

III A Man

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

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III A 1 Remarks

Intent of the essay is to take a stock check of man at the beginning of the 21st century.
Observer's position is questioning, reflective, defensive, hopeful, literary participation.
Definition of truth for the essay is: Have all components and their esprit been considered?

Man and his image consist out of components, not as a single, defined, finished object. They are mutually interwoven and building on each other as natural constitution, construction and expansion.

1a) Image

Man's pragmatic image is described by his spiritual, mental and human forces.
His visible image is described by his expressions, having generated all man made phenomena.
His mental image is described by his spiritual, mental, human and historical horizons.
He stands at the center of his forces, their standards, generation, application and responsibility.
His convictions direct his intentions, conceptions, decisions and expressions.
They are trained in telos of mind, - a by nature solely altruistic or ego-centric man does not exist.
His image is marred by inhibiting factors, as convictions are vulnerable to lower instincts, myth, idolatry, superstition, illusion, ideology, deception and violence.

1b) Natural constitution

Components are physical growth, needs, drives, motivations, the senses, memory, emotions, psychic activities, mental capabilities and anthropological characteristics.

1c) Construction

Components are intention, conception, mental operations, question, search, experience, cognition, comprehension, reflection, design of expression, expression, communication, action, institution and technical device.

1d) Expansion

Components are its goals, expansion rules, cognition, innovation, quality, institutional efforts, co-determining factors, interactions, vulnerabilities, excesses, inhibiting factors, pseudo-developments, results and evaluation.
They open, diversify and push the frontiers of mankind step by step forward to increase his radius of action and his boundaries of physical, mental and spiritual capabilities.

1e) Essentials

Essentials of life are a physiological base, freedom and conviction as decision making mental organ.
Individual and collective convictions aim in telos of mind at the long term essentials of man, society and nature.

III A 2 Standards

Standards entail mostly definition, purpose, scope, generation, classification, scale and application.

2a) Definition

Man's standard, a self-set and self-interpreting value, is human dignity.

2b) Intent

2b1) Intent is to protect man, society and environment that human actions in freedom of choice with positive and negative consequences do not fall back on themselves, but promote objective benefits.

2b2) Scaled up intent is to further telos of mind with sound mental concepts in ethical freedom.

2c) Scope

They apply to all subjective-objective, individual-collective, spiritual-human-natural objects in space-time. There is not one object with at least one spiritual and human and natural aspect.

2d) Generation

Human dignity and deduced values are generated by designation of goods as being worth of protection.

2e) Classification

2e1) Spiritual values protect divine gifts to man.

2e2) Existential values protect basic human rights to life.

2e3) Humanitarian values protect basic personal rights to growth.

2e4) Environmental values protect basic rights of nature.

2e5) Cosmic values contribute to life, truth, unity and environment for the long term future of man.

2e6) Universal values apply to all objects on the globe in past, present and future.

2e7) Framework values combine all proper values of a social fabric.

2e8) Object values combine all proper values of a single object.

2f) Scale

Values are ordered hierarchically according to significance and range of validity and connected by an unbroken interlinked tree structure. There are no values, which cannot be deduced from human dignity.

2f1) Primary values

f1,1) Primary spiritual, existential, humanitarian and universal 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).

It extends equally to all disregarding origin, race, color, gender, age, position, wealth, culture and faith.

f1,2) Primary to fourth values in a constitutional framework are often codified as basic human rights.

f1,3) Primary universal natural value is integrity of nature.

2f2) Secondary spiritual, humanitarian, universal and natural value is truth. It abhors deception.

It extends to all objects in reach of self-awareness, curiosity, imagination and ambition.

f2,1) Truth is found by cognition, first by an intruding, observing, questioning, investigating search, exhausting available means to generate knowledge.

f2,2) 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.

f2,3) Truth in its narrow context means congruence of an objective description with its object in one to one accuracy from property to term to sign to communication to documentation.

f2,4) Truth in its wider context means an accurate, complete, transparent. objective description of an object within the dimensions of man's radius of action and responsibilities.

f2,5) Truth in its cosmic context means an accurate, scaled up, objective description of an object within the dimensions of nature and the infinite.

f2,6) Truth in a social framework means freedom of knowledge from generation to application.

2f3) Tertiary, existential, humanitarian, universal and primary social value is unity of mankind.

It abhors segregation. It is based on equity and justice with the rule of law.

2f4) Fourth humanitarian and universal values are freedoms, emancipation and common welfare.

2f5) Professional standards are guidelines of state of the art field knowledge and praxis.

2f6) Item specific standards are benchmarks of properties and performance.

2g) Realization is by design, feedback, public discussion, regulation, supervision and litigation.

Design entails proper formulation, combination and conflict solving of standards.

III A 3 Constitution

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

A natural originator's needs and drives build up to motivations, emotions, psychic activities, mental capabilities and into conscious intentions, conceptions, decisions and expressions.

They initiate at any starting point from lower instincts to higher hopes and proceed in any direction on any chosen path, straight, meandering or in repetitive cycles in varying modi and intensities. Beaming with life as well as being vulnerable, they reach out to all objects of imagination and drive on with zeal inexhaustibly to excess. Demanding ever new stimulation, satisfaction and expansion, they transgress with accumulating resources, administrative-technical tools, research and development, deception and violence the boundaries of man and his environments. They do not rest until self-destruction.

Growth of physiological-physical-motivational-emotional-psychic-mental capabilities depends on an array of interwoven genetic and acquired, phase specific and continuous, subconscious 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 arise out of various internal stimuli and external incentives to form a motivation towards action. They desire a state of satisfaction, wellbeing, continuation, achievement and recognition.

3b1) Spiritual needs and drives address all phenomena

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

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

b1,3) Values aspire local to cosmic object specific and frame work benefits.

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

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

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

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

b2,4) Improvement of individual, social and environmental conditions, first in putting off death, alleviation of diseases and reduction of bare needs, restrictions, contingencies, risks and dangers.

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 and processes, 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, ease, comfort and entertainment.

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

3b6) Lower instincts mostly lead to self-usurious 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 excessive security, control, accumulation, diversity and demonstration.

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

3c) Motivations

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

- 3c1) They draw on pre-existing, habitual and new endogenic dispositions like impulses from physiological-psychic-mental-spiritual needs and on exogenic conditions like opportunities, encouragements, incentives, obstacles, sanctions, coercion to generate an innumerable variety of desirables.
- 3c2) They concentrate on a specific object of goal attainment from short to long term action.
- 3c3) They change objects, modulating, combining, separating, substituting and eclipsing.
- 3c4) They fluctuate in intensity and breadth, increasing, expanding, slackening and diminishing.
- 3c5) They organise themselves, structuring, processing, coordinating and reorganizing.
- 3c6) They interact with foreign motivations, co-operating, evading, challenging and counter-acting.
- 3c7) They are often satisfied for a short period only to rest, revive and re-invigorate themselves.
- 3c8) They are reflected on, further researched, modified, corrected and redirected, - without, they often become base, biased, criminal and over-extend to self-destruction.

3d) The senses

A sense is a physiological capacity of an organ to record with receptor cells a specific stimulus.

Body internal receptors record movement, balance, pressure, temperature and pain.

Body external stimulation through seeing, hearing, smelling, tasting or touching is the first, immediate, necessary, non-alternate source of cognition of objects for reflexive and mediated responses.

- 3d1) Stimulations are filtered for items of interest, others are left below a threshold of consciousness.
- 3d2) Attention span can be short to long term, low to highly selective and automatic by training.
- 3d3) The stimulation is neurologically encoded into a dynamic bio-electro-chemical action potential.
- 3d4) It is passed on by the visual, auditory, olfactory, gustatory or somatosensory-kinesthetic cortices to the brain lobes for acute experienced sensual-mental perception.
- 3d5) It is transformed into a present, conscious, constructed, representative image in mental conception.
- 3d6) Interpreted into a conception are often eg simplicity, pattern, coherence and common features.
- 3d7) Codetermining impulses come from eg questions, motivation, experience, context and environment.
- 3d8) Instrumental detectors extend the range of observation from the meso- to the micro-macro-cosmos.
- 3d9) Performance measures are eg receptive field, sensitivity, resolution, reaction time and reliability.

3e) Memory

Memory stores information for reproduction on instant demand.

Information of any class in varying accuracy, distinctiveness and volumes is

- 3e1) Encoded and stored in an ultra-short sensory, short working and long time memory, being
 - e1,1) Filtered according to source, relevance, context, environment and convenience.
 - e1,2) Modulated by addition, change and cut out. Changes can be eg simplification and fabrication.
 - e1,3) Held with eg explicit meaning, situation, episode, context, extraordinary event, autobiography, predilections, moods, implicit procedures and prospective intent.
- 3e2) Decoded and recalled into awareness and consciousness, being
 - e2,1) Used in psychic activities, orientation, cognition, recognition and all further processing.
 - e2,2) Retrieved back from the first conscious impression in childhood.
 - e2,3) Aroused from sub-consciousness by association and trauma.
- 3e3) Lost by fading, forgetting, dislocation, repression, interference, amnesia and brain damage.
- 3e4) Evaluated by its accuracy, completeness, capacity, reaction time and conditioning.

3f) Emotions

Emotions as atmosphere of being constitute a distinct subconscious to conscious psychic activity.

- 3f1) They arise out of stimulations and are generated at will in kind, intensity, duration and expression.
- 3f2) They interact anticipating, accompanying and trailing with cognitive and all further in-external, own-foreign activities, eg embellishing, tarnishing and evaluating them.
- 3f3) They are trained by impetus, modulation and repression.
- 3f4) Moods arise with individual-collective needs as basic emotions like stress-relaxation, desire-satisfaction, joy-fear, elation-depression, happiness-sadness and friendliness-gruff.
- 3f5) Passions, sentiments and inclinations arise with individual-collective psychic, social, mental needs as love-hate, self-esteem-shame, interest-disinterest, affection-aversion and ambition-repulsion.
- 3f6) Compassions arise with individual-collective spiritual drives with awareness of good-evil and right-wrong towards self-emancipation, -realization and responsibility for a common benefit.
- 3f7) They are vulnerable to uncritical under- and overestimation of a present state of affairs.

3g) Psychic activities

Psychic activities move psychic images in an inner, self-aware, self-identifying 'drag&drop' screen.

3g1) A psychic image is constructed from sensations from the entire neuronal network and perceived as an existing entity and placed in front of a psychic area of neurological free movement like a sketch on a background screen between subconsciousness and consciousness.

3g2) A psychic activity arranges freely imagined and real objects, forces, dimensions, realities, points of perspective, needs and hopes to turn them over, combine, penetrate, separate, remove, bundle and point them inspectively and creatively.

3g3) It hands the arrangements over to emotional-motivational-physical-mental-spiritual activities.

3g4) 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.

3h) Mental activities

3h1) Mental growth, predetermined by evolutionary forces over geological time spans, developing multicellular organisms with differentiated-specialized functions, has formed out the central brain and extended enteral-peripheral nervous systems, a plastically, multi-dimensional organ, empowering all mental functions. Its network of $\approx 10^{10}$ neurons of bio-electro-chemical information generators, transformers, transmitters, processors, receivers and storage units represent through neurological firing patterns in sequential and parallel processing steps the models, terms, signs and speech of all physical, psychological, intellectual and spiritual objects in consciousness on their entire way from sensual perception and recollection to psychic and mental activities.

3h2) 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 work area for mental processing. It enables objects and activities to be visualized, focused, arranged and further operated on.

3h3) They are tied to life and concentrates first on self-preservation to satisfy basic needs.

3h4) Their productivity varies over a life cycle with changing skills, health and environments.

3h5) The nature given mind has the most growth potential by uptake and processing of content.

3i) Anthropological characteristics

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

3i1) Types of homo-sapiens are eg homo-cognitus (-knowing), -cerebralis (-mental), -culturalis (-cultural), -legalis (-legal), -activans (-active), -faber (-productive), -sociologicus (-political), -cooperativus (-co-operative), -oeconomicus (-economical), -ludens (-laughing), -vitalis (-vital), -capax (-capable), -patiens (-ailing) and -debilis (-debile).

3i2) Behavior patterns

i2,1) Flight and protection from dangers.

i2,2) Adaptation to social and natural environments.

i2,3) Recognition of needs and opportunities.

i2,4) Provisions for needs and desirables.

i2,5) Organized, methodical and technical approach to problem solving.

i2,6) Tactics and strategies of defence and attack.

i2,7) Self-knowledge, -preservation, -realization and -display.

i2,8) Questioning, search, exploration of uncharted areas and conquering of challenges.

i2,9) Sharing of experiences, usages, traditions, knowledge and ideas.

III A 4 Construction

The mind

The mind is the conscious internal processing, decision making and external executive organ of sensual, psychic, physical, mental and spiritual activities. It has generated all man made phenomena.

Preconditions

- Physiological preconditions are autonomy of body and mind with an alert consciousness.
- Framework preconditions are guaranties of safety, freedoms of movement, thought, speech, assembly, profession, the press, the arts, religion and access to education.
- Preforms remain on the stage of infantilism, primitivism, naivety, cliché, impulse and blind imitation.
- Basic cultural prerequisites are language, mathematics, logic, method and data processing.
- Language see Communication 4m.
- 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.
- Logic is accountability of identity. It lists for a given logical space with a defined set of items, properties and relations the rules for rational, valid, consistent and complete reasoning of eg deductive and inductive, negative and affirmative, a priori and a posteriori conclusions.
- Methods are standardized steps to perform routine tasks of eg observation, investigation, description, interpretation, evaluation and presentation of an object, - short of an in-depth treatment.
- Electronic data processing in worldwide multi media networks with microprocessors programmed in digital code, assists mental activities in all qualitative-quantitative tasks of computing and application.

It forms out

- Inner subjective tools of processing: intention, conception, mental operations, question, search, experience, cognition, comprehension, reflection and design of expression.
- Outer objective tools of expression: communication, action, administrative organization and technical device.

The inner and outer tools are tailored to be in close touch with subjective and objective realities to enable in first place pragmatic goal attainment, determined, functional, productive, quality concerned, adequate, coherent and balanced.

It follows in line

- Concrete starting points of question, search and the tools of cognition.
- Construction rules of subject and object true treatment.
- Expansion rules to explore with development new horizons.
- Aspirational convictions.

It increases with applications the radius of action with beneficial and destructive capabilities,

- Generating knowledge about facts with sound mental concepts like faith, reason and maturity.
- Generating knowledge about depraved power tools with pseudo mental products like ideology.

4a) Intention

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

It builds on perception by internal and external senses.

It initiates, guides and terminates psychic-emotional-mental activities with their visualized objects for realization of an object of choice.

It refuses to be penetrated by other chains of causality.

4a1) Construction rules

- As a visualizing tool it aligns itself from a point of perspective via a relation towards an object.
- As a pragmatic tool it considers along all steps possibilities and limitations.
- As a quality concerned tool it employs the principles of subject and object true treatment.

4a2) Characteristics

Its most outstanding characteristic is its range of interest, attaching itself to any object over any time-span, re-invigorating itself persistently to explore new horizons with a variety of desirables.

- Preforms are reflex, bare need, blind impulse and compulsory action.
- Trains of intention run from internal physiological-motivational-emotional-psychic-mental-spiritual stimulus to a conscious intent, conception, mental operation, question, search, experience, cognition, comprehension, reflection, design of expression, decision and from there externally to direction of tactical-strategical steps of realization by communication, action, administrative organization, technical device.
- Scope of intention entails all in- and external factors in their dimensions from psychic processing to results with further consequences.

4a3) Cognitive intent

Driving motor of all steps of cognition is its intent.

- Main intent is to shed light on an object and to look further for a more accurate description.
- Scaled up intent is ethical awareness in telos of mind with correction of inhibiting factors.
- Pragmatic research goal is realization of a specific envisioned project.
- Intellectual research goals are expansion of man's horizons and radius of action.
- Epistemic research goals are expansion of knowledge and avoidance of errors.
- Scaled up epistemic research goal is universal treatment of all objects.
It allows with management of knowledge and public contributions treatment of objects of any class in all applications, contexts, environments on all levels of abstraction and complexity.
- Political-social research goal is to embed enlightenment into public participation.
- Spiritual intent is increase in overall comprehension of human endeavors with values, priorities, responsibilities, tasks, means and results to gain responsible treatment of all factors of matter and life.

4a4) Every point of its train is subject to reflection, evaluation and re-direction.

4a5) Stored in memory are observed, studied, experienced models of goal attainment for reference.

It blends with collective motivations and intentions to participate in larger generations running efforts.

4a6) Vulnerability exists especially to narrow, lacking, habitually trodden cycles.

4a7) Excess is eg overestimation, overshooting one's capabilities.

4a8) Inhibiting factor is eg megalomania, transgressing natural, human, social and ethical standards.

4b) Conception

Conception constructs an image of an object as a 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.

A conception serves mental activities in all stages from internal, subjective processing to external, objective expressions to visualize objects of choice.

All conceptions entail psychic-emotional-mental activities and are closely guided by intentions.

Main goal is to mold an object of choice according to present intent.

Scaled up goal is to participate in the collection of a canon of knowledge, to avoid inhibiting factors and to generate mental-ethical awareness with spiritual, natural, human, historic horizons.

Its limits of realization delineate the radius of human actions and responsibilities in cosmic space-time.

4b1) Construction rules

- As a visualizing tool it aligns point of perspective, relation and object.
- As a pragmatic tool, it visualizes the object distinctively and accurately.
- As a quality concerned tool it employs the principles of subject and object true treatment.

Expansion of a mental horizon is as in search and development by tiny repetitive steps.

4b2) Characteristics

Its most outstanding characteristic is its range of interest, constructing any object conceivable from reduction to a void, exploration of uncharted areas to spinning off new creations with a life of their own.

- Preforms are shadowy silhouette, patch, hunch and suspicion.
- The specified, identified content stands at the center of mental operations.
- It is drawn out of psychic activities by awareness, of the senses by cognition, of memory by recollection, of creativity by imagination and of reflection by turning it over.
- It is visualized as an image, map, pattern or symbol.
- It is adjusted in focus with distance, angle, surrounding medium and place-time frame.
- It attaches to the image a term with a phonetic signal and a written sign.
- It endows the image with meaning, its forces, characteristics and relations.
- It allows the image movement, flexibility, moldability and transparency.
- It is carried with its modifications through all stages of processing and realization.

4b3) Cognitive conception

- Main function is to shed light on an object and to look further for a more accurate description.
- Scaled up function is ethical awareness in telos of mind with correction of inhibiting factors.
- Pragmatic function is to render a concise, accurate, objective description.
- Intellectual function is to enable mental operations, reflection, design of expression and expression.
- Epistemic function is classification, categorization and sub-categorization of objects to gain a complete list of properties in their dimensions from perception to application to consequences.
- Political-social function is to pass on objective information to the general public.
- Spiritual function is increase in overall comprehension of human endeavors with values, priorities, responsibilities, tasks, means and results to gain responsible treatment of all factors of matter and life.

4b4) Every point of an image is subject to reflection, evaluation and re-construction.

4b5) A single image stands in a single contextual frame, - not in a house of a thousand mirrors.

4b6) Vulnerability exists especially to narrow, habitual segmentation of focus against overall reality.

4b7) Excesses are eg world views, overestimating present knowledge against cosmic dimensions and ossifications, protecting themselves against revision and expansion.

4b8) Inhibiting factor is eg lack of transparency to block truth tracking.

4c) Mental operations

Mental operations process an object in visualization, guided by intentions along the required qualitative and quantitative steps to reach a conclusion.

They draw on sensations from the entire neuronal network and let the object undergo in free arrangement and complete interlinkage a series of transformations.

4c1) The object is first fixed in consciousness and placed into a contextual frame with the author's position, operational intent, assumptions, definitions, conditions and searched for result.

Contextual frames are in general the natural, human-social and spiritual dimensions with their standards, a set of items, lines of forces, properties, relations, conditions, operational rules and ranges of validity.

They are designed to align items, relations and conclusions consistently by eg place + time, quality + quantity, modality + possibilities, part + whole, cause + effect, purpose + result, relevant + irrelevant.

4c2) The items comprise mainly semantic content, linguistic term and semiotic symbol.

4c3) Psychic operations are mostly association, alignment, probing and dissociation.

4c4) Mental operations are mostly addition, subtraction, substitution, deletion, rearrangement, comparison and conclusion.

Mathematical operations are mostly logical and arithmetic like algebraic-geometric calculations.

4c5) Operations proceed mostly in sequence and parallel along tree and cycle charts.

4c6) Contextual frames can be expanded to handle with interwoven realities longer interconnected tasks.

4c7) Conclusions range from a sad truth to a hoped for result and are starting point for further operations.

4d) Question

A question points at an object at hand.

4d1) It is placed into the center of a search for more information.

4d2) Basic questions are: Who is man? What is nature? Who is God?

What is life? What is death? Which is the best way to proceed?

4d3) It gives with follow up questions a direction to a pursuing search.

A pointed question projects a 'laser beam' from an interrogation mark to an application.

4d4) As the deciding starting point, philosophy can be called the art to ask questions.

4e) Search

A search continues in the train of a question as an exploratory excursion.

4e1) It aligns psychic, mental and expressive activities, repeatedly crossing back and forth subject - object realities with close interplay of their forces.

4e2) Its primary standard is the standard of truth in its narrow, wider and cosmic context.

4e3) Its rules are like that of expansion of a mental horizon and development by tiny repetitive steps.

4e4) It takes a closer look across the panorama, the micro- and macroscales.

4e5) It studies the subject matter from existing, available knowledge.

4e6) Continuing its questions, it concentrates on a direction, field, method, means, place and time.

4e7) It sets the starting point of the tools of cognition for scientific, contemplative, aesthetic research.

4e8) Searched is intrudingly and pryingly, though restricted by ethical standards of acquisition.

4e9) Its primary stepping stones are sound mental concepts of knowledge.

4e10) The initial steps of question, search, focus and observation are the first bottlenecks and have to be studied in all human activities. All subsequent steps of mental-technical processing rely on them.

4e11) Corruption is mostly by error, faulty concepts of knowledge and intent.

e11,1) Habitual deficiencies lead to permanent loss of eg accuracy, functionality, range, structures and processes with a black out of proper perception, comprehension, evaluation and action.

e11,2) Corruption multiplies along publication to teaching to applications into gross inhibiting factors.

4f) Experience

Experience registers subjectively all personal and surrounding activities of life.

4f1) It is acquired in the modes of eg active-passive, pre-reviewing, snapshot-continuously, short-long term, accidental-preplanned, autodidactic-institutional and sensual-instrumental.

4f2) It is intensified by eg own questions, searches, deliberations, discussions, hands on experiences, failures, restarts and successes to be reflected on, squashed, modified or ascertained.

4f3) It is collected in memory as sensual-empirical data with eg semiotic-semantic values, causes, mechanisms, effects, environments, singularities, generalities and expectations.

4f4) It is expanded by documental and fictional narrations of other people.

4f5) It is collated with knowledge and visions about human-social-natural-spiritual objects and issues.

4f6) It promotes cognition by eg proven remedy, analogy, intuition and educated guess.

4g) Cognition

Cognition opens up doors.

It is transformation of forms of being into forms of consciousness.

Its components are therefore the subject, the object and a relation between them.

Its first standard is the standard of truth, applying universally to all objects throughout fact finding.

There is not one cognition exhausted object. 90% of truth is truth finding.

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

Man sets out to explore an ocean and beyond where he can discern so far not more than a single drop.

4g1) Approach

Approach to all objects is by observation of facts, contemplation of possibilities and their negation.

Subjective, relational and objective cognitive factors are to be approached by cognition themselves.

Cognition is a daily and a basic individual-collective long term running challenge.

'Cognosce te ipsum' points at the key: the observer's position. What are his questions - his tools?

g1,1) Cognition is initiated by questions and searches.

g1,2) The questioned item is placed into the center of scientific, contemplative, aesthetic research.

g1,3) Every object entails at least a subjective, relational and objective factor with its properties.

g1,4) Every object entails at least a natural, human and ethical dimension with its standards.

g1,5) Every object is subject to investigation, addition, deletion and correction.

4g2) Subjective factors

g2,1) Constitution with physical growth, needs and drives, motivations, the senses, memory, emotions, psychic activities, mental activities, anthropological characteristics.

g2,2) Construction with intention, conception, mental operations, question, search, experience, tolls of cognition, comprehension, expression, communication, action, administrative organization, technical device.

g2,3) Expansion with goals, rules, cognition, innovation, quality, institutional efforts, co-determining factors, collective efforts, interactions, vulnerabilities, excesses, inhibiting factors, pseudo developments, results.

g2,4) Essentials with physiological base, freedom, conviction.

g2,5) Inhibiting factors.

Driving motor of all steps of cognition is its intent.

g2,6) Main intent is to shed light on an object and to look further for a more accurate description.

g2,7) Main function is visualization from perception to mental horizon to vision to reflection.

g2,8) Scaled up intent is ethical awareness in telos of mind with correction of inhibiting factors.

4g3) Relational factors

A relation allows access of a physiological sensor to an object in focus.

4g4) Objective factors

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

g4,1) Objective factors achieve description of the item at hand with its properties, forces and relations.

g4,2) The pragmatic status can be object surpassing, adequate, lacking or inhibited.

g4,3) The theoretical status is open ended.

g4,4) Limits are set by the observer's position, by mental-administrative-technical tools' range and precision and by environmental physical-social forces and conditions.

4h) Comprehension

Comprehension is a multistep process from awareness to a valid evaluation of an object. Formed out are

- Perception, reconstruction and visualization.
- Identification, description, classification and categorization with conceptualization.
- Acceptance in sound theology, explanation in reason and understanding in maturity.
- Interpretation, application and evaluation.

4h1) Conceptualization

Scientific concepts are as tools of cognition ordered data platforms of object's properties, forces and relations with their cognitive aspects for more detailed investigations.

- Knowledge comprises data generation, arrangement, management, assessment, standards and responsibilities with supervision.
- Reason, maturity and sound theology comprise description, approach, data classification, categorization and treatment.

4h2) Classification

Classification serves as a template for groups of items with major common properties to allow convenient one like all treatment, standardization and economization. All objects are

c2,1) Typified according to their primary semantic content.

c2,2) Listed in intention (content), extension (cases) and relations under the next higher genus.

c2,3) Become by art differences a part in an open, heterogenous taxonomic systems of all objects.

The classes and categories are

- Spiritual objects

Spiritual statements of revelation are expanded on by exegeses of His will.

Spiritual objects are grasped in faith in the divine dimensions of life, love, truth and justice.

Their result oriented priorities within sound theology are

- Non-violence
- Address of major issues

- Natural objects

Natural phenomena are described by the scientific method.

Natural objects are explained in reason in the physical dimensions of space-time.

Their 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.

- Human-social objects

Human affairs are described by the real life method.

Human-social objects are understood in maturity in the dimensions of human activities.

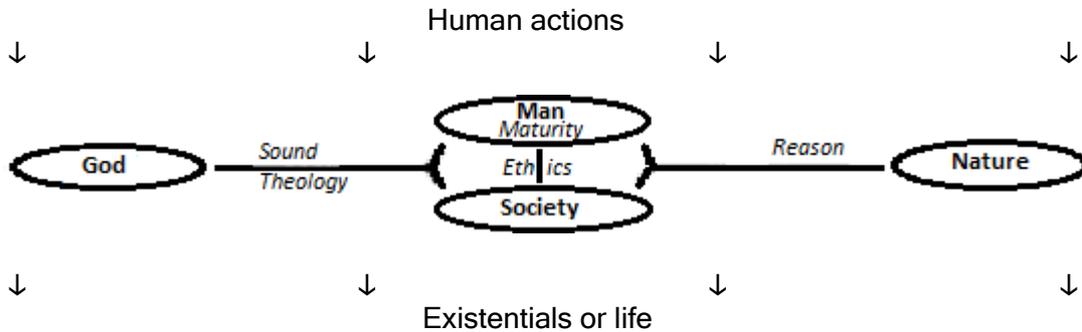
Their categories, rejecting omission, are

- Content with natural, human and spiritual forces, properties and causal chains in space-time.
- Reality, eg spiritual, natural, human, mental, psychical, emotional, pragmatic or fantastic.
- Functions, states, structures, processes, paths, mechanisms, events and effects.
- Logical and mathematical space, preserving identity, consistency and non-contradiction.
- Presentation, eg, theme discussion, medium and event staging.
- Environments, eg situation, context, praxis, framework, heritage and tradition.
- Cosmic environment, eg rooms of movement, capabilities and boundaries.
- Inhibiting factors, eg non-knowledge, uncertainties, risks, dangers and possible damages.

4h3) Standards of compatibility

Standards of compatibility are existential conditions of human actions and life.

They serve as class boundaries for proper treatment of objects from generation to application by sound theology towards God, by reason towards nature, by maturity towards man himself and by ethics towards society and cannot be transgressed without faulty results, failures, conflicts and possibly severe fall back effects on human existentials.



The standards will reduce in cosmic dimensions to responsible treatment of the innumerable factors of objects towards God, life and matter.

4h4) Application

Application comprises object provision, function, impacts and environments.

They cross subject-object relations over the range of non-expression to expression.

Its basic components of subject, relation and object are arranged in line to be compatible, practical, economical and productive in goal attainment.

h4,1) Subject true treatment

In subject true treatment attention centers on the criteria of the subjective processing factors in their biotic medium of self-understanding to arrive at a workable design of expression with removal of gaps, friction and inhibiting factors.

h4,2) Object true treatment

In object true treatment attention centers on the criteria of the objective realization factors in a biotic medium of world-understanding to arrive at the desired result with surmounting of pitfalls, obstacles and inhibiting factors.

4h5) Inhibiting factors

Pseudo mental products out of irrationalities and misuses of knowledge like special interests of cognition and destructive intent, both claiming 'knowledge is power', violating the standards of compatibility and possibly life and matter, are eg egocentric happiness, aggrandizement, myth, idol, superstition, illusion, rigid dogma, ideology, pseudo-scientific concept, social profiling/programming and secret policy goal.

4i) Reflection distrusts physiological-psychic-mental-spiritual activities, their results and consequences to recheck points in question. The tools of cognition are reapplied to the project, while

4i1) Taking a perspective from a step further back for an unprejudiced view.

4i2) Retrieving the steps of mental processing and implementation.

4i3) Challenging all factors with their states, processes, assumptions and conditions.

4i4) Recalculating the error analysis.

4i5) Searching for disregarded and additional factors.

4i6) Abstaining from dead end, self-crucifying contemplation.

Desired result is a more accurate, objective, complete, reliable, balanced and creative description, interpretation and evaluation of the question at hand.

4j) Design of expression

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

4j1) Processing comprises a complete line from intention to a mental draft of the envisioned object.

Individual steps can be bundled as one intention-conception-operation units in sequence.

4j2) Implementation comprises a complete line from decision to a mental draft of the realized object.

Individual steps can be bundled as one force-resource-action units in sequence.

4j3) Applied is subject - object true treatment to follow the rules of construction and expansion.

4j4) As blueprint, all steps are often redrawn and reworked to improve points in question.

Desired result is a functional natural-human-spiritual product with sought for properties.

4k) 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 and 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, drifts and broad trends, where its factors are co-determined by various unique circumstances.

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

4k1) Generation

k1,1) Preconditions are autonomy of body and mind.

k1,2) Training is from childhood on, followed by schooling and study in a professional field.

k1,3) A design of expression is generated out of intention, conception and mental operations.

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

k1,4) Point of inspiration can lay in imaginative and real past, present and future.

k1,5) Force and desired object can be spiritual, natural and human, relative to the originator class internal - self-referential or class external - foreign referential.

k1,6) Desires explore possibilities, maximise results, minimize efforts and remove obstacles.

k1,7) Responsibilities achieve a qualitative jump by applying a standard of merit.

4k2) Progression

k2,1) Preforms remain on a stage of eg attempt, patch, fragment and blank imitation.

k2,2) Implementation proceeds along trials, errors, complications, obstacles, setbacks, restarts, hurdles taken, changes, ramifications, chances and results with receptions and reactions.

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.

k2,3) Base pattern comprises originator, desired object, communication, action, administrative organization, technical device, relation, medium, recipient, situation, environment and boundaries.

k2,4) Base process comprises initiation, progression, reception, reaction and termination.

k2,5) Extension over space can cover a point, region, the globe and the cosmos.

k2,6) Continuation over time can cover a point, generation, millennium and geological span.

k2,7) Augmentation of means is achieved by administrative organizations and technical devices.

k2,8) Penetration of complex systems is measured by the scope of impact.

k2,9) 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.

k2,10) 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.

k2,11) Interactions range from union to cooperation, coexistence, evasion, competition to conflict.

k2,12) 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 $(n > 2)$.

4k3) Results

k3,1) Expressions run to first, intermediate, side, lasting effects and far down consequences.

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

k3,2) They form out social-media-admin-technological structures and association complexes.

k3,3) Unfolding realities are eg physical, physiological, psychic, mental, spiritual and historical, claiming eg existence, necessity, potentiality and possibility to be verified as valid or illusionary.

k3,4) Lasting results can be classified as spiritual-mental products like a value, mental products like a law of nature, mental-human products like a law court and mental-human-natural products like a dam against the tides.

k3,5) Limits to physical expression are set by known and existing energy, matter, space and time.

k3,6) Limits to mental expression are set by capabilities of imagination, formulation and reception.

k3,7) 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.

41) Communication

Communication serves the transmission of information. Language, text and picture stand at center of human praxis as means of conception, socialization, discussion of issues and spread of knowledge.

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.

411) Communicator

I1,1) Communicator can be eg speaker, singer, author, publisher, editor, agent and moderator.

I1,2) Number of speakers range from sole person in monologue to a heterogeneous chorus.

I1,3) Collective communication ranges from community press release to mutual shouting down.

I1,4) Intention ranges from investigation to description to manipulation to psychic violence.

I1,5) 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 O to A's Perception and Conception to P's Expression and Transmission to B's Perception and Conception.

412) Language representation

I2,1) Objects of any class can be represented by language, an audible, articulate, meaningful, conventionalized system of sounds with vocabulary, phraseology, pronunciation and grammar.

I2,2) Terms are by semantic being eg constative, representative, regulative or expressive, by semantic function eg explicative, expressive, instrumental, moralistic or evaluative.

I2,3) Text is out of phonemes, morphemes, lexemes, syntax, pragmatics, semantics, linguistics.

I2,4) Paralinguistics are eg sound, volume, intonation, pitch, range, rate and body language.

I2,5) Stylistic frames are eg political, professional, social and local.

I2,6) Stylistic levels are eg secret code, slang, casual, professional, formal and artistic.

I2,7) Stylistic colours are eg humorous, confidential, dry, antique, insulting and degrading.

I2,8) Vitality can be eg natural or artificial, traditional or avant-garde, free or censored.

I2,9) Common forms of speech are eg small talk, info, sales pitch, argumentation and instruction.

I2,10) Artistic forms are eg short story, novel, epos, poetry, drama, song, chant and opera.

I2,11) Forces of creation, usage, change and extinction over generations arise mostly out of adaptive needs to new trends and rhetoric of social forces, being described by history of language.

Mass applications are in eg daily usage, education, advertisement, global commerce and media rhetoric-propaganda with effects on eg standards, usage, educational level and predominant world view.

I2,12) 1500 families and more than 3000 languages and dialects exist today worldwide. They are classified as analytically, agglutinating, inflecting and incorporating term building languages.

413) Text representation

I3,1) Any articulate sound can be represented by a semiotic sign like a letter or symbol in written text.

I3,2) The Latin alphabet contains 26 letters with indefinite combinations to handle any complexity.

I3,3) Syllables can be represented by eg phonograms, logograms, pictograms and ideograms.

414) Artefact representation

I4,1) Objects of any class can be represented by drawing, picture and sculpture.

I4,2) Common and artistic forms are eg sketch, painting, collage, video, film and architecture.

415) Physical representation by technical devices

I5,1) Collection of data is by eg scales, sensors, microscope, microphone and scanner.

I5,2) Storage of data is by eg stone, metal, paper, polymer, electro-magnetic film and electronic device on data sheets, in libraries, data banks and information systems.

I5,3) Duplication is by eg manual copy, technical copy and performance.

I5,4) Processing and evaluation are by eg editor, calculator and electronic computer software.

I5,5) Search and retrieval are by eg indexes, catalogues and search engines.

I5,6) Transmission is by eg ground-water-air mail, hauling, projection, phone, radio, tv and internet.

Data flows from eg source to encoder, emitter, channel, receiver, decoder to recipient.

I5,7) Mediums of accurate, suitable and efficient transmission are eg air, vacuum, cable and fiber.

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

417) 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.

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

4m) 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, tool, 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. Activities comprise persons, types, tools and processes.

4m1) Acting person

m1,1) Acting person by role can be eg private individual, blue or white collar worker, salesperson, 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.

m1,2) Number of acting persons ranges from sole individual to community of nations.

m1,3) Collective action ranges from situational confusion to political-social crusade.

m1,4) Prime intent is to mold an object according to intention and conception of the originator.

m1,5) Intention ranges from suppression of action to help, construction, maintenance, service, embellishment, regeneration, regulation, supervision, restriction, manipulation, destruction to crime.

4m2) Types

m2,1) Typical behavior can be eg role, usage, praxis, tradition, etiquette and lifestyle.

m2,2) Non-typical, stigmatized behavior, can be eg drop-out, draft resistance and whistle blowing.

m2,3) Uncontrolled mass behavior can be eg mass discrimination, craze, run, riot, flight and panic.

m2,4) 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.

4m3) Tools

m3,1) Sensual actions comprise perception by the five senses.

m3,2) Bio-mechanical actions comprise all physical activities from movement to manual labor.

m3,3) Mental actions generate a design of expression for translation into language and action.

m3,4) Administrative actions comprise all schreibetisch tasks from documentation to projection.

m3,5) Technical action comprises all employments of a device for a specific application.

4m4) Processes

Processes of expression run along planning, decision, initiation, extension, continuation, augmentation, penetration, feed back evaluation, alteration, consolidation, split-up, interruption and termination.

m4,1) Planning proceeds by eg information gathering, modelling, simulation and calculation.

m4,2) Decision grows out of eg perspective, goal definition, determination and circumstances.

m4,3) Initiation can be eg a first move, final ripening and removal of a barrier.

m4,4) Goal orientation pursues eg strategic-tactical lines, control of factors and feedback evaluation.

Strategies lay out objective, frame of action and factors of implementation.

Tactics pinpoint situational, operational actions, counteractions, tools, modi and circumstances.

m4,5) Structure control can be by eg hierarchical layering, networking and division of labor.

m4,6) Process control can be by eg scheduling, synchronization and feedback evaluation.

m4,7) Event control can be by eg staging, maneuver, ploy and plot.

m4,8) 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.

m4,9) Frame work control, turning oppressive environments into advantageous ones, can be by eg party program, public relation campaign, action committee, lobbying, bribery and compellence.

m4,10) Termination can be by eg diffusion, attrition, cessation, abandonment and interference.

4m5) Legally it relies on realizable guaranties of security of physical inviolability, property, non-discrimination and freedoms of movement, information, profession, access to resources and markets.

4m6) Inhibiting factors can be eg lack of intent, knowledge, resources, adequate frameworks and environments like restrictive regulations, irrationalities, profiteering, corruption, deception and violence.

4m7) Evaluation is objectively by merit, accountability, necessity, adequacy, performance, cost and subjectively as success with a gain or as failure with a loss.

4n) Institution

An institution is a N persons configuration, grouping under one head people, information, financial and natural resources as collective driving force with spiritual, mental, psychological and physical functions. Most motivations seek in expressions support of organized, operational, institutional means.

They augment mental-physical capabilities of human endeavors on the meso- and macro-scales.

4n1) Growth

Growth forces are those of an originator, political-social forces and inner dynamics of self-motivation, -formation and -organization, starting from a historically given to hypothetical point and proceeding via formalization, mobilization and expansion into various directions.

They move as complex in- and externally interacting systems time delaying step upon step.

- They can be adapted to new policies, competitive forces and social trends.
- They can be reformed to correct failures and improve operations.
- They can set up mechanisms to perpetuate themselves over generations.
- They develop lines of actions and historical continuity to be predictable in their future actions.
- They change as macro-structures en bloc only by collapse, takeover or revolution.

4n2) Activities

Institutions with their policies, structures and processes, praxis, cohesion and dynamics are the primary social reality shaping forces with stringent causal chains to establish a political-legal framework, to coin the political-social character and to suggest etiquettes of formal and informal behavior.

Their actions give a first indication of the power distribution within and towards competing social entities.

They are active **on 3 levels**

- They set an example: where there is need or inequality, action and correction will be taken.
The exemplary standard legitimizes the established legal framework.
- They coin common symbolic systems like insignia, status, money, culture and iconic sites.
- They are assigned a task, mainly to realize, protect and advance a value, defining the object of attention, value, legal protection, benefits, competences, means and desired results.

They are active in all professional fields from religion, politics, the military, the sciences, technologies, finance, commerce, culture to society.

They are active locally to globally and short to long term.

4n3) Actors

Actors comprise the policy setting elite, institutional heads, professional community, affected people, public press and the general public.

Main motivation is assumed to be rational choice within the law, traditions and general conventions.

It ranges from charity, special interest, authoritarian submission, dissent to criminal machination.

4n4) Functions

- n4,1) Main intent is to provide an accessible, efficient, transparent, accountable service to the public.
- n4,2) Main conception is a contribution to life while refraining from political-social excesses.
- n4,3) They assist social and administrative tasks to manage human factors of goal attainment.
- n4,4) They establish with regulation, administration and supervision the political-legal framework.
- n4,5) They put into place the required administrative and technological infrastructure.
- n4,6) They codetermine with concentration, specialization, differentiation, integration, coordination, re-organization and regeneration the corporate professional praxis.
- n4,7) They advance with cooperating institutions long term collective efforts like education, R&D.
- n4,8) They establish by directive competence a multitude of embedded, autopoiesic systems with regulative impact on heterogenous public-private, open-hidden and soft-forcing circles of relations.
- n4,9) The institutional fabric of a social entity determines its character, in form ranging from loose association, laissez faire, constitutionality, system theory, social programming to fascism.

4n5) Appearance

n5,1) 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, functions, structures, processes and power of authority.

n5,2) They are visible as formal public units of action as eg forum, market, association, company, institute, trust, network, party, administrative department, state, nation, commonwealth and block.

n5,3) They are tangible as agentic powers of public norms, regulations, routines and taboos.

n5,4) They show a high one-, two-, multi-directional traffic density.

n5,5) Population contact is measured by eg market share, constituency, citizens and voters.

4n6) Competences

Heads of institutions provide and are accountable for eg representation, task agenda, capacity to act, process management, interinstitutional relations, promotion of innovations, decision making, delegation of tasks and oversight.

4n7) Structures

n7,1) Organized are tasks with eg man power, instructions, stations, equipment and supplies.

n7,2) Introduced in a meso configuration is one and in a macro configuration several hierarchical vertical-horizontal levels, indicating the chains of command and degree of order.

n7,3) Networks decentralize tasks over a number of interlinked stations mostly for pragmatic reasons, eg flexibility of organization, qualified specialization, coverage of regions. connection to external sources and avoidance of a mammoth administration.

n7,4) Social tightness ranges from open forum to regulated body to closed system.

n7,5) Social freedoms are described by eg culture, creativity, flexibility, transparency, vertical-horizontal, internal-external mobility, allowance for rooms of privacy, retreat, anonymity, restraint and asylum.

4n8) Processes

n8,1) Organized are in- and outputs with eg flows of man power, information, materials and money.

n8,2) Introduced are consecutive, task divided steps of action, timely integrating operational functions of eg planning, research, design, development, testing, decision, implementation, financing, marketing, public relations, events, negotiations, feed back evaluation, corrective action and termination.

n8,3) Set up are in-external, point-broad and official-privileged channels of communication.

4n9) Interrelations extend from the intergovernmental, governmental, interinstitutional, institutional, populational to individual levels and across all professional fields.

Power relations range from independence, coexistence, association, cooperation, integration, supplementation, competition, subordination, dictation to conflict.

4n10) Interdependencies exist between populations, markets, resources, systems and environments.

4n11) Acceptance depends on private, public, local, regional and foreign evaluation and reaction, public opinion being shaped by eg word of mouth, public events and multi-media press coverage.

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

4n12) Public oversight is by eg internal - external, undercover - public, specific - general, national - international investigative control mechanisms, demanding eg adherence to regulations, transparency, statement of responsibilities, structures and activities and public forum discussions with corrective action.

They are the first to be corrupted by eg profiteering.

4n13) Misdevelopments are eg automatism, unrestricted autonomy and formation of a deep state.

4n14) Excesses are eg inequitable distribution of resources, income, wealth and division of labor that the competent institutions degenerate to a facade without legitimation.

4n15) 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 with can lead to law and order fascism.

4n16) Evaluation is comparable to that of social forces by their actions and merits.

4o) 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, organized technical tools. They augment mental-physiological-physical capabilities of human endeavors on the micro-, meso- and macro-scales.

4o1) Forces

o1,1) Forces, derived out of the basic strong, weak, electro-magnetic and gravitational ones are nuclear, mechanic, electrical, optical, thermal, chemical, genetic and biological.

o1,2) They are generated, amplified, transformed, stored, transmitted, distributed and applied.

4o2) Functions

o2,1) Use of technical devices is limited only by imagination, available forces and applications.

o2,2) Resources are scientific knowledge, technical know-how, soft skills and raw materials.

Information has become a vital production factor aside of money, labor and resources.

Materials can be primary natural or secondary processed, half finished goods.

o2,3) They assist social and technical tasks to execute material factors of goal attainment.

o2,4) Basic steps are study of force and effect, engineering of function, operational medium, relation, mechanism and safety, supply of power, production, test, market introduction and service.

Required are standards, regulations, instructions, training, knowledgeable behavior and supervision.

Required are impact statements of risks, dangers and misuses against man and environment.

In all, required is responsible treatment of the innumerable factors of life and matter.

4o3) Appearance

Appearance can be eg stationary-mobile, fixtured-hand held, mini-medium-large sized, manually-power operated, mechanically-electronically controlled.

4o4) Interaction

o4,1) Integration links two machine operations sequentially by administrative arrangement.

o4,2) Automation links two machine operations sequentially by a technical control mechanism.

o4,3) Joined administrative-technical means allow eg system interaction and integration.

4o5) Impacts

The steps of homo faber continue to accelerate since the early stone age.

o5,1) They have improved basic conditions of life in all fields from food to clothing, housing, routine chores, manual-mental labor, commerce, communication, transportation, medicine to administration.

o5,2) They have reduced vulnerabilities to natural forces with their intricacies, risks and dangers.

o5,3) They have allowed growth of the world population beyond the required resources to sustain it.

o5,4) They stimulate demands for ever new innovations and applications. Appealing to eg ease, comfort, accessibility, speed, power, efficiency, precision, economy and reliability, they have become an emotional-motivational-habitual mass motor for growth in the professional fields.

o5,5) They produce growing incomes, wealth and mass consumption with harsh global inequities.

o5,6) They achieve higher performances, accelerate the pace of life, reduce barriers of place, time, mass and a vulnerable, interdependent technological civilization supplants natural surroundings.

o5,7) They have brought a series of industrial revolutions from the steam engine to electricity, digital multi-media data processing to bio-technological-genetic engineering.

o5,8) They generate cyberspaces, digital-technological abstractions from space, time and objects, shielded from natural surroundings, for eg multi-media data processing and virtual realities to model, calculate and test any conceivable object and environment.

o5,9) They foster illusions of human capabilities and convenience with blindness to fall back effects.

o5,10) They pollute water, land, air and cause changes of weather patterns and the global climate.

o5,11) They burn up natural resources beyond their rate of renewal.

o5,12) They deplete non-renewable resources to exhaustion.

o5,13) They reduce biotopes and biodiversity to extinction of entire species.

o5,14) They severely undermine the local and global physiological bases of all forms of life to head inevitably into a series of planetary catastrophes.

o5,15) Modern tools of deception, misuses and destruction severely transgress human boundaries.

Warfare with A-B-C-G-R-N weapons leads to annihilation of billions of people, destruction of build land, devastation of natural land, global environmental collapse and self-extinction of mankind.

4o6) Evaluation is by merit of intent, function, result and overall consequences. Bench marks of function and performance are eg quality, safety, versatility, durability, ruggedness, responsivity, user friendliness, maintenance and disposal requirements.

III A 5 Expansion

Development

In continuation of construction, expansion by scientific, artistic, contemplative research and development of man made objects in advancement of human potential is a universal human activity. It is initiated by individual and collective spiritual, mental, psychological, emotional, biological and bio-mechanical forces in combinations.

Preconditions

- Physiological preconditions are autonomy of body and mind with an alert consciousness.
- Operative preconditions are knowledge, know-how, experience, technical and soft skills.
- Framework preconditions are a spectrum of freedoms and positive political-social environments.
- Supportive is an infrastructure of information, regulation and application.

As organized political-social forces they have generated all man made phenomena.

Large scale, institutionalized programs of research, development and applications of objects of all classes and across all layers of reality out of human and natural resources are supported mainly by

- Common, population wide expanding socio-spiritual-mental-psychic-physical needs, desires and demands in a civilization of man designed and made products.
- Social forces with their schools of political-scientific-technological-commercial-social thought.
- Social-legal frameworks and human-administrative-material infrastructures.
- Aspirational R&D spearheads towards construction of future living environments.

Practical applications generate developmental marks as population wide technological aptness, as common mass effective use of tools and as progressing collective causal chains of actions.

Goal definition is by philosophy of research with its merits, political-social-scientific-technical-industrial-commercial character, prospects, scope, means, applications and public interactions.

Basic goal is universal treatment of all objects in their objective, complete, balanced description of objects; natural, human, social and spiritual dimensions; levels of reality, abstraction and complexity; applications, results and consequences; situation, context, environment in space-time; aspects, contributed by all people in public discussions.

Scaled up goal is to fuse envisioned human spiritual, mental and material hopes.

Advanced is the human radius of action with its frontiers of the thinkable, calculable, do- and usable over ages into the micro-scale of nano-technologies and macro-scale of the solar system.

- Advanced are human boundaries of spiritual, mental and physical capabilities and their class boundaries of sound theology, reason and maturity by pooling population wide, generations running, organized, institutionalized, systematic research efforts.
 - Spiritual limits
The distance God - man is infinite, God being the creator of heaven and the earth.
Theological teachings are advanced by spiritual forces through faith and sound theology.
 - Mental limits
Man is born in the common state of non-knowledge and over centuries acquired knowledge constitutes only a scrap versus the dimensions of the universe. His free phantasy exceeds factual knowledge by leagues, but rarely approaches common fundamentals or far out extremes.
Mental states are improved by social forces through maturity, research and development.
 - Natural limits
Limits of action are set by possibilities of existing-known energy, matter, space and time.
Man can utilize and alter conditions, but he cannot create out of his own new physical forces.
Natural conditions are improved by social forces through reason, research and development.
 - Class boundaries
Class boundaries are standards of compatibility: sound theology towards God, reason towards nature, maturity towards man and ethics towards society.
- Expansion activities are able to further, sustain and altogether destroy man, society and nature. Philosophically degraded by lower instincts they grow into gross misdevelopments.
- Stepwise collective ethical-technical efforts can gain man's self-preservation in cosmic dimensions.

5a) Rules

5a1) Development builds on human constitution and construction, especially on physiological and framework preconditions and basic universal standards.

5a2) It proceeds in tiny steps from questioning to realization via eg literature and field search, goal definition, research, forecast, project design, feasibility study, decision, pooling of human-material-financial resources, test runs, provision of goods and services, marketing and feedback evaluation.

5a3) It proceeds on the way from simple to complex, specific to general and concrete to abstract.

5a4) It spreads from a country to a continent, the globe, the planetary system and the galaxy.

5a5) It continuously supersedes present states of art by enlargements of comprehension and application.

5a6) It expands its concepts with superseding, generalizing and unifying principles.

5a7) It abstains from absolute definitions of truths.

5a8) It promotes the spirit of man and the integrity of nature.

5a9) It continuously reapplies all single steps, starting from questioning and cognition in series.

5b) Cognition

5b1) The first step of development focuses in-depth on the desired object.

Expanded, refined, corrected and spread are the canon of present knowledge, know-how and skills.

5b2) Management of knowledge serves eg collection, storage and presentation of objects' properties, forces, relations and functions, their standards, applications, sources, check, classification, impact history and safeguards against inhibiting factors.

5b3) Today, all political-social endeavors are build on R&D investments for competitive performance.

5c) Innovation

Innovation introduces new designs. It generates along the product road map from conception to sale successively improved versions and speculative, visionary objects, which did not exist before on the market.

5c1) It increases the number of existing objects and accelerates their turn over.

5c2) It increases the number, differentiates and specializes the professional fields.

5c3) Modernization promotes present state of the art technologies like mechanization, automatization and digitalization for gains in efficiency, productivity, competitiveness and growth.

5c4) Rationalization cuts out waste. It eliminates non-required means of goal attainment.

c4,1) It sets up a tight chain of cause - effect relations to achieve a lean operation.

c4,2) Its criteria are mostly maximization of profits and minimization of costs.

c4,3) As administrative reform it eg sets priorities, standardizes, specializes and reorganizes.

c4,4) As technological reform it eg improves materials and processes, innovates and modernizes.

5c5) Urbanization sets up basic, practical administrative-technical infrastructures and services in centric and poly-centric urban areas to massively expand and attract neighbouring, rural populations.

It offers new opportunities, wealth, higher living standards and mobilizes emotional-social-cultural forces.

5c6) Industrialization with mass production in organized step by step processes promotes a scientific-industrial-technological-commercial civilization, which initiates periodic, large scale, far reaching political-religious-mental-social-cultural-administrative adaptations, re-orientations, incisions and upheavals.

5c7) Sciensfication promotes generations running, institutionalized scientific research and development, as a mental resource and a driving production factor aside of capital, labor and natural resources.

5c8) Globalization promotes worldwide exchange of ideas, people, goods, services, money for economic growth by liberalized trade and fiscal policies, efficient transportation and communication, but favouring mostly global players in an interlinked and -dependent, inequitable, strained, competitive market.

5c9) Cosmization carries technological applications of the professional fields throughout space.

5c10) Fostered are illusions of continuing progress with increases in power and wealth without limits.

Ideologized are social claims out of lower instincts of prestige, power, possessions and pleasure, disregarding violations of ethical standards of man, society and environment.

5d) Quality

Quality adds performance and merit. It improves a technical benchmark for an application and designs an objective benefit into a mental-human-natural product by applying sound theology, reason, maturity and ethics within basic universal standards.

A human drive is transformed into an acceptable product without harm to man or environment.

5e) Institutional efforts

Institutional efforts can promote research, development and applications. Private, public non-government and government institutions assist, sponsor, champion, channel home and foreign efforts in all fields of life at any stage according to their philosophy of research and political-social objectives.

5e1) Means are eg political, legal, financial, commercial, technical, scientific and man power support.

5e2) Scope of sponsorship ranges from a single project, professional field, application, human and natural resource, social structure and process, population group to the natural environment.

5e3) Scale can broaden into a social enterprise to expand human boundaries.

5f) Co-determining factors

Co-determining factors are spiritual, social and natural environmental states, changes and boundaries.

5f1) They result as social heritage out of past and present trend setting social forces and constitute co-determining, long term in- and external variables of individual and collective lives.

5f2) They comprise as social character eg vitality, dynamics, mobility, mentality and their interactions.

5f3) They can promote, tolerate and inhibit the material-human-spiritual infrastructure.

5f4) They are treated in daily trading as a non-contractual framework conditions.

5f5) Changes are caused by eg new emerging motivations and trends in long term goal attainment.

Avant-gardes exist in all professional fields and as new social movements.

Changes are measured qualitatively and quantitatively by leading, coincident and lagging indicators.

5f6) Boundaries are man's limits of spiritual, mental and physical capabilities.

5g) Interactions

Interactions of expansive efforts start in early stages as points of awareness, then broaden in most cases rapidly into interwoven global relations.

Large scale developmental interactions take place in all expanding professional fields eg

- In the sciences by eg information exchange, interdisciplinary research and transfer of technologies.
- In commerce by eg joint ventures to take advantage of synergistic effects.
- In politics eg by military agreements to set up a security network.
- In culture eg by international festivals and foreign exchange programs.

5g1) State ranges from concurrence to co-existence, dynamic balance, competition to conflict.

5g2) Scope ranges from past-present, local-global, unrelated-related to public-under cover.

5g3) Effects range from convergence, synergism, revival to distancing, takeover to displacement.

5h) Vulnerabilities

An extended radius of action and possibilities invites equally irresponsible political-social policies to exploit basic existential humanitarian and environmental conditions.

5h1) The technological civilization as a complex, multi-interdependent techno-city is vulnerable to manipulation of its longer, faster, intertwined chains of actions and to miniscule, far off, hard to detect, incalculable uncertainties, risks, dangers.

5h2) Man's inner freedoms are vulnerable to minute traces of poisonous agents and synthesized toxins for genetical, physiological, psychological, mental, ethical manipulation, impairment and elimination.

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

5h3) Flora and fauna are vulnerable to eradication of its biotopes.

5i) Developmental marks

Developmental marks evolve out of the predominant scientific-commercial forces, striving mainly for eg profit, wealth, growth, progress, power and an image of a rational, functional technological civilization.

They have become the main driving forces in shaping the present day society, eclipsing the traditional schools of social thought.

Some major developmental marks are eg futurology, information society, affluent society and environmental advocacy.

5j) Scientific-technological misdevelopments

Misdevelopments evolve mostly out of lower instinct, criminal inclinations, aggrandizements to drive maniacally ahead with any project that is conceptually, organizationally, technologically doable to shape man, society and nature, - but, - starting out as greedy excesses they are belittled, as exploitation of the environment are acquiesced by illusions, as misuses of power are tabooed by public opinion control and as pseudo-developments are enforced by image fascism, - all in the long run to fall back on themselves.

5j1) Illusions

Scientific-technological mastery of nature fosters illusions of human capabilities and conveniences.

Quickly claimed is progress without a limit with

- Increases in knowledge and the human radius of action.
- Increases in life expectancies and social-economic possibilities.
- Increases in wellbeing, welfare, wealth and power.
- Comprehensive problem solving by technological expertise.
- Image of an easy going and successful lifestyle.

The public social reality and its rooms of political-social movement fade into scenery designed facades, polished formalisms, stupor, distrust, paranoia and hypocrisy towards objective values.

Gone is the informed citizen, who thinks independently over the full spectrum of his mind.

5j2) Excesses

Excesses occur through eg run-aways like speculation bubbles, large commercial imbalances like monopolies, large financial imbalances like polarization of wealth, framework break downs like black markets and short cuts like ideas for cash.

5j3) Exploitation of the environment

The natural environment has become over the last centuries increasingly vulnerable to mass effective, non-sustainable, often irreparable man made incisions, changes, substitutions, degradations, destructions and eliminations.

Threatened is the earth's biosphere with its atmosphere, hydrosphere, and lithosphere.

- Polluted are water, land, and air with changes of weather patterns and the global climate.
- Burned up are renewable natural resources beyond their ability of regeneration.
- Depleted are non-renewable natural resources without sufficient frugality or rehabilitation.
- Reduced and eliminated are biotopes and biodiversity with entire common and rare species.
- Wasted are products without being eg consumed, preserved, repaired or recycled.
- Contaminated are product lines with toxic production residues and materials.
- Poisoned are food chains from land and sea to the final consumer.

5j4) Misuses or power

Scientific-technological means of exploitation of human and natural resources have generated increased knowledge, income, wealth and leverage to manipulate social fabrics.

R&D&Apps have been turned into a pioneering battlefield for political-social control, predominance and gain. Employed are mostly 'soft', clandestine means under the perversity label of 'security' out of militarily protected command centers with global telecommunication and surveillance systems to

- Control public opinion by eg manipulation of content, context, style and image of public media.
- Collect population wide individual profiles from all daily activities.
- Operate hit teams for targeted poisoning with B-C-G-R (bio-chemical-genetic-radiative) toxins.
- Channel individual behavior and program political-social structures and processes.

'Security' is tabooed, pseudo rationalized, ideologized and instrumentalized as a tool of power.

The predominant, mass effective political-social motivations and convictions of the times have fallen victim to power, the lowest and most devastating archaic notion.

5j5) Weaponizing

Weaponizing of modern technologies is to hit progressively easier, faster, severer, more precise, be more effectively shielded and guided than foregone ones and to exhaust human-material, scientific-technological capabilities in space, air, at sea, land from single to large scale, non-lethal to lethal, intercepting to retaliating tools and in cyberspace from data scanning to misinforming to infrastructure crippling hacks.

- B-C-G-R-N weapons

Aside from research and development of conventional weapons, developed are B-C-G-R-N (biological, chemical, genetic, radiation, nano) compact weapon architectures as the 4th generation after spears, guns, rockets and are now armed with toxins like contaminants, bio-chemical-genetic agents, electrical current, electro-magnetic-thermal-acoustic radiation and neurologically coded misinformation.

Out of life sciences developed weapons always lead to inexpensive, perfidious weapons of mass destruction, corrupting as totalitarian tools in first line human living environments, where it cannot be perceived by the senses in the very small, very distant and difficult to detect.

- Geneva Conventions

The civilized world, customary international law and the Geneva Conventions (especially the Biological Weapons Convention (UN Geneva 1972) and the Chemical Weapons Convention (UN Geneva 1992)) outlaw the development, production, stockpiling of B and C weapons as a means of warfare and call for their disarmament.

- Arms race

An arms race between the global political blocks, having started with the Cold War, continues today in weapon development for a credible defence with overkill stockpiles of A-B-C-G-R-N weapons. It covers the political, military, intelligence, scientific, technological, commercial and social professional fields to instrumentalize them in geo-political contests for power. Under the superpowers' shields conflicts of global positioning and degradation of political-social fabrics endure in relentless efforts with shifting advantages.

- Dirty war

A global, clandestine, dirty B-C-R-G-N war wages between government, private, independent defence leagues' security services of the 1st, 2nd and 3rd Worlds and their populations. They operate global systems of labor camps for electro-magnetic-bio-chem-genetic programming of individual-social-psychological-physiological profiles and to eliminate human roots of dissenting, opposing and moral voices.

5j6) Pseudo-developments

Pseudo developments like pseudo medical experiments spring out of the drive for political-military-intelligence-scientific-technological-industrial-commercial superiority.

Threatened is a 'human hand directed, accelerated evolution' by electro-magnetic-mechanical-bio-chemical-genetic means to transform man into a programmable cyborg - cloned chimera with special augmented capabilities according to orders.

They are misuses of civilian professions and depraved weaponizing directed against God given institutions, which are protected in the civilized world by basic human rights and can not be realized against public resistance, except with open and clandestine power tools of image fascism.

Man's position in nature is existential dependency on a small, scarcely endowed planet in a 250 million years from now heating up solar system as physiological basis and room of life, which he has to preserve and not to counteract technological developments to survive in cosmic dimensions.

Man is with nature given and trained awareness, conviction, maturity and reason well enough endowed to overcome limiting and hostile factors. A human hand directed evolution stands therefore in violation of

j6,1) Dignity of man

Dignity of man as self-set and self-interpreting value is violated in its integrity of health and autonomy of body, mind, genetic code and gene expressions.

j6,2) Unity of mankind

Unity of mankind in nature given common ancestry, range of equality in body, mind and environments and common long term future is violated by technologically integrated inequalities into human physiological, psychological and mental capacities. Differences of eg strong-weak, healthy-sickly, rich-poor, powerful-dependent are added by specifically enhanced-non-enhanced.

j6,3) Responsibility

Responsibility to act in stewardship of the creation and of each individual towards man, society, nature is violated in its transparency and adequacy as communication and action require identification, traceability and accountability of a person's intentions, conceptions and administrative-technical tools.

Tools are to be handled logically-practically as distinct, separate, auxiliary variables of expression.

A cyborg-chimera with augmented capabilities can only be identified by a barcode scan app as their special performance-control mechanisms, often without exit-brake, are enclosed in their data sheets.

j6,4) Freedom

Inner and outer freedoms of movement are limited by new dependencies and vulnerabilities.

Dependencies arise for eg training, bio-chemical agents, check ups, devices, maintenance, monitoring, safety, reliability, technological service infrastructure and political-social-regulatory frameworks.

Vulnerabilities arise to eg propaganda, discrimination, polarization, manipulation, social programming of population structures-performance profiles, science-fiction concepts, misapplications, conflicts, G-R hyper-warfare and loss of ethical-historical freedom.

j6,5) Side effects

An arbitrarily, bio-technologically designed genetic evolution of individuals, groups and entire populations according to desired performance criteria will lead with its multiple variables, long causal chains and broad affects on the anatomy, morphology and physiology of organisms and transmission to succeeding generations to wide spread pollution of the common gene pool, to risks and dangers of further long term effects, to promotion of present G-R weapon developments, to misapplications, to under cover operations, to mass impairments of plant, animal and human life and to an almost irreversible planetary catastrophe.

j6,6) Exemptions

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

5k) Inhibiting factors

Inhibiting factors of developmental marks are eg

5k1) Lack of will, knowledge, resources and corrective action to sap any starting point.

5k2) Social-cultural misdevelopments like overpopulation to dilute efforts.

5k3) Social-commercial-political misdevelopments, falling back on themselves.

5k4) Counterforces of deception and violence.

5l) 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.

They can sub-classified as essential, common and luxurious.

5l1) 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 or utilization. They give an intellectual contribution to the canon of knowledge.

They are a conceptual design of most products. They can be

I1,1) Spiritual mental products like an ethical standard.

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

I1,2) 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.

I1,3) Personal mental products like an individual opinion.

I1,4) Mental processing products like a design of expression.

I1,5) 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.

I1,6) Auxiliary mental products assisting another product like an operating instruction.

I1,7) Evaluation is by eg truth, merit, sincerity, completeness and consistency.

5l2) 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, independent of utilization. They give an administrative contribution in service to man and environment. They are organized mostly as part of the public infrastructure to handle mass applications.

They can be

I2,1) Public, 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'.

I2,2) Private, institutionalized administrative units like a corporation.

Today, all larger for profit and non-profit organizations are registered as legal entities.

I2,3) Associative administrative units like a scientific community.

I2,4) Auxiliary administrative units like a called in expert panel.

I2,5) Evaluation is by eg merit, function, performance and transparency.

5l3) 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, a list of defined properties and uses. 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.

In daily population wide production and consumption, they add up to mass effects. They can be

I3,1) Modified natural environment like a dam against the tides.

I3,2) Cultivated natural flora and fauna products like a fruit orchard.

I3,3) Products from non-living raw materials like machinery.

I3,4) Semi-finished goods, eg an automotive part is further processed in a complete product, eg a car.

I3,5) Evaluation is by eg industrial, technical and practical standards like function, performance, quality, service, user friendliness, cost, recognition, acceptance and natural-social concerns.

5m) Evaluation

Evaluation is by immediate effects and further reaching consequences on all aspects of life and nature by universal to item specific standards, eg merits, basic human-social rights, absence of inhibiting factors, co-determination of affected parties and benefits-costs balance.

III A 6 Essentials

Essentials comprise physiological base, freedom and conviction.

6a) Physiological base

The physiological base builds on material and biological existentials within a habitable range.

The material existentials comprise mainly earth's distance from the center of the milky way and the sun; 3+ generations of burned out stars with the required chemical composition; mass and energy of the sun; mass, rotational stability, inclined rotational axis, magnetic field, water, atmosphere, temperature, plate tectonics, vulcanism of the earth.

The biological existentials require self-organization of matter, organic building blocks and the forces of evolution to form out a diversity of species and natural living environments with ecological systems.

6a1) The cosmos

The physical cosmos is qualitatively and quantitatively depictable, causally explainable and in its development predictable. It is described by cosmogony, cosmology and eschatology

- 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 h_t , it exploded, cooled and developed into the present geometry with a multitude of material formations.
- Cosmology
 - 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.
 - 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.
 - The microcosmos 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, endowing elementary subatomic particles with mass. 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 Flavor-dynamics.
 - Eschatology projects through forward extrapolation future physical conditions of the cosmos 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.

6a2) Natural environments

Natural environments are long term variables of in nature found energy, matter, flora and fauna.

- 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, including Pluto, allows a long, stable developmental time span for evolution of organic life.
- The earth's magnetic field extends as magnetosphere asymmetrically $\sim 60\,000$ km sunwards and $\sim 1\,200\,000$ km away from it. Layered below are the plasmasphere and ionosphere. It deflects together with the heliosphere cosmic ray from outside the solar system. It deflects charged particle of the solar wind, which would erode the upper atmosphere with the ozone layer, which in turn shields against ultra-violet radiation.
- The Biosphere describes all single factors enclosed by the atmosphere.
- 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.
- The hydrosphere 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.
- 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.
- The biotic environment includes all living organisms in water, land and air.
- Ecology describes individual, populational, environmental abiotic-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 labile dynamic balance.

6a3) Early forms of life

The earliest forms of one cell organisms appeared in the Precambrian about 3.7×10^9 years ago according to undisputed evidence, but possibly as early as 4.2×10^9 years back.

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), carbon monoxide (CO), methane (CH_4), sulfur hydrogen (H_2S), hydrogen (H_2) and energy sources of heat, radiation and electric discharges and was possibly added by meteoritic seeds. Formed were mixtures of amino acids, polysaccharides, lipids, bases of nucleic acids and proteinoid microspheres with first forms of a membrane, metabolism and growth by budding.

Biological evolution with nucleic acid chains capable of self-replication progressed in the oceans by self-organization of matter with basic forces of the evolutionary drives over geological time spans in repetitive life cycles of mutation, recombination, differentiation of structures, specialization of functions, adaptation and selection with extinction of most variations. Formed were protobiontes, containing a short DNA strand, which differentiated stepwise an improved protein production, metabolism and a multifunctional membrane. The first prokaryotes of bacteria, often colonizing as microbial mats, and blue algae appeared and developed photosynthesis to gain energy-rich biomolecules. Bacterial fossils have been found eg as small rods in metasedimentary stromatolites. 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). The spreading aqueous 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 2.4×10^9 years back, into the one we know today. Their oldest known chalky fossils found in oceanic sediments are about 1.8×10^9 years old. About 9×10^8 years ago the evolutionary rate of the diverse one cell organisms accelerated, forming multi-cellular eukaryotes with specialized cell functions. Introduced was sexual reproduction about 5.5×10^8 years back, by genetic recombination with meiosis and mitosis further accelerating the evolutionary rate, production of lineages with superior fitness and diversification of species. While the first microorganisms had appeared on land about 10^9 years back, the first plants adapted themselves about 4.8×10^8 , followed by animals about 4.2×10^8 years back.

6a4) Phylogenetic topology

The first evolutionary line is continuously traceable in the development of the proteins of genetic materials and ensuing forms of life. The first nucleic acid chains grew by processes of base pair changes, addition, deletion, inversion, duplication, 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 bio-chemical building blocks, the genetic code, the biosynthesis of proteins, the catalysis by enzymes and an energy metabolism with glycolysis.

6a5) Taxonomy

The phylogenetic theory of descent serves as basis for description, denotation and categorization of all organisms. As a result of evolutionary processes, there exist in discontinuous variability today about 500 000 plant and 2 000 000 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 (taxon, pl. taxa). The taxonomic categories are rooted in four kingdoms (regnum, pl. regna) of one cell organisms, prokaryotes, eukaryotes and mushrooms.

6b) 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 backfires on itself.

6b1) 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 essential or superfluous, major or minor, daily or scarcely, actual or potential, stable or fragile, adequate or inadequate, encroaching on others or not, seen or not.

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

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

6b2) 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 un- and 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 imbalance, enslavement, 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 combination and interaction.

6b3) Interactions

b3,1) Singular freedoms of several persons, acting often in association in the same direction, eg assist, overlap, complement, add, multiply and inspire each other.

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

b3,3) Singular freedoms of several persons, acting often in conflict in opposite direction, eg level, compete, exclude, undermine, impair, encroach on and envy each other.

6b4) Balanced freedoms grant a maximum of freedom to each individual and group within a larger community of people, while observing obligations, rights, weights, limits and reconciliation of conflicts.

5b5) Limits of freedoms are natural and man made physical restrictions and 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 extent of possibilities and rights and conditions like rules of accessibility.

6b6) Inhibiting factors are restriction, bondage and incapacitation by pretended justifications.

Today, common practice worldwide are arbitrary private and government restrictions to privacy, property, travel, migration, choice of residence and profession, 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.

6b7) 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.

6c) Conviction

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

A conviction springs out of faith or a vision or a human concept about life in relation to man, society, nature and the infinite.

As a living organism with a biological base, it unfolds in themselves independent psychic, mental and spiritual activities and trains itself by experience, cognition, awareness and knowledge.

It pursues contemplative, scientific, aesthetic research to grasp spiritual, understand human and explain natural issues, to describe, interpret, calculate and evaluate them from the micro to macro-level.

It generates intent and concepts out of an abundance of possible contributions to life and matter.

Anthropological behavior is integrated into considerations of the multitude of concepts, values and long term future in cosmic dimensions to eclipse homo-cerebralis, -culturalis, -legalis, -activans, -faber, -sociologicus, -cooperativus, -oeconomicus, -ludens, -vitalis, -capax, -patiens and -debilis.

6c1) Steps of cognition

c1,1) Passive steps are to stay away from

- Lower instincts of prestige, power, possessions and pleasure.
- Pseudo-mental products like myth, idolatry, superstition, illusion and ideology.
- Evil, degrading individual rights, social frameworks and the natural environment.

c1,2) Active steps are to initiate

- Questioning towards valid knowledge by its subjective, relational and objective factors.
- Expansion of the canon of knowledge in scope, depth and quality.
- Application of overall comprehension in realization of practical projects.

6c2) Horizons of awareness

c2,1) On the individual level acquired are

- Sensual and psychic awareness, generating personal, social and environmental awareness with individuality, sociality and orientation across all layers of reality.

They are the basic steps towards universal treatment of all objects.

They are trained by eg curiosity, experience, education, cognition, management of knowledge and the present day agenda of practical and theoretical tasks like issues for conflict solving.

- Personal and collective goals for one's life work.

A habitual way of life with repetitive activities, being the largest part of study, work and social practices, serves as a locomotive engine to move large loads.

c2,2) On the meso-level acquired are

- A spiritual horizon with principles of conviction.
- A mental horizon with knowledge about man, society, nature and God.
They are commonly referred to as images of man, society, nature and God.
- A human horizon with long term aspirations and challenges for man.
- A historic horizon with past events leading up to present political-social affairs.
- Overall comprehension with values, priorities, responsibilities, means, tasks and supervision.

c2,3) On the macro-level a visionary horizon encompasses man's pragmatic forces with actual to possible radius of action and responsibilities in cosmic dimensions.

- Responsibilities of individual-collective convictions are towards posterity and life.
- Standards are the existential, humanitarian, universal and social values.
- The primary social value is the unity of mankind in historic freedom.

6c3) Results gain

- Overcoming with enlightenment hostile and inhibiting factors.
- Positive contributions to life and matter with their innumerable factors.
- Expansion of man's boundaries towards survival in cosmic dimensions of space-time.

III A 7 Inhibiting factors

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

7a) Errors are deficiencies in intellect.

They are caused by eg thoughtlessness, non-knowledge, mistake, but mostly by irrationalities like

7a1) Primitive aggrandizements like fate, fame, glory, beauty. happiness and sex appeal.

7a2) Self-exultations like man to be the crown of creation, - a self-deception that has been rectified by cosmological insults: man and earth are not the center of the universe, he does not spring out of a single act of divine creation, he is not driven alone by reason and he is vulnerable to minute traces of toxins.

7a3) Caricatures, when reduced to oversimplification, black-white painting and prejudice.

7a4) Pseudo-mental products, lacking sound theology, reason or maturity like myth, idol, superstition, illusion, dogmatism, ideology, construal, social programming and secret policy goal.

7a5) Pseudo-logical reasoning like tautology, pleonasm, circular reasoning and regress ad infinitum.

7a6) They spread by eg culture, teaching, ways of thought and political-social propaganda.

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 strive to bleed dry with kraken suction cups any object in reach and tangible.

They openly, tyrannically set up arbitrary rules or secretly, hypocritically corrupt equitable law.

They pervert knowledge and with it its natural-human-spiritual realities.

They defile human dignity and universal human, social, natural and spiritual values.

7b1) Targets of gain are mostly self-image, language, frame works and physical objects.

7b2) Targets of loss are mostly the natural environment, another person's property, social-professional surroundings and he himself.

7b3) Targets of elimination are first whistle blowers, watchdog organizations and political opponents.

7b4) Means are acquiescence, subversion, corruption, deception and violence.

b4,1) Acquiescence yields to political-economic-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, comprehension, intentions, conceptions, decisions, individual actions and social behavior patterns by

- Motivation control, eg stirring up of lower fears and desires leads to eg brutality.
- Justification control, eg propaganda for a political system leads to eg ideology.
- Knowledge control, eg privileged information leads to eg system control.
- Cyber control, eg fake news and fiction ware lead to eg biased hyper reality.
- Public opinion control, 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.

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

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

- Damage of a man made object is by eg tempering, misapplication and destruction.
- Infringement of a political-social-professional framework is by eg harassment, disenfranchisement, oppression, exploitation, subjugation, strangulation, enslavement and expulsion.
- Degrading abuses are eg insult, surveillance, defamation and demonization.
- Impairment can be eg physical injury, disease, altered growth and differentiation of a physiological trait and change in the level of a genetic-physiological capacity.
- Transformation can be into a cyborg - chimera with programmable augmented capabilities.
- Replacement can be by a programmable robotized android.
- Elimination can be by severe cripplement and murder.

7b5) Escalation

b5,1) Deception and violence can escalate in place to the planetary system, in time to an area, in severity to bestiality, in organization to a totalitarian system and in technology to industrial murder.

b5,2) Lower instincts drive them to the outmost, prestige leading to image fascism, power to system fascism, possessions to order fascism, pleasure to hedonism and their combination to global hegemonic policies.

III A 8 Summary

Man is a complex functional, regenerating form of life, activating physiological-mental-spiritual forces from his human center, conviction, into the extremes of life. He is across all layers of reality depictable, being independent-social, abstract-concrete, dynamic-passive, free-submissive, reflective-thoughtless.

8a) Achievements

Over the last three millennium huge advances have been made in the humanities, natural sciences, logic, mathematics, data processing, technologies and applications with expansion of the radius of action and generation of power, wealth and an environment of man made products.

8b) Failures

8b1) Hardly addressed are the zeitgeist issues in substance, leading to depravation of esprit

- Pseudo-mental products like illusions of human capabilities-conveniences and pseudo scientific concepts like social profiling/programming.
- Power as the most devastating archaic notion, narrow, vile, hateful, persistent and scheming instrumentalizing values, constitutional structures and processes towards their self-destructive end.
- Man himself, his intentions, conceptions, convictions, values, responsibilities and expressions with their consequences. He is largely a brutal creature, applying any means for his advancement.
- Man's position in society with its service functions. He does not know how to overcome inhibiting factors by enlightenment or handle conflict solving between hostile parties efficiently.
- Man's position against nature and God. He does not project himself into the future, combining a spiritual hope with a real prospect in cosmic dimensions.

8b2) Hegemonic policies

- Continuing are overpopulation, famines, epidemics, inequities of life essentials, environmental pollution and destruction, leading as mass effective misdevelopments to planetary catastrophes.
- Continuing are exploitation, polarization of wealth, human rights violations, leading as mass effective power tools to destruction of social fabrics, refugee streams, terrorism, mass murder and war.

8c) Accusations

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

They conduct a clandestine, global dirty B-C-G-R-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 cloneable, programmable augmented 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 million already devoured.
Auschwitz is held in its vices -
Everything, everything is cinder.

Ruth Klüger (1944) (abr. tr. 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
To collapse by 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)

8d) Self-extinction

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