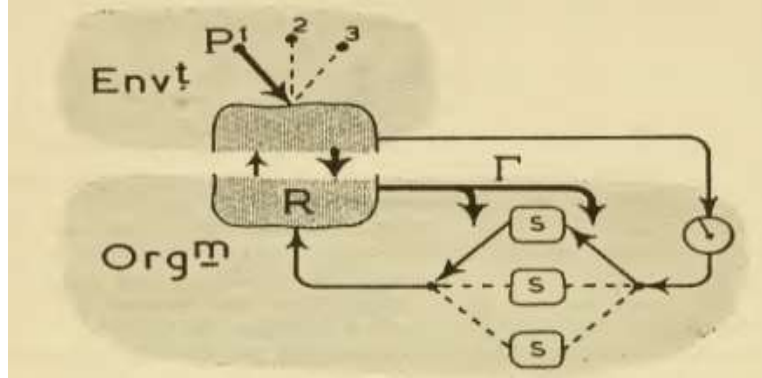
"Dynamic" stands for Ashby, "Biological" for Maturana, "Control Systems" for Powers.

DBCS theory is mostly based on Ashby's theory of ultrastability
Maturana's autopoiesis and Powers PCT.

Selfevident is contribution of Wiener as author of Cybernetics.

DBCS works as a kind of HUGE INTEGRATION of the knowledge and thinking of the most prominent cyberneticians, modern biological, neurobiological,

physiological, neurophysiological, neuropsychological etc. scientific knowledge.



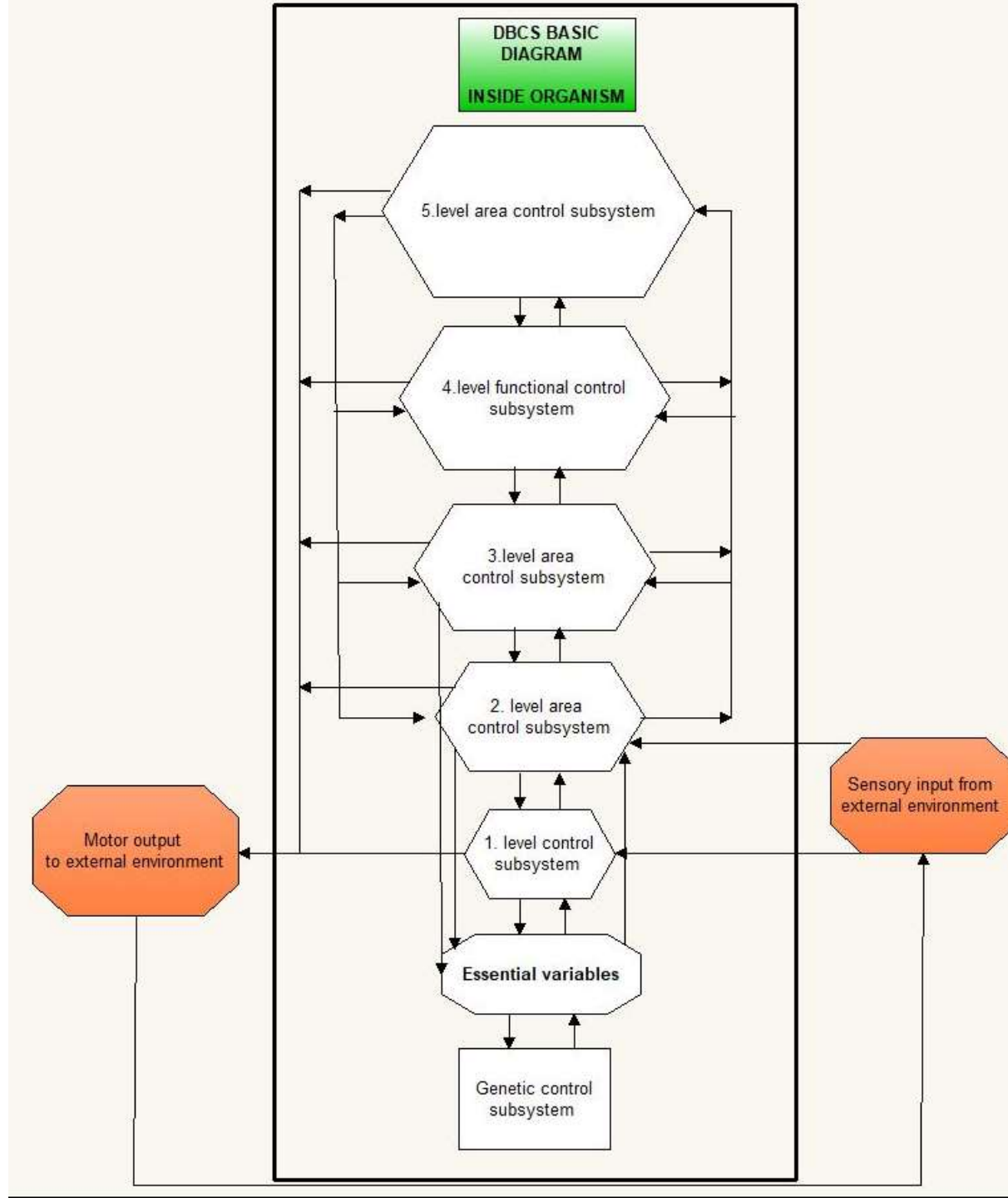
DBCS starts with Ashby

Ashby's diagram of ultrastability in Living Systems – stability control of essential variables (Ashby 1960)

Life important variables (essential variables) in human body (Guyton 2021)

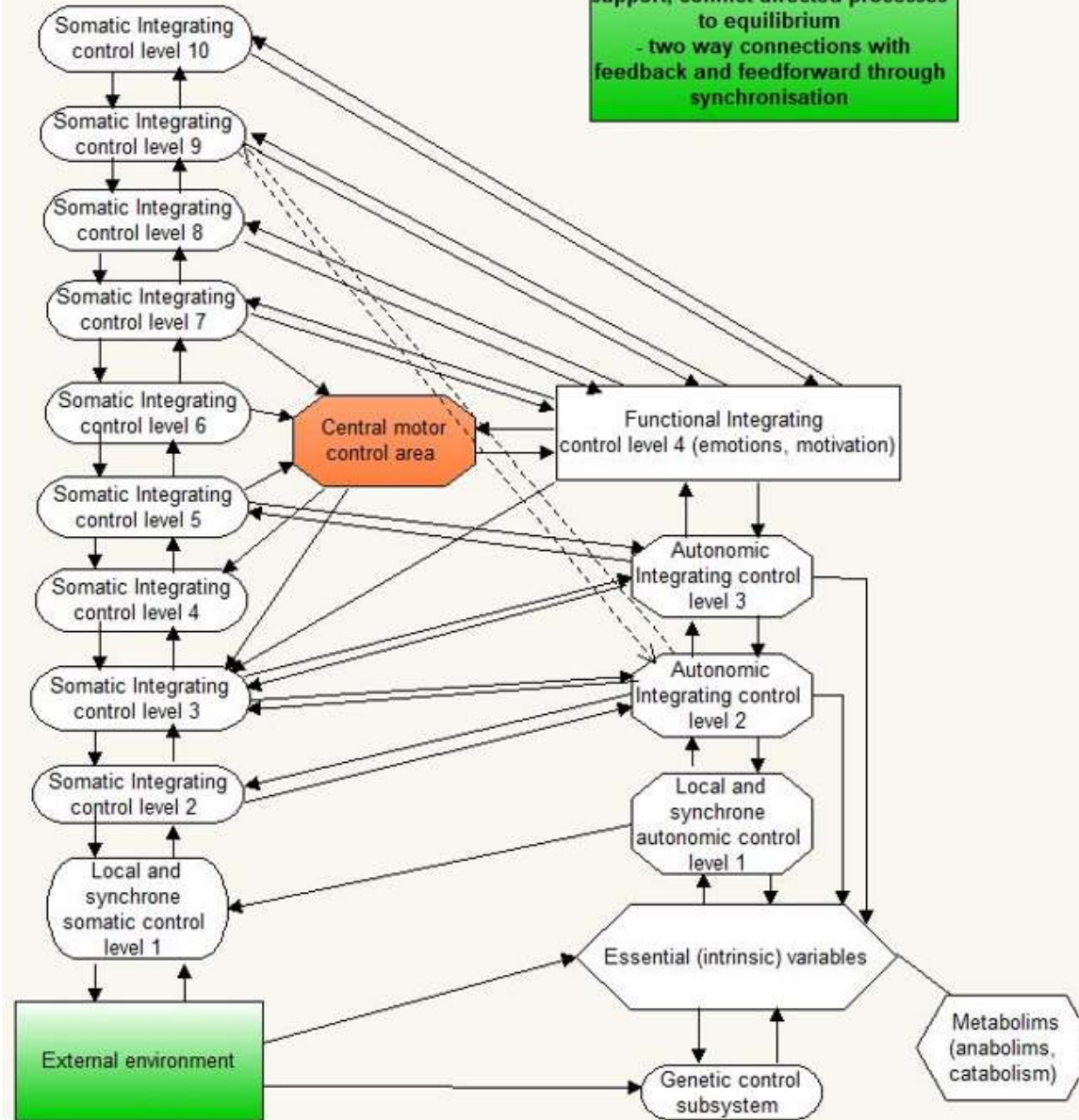
Important Constituents and Physical Characteristics of Extracellular Fluid

	Normal Value	Normal Range	Approximate Short-Term Nonlethal Limit	Unit
Oxygen	40	35–45	10–1000	mm Hg
Carbon dioxide	40	35–45	5–80	mm Hg
Sodium ion	142	138–146	115–175	mmol/L
Potassium ion	4.2	3.8–5.0	1.5–9.0	mmol/L
Calcium ion	1.2	1.0–1.4	0.5–2.0	mmol/L
Chloride ion	108	103–112	70–130	mmol/L
Bicarbonate ion	28	24–32	8–45	mmol/L
Glucose	85	75–95	20–1500	mg/dl
Body temperature	98.4 (37.0)	98–98.8 (37.0)	65–110 (18.3–43.3)	°F (°C)
Acid-base	7.4	7.3–7.5	6.9–8.0	pH



**DBCS - Dynamic Biological (Living)
Control Systems**

Whole functioning of organism :
equalization, leveling, modulation,
support, conflict directed processes
to equilibrium
- two way connections with
feedback and feedforward through
synchronisation



Understanding that Living Systems function as individual homeostatic whole
and that they create their own internal environment and their own knowledge constructs

demand new school approach help children forming "picture" toward
clean and healthy physical and social environment.

Its important to understand that all children are genetically different,
and that we can't force changes into their genetic structure.

But we can be emphatetic to them

We cannot shape, knead or even "format" them,
because they develop genetically on their own.

Learners create their own mental constructs that are unique and original.

Knowledge can't be transferred from the teacher's head to the students' heads without individual self-constructing transformation.

We can't develop or shape learners by our own image.

We can only try to influence them so that they will decide right.

Inclusion means that it is necessary to help each student to be able to create their own thought constructs in thinking processes on their own positive experiences of balance inside inclusive learning environments.

and thus make individual understanding of the SDG goals.

Living beings are self-decision making systems. We can't decide for them.

But we can persuade them through inclusive approach.

The only learning process that adults can encourage is to influence learners self-decision homeostatic mechanisms hidden in huge networks of neurons.

Inclusion in education means:
promoting and organizing inclusive environments,

which enable to all different children and adolescents process of individual optimal self-balanced development and the creation of their own experiential mental constructs.

Inclusive (SDG) environments should thus ensure optimal self-development to every learner,
optimal individual understanding of SDG goals

or "full development of the personality" and its potentials
(Declaration of children's rights, 1989).

Inclusion is based on the logic that it is possible to humanly influence the child's decisions
without productivity pressure and "accumulation" of huge amount of information

which can't be properly mentally processed by different children.

We have to understand how an individual child functions
as a specific bio-psycho-social whole with a need

for specific assistance for the self-help

toward empowerment of the individuals mental and psychophysical potentials.

Taking responsibility for own self-development
and the sustainable development of the community and natural environment

in which he lives and works should be the highest goal together with

seeking and achieving bio-psycho-social balance

in an ecologically balanced environment.

Main elements for modeling an Inclusive learning environment

1. Teleological starting points in school systems around the World should promote and support realization of all SDG goals specially SDG 4 till 2030.

2. Curriculum and organization of subjects in school should be scientific complexity of multidisciplinary and transdisciplinary knowledge.

3. Actual disciplinary and interdisciplinary organization of curriculum is inadequate, insufficient and ineffective for optimal individual understanding and "meeting individual learning needs".

Actual integrative education systems around the world promote help and support mostly for children with "special needs". Help and support need all children for optimal development.

4. Pedagogics and Didactics should be oriented into individual construct formation of understanding SDG, not into productivity presentation of knowledge for all learners the same.

5. Different sensory, learning and thinking styles of learners should be supported by didactics so to help learners constructing "big and integrated picture of sustainable green and blue World" inside inclusive societies with full mental health support.

6. Inclusive learning environment should encourage bio-psycho-social balanced (health) self-development

7. School architecture should be constructed from ecological materials for full protection of health of learners