

III A Man

To describe man,
You do not study
His world, but his mind,
The organ, generating
Cause setting forces.

Udo Frentzen 2014/18

III A 1 Remarks

- 1a) Natural constitution
- 1b) Emancipation
- 1c) Author's position

III A 2 Standards

- 2a) Values
- 2b) Value classes
- 2c) Value scale

III A 3 Constitution

- 3a) Physical growth
- 3b) Needs and drives
- 3c) Behavior patterns
- 3d) Psychic activities
- 3e) Emotions
- 3f) Motivations
- 3g) Mental activities

III A 4 Construction

- 4a) Subject true treatment
- 4b) Object true treatment

III A 5 Essentials

- 5a) Physiological base
- 5b) Freedom
- 5c) Development
- 5d) Conviction

III A 6 Results

III A 7 Inhibiting Factors

III A 8 Summary

- 8a) Achievements
- 8b) Failures
- 8c) Self-extinction

III A 1 Remarks

1a) Natural constitution

Man's constitution exists out of components and not as a single, defined, finished object.

Human growth towards a defined object 'man' is a self-contradiction.

Components are physical growth, needs, drives, psychic activities, emotions, motivations and mental activities. They generate cause setting forces and capabilities, for which he signs responsible.

1a1) Basic capabilities are sensual perception, questioning, search, cognition and expression.

Expressions comprise communication, actions, administrative organizations and technical devices.

1a2) Forces proceed over cognition to subject true treatment to object true treatment to results, being accompanied throughout by reflection.

1a3) Forces mold objects

a3,1) Human objects by maturity.

a3,2) Natural objects by reason.

a3,3) Spiritual objects by sound theology.

1a4) Forces are guided by values, not to fall back on themselves.

1a5) Man is subject to malformation, aging, disease, accident and death.

1b) Emancipation

Man is centered in his convictions, delineating his intentions, conceptions, responsibilities, means and results in relation to himself, society, nature and the infinite.

1b1) He enlightens public comprehension to discern, describe and evaluate his conditions and efforts.

1b3) He generates the essentials of a physiological base, freedoms, development and convictions.

1b2) He acts with self-determination, -preservation, -interpretation and -realization.

1b4) Telos of mind aims at moral utopia, cosmic ethical awareness for a future of man in changing cosmic environments.

1c) Author's position

1c1) Intent of the essay is to take a stock check of man at the beginning of the 21st century.

1c2) Observer's position is questioning, reflective, defensive, hopeful, literary participation.

1c3) Definition of truth for the essay is: Have all components, gist and works been considered?

III A 2 Standards

2a) Values

Values are self-set standards to give a direction to the course of human actions in freedom of choice with positive and negative consequences, not to fall back on themselves.

Man's standard is human dignity, from which all others are deduced to fill it with content of:

- 2a1) Item specific, objective, predictable, common benefits.
- 2a2) Self-preservation and foresight by respect for the foundations of life.
- 2a3) Betterment of man, society, his race and environment.
- 2a4) Expansion of sound theology's, maturity's, reason's and ethic's freedoms.

2b) Value classes

- 2b1) Cosmic values are contributing to life, truth, unity and environment for the long term future of man.
- 2b2) Existential values protect basic human rights to life.
- 2b3) Humanitarian values protect basic personal rights to growth.
- 2b4) Environmental values protect basic living environments of nature.
- 2b5) Universal values protect basic rights, applying to all objects in past, present and future.
- 2b6) Framework values are
 - b6,1) Ethically: unity of mankind, justice, due process and conflict solving.
 - b6,2) Naturally: integrity of nature.
 - b6,3) Human: collection, management, expansion and application of knowledge.
- 2b7) Object values are
 - b7,1) Ethically: non-violence, accuracy, completeness and transparency.
 - b7,2) Naturally: application by reason.
 - b7,3) Human: application by maturity.

2c) Value scale

Values are ordered hierarchically according to significance and range of validity.

They are connected by an unbroken interlinked tree structure.

There are no political or discipline specific values, which cannot be deduced from the dignity of man.

2c1) Primary universal values

- c1,1) Primary universal spiritual value is love, being kind, patient and protecting. It abhors violence. It extends to the low (Mat 25,40), lost (Luk 15,4) and hostile (Mat 5,43).
- c1,2) Primary universal human value is dignity, extending equally to all, disregarding origin, race, color, gender, age, position, culture and faith.
- c1,3) Primary universal natural value is integrity of nature.

2c2) Secondary universal spiritual, human and natural value is truth. It abhors deception.

It extends to all objects as far as self-awareness, curiosity, imagination and ambition do.

- c2,1) Truth is found by cognition, first by an intruding, observing, questioning, investigating search, exhausting available means to generate knowledge.
- c2,2) Truth in its narrow content means congruence of a description with its object in one to one accuracy from property to term to sign to communication to documentation.
- c2,3) Truth in its wider content means an accurate, complete, transparent description of an object within the dimensions of man's radius of action and responsibilities.
- c2,4) Truth in its cosmic content means an accurate description of an object within the dimensions of nature and the infinite.
- c2,5) Investigating an object, truth is in respect to God a comprehensive analysis towards innocence, in respect to man and nature a comprehensive analysis in spirit of man and in integrity of nature.

Their research adding each other, they stand on a linked, equal, balanced and cooperating level.

2c3) Tertiary universal and primary value for society is unity of mankind. It abhors segregation.

As existential value it is based on equity and justice with the rule of law.

2c4) Fourth universal and humanitarian values are freedoms, emancipation and common welfare.

2c5) Professional standards are guidelines of state of the art field knowledge and praxis.

2c6) Item specific standards are bench marks of properties and performance.

III A 3 Constitution

An originator can be a natural, legal or virtual person.

A natural originator's needs and drives build up to psychic activities, emotions, motivations and evolve by mental processing into a conscious intention, conception, decision and a design of expression.

They initiate at any starting point from lower instincts to higher hopes and proceed in any direction, repetitive cycle, variation, modus and intensity. Beaming with life as well as being vulnerable, they reach out to all objects of imagination and drive on with zeal inexhaustible to excess. Demanding ever new stimulation, satisfaction and expansion, they transgress with administrative-technical tools, deception and violence the boundaries of man and his environments. They do not rest until self-destruction.

Growth of physical-psychic-emotional-mental capabilities depends on an array of intervening epigenetic and acquired, phase specific and continuous, unconscious and conscious factors in a process of life long man-society-nature-God interacting self-realization.

3a) Physical growth proceeds out of evolution determined traits of geno- and phenotype, onto- and phylogenetic factors together with nutrition, exercise, environmental conditioning and selection to form out morphology, anatomy and physiology over a life cycle of six stages from zygote to embryo, infant, youth, adult to death and a sex cycle of three stages from germ cell to karyogamy to mature sex organ.

3b) Needs and drives

Needs and drives are various internal stimuli and external incentives to form a motivation towards action. They desire a state of wellbeing and achievement and organize themselves into a hierarchy.

3b1) Spiritual needs and drives address all phenomena

b1,1) Faith is given by God and accepted with a set of religious statements.

b1,2) Man is centered in his convictions, a concept of life in self-determination.

b1,3) Values mark cosmic, framework and object specific benefits.

3b2) Mental needs and drives thrive with eg curiosity, variation, experiment and result, seeking eg

b2,1) Free mental-physical movement and control.

b2,2) Information, experience, knowledge and know-how.

b2,3) Identity, independence, self-reliance, -determination, -realization and -presentation.

b2,4) Improvements of existential, social and environmental conditions, first in putting off death, alleviation of diseases and reduction of restrictions, contingencies and energy requirements.

b2,5) Reduction of complexities to simplicity, transparency, accessibility and functionality.

3b3) Social needs and drives thrive with eg communication and socialization, seeking eg

b3,1) Immediate social environment in a small group with common language.

b3,2) Reproduction of the immediate surroundings, social group and species.

b3,3) Social identity with name, self-esteem and -respect.

b3,4) Collective identity with chosen association, participation, culture and norms.

b3,5) Production of social structures, order, coordination and organic growth.

3b4) Emotional needs and drives comprise moods, sensations, passions, sentiments and compassions.

3b5) Biological needs and drives thrive with eg resources and consumption, seeking eg as

b5,1) Absolutely necessary: existence, self-preservation and provisions for the near future.

b5,2) Indispensable: privacy, rest and recreation.

b5,3) Urgent: protection against natural and human threats.

b5,4) Required: physical maintenance and excitement of life's basic notions.

b5,5) Desirable: livelihood above marginality with youth, well-being, ease and comfort.

b5,6) Aspirational: self-development of physiological to spiritual capacities.

3b6) Lower instincts mostly lead to self-usurious archaic desires for

b6,1) Prestige, seeking eg excessive recognition, preferential treatment and glamour.

b6,2) Power, seeking eg excessive means, control, dominance and penetration of all facets of life.

b6,3) Possessions, seeking eg security, control, increase, diversity and demonstration.

b6,4) Pleasure at the expense of others, seeking eg gloat up to sadistic delight.

3c) Anthropological characteristics

Anthropological types and behavior patterns evolved over geological time spans out of innate traits and learned, repetitive and varied, reflective, intra- and interspecific behavior within natural and social environments as relative constant human phenomena.

3c1) Types of homo-sapiens

c1,1)	-cognitus	-knowing
c1,2)	-cerebralis	-mental
c1,3)	-culturalis	-cultural
c1,4)	-legalis	-legal
c1,5)	-activans	-active
c1,6)	-faber	-productive
c1,7)	-sociologicus	-political
c1,8)	-cooperativus	-cooperative
c1,9)	-oeconomicus	-economical
c1,10)	-ludens	-laughing
c1,11)	-vitalis	-vital
c1,12)	-patiens	-ailing
c1,13)	-debilis	-debile

3c2) Behavior patterns

- c2,1) Flight from dangers, adaptation to environments and conquering of challenges.
- c2,2) Questioning, search and exploration of uncharted areas.
- c2,3) Recognition of needs, opportunities and means for innovations.
- c2,4) Self-knowledge, -improvement, -realization and -display.
- c2,5) Sharing of experiences, traditions, knowledge and ideas.

3d) Psychic activities

A psychic area is an inner, individual, independent self-aware and self-identifying neurological room of movement between subconsciousness and consciousness.

3d1) It is self-constructed in scope and arrangement, - 'a free drag&drop screen' - where to pick up sensations from the entire neuronal network, where to touch objects of all classes, their properties, forces, realities and dimensions, where to turn them over inspectively and creatively and where to bundle them for hand over to emotional-motivational-physical-mental-spiritual activities.

3d2) It is vulnerable to external mistreatment and can also be trained into a readily accessible operational resource with suitable structures, processes and mechanism, often visible in behavior patterns.

3e) Emotions

Emotions as atmosphere of being constitute a distinct conscious and unconscious psychic activity.

They arise out of stimulations and are generated at will in duration, intensity and expressive appearance.

They attach to in-external, own-foreign activities, ranging from being enslaved to independent initiative.

They are trained and suppressed, anticipate, accompany, trail, sense, evaluate, modulate and embellish.

3e1) Moods and sensations arise with individual-collective needs as basic emotions like stress, relaxation, desire, satisfaction, joy, fear, elation, depression, happiness, anger, friendliness and gruff.

3e2) Passions and sentiments arise with individual-collective psychic, social, mental needs as love, hate, self-esteem, shame, interest, disinterest, affection, repulsion, ambition and aversion.

3e3) Compassions arise with individual-collective spiritual drives with awareness of right and wrong, good and evil towards self-emancipation, -realization and responsibility for a common benefit.

3f) Motivations

Motivations are psychic forces of volition, advanced to the point of decision.

3f1) They draw on habitual to new endogenic dispositions like impulses from physiological-psychic-mental-spiritual needs and on pre-existing to new exogenic conditions like opportunities, encouragements, incentives, obstacles, sanctions, coercion to generate an innumerable variety of desirables.

3f2) They concentrate on a specific object of goal attainment, underlying every short to long term action.

3f3) They expand and diminish in flux by addition and multiplication, proceeding, concentrating, organizing, intensifying, separating, substituting, changing, eclipsing, reflecting and correcting.

3f4) They interact with foreign motivations, co-operating, challenging and counter-acting with each other.

3f4) They are often satisfied for a short period only to slacken, rest, revive and re-invigorate themselves.

3f5) Without reflection they often become base, biased, criminal and over-extend to self-destruction.

3g) Mental Activities

The mind is the conscious processing organ of physical-psychic-emotional-motivational-mental-spiritual activities, all called to be present, weighted, sized, arranged, fitted, bonded and operated on towards new capabilities beyond anthropological behavior types and patterns: to enable universal treatment of objects of any class and magnitude and to envision emancipation by conviction and faith.

3g1) Mental growth, predetermined by evolutionary forces over geological time spans, developing multicellular organisms with specialized functions, forms out the autonomic and sensori-motoric enteral, peripheral and central nervous systems. More than 10^{10} nerve cells, a neuronal network of bio-electrochemical information generators, transformers, transmitters, processors, receivers and storage units, channel in- and external neurological signals towards the desired result.

They represent objects in consciousness by models, terms, speech and sign through neurological firing patterns in sequential and parallel processing steps.

3g2) Mental capability and productivity change over a life cycle with states of health, environments, acquired training, experience, knowledge and ways of thought.

3g3) They generate inner processing products for subject true treatment: cognition, intention, conception, mental operations, reflection, combined intention-conception and design of expression.

3g4) They generate outer processing products for object true treatment: cognition, approach by its class and realization by communication and action.

3g5) They, tied to life, concentrate first on self-preservation to satisfy basic needs.

3g6) They have generated all man made phenomena, their character and appearance.

3g7) They expand freedoms, comprehension and physical, mental, spiritual boundaries.

III A 4 Construction

4a) Subject true treatment

Subject true treatment centers on the design of an object according to subject related criteria. It employs mental processing products, inner, conscious, organized constructions as mental tools to generate, focus, coordinate and apply a biotic medium of comprehension to an objectively placed item. It entails cognition of oneself and the object, intention, conception, memory, mental operations, reflection and a design of expression. Productivity is gained by sound principles and praxis in all steps. As artificial constructions, they are chosen to be close to human physiology and objective reality. Evaluation is by merit, adequacy, productivity, dynamics, balance, cohesion and restraint of individuality. Preforms remain on the stage of eg infantilism, primitivism, naivety, cliché, impulse and blind imitation. Basic cultural prerequisites are language, mathematics, logic, method and data processing.

α) Language (Communication 5b2).

β) Mathematics are the study of quantity, structures, processes, relations and their changes. By measurement, calculation and deductions from a set of appropriately chosen axioms and definitions, it arrives at quantitative descriptions and predictions of forces, properties and behavior of objects.

γ) Logic is accountability of identity. It derives from two basis statements through material and formal reasoning along a relationship and a standard of comparison a follow up statement, a conclusion.

δ) Methods are standardized steps to perform routine tasks of observation, investigation, description, interpretation, evaluation and presentation of an object, - short of an in depth treatment.

ε) Electronic data processing in multi media, in worldwide networks with microprocessors programmed in the digital code, assists in all qualitative, quantitative and communicative tasks of mental activities.

4a1) Cognition

Access to all objects is by cognition, transforming forms of being into forms of consciousness.

At center stands the item at hand throughout all scientific, contemplative and aesthetic research.

Every object entails at least a natural, human and ethical dimension with its corresponding standards.

It is a mental-psychic-neurologically constructed representative model of an object.

Main intent is to shed light on an object and to investigate further for a more accurate description.

Epistemic research goals are a canon of knowledge and avoidance of errors.

The canon is structured in place from the micro- to macro-cosmos, in time from the beginning to the end of the universe, in scope throughout all layers of reality, a system of the sciences, a value scale, the professional fields, data banks, text books, review summaries and themes of public discussion.

Scaled up intent is promotion of the spirit of man and integrity of nature.

Increase in overall comprehension with responsibilities, means of enlightenment and sound results will gain the capability for long term survival in changing cosmic environments.

Principle of expansion is continuous application of the tools of cognition to increase with sound facts, assumptions, working hypotheses, methods and skills the data base.

It is added by a constructive environment, administrative structures and technical devices.

Cognition remains the most basic of all individual-collective generations running challenges of mankind.

Present knowledge is totally insufficient for extended interpretation, construal and speculation.

Errors multiply along publication to teaching to applications into gross inhibiting factors.

Starting from questions and searches, it proceeds along the factors of object, relation and subject.

a1,1) Objective factors are focus, observation, denotation, description, deliberation, interpretation, evaluation, documentation, propositional support, publication, public discussion, problem solving, conflict solving and development.

a1,2) Relations comprise information, transmission and medium.

a1,3) Subjective factors are onto- and phylogenetic development, the senses, emotions, mental capabilities, experience, way of life, self-understanding, historical factors, schools of thought, present day trends, institutional factors, codetermining factors, inhibiting factors and ethics.

a1,4) The first two steps of focus and observation serve as initial data input.

They are the first bottleneck and its tools have to be studied and practiced in all human activities.

All subsequent steps of mental, administrative and technical processing rely on it.

a1,5) Progress runs from the unknown to the known, simple to complex and illusionary to possible.

4a2) Intention

Intention is the conscious cause setting force of expressions by communication and action.

It strives to realize an object of its choice, while refusing to be penetrated by other chains of causality.

It blends with collective motivations and intentions to realize large scale generations spanning aspirations and with it lasting spiritual-mental-human products and environments in cosmic dimensions.

a2,1) Goals range from sacrifice to power madness.

a2,2) Internal physiological-psychic-emotional-motivational-mental-spiritual stimuli of the constitution are sensed, taken up, weighted, sized, arranged, fitted, bonded and their activities initiated in a single train of intention to direct an object's construction by subject and object true treatment.

a2,3) Decision is starting point of realization and in collective efforts of participation.

a2,4) Every step is subject to reflection, re-evaluation and redirection.

a2,5) It stores in memory observed, studied and experienced models of goal attainment for reference.

a2,6) A resulting design of expression considers value, costs, place, time, prospects and also code-determining and inhibiting factors, planning ahead with realistic strategical-tactical operations.

a2,7) Acid tests move the sequence backwards to infer from indicators, behavior, context, experience and reason the intentions, conceptions and potential future actions of another person's mind.

4a3) Conception

Conception constructs an image of an object as its mental representation in consciousness.

Consciousness is neuronal bio-chemo--electro-magnetic sensory awareness of a short term focused item and a long term present background screen, serving as a workbench for mental processing.

a3,1) It draws for visualization items of any class out of the senses by cognition, out of knowledge from memory, out of phantasy by creativity and out of re-looping by reflection.

Visualizations as image, map or symbol range from a void to the limits of imagination.

In focus adjusted are distance and perspective to eg close up on details or expand to a panorama.

a3,2) It endows the image with meaning, its forces, characteristics and relations.

a3,3) It attaches to the image a term with a phonetic signal and a written sign.

a3,4) It stands with specified and identified content at the center of mental processing.

a3,5) All steps of mental processing are driven by an intentional chain from attention to desired result.

a3,6) Standards are those of cognition and truth.

a3,7) Desired result is a canon of knowledge and avoidance of errors with a collective mental horizon, a public, representative, unprejudiced collection of facts from verifiable sources. As palpable background knowledge it represents the present state of affairs, world view and historic record.

4a4) Memory

Memory stores information for reproduction and on recall reproduces it instantly in consciousness.

Information of any class in varying volumes and levels of intensity is

a4,1) Collected from visualization out of cognition, creativity and reflection.

a4,2) Filtered according to source, relevance, context, environment and convenience.

a4,3) Consolidated by addition, change and cut out. Changes can be simplification and fabulation.

a4,4) Encoded and stored over time in an ultra-short sensory, short working and long time memory.

Held with it can be eg explicit meaning, situation, episode, context, extraordinary event, autobiography, implicit procedures and prospective intent.

a4,5) Decoded and retrieved on call for attention, cognition, recognition, orientation and further mental processing like training, learning, re-interpretation and re-evaluation.

a4,6) Aroused in sub-consciousness by association and trauma.

a4,7) Lost by fading, forgetting, dislocation, repression, interference, amnesia and brain damage.

a4,8) Memory is evaluated by its capacity, accuracy, reaction time and conditioning.

4a5) Mental operations

A mental operation fixes an item in consciousness for deliberate processing.

It is set into a frame of attention with the author's position, operational intent and the standards of truth.

Free arrangement of items is given in a neuronal network with complete interlinkage.

a5,1) Processed images are mainly semantic content, linguistic term and semiotic symbol.

a5,2) Processing steps are mainly addition, combination, transformation and deletion.

a5,3) Mechanisms are mainly association of items, comparison, dissociation and conclusion.

a5,4) Complex tasks utilize from start to finish task mapping frames of operation with their related items to be worked off by free and algorithmic operations.

a5,4,1) A task comprises available information and searched for conclusion.

a5,4,2) A mapping frame arranges an inner order of operations with lists of the items' properties, assumptions, required accuracy and a flow chart of operational steps.

a5,4,3) The inner order matches by rules of logic purpose and result, place and time, quality and quantity, cause and effect, reality and hypothesis, level of composition, abstraction and style.

a5,4,4) A conclusion is combined with an intention and conception to be inserted as a composite unit into a design of expression.

a5,5) Frames of operation can be expanded to handle complex, longer, more detailed, interconnected causal chains of objects' characteristic and relation as they grow with expanded knowledge.

4a6) Reflection

Reflection distrusts a need, drive, emotion, motivation, thought or expression.

a6,1) Perspective is from a point set back, cut off from environmental factors for an unprejudiced scan of a point in question to gain more accuracy, objectivity, creativity, reliability, scope and balance.

a6,2) Tools of cognition are reapplied, retrieving the steps of mental processing, retracing the phases of implementation or searching for additional or disregarded factors.

a6,3) Desired result is a more complete description and evaluation of an object without running into a dead end of self-crucifying contemplation.

4a7) Design of expression

A design of expression fuses a line of mental processing with a line of mental-physical implementation.

For productivity combined are internal subject true and external object true treatment.

a7,1) The line of processing comprises a complete chain from intention to conception to mental operation to a mental draft of the envisioned object.

Handled in sequence are one-intention-conception-operation units as topics.

a7,2) The line of implementation comprises a complete chain from decision to communication to action to a mental draft of the realized object.

Handled in sequence are bundled one-force-resource-action-units as management factors.

a7,3) They are often run and rerun to improve points of reflection.

a7,4) Desired result is a functional spiritual-mental-human-natural product with merit.

a7,5) Universal processing handles objects of any class and magnitude in any context with their forces and properties on all levels of reality, abstraction and complexity.

a7,6) Evaluation is by merit, standards of truth, aesthetics and performance yardsticks like intelligence.

4b) Object true treatment

Object true treatment centers on molding of the object according to object related criteria. It entails cognition of the object, approach by its class and realization according to the desired result. Productivity is gained by sound principles and praxis in all three steps.

It crosses subject-object relations over the range of non-expression, expression and expression roll back.

4b1) Cognition deciphers an item with its properties to make it palpable for mental-physical handling. Objective, confirmed qualitative and quantitative knowledge serves as data base and mental horizon.

It is assisted by experience, routine, know-how, technical and soft skills.

4b2) All items can be placed into one of three classes or templates of in-common properties for type like approach and handling, though all items show at least one aspect of all three.

They can be further placed into sub-templates as categories with major aspects.

They delineate class boundaries, not to be transgressed without faulty results, failures and conflicts.

b2,1) Spiritual objects

Spiritual objects are grasped in faith and sound theology. Its categories, rejecting violence, are

- Determination of the Will of God.
- Address of major issues.

b2,2) Natural objects

Natural objects are explained in reason. Its categories, rejecting contradiction, are:

- Quantity by unity, multitude and all.
- Quality by reality, negation and limitation.
- Relation by inherence and subsistence, cause and effect, interrelation between objects.
- Modality by possibility - impossibility, existence - non-existence and necessity - chance.

b2,3) Human-social objects

Human-social objects are understood in maturity. Its categories, rejecting omission, are:

- Content and appearance.
- Place and time.
- Presentation in public discussion for decision and realization.
- Medium, situation, context, framework, cosmic dimension.
- Rooms of movement, capabilities and boundaries.
- Non-knowledge, uncertainties, risks, dangers and possible damages.
- Inhibiting factors.

b2,4) Class boundaries of sound theology, reason and maturity are standards of compatibility.

Sub-class boundary between man and society is ethics.



4b3) Realization

A desired product can be spiritual, natural and human-social in combinations.

b3,1) Spiritual products as speech, text and picture spring out of faith, study and contemplation.

b3,2) Natural objects as physical bodies are molded out of knowledge, material and financial resources with physical-chemical engineering.

b3,3) Human-social products as arrangements of inter-human relations are organized out of knowledge, human and financial resources with administrative structures and processes.

b3,4) Evaluation of realization is by merits and lasting consequences.

4b4) Expression

Expression by communication and action is a basic, universal human activity.

An originator's decision out of need, drive, motivation, intention for an expression is the basic human force to realize along a relation a desired result. It has established by construction, restraint and destruction all man made phenomena and is able to advance, sustain or destroy man, society and nature.

Expressions are highly complex in their construction, combinations, chains, ramifications, long term consequences and cannot be calculated in advance in all possible effects or strictly classified. They will always remain the raw mass of daily usages with repetitions, play, variations and drift, where its factors are co-determined by various unique circumstances.

An expressions is first described in its major lines of acting forces.

b4,1) Generation

b4,1,1) Preconditions are autonomy of body and mind.

b4,1,2) Training is from childhood on, followed by schooling and study in a professional field.

b4,1,3) A design of expression is generated out of intention, conception and mental operations.

It comprises as 'vector package' all steps from inspiration to result.

b4,1,4) Point of inspiration can lay in real and imaginative past, present or future.

b4,1,5) Force and desired object can be spiritual, natural and human, relative to the originator class internal - self-referential or class external - foreign referential.

b4,1,6) Desires explore possibilities, maximise results, minimize efforts and remove obstacles.

b4,1,7) Responsibilities achieve a qualitative jump by applying a standard of merit.

b4,2) Progression

b4,2,1) Preforms remain on a stage of eg attempt, patch, fragment and blank imitation.

b4,2,2) Implementation proceeds along trials, errors, complications, obstacles, set backs, restarts, hurdles taken, changes, ramifications, chances, receptions and reactions to arrive at a result.

Mixed are communication and action with silence, non-action, body language, accompaniment signals, symbols, icons, gestures, laughter, crying, proxemics and environments.

Modi are eg place, time, direction, path, speed, degree, gradient, intensity, vitality and dynamics by eg growing motivations via addition, multiplication, synergism, spill over and spin off.

b4,2,3) Base pattern comprises originator, desired object, communication, action, administrative organization, technical device, relation, medium, recipient, situation, environment and boundaries.

b4,2,4) Base process comprises initiation, progression, reception, reaction and termination.

b4,2,5) Extension over space can cover a point, region, the globe and the cosmos.

b4,2,6) Continuation over time can cover a point, generation, millennium and geological span.

b4,2,7) Augmentation of means is achieved by administrative organizations and technical devices.

b4,2,8) Penetration of complex systems is measured by the scope of impact.

b4,2,9) Changes and deviations occur permanently due to a multitude of varying needs, drives, motivations, intentions, communications and actions. They range from cosmetics to qualitative jump.

b4,2,10) Interruptions by break of an element in a causal chain occur due to eg absence, mal-function, -quality, -supply, -service, -proportion, -linkage, -control, -adaption, -acceptance and accident.

b4,2,11) Interactions range from union to cooperation, coexistence, evasion, competition to conflict.

b4,2,12) Complexity increases exponentially, as the number of possible interactions I in a constellation of n persons P with transmitted properties x at a point in time is: $I = (3 (P_n - 2))^x$ with $(n > 2)$.

b4,3) Results

b4,3,1) Expressions run to first, intermediate, side, lasting effects and far down consequences.

Mechanisms are human action-reception-response interactions and natural laws of nature.

b4,3,2) They form out social-media-admin-technological objects and association complexes.

b4,3,3) Unfolding realities are eg physical, physiological, psychic, mental, spiritual and historical, claiming eg existence, necessity, potentiality or possibility to be verified as valid or illusionary.

b4,3,4) Lasting results can be classified as mental-human-natural products.

b4,3,5) Limits to physical expression are set by existing and known energy, matter, space and time.

b4,3,6) Limits to mental expression are set by capabilities of imagination, formulation and reception.

b4,3,7) Evaluation of causal lines of forces as traceable indicators of intentions and conceptions is by man's overall responsibilities towards himself, society, nature and God.

4b5) Communication

Communication serves the transmission of information. Language, text and picture stand at center of human praxis as means of conception, interchange, spread of knowledge, socialization and discussion of issues. A message about an object connects a signal with content, its potential-actual sense with conviction, understanding, explanation, interpretation and evaluation in context of situation and environments. Phonetic signals are universal, resourceful, flexible, practical, obstacle safe means to reach through air the acoustic sense, undergoing in flow from originator to recipient several transformations in appearance.

b5,1) Communicator

b5,1,1) Communicator can be eg speaker, singer, author, publisher, editor, agent and moderator.

b5,1,2) Number of speakers range from sole person in monologue to a heterogeneous chorus.

b5,1,3) Collective communication ranges from community press release to mutual shouting down.

b5,1,4) Intention ranges from investigation to description to manipulation to psychic violence.

b5,1,5) Prime intent is to carry information about object O from A by an accurate phonetic term P to B in a fragile neurological-physiological-physical chain of 1:1:1:1:1:1 representations from Q to A's Perception and Conception to P's Expression and Transmission to B's Perception and Conception.

b5,2) Language representation

b5,2,1) Objects of any class can be represented by language, an audible, articulate, meaningful, conventionalized system of sounds with vocabulary, phraseology, pronunciation and grammar.

b5,2,2) Terms are by semantic being eg constative, representative, regulative or expressive, by semantic function eg explicative, expressive, instrumental, moralistic or evaluative.

b5,2,3) Text is out of phonemes, morphemes, lexemes, syntax, pragmatics, semantics, linguistics.

b5,2,4) Paralinguistics are eg sound, volume, intonation, pitch, range, rate and body language.

b5,2,5) Stylistic frames are eg political, professional, social and local.

b5,2,6) Stylistic levels are eg secret code, slang, casual, professional, formal and artistic.

b5,2,7) Stylistic colours are eg humorous, confidential, dry, antique, insulting and degrading.

b5,2,8) Vitality can be eg natural or artificial, traditional or avant-garde, free or censored.

b5,2,9) Common forms of speech are eg small talk, info, sales pitch, argumentation and instruction.

b5,2,10) Artistic forms are eg short story, novel, epos, poetry, drama, song, chant and opera.

b5,2,11) Forces of creation, usage, change and extinction over generations arise mostly out of adaptive needs and rhetoric of social forces, being described by history of language.

Mass applications are by eg education, advertisement, media rhetoric-propaganda and staged shows with effects on eg standards, usage, educational level, predominant reality and world view.

PC multi-media promotes a clear, pointed, structured style with visual, user friendly navigation.

b5,2,12) 1500 families and more than 3000 languages and dialects exist today worldwide. They are classified as analytically, agglutinating, inflecting and incorporating term building languages.

b5,3) Text representation

b5,3,1) Any articulate sound can be represented by a semiotic sign like a letter in written text.

b5,3,2) The Latin alphabet contains 26 letters with indefinite combinations to handle any complexity.

b5,4) Artefact representation

b5,4,1) Objects of any class can be represented by drawing, picture and sculpture.

b5,4,2) Common and artistic forms are eg sketch, painting, collage, film and architecture.

b5,5) Physical representation by technical devices

b5,5,1) Collection of data by eg scales, sensors, microscope, microphone and scanner.

b5,5,2) Storage of data by eg stone, metal, paper, polymer, electro-magnetic film and electronic device on data sheets, in libraries, data banks and information systems.

b5,5,3) Duplication by eg manual copy, technical copy and performance.

b5,5,4) Processing and evaluation by eg editor, calculator and electronic computer software.

b5,5,5) Search and retrieval by eg indexes, catalogues and search engines.

b5,5,6) Transmission by eg mail, transportation, projection, phone, fax, radio, tv, e-mail and internet. Data flows from eg source to encoder, emitter, channel, receiver, decoder to recipient.

b5,5,7) Mediums of accurate, suitable and efficient transmission are eg air, vacuum, cable and fiber.

b5,6) Legally it relies on realizable guaranties of free flow of information, freedoms of movement, speech, assembly, religion, the sciences, the press, the arts and professions without censorship.

b5,7) Inhibiting factors are eg technical defect, language barrier, inaccuracy, shift of context, shift of reality, misuse, deception, violence, image fascism with destruction of language as tool of fact finding.

b5,8) Evaluation is by merit, exactness, representativeness, consistency, sincerity, necessity, coordination with action, independence and artistic multi-media concept.

4b6) Action

An action realizes an object by human hand. It constitutes a basic social fact.

It is the causal psychic-physical-chemical force to take an effect on a human being or a material object.

A human force is described by its factors of expression and its ensuing reception and reaction.

A physical-chemical force is described by its energy, application and ensuing change of state.

All forms of life interact by information exchange and action, their causal chains propagating along a relation and mechanism within their immediate situation and environments, often undergoing several transformations in appearance. Major forms can be listed as core elements, roles, types and ranges.

b6,1) Acting person

b6,1,1) Acting person by role can be eg private individual, blue or white collar worker, sales person, service person, supervisor, investigator, inspector, regulator, comptroller, negotiator, representative, plenipotentiary, arbitrator, free-lancer, player, coach, inventor, reporter, commentator, adviser, teacher, consultant, contractor, specialist, manager, executive, executioner and owner.

b6,1,2) Number of acting persons ranges from sole individual to community of nations.

b6,1,3) Collective action ranges from situational confusion to political-social crusade.

b6,1,4) Prime intent is to mold an object according to intention and conception of the originator.

b6,1,5) Intention ranges from suppression of action to help, construction, maintenance, service, embellishment, regeneration, regulation, manipulation, restriction, destruction to crime.

b6,2) Types

b6,2,1) Typical behavior can be eg role, usage, praxis, tradition, etiquette and life style.

b6,2,2) Non-typical, stigmatized behavior, can be eg drop-out, draft resistance and whistle blowing.

b6,2,3) Uncontrolled mass behavior can be eg mass discrimination, craze, run, riot, flight and panic.

b6,2,4) Common characteristics are eg real or virtual, certain or probable, factual or symbolic, one person or population wide, singular or systematic, particular or universal, short or long term, fast or slow, flexible or rigid, simple or complex, unchallenged or contested, unregulated or regulated, open or hidden, observed or unobserved, visible to the eye or not and non- or for profit.

b6,3) Tools

b6,3,1) Sensual actions comprise perception by the five senses.

b6,3,2) Bio-mechanical actions comprise all physical activities from movement to manual labor.

b6,3,3) Mental actions generate a design of expression for translation into language and action.

b6,3,4) Administrative actions comprise all schreibetisch tasks from documentation to projection.

b6,3,5) Technical action comprises all employments of a device for a specific application.

b6,4) Processes

Processes like human expressions, especially in the professional fields, run along initiation, extension, continuation, augmentation, penetration, changes, split-ups, interruptions and terminations.

b6,4,1) Planning proceeds by eg information gathering, modelling, simulation and calculation.

b6,4,2) Decision grows out of eg perspective, goal definition, determination and circumstances.

b6,4,3) Initiation can be eg a first move, final ripening and removal of a barrier.

b6,4,4) Goal orientation pursues strategic-tactical lines, control of factors and feedback evaluation.

Strategies set down objective, factors of implementation and frames of action.

Tactics pin point situational, operational actions, counter-actions, tools, modi and circumstances.

b6,4,5) Structure control can be by eg division of labor, networking and hierarchical layering.

b6,4,6) Process control can be by eg scheduling, synchronization and feedback evaluation.

b6,4,7) Event control can be by eg staging, maneuver, ploy and plot.

b6,4,8) Resource control generates eg human soft and professional skills out of the labor market and materials out of fauna, flora, gases, liquids, solids in the natural environment.

b6,4,9) Frame work control, turning oppressive environments into advantageous ones, can be by eg party program, public relation campaign, action committee, lobbying, bribery and compellence.

b6,4,10) Termination can be by eg diffusion, attrition, cessation, abandonment and interference.

b6,5) Legally it relies on realizable guaranties of security, physical inviolability, property, non-discrimination and freedoms of movement, information, profession, access to resources and markets.

b6,6) Inhibiting factors can be eg lack of intent, knowledge, resources, adequate environments, frame works, also restrictive regulations, irrationalities, profiteering, corruption, deception and violence.

b6,7) Evaluation is objectively by merit, accountability, necessity, adequacy, performance, cost and subjectively as success with a gain or as failure with a loss.

4b7) Administrative organization

An administrative organization is a N persons configuration, grouping under one head people, information, materials and money as collective driving force with mental, psychological and physical functions. Most motivations seek in expressions support of operational, administrative means. They augment mental-physical capabilities on the meso- and macro-scales, managing human factors of goal attainment. They establish by directive competence a multitude of embedded, autopoiesic systems with regulative impact on heterogenous public to private, open to hidden, soft to forcing circles of relations. They effect regulation, administration, supervision and growth, specialization, diversification, concentration, mobilization, integration, coordination, reorganization and regeneration to perpetuate themselves. They coin political-military-legal-economic-financial-social frame works and common symbolic systems like insignia, status, money and culture.

b7,1) Functions

b7,1,1) The predominant function determines its political-social character, ranging from constitutionality to laissez faire to system theory to social programming to fascism.

b7,1,2) Main intent is to provide an accessible, accountable service to the general public.

b7,1,3) Main conception is a contribution to life while refraining from political excesses.

b7,2) Growth

b7,2,1) Growth forces are those of an originator, social forces and inner dynamics of self-motivation, -formation and -organization, starting from a historically given to hypothetical point and proceeding into various directions. Élan vital induces eg formation, addition and variation of base patterns, differentiation, specialization, association, formalization and institutionalization.

b7,2,2) They move as systems of interactive elements step by step, expanding, dominating, adapting and dissolving. Macro structures change as a whole only by collapse or revolution.

b7,3) Appearance

b7,3,1) Appearance is formed by eg identity, self-awareness, function, means, constitution, stratification, radius of activities and public image. The constitution identifies the organizational form, representatives, objectives, structures, processes, means and its actual function.

b7,3,2) They act as informal to formal public units of action like eg a forum, market, company, institute, trust, network, party, state, nation and block.

b7,3,3) They show a high traffic density, occupy a point to territory and operate locally to globally.

b7,3,4) Population contact is measured by eg market share, constituency and registered citizens.

b7,4) Structures

b7,4,1) Organized are resources with eg man power, tasks, stations, equipment and supplies.

b7,4,2) Introduced in a meso configuration is one and in a macro configuration several hierarchical vertical-horizontal levels, indicating the degree of order.

b7,4,3) Tightness ranges from open forum to regulated body to closed system.

Inner freedoms are described by eg culture, creativity, flexibility, vertical-horizontal internal-external mobility and allowance for rooms of privacy, retreat, anonymity, restraint and asylum.

b7,5) Processes

b7,5,1) Organized are resources with eg flows of man power, information, materials and money.

b7,5,2) Introduced are consecutive, task divided steps of action, timely integrating operational functions of eg planning, research, design, testing, decision, implementation, financing, marketing, public relations, events, negotiations, feed back evaluation, corrective action and termination.

b7,5,3) Set up are in- to external, point to broad, regular to privileged channels of communication.

b7,6) Interrelations range from independence to coexistence, competition, conflict to annihilation.

b7,7) Interdependencies exist between resources, markets, systems, constellations and environments.

b7,8) Acceptance depends on private, public, local, regional and foreign evaluation and reaction.

Vital are contributions by the public with eg feedback, counselling, canvassing and volunteering.

b7,9) Public oversight is by eg internal - external, undercover - public, specific - general, national - international investigative control mechanisms, demanding eg transparency, statement of activities and public forum discussion with corrective action. They are the first to be corrupted by eg profiteering.

b7,10) Excesses lead to eg globally inequitable division of labor and distribution of income.

b7,11) Inhibiting factors are mostly misuses of power by special interest groups, eg non-action on pressing problems, instrumentalization and political-social programming of social formations.

b7,12) Administrative organizations are seen like social forces by their actions and merits.

4b8) Technical device

A technical device is a man made object, utilizing a material, floral, animal or human force against a counterforce for a specific application.

Most motivations seek in expressions support of operational, technical tools. They augment mental-physiological-physical capabilities of human endeavors on the micro-, meso- and macro-scales.

They assist social and technical tasks to execute material factors of goal attainment.

They are a mass motor in the professional fields. Demands for ever new applications foster innovations by scientific-technological research and development and have brought a series of industrial revolutions from the steam engine to electricity to digital data processing to genetic engineering.

They coin human living environments: Increases in performance in power, speed and accuracy accelerate the pace of life, man made products supplant natural surroundings, human-scientific-technical-industrial-natural systems realize rationalized rooms of goal attainment, reduce barriers of place, time and mass and the planet to a global, complex, vulnerable, multi-interdependent techno-city.

They extend the radius of action into the micro-macroscopic, over ages and advance the frontiers of the thinkable, calculable, do- and usable. Man has with A-B-C-R-N weapons the capability to mass murder billions of people up to the extinction of mankind.

b8,1) Forces

b8,1,1) Forces, derived out of the basic strong, weak, electro-magnetic, gravitational ones are nuclear, mechanic, electrical, optical, thermal, chemical, genetic and biological.

b8,1,2) They are generated, amplified, transformed, transmitted, stored and applied.

b8,2) Innovation

b8,2,1) Use of technical devices is limited by free imagination, available forces and mechanisms.

b8,2,2) Resources are scientific knowledge, technical know-how, soft skills and raw materials.

Raw materials can be primary natural or secondary man made, half finished goods.

b8,2,3) Basic steps are study of force and effect, engineering of function, medium and operational mechanism, supply of power, safety precautions, production, test and market introduction.

b8,3) Interaction

b8,3,1) Integration links two machine operations sequentially by administrative arrangement.

b8,3,2) Automation links two machine operations sequentially by a technical control mechanism.

b8,3,3) Joined administrative-technical means allow eg modernization, rationalization, globalization.

b8,4) Appearance

b8,4,1) Appearance can be eg stationary or mobile, hand-held, fixture- or self-supported, mini, medium or large sized, manual-mechanically or -electronically operated.

Digitalization is by multi-media, a combination of technically engineered, display designed, page by page navigable texts, pictures and sounds with resources and task sharing interfaces.

Cyberspace is an artificial, projected 3D panorama, an imagery of objects of all classes, reality duplicating, manipulating and fantasizing, shielded from natural surroundings with real time sensual-ly perceptive and active - electronically receptive and guided interaction.

◦ Hardware comprises eg central processor, bus, cache, memory, in- and output devices.

◦ Software comprises eg machine-programming languages, operating system and apps.

◦ Processing is by digital, binary-boolean signals in semiconductor circuitry.

Miniaturization reduces the size of devices often under visibility of the eye as in eg surveillance.

Micro-chip devices, implanted, embedded, integrated, automated and linked, handle every by discrete numerical methods stable, fast representable, calculable, processable and displayable task.

Nanotechnology allows engineering of materials and machines on the nano-level of 10^{-9} m.

b8,4,2) Present day trends are expansion, differentiation and specialization of professional fields.

Information has become a vital production factor. Growth of knowledge is exponential.

b8,5) Required are standards, regulations, instructions, training, knowledgeable behavior, supervision.

b8,6) Required are impact statements of risks, dangers and misuses of man and environment.

b8,7) Inhibiting factors

Illusions of human capabilities and convenience foster blindness to fall back effects.

Mass applications lead to a massive burn up rate of resources with environmental damages.

Modern tools of deception, misuses and destruction severely transgress human boundaries. Warfare with high tech weapons of mass destruction is self-destructive with of annihilation of billions of people, destruction of build land, devastation of natural land, global pollution and climate collapse.

b8,8) Evaluation is by merit of intent, function, result and further consequences. Functions are seen by professional standards of performance versus fixed, operating and environmental costs.

III A 5 Essentials

5a) Physiological base

5a1) The physical cosmos is qualitatively and quantitatively depictable, causally explainable and in its development predictable.

a1,1) Cosmogony reconstructs through backward extrapolation the earliest physical conditions of the cosmos. From a singularity at a finite point in space-time about 14×10^9 years ago, a state of extreme density of radiation energy, approaching Planck's time t_i , it exploded, cooled and developed into the present geometry with a multitude of material formations.

a1,2) Cosmology

a1,2,1) The macro-cosmos is a coherently gravitation bound, isotropic, homogeneous, accelerating inflationary Riemann geometry with asymptotic Minkowski properties towards infinite. It developed stable single and groups of galaxies, clusters, nebula, stars and planetary systems.

a1,2,2) The meso-cosmos constitutes the validity range of classical, non-relativistic physics. Its phenomena of abiotic matter are described by physics, chemistry and their fields of study.

a1,2,3) The micro-cosmos enfolds according to the standard model out of 3 classes of elementary particles, point like spin $\frac{1}{2}$ particles, field particles of the 4 forces and Higgs particles, preserving symmetries. It is ruled predominantly by strong, weak and electro-magnetic forces, unified in a single theory. It is described by Quantum Mechanics, Electro-, Chromo- und Flavordynamics.

a1,3) Eschatology projects through forward extrapolation future physical conditions of the universe for the next 10^{27} years as a continuing, entropy gaining, spatial expansion, dispersion of matter and emission of radiation to leave black dwarfs, neutron stars and black holes.

5a2) Natural environments are long term variables, comprising untouched materials, flora and fauna.

a2,1) The Heliosphere, a star of medium size and luminosity, about 4.5×10^9 years old, generating by nuclear fusion electromagnetic radiation, a gravitational and geometrical center of nine orbiting planets, allows a long, stable developmental time span for evolution of organic life.

a2,2) The Biosphere describes all single factors enclosed by the atmosphere.

a2,2,1) The atmosphere of the earth, reaching about 10 km upwards, consists out of 78% N_2 , 21% O_2 , 0,03% CO_2 and in its lower layers up to 4% of H_2O_{VAP} . It dampens by circulation temperature and pressure differences, carries precipitation inland and serves as a metabolic fuel.

a2,2,2) The hydrosphere in forms of gas, ice and liquid, found to 99,7 % in the oceans, supplies with sweet water the largest component of plants and animals and is indispensable in their metabolism.

a2,2,3) The lithosphere, the outer, firm, plate layered mantle of the earth, reaching about 100 km deep, has as its crust the pedosphere with rocks, stones, sands and soils of various qualities.

a2,2,4) The biotic environment includes all living organisms in water, land and air.

a2,3) Ecology describes individual, population and environmental abiotic and biotic forces, requirements and conditions of life with their multifaceted interdependencies in the development over geological time spans. A local ecological environment often forms out a self-organizing, semi-closed system with an energy and metabolic cycle along an ascending food chain in a dynamic, labile balance.

a2,4) Man causes major, often irreversible environmental changes, substitutions, destructions and climatic shifts through persistent, large scale technological applications with pollution of air, water and soil and eradication of entire biotopes and species.

5a3) Forms of life on earth developed out of evolutionary forces and processes.

a3,1) Early forms

The earliest forms of life appeared about 3.7×10^9 years ago. Development of life on earth (biogenesis) was first a chemical, abiotic evolution, taking place in the oceans in the presence of phosphates (XPO_4), silicates ($XSiO_4$), metal ions, an atmosphere of nitrogen (N_2), ammonia (NH_3), carbon dioxide (CO_2), methane (CH_4), sulfur hydrogen (H_2S), hydrogen (H_2) and energy sources of heat, radiation and electric discharges. Formed were mixtures of amino acids, proteinoid microspheres with first forms of a membrane, metabolism and growth by budding.

a3,2) Biological evolution

Biological evolution with nucleic acid chains capable of reproduction progressed in self-organization of matter with basic forces of the evolutionary drives of repetitive life cycles, mutation, recombination, divergent development of structures and forms with specialization of functions, adaptation and selection. Formed were protobiontes, containing a short DNA strand, which differentiated stepwise an improved metabolism, protein production, a multifunctional membrane. The first prokaryotes of blue algae and bacteria appeared. Following in the first evolutionary line were eukaryotes with differentiated organelles within the cell and a membrane enclosed nucleus, containing a chromosome set to control cell division by mitosis (start of phylogenesis). Their oldest known chalky fossils found in oceanic sediments are about 1.5×10^9 years old. The spreading one cell organisms took up mainly carbon and hydrogen containing molecules in exchange for nitrogen and oxygen to radically change the composition of the atmosphere, starting 2×10^9 years back, into the one we know today. During the Upper Precambrium of about 9×10^8 years ago the evolutionary rate of the diverse aquatic one cell organisms accelerated, forming multi cellular eukaryotes with specialized cell functions. The branches of plants and animals separated about 1×10^8 years back, introduced was sexual reproduction, further accelerating the evolutionary rate, and set up was a heterotrophic food chain with plants at the base, before the first forms of plant life appeared on land.

a3,3) Genetic materials

The first evolutionary line is continuously traceable in the development of genetic materials, their proteins (phylogenetic topology) and ensuing forms of life. The first nucleic acid chains grew by processes of duplication, base pair changes, addition, deletion, inversion, rearrangements, activation, deactivation, in later stages by production of catalyzing enzymes, by interaction of these factors, mostly enlarging the overall DNA material. The development of function specific genes and proteins is graphically demonstrated by a polygenetic tree (molecular phylogram), by branch order and lengths, indicating their degree and distance of relation, the evolutionary steps and the corresponding evolutionary rates. The molecular tree of lineage delineates copy true the evolutionary tree of comparative anatomy of all plant and animal species, stating a common ancestry of all living organisms in the biochemical building blocks, the genetic code, the bio-synthesis of proteins, the catalysis by enzymes and an energy metabolism with glycolysis.

a3,4) Taxonomy

The phylogenetic theory of descent serves as basis for description, denotation and categorization (taxonomy) of all organisms. As a result of evolutionary processes, there exist in discontinuous variability today about 500 000 plant and 2000 000 animal species. The degree of relationship between groups, traced in a hierarchical, monophyletic tree of lineage, is measured by singular, homologous, derived traits in descent of corresponding original traits. The taxonomic categories are rooted in four kingdoms (regnum) of one cell organisms, prokaryotes, eukaryotes and mushrooms.

5a4) Boundaries are man's limits of spiritual, mental and physical capabilities.

a4,1) The distance God - man is infinite, God being the creator of heaven and the earth.

a4,2) Mental limits

a4,2,1) Man is born in the original and common state of non-knowledge and over centuries acquired knowledge constitutes only a drop out of an ocean.

a4,2,2) Limits of free phantasy exceed factual knowledge by leagues. Below limits, inspiration abounds, but rarely approaches common fundamentals or far out extremes.

a4,3) Natural limits

a4,3,1) Man is extremely vulnerable in his natural environments to dangers, needs and diseases.

Traces of natural and synthesized germs, viruses and toxins, not visible to the eye, can be lethal.

a4,3,2) Limits of action are set by the possibilities of existing energy, matter, space and time.

Man can utilize and alter conditions, but he cannot create out of his own new physical forces.

a4,4) Class boundaries are sound theology towards God, reason towards nature, ethics towards society and maturity towards man himself.

5b) Freedom

Freedom, man's ability of movement in natural, human, social and spiritual dimensions is a basic and universal requirement of human activities. Every movement in any environment requires freedom. It is a state for being, encompassing passively absence of intrusion and non-use, actively liberation, use, expansion and also transgression of boundaries, which backfire on themselves.

5b1) States

b1,1) Submission leads to physical enslavement, mental stupor and often extinction.

b1,2) Liberation from political barriers is won by awareness, will, resources and often conflict, - from mental barriers like idolatry, superstition, illusion by sound theology, reason and maturity.

b1,3) Use is by intentional restraint or actual expression with communication and action.

Common characteristics are eg major or minor, actual or potential, stable or fragile, seen or not.

Modi of movement are given by eg direction, speed, dynamics, volatility, range and path.

b1,4) Expansion is by eg adaptive, social, educational, administrative, technical means, change of conditions and environments to widen the radius of action.

5b2) Types

b2,1) Natural freedoms utilize by nature given rooms of individual and collective movement.

b2,2) Civilizational freedoms utilize cultural-social-scientific-technical opportunities.

b2,3) Individual freedoms are possibilities of physical, mental and spiritual activities of a person.

b2,4) Collective freedoms are individual freedoms in collective endeavors.

They enclose set up, maintenance, expansion, alteration, regeneration, reduction and termination of relations for eg information, assembly, association and activities in all fields of life.

b2,5) Basic freedoms of movement, privacy, security, speech, action, assembly, education, property, profession, culture and religion are largely constitutionally codified as inalienable human rights.

b2,6) Inner freedoms comprise internal, conscious neuro-physiological processing.

b2,7) Outer freedoms comprise external, conscious bio-mechanical-vocal expressions.

b2,8) Truth's freedom allows unrestricted research and description of God, nature, man and society.

b2,9) Ethic's freedom does not allow a major inhibiting factor to run to its self-destructive end.

b2,10) Historical freedom is a state of affairs with minimal causal dependencies, where not imbalances, disintegration, destruction, collapse or catastrophe determine public actions.

b2,11) Cosmic freedom prevails over longer periods, where causes of historical developments with their large number of factors are not any more predictable by laws or theoretical approaches, but are subject to chances. Achievements of later born stand in alternatively open and equivalent time.

b2,12) Overall freedom is the sum of singular freedoms, their combinations and interactions.

5b3) Interactions

b3,1) Singular freedoms of several persons, acting in the same direction, often in association, eg overlap, supplement, relate, combine, enlarge, multiply and reinforcing each other.

b3,2) Singular freedoms of several persons, not in interaction, coexist with each other.

b3,3) Singular freedoms of several persons, acting in opposite directions, often with bundled forces, eg level, compete, retard and conflict with each other at the expense of the other party.

5b4) Balanced freedoms grant a maximum of freedom to each individual and group within a larger community of people, while observing obligations, rights, limits and reconciliation of conflicts.

5b5) Limits of freedoms are natural or man made physical restrictions or sanction enforced guidelines of behavior like a social classification, statute, norm, tradition, usage or etiquette.

Common characteristics are eg resistant or ductile, enforced, circumvented or disregarded.

Their range can be given by eg shape, extent and conditions like rules of accessibility.

5b6) Inhibiting factors are restriction, bondage and incapacitation by mostly pretended justifications.

Today, common practice worldwide are arbitrary private and government restrictions to privacy, travel, migration, choice of residence and work, property and movement of ideas and goods, free speech, assembly, religion and access to communication. Means of enforcement range from social sanctions to sublime oppression to data based rooms of surveillance and administration to deception and violence.

5b7) Evaluation is as

b7,1) Room of movement by eg awareness, potential, reality, use and misuse.

b7,2) Restriction by positive sources like ethics and negative sources like arbitrariness.

5d) Development

Development of man made objects out of natural and human resources is an universal human activity. Molding an object in detailed attention aims at an advancement in realization of human potential. It is initiated by individual and collective spiritual, mental, psychological, emotional, biological and bio-mechanical forces in combinations. Only limited by imagination, it reaches across all layers of reality. Required is a spectrum of freedoms and positive political-social-cultural-economic environments. Supportive is an infra-structure of accessible data bases, research and educational institutions, commercial applications, regulative agencies and a scientific-technological-administrative community.

5d1) Basic principle

Basic principle of development is the expansion und application of the canon of knowledge.

d1,1) The canon is structured in cosmic dimensions by standards, place, time and fields of study.

d1,2) The steps of cognition and R&D are applied repetitively.

d1,3) Present knowledge is totally insufficient for extended interpretations or construals and present human forces and man made products amount to no more than a scrap.

5d2) Goal orientation

Goal orientation is defined by the philosophy of research in its merits, political-social-scientific-technical character, prospects, scope, application, methods and public interactions.

5d3) Means

d3,1) Means are scientific, artistic, contemplative research, knowledge, capital and natural-human resources. They are aided by experience, technical soft skills like ingenuity, diligence and perseverance.

d3,2) Major steps in a case study are literature search, field search, formulation of question, hypothesis, design of experiments and methods, test runs with data collection and evaluation, conclusion, prototype up scale, test runs, decision to go ahead, implementation, marketing and feedback evaluation.

d3,3) Integrated steps of cognition are focus, observation, denotation, description, deliberation, interpretation, evaluation, documentation, propositional support, publication and public discussion.

d3,4) Productivity is achieved by adhering to the steps of subject and object true treatment.

5d4) Trends

Present day institutionalized, systematic, generations running research, development, education, management of knowledge and applications refine, add to, correct and spread present knowledge, initiating a variety of innovative political-social trends.

d4,1) Professional fields are expanding, differentiating and specializing.

d4,2) Man made environments dominate over natural ones in a technical civilization with mass utilization of resources, modernization, commercialization, urbanization and globalization.

d4,3) Chains of actions have become longer, faster, more miniscule, varied, extending, interacting, interdependent, also leaving far off, hard to detect, unregulated, incalculable areas.

d4,4) Vulnerability of the social fabric has increased, a multitude of variables is open to exploitation, misuses lead to gross misdevelopments and despotic policies lead to collapse of political structures.

5d5) Long term goal orientation is promotion of the spirit of man and integrity of nature.

d5,1) Creative development generates improved existing, innovative, speculative and visionary objects, which did not exist before in construction of future living environments.

d5,2) Qualitative development achieves a qualitative transformation of a human drive into a mental-human-natural product with a common benefit and a tiny advancement for man.

d5,3) Expansion of boundaries into the micro- and macroscopic ranges over ages by increased comprehension, freedoms, capabilities and radius of action with frontiers of the thinkable, calculable, do- and usable. Expanded are

d5,3,1) Theological teachings by spiritual forces through faith and sound theology.

d5,3,2) Mental conditions by social forces through maturity, research and development.

d5,3,3) Natural conditions by social forces through reason, research and development.

d5,4) Reached can be by collective moral and technical efforts self-preservation in cosmic dimensions.

5d6) Interaction of concurring, opposing, past and foreign developments can lead to eg revival, combination, supplementation, dynamic balance, coexistence, competition, eclipse and conflict.

5d7) Excesses occur through eg run-aways, large imbalances and short cuts like ideas for cash.

5d8) Inhibiting factors are eg lack of will and knowledge, counter-forces and recoil of misdevelopments.

5d9) Evaluation is by immediate effects and further reaching consequences by universal to item specific standards, eg merits, co-determination of affected parties and benefits-costs balance.

5e) Conviction

Man is centered in his convictions. They are the pivotal deciding points of his actions.

A conviction springs out of faith, an understanding of life or a vision. It forms out

5e1) A spiritual horizon with a set of religious statements and values.

5e2) A human horizon with short and long term aspirations.

5e3) A historic horizon with experienced and globally realized events.

5e4) A mental horizon with knowledge about man, society, nature and God.

5e5) An overall comprehension with a personal responsibility in stewardship of the creation, enlightenment and its envisioned result.

e5,1) A responsibility is chosen as a concrete contribution to life.

e5,2) Enlightenment are the means of realization with the tools of language, task, value, regulation and supervision. They are promoted in public with humility, fearlessness, courage and perseverance.

They overcome with spiritual-political determination any hostile, inhibiting factor.

e5,3) Result is a qualitative transformation of a human drive into a product with lasting merit.

e5,4) It directs anthropological towards comprehension-emancipation based behavior patterns. It eclipses homo-crebralis, -culturalis, -legalis, -activans, -faber, -sociologicus, -cooperativus, -oeconomicus, -ludens and vitalis.

e5,5) Review is by authorities like supervisor, affected parties, public conscience, life and posterity.

Faulty execution of responsibilities requires damage assessment and re-establishment.

5e6) Emancipation springs out of human drives, growing into an individual identity with independence, self-understanding, -preservation, -reliance, -determination, -presentation and -realization. A psychic constructed intention-conception-decision center interconnects all in- and external realities on the most direct path. It forms out

e6,1) An independent, functional mind, able to look, think and act for oneself.

e6,2) An individual, livable concept of one's life work with personal-collective goals.

e6,3) A cosmic spirit and responsibility to increase the canon of knowledge towards self-preservation in the long term future. It is achieved step by step by large scale, long term, systematic research, development, education and administrative-technical means.

e6,3,1) It questions individual-social forces: Are developmental steps on solid grounds?

e6,3,2) It expands boundaries of man versus man made and natural living environments.

e6,3,3) Its telos is functionally directed at self-preservation of man in the long term future.

e6,3,4) It is the only path of man towards moral utopia: ethical awareness with cosmic survival.

e6,3,5) A universally definable, finished object man or society does not exist.

5e7) Pseudo visions

Convictions are extremely vulnerable to idolatry, superstition, illusions, deception and violence.

Today, pseudo concepts of life spring mostly out of illusions of human capabilities and convenience, driven by lower instincts for prestige, power and profit against basic God given institutions.

Threatened is a 'human hand directed, accelerated evolution' by electro-magnetic-mechanical and bio-chemical-genetic means to develop a cyborg-chimera with programmable augmented capabilities.

e7,1) They are violations against the dignity of man in autonomy and health of mind, body and genetic code with inner and outer freedoms of movement in naturally given equality with all mankind.

e7,2) They are violations against the dignity of man in his responsibility for his expressions with transparency of intention, conception, language, action, administrative and technical tools.

A cyborg-chimera with its augmented capabilities can only be identified by a barcode scan app as it is distinguishable only by its technical performance data and programmable control mechanisms.

e7,3) Transformation of man into a cyborg-chimera cannot be realized against public resistance, except in image fascism with massive public opinion control.

Acceptable electro-magnetic-mechanical-bio-chem-genetic incisions remain diagnosis, prostheses, production of medication and somatic therapy, comparable in concept to abortion indication rules.

e7,4) A 'human hand directed evolution' will lead with its risks, dangers, misuses and destructions to a planetary catastrophe.

III A 6 Results

Results of expressions by communication and action comprise all longer lasting man made objects. Their design, generation and manifestation are collected in the canon of knowledge. They can be classified as mental, mental-human and mental-human-natural products. Within conceivable alternatives in life, - deficient essential components lead to gross inhibiting factors.

6a) Mental products

Mental products as results of neuro-physiological data processing are internal, conscious, intentional, visualized constructions. They are abstract units with identity, name and defined content of properties, independent of realization and utilization. They are a conceptual design of most products. They can be:

6a1) Spiritual mental products like an ethical standard.

Example is the Nicene creed, Athanasius (AD 287-373) fought for his life long.

6a2) World view mental products like a way of thought.

Example is humanism, a questioning and educating view of man, being endowed with human dignity and the potentials for freedom, individuality and virtues in real life.

6a3) Personal mental products like an individual opinion.

6a4) Mental processing products like a design of expression.

6a5) Professional mental products like a law of nature.

Example is the Archimedes' principle, he (BC 287-212) discovered while playing with soap in a bath.

Today, development of a mental product often requires a large scale R&D project.

6a6) Auxiliary mental products assisting another product like an operating instruction.

6a7) Evaluated are mental products by eg truth, merit, sincerity, completeness and consistency.

6b) Mental-human products

Mental-human products as results of molding human resources are external, conscious, intentional, realized construction. They are concrete units with identity, name, defined content of properties and function. They give an administrative contribution in service to man and environment.

Mass application is by large scale organized human structures and processes. They can be:

6b1) Institutionalized administrative units like a law court.

Example is public trial by state authorities in cases of capital offense to break through cycles of savage blood revenge, as expounded by eg Aeschylus (BC 525-456) in his 'Eumenides'.

6b2) Associative administrative units like a scientific community.

6b3) Auxiliary administrative units like a called in expert panel.

6b4) Evaluated are mental-human products by eg merit, function, performance and transparency.

6c) Mental-human-natural products

Mental-human-natural products as results of molding natural resources of physical raw materials, flora and fauna are man made material objects. They are concrete units with identity, name, defined content of properties and use. They give a technical contribution in service to man and environment.

Their finished state is described by eg appearance, function, performance, quality, practicability, efficiency, specialization, differentiation, communication and energy consumption.

Mass application is by daily population wide consumption. They can be:

6c1) Modified natural environment like a dam against the tides.

6c2) Cultivated natural flora and fauna products like a fruit orchard.

6c3) Products from non-living raw materials like machinery.

6c4) Evaluated are mental-human-natural products by eg industrial, technical and practical standards like function, performance, quality, service, cost, recognition, acceptance and natural-social concerns.

6d) Man's overall image is outlined by his intentions, conceptions and records of growth and decline, achievements and failures, for which as artisan he signs responsible.

III A 7 Inhibiting factors

Inhibiting factors introduce man made barriers by causes of error and intent.

7a) Errors are deficiencies in intellect.

6a1) They are caused by eg thoughtlessness, non-knowledge, mistake and irrationality.

6a2) Primitive aggrandizements are eg world, fate, fame, glory, beauty, happiness and sex appeal.

6a3) Pseudo-mental products, lacking sound theology, reason, maturity or ethics, are eg myth, idol, superstition, illusion, dogmatism, ideology, construal, social programming and secret policy goal.

6a4) Pseudo-logical reasonings are eg tautology, pleonasm, circular reasoning and regress ad infinitum.

6a5) They spread by eg culture, teaching, ways of thought and political-social instrumentalization.

7b) Intentional barriers are defects in drives, mentality, intellectuality and spirituality, originating out of criminal inclinations, hate of man and archaic notions of prestige, power, possessions and pleasure. They defile human dignity and universal spiritual, natural, social and human values.

6b1) Targets of gain are mostly self-image, language, frame works and tangible objects.

6b2) Targets of loss are mostly the natural environment, another person's social-professional surroundings, his property and he himself.

6b3) Targets of elimination are first whistle blowers and political-social opponents.

6b4) Means are acquiescence, subversion, corruption, deception and violence in combinations.

b4,1) Acquiescence yields to political-social pressure as way of least resistance.

b4,2) Subversion mentally disrespects the gist of an objective standard.

b4,3) Corruption physically violates an objective standard.

b4,4) Deception manipulates perceptions, understandings, explanations, intentions and actions.

b4,4,1) Motivation control by eg stirring up of lower fears and desires leads to eg brutality.

b4,4,2) Justification control by eg propaganda for a political system leads to eg dogmatism.

b4,4,3) Public opinion control by eg manipulation of content, context, style and image by eg appeasement, diffusion, deflection, distortion, misinformation, omission, elimination, perversion, ridicule, entertainment, glorification, irrationality leads large scale to social reality control.

b4,4,4) Self-deception and arrogance are rectified by cosmological insults: man is not center of the universe, not out of divine creation, not driven alone by reason and vulnerable to traces of toxins.

b4,5) Violence damages a spiritual, natural, man made object or human being by degrading abuse, attack by a military tool designed to do damage and misuse by a civilian tool designed to amend.

A society with a multitude of social-administrative-technical interacting relations is extremely vulnerable to 'soft' channels of private and public coercion, curtailing inner and outer freedoms of movement.

b4,5,1) A man made object is damaged by eg tempering, misapplication and destruction.

b4,5,2) A political-social-professional framework is damaged by eg harassment, denial of ownership, disenfranchisement, expulsion, exploitation, subjugation, strangulation and enslavement.

b4,5,3) Degrading abuses are eg insult, surveillance, defamation and demonization.

b4,5,4) Impairment can be eg physical injury, disease, altered growth and differentiation of a physiological trait and change in level of a genetic-physiological capacity.

b4,5,5) Transformation can be into a cyborg - chimera with programmable augmented capabilities.

b4,5,6) Replacement can be by a programmable robotized android.

b4,5,7) Torture and murder.

6b5) Degrees can escalate in

b5,1) Place from a spot to a nation to the globe.

b5,2) Time from a point to a decade to an area.

b5,3) Organization from an individual to a criminal cartel to a fascist system.

b5,4) Technology from bio-mechanical action to weapon of mass destruction.

b5,5) Severity from practical joke to manipulation to impairment to bestiality to fascism.

6b6) Combination of deception and violence out of archaic notion of

b6,1) Prestige leads to image fascism.

b6,2) Power leads to system fascism.

b6,3) Possessions leads to order fascism.

b6,4) Pleasure leads to hedonism.

b6,5) Systematic political-social fascism leads to global hegemonic policies.

III A 8 Summary

Man is a complex mental, functional, multi-dimensional, regenerating form of life, reaching from his human center, conviction, into the extremes of life. He is in all aspects depictable. He is independent and social, abstract and concrete, dynamic and passive, free and submissive, reflective and thoughtless.

8a) Achievements

He has made huge progresses over the last three millennia in theology, the humanities, natural sciences, mathematics, logic, data processing, collection of knowledge and technological applications with expansion of his radius of action, production of wealth and an environment of man-made products.

8b) Failures

He does not practice cognition to see himself, his intentions, conceptions and expressions with their positive or negative consequences. He does not know how to overcome inhibiting factors. He does not project himself into the future, combining a spiritual hope with a real prospect in cosmic dimensions. 'Act justly and love mercy...' (Micah 6,8) is the furthest into the future pointing arrow man can have. Basic utopia is ethical awareness with cosmic survival. His aspirational red thread is constitutionality.

The major church and secular political-social leaders are in image fascism in hundreds of millions of cases a year worldwide by universal standards accused of environmental violations, deception, exploitation, subjugation, degradation, physical injury and murder.

They conduct a global, clandestine, dirty B-C-R-G-N war between government, private, independent defence leagues' security services of the 1st, 2nd and 3rd Worlds and their populations. Together they operate a global system of labor camps for electro-magnetic-bio-chem-genetic programming of social-psychological-physiological profiles to transform man into a cloned, programmable cyborg-chimera and to eliminate human roots of dissenting, hostile and moral voices.

The Chimney To my friend Hannah Ungar

Daily behind the barracks
I see fire and smoke abound,
Jews, stoop down your necks,
You will be gassed and burned.
Don't you see in the haze
A torture torn face?
Doesn't it call with derision:
Five millions already devoured.
Auschwitz is held in its vices -
Everything, everything is cinder.

Ruth Klüger (1944)
(abr. trans. by U F)

The Belfry

Daily behind lighted ads
Silenced are exhorting voices
Against torture and autocrats
In whimpers and muted cries.
They are being called to order
By collapse and secret power.
Docs, lawyers break for pause,
A few drops for a good cause.
Millions sent to their last refuge,
Always, always the bells accuse.

Udo Frentzen (2014)

8c) Self-extinction

Man has allowed to let himself be prostituted by his lower instincts of prestige, power, possessions and pleasure to fall in his freedoms indefinitely low, if not arrested. After colonialism, two world wars and genocide, today with modern technologies of mass destruction, the sum of multiple, escalating gross corruptions in excess of boundaries will lead inevitably to collapse of political-social systems, planetary catastrophes and self-extinction of mankind.