

## **Toward an Ecologically Oriented Philosophy of Educology to Meet Future Challenges in the World (A Paper in Philosophy of Educology)**

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### Introduction by Co-Editors

This paper is one in philosophy of educology, i.e. in philosophy of knowledge about the educative experience as this experience is integrated, well or ill, into daily life and into the educational process, in that it inquires into the nature of the educative experience as it is in synergetic, i.e. in integrative, inter-active, and trans-active, inter-connection with the natural environment of the earth and universe. It was written by Dr. James E. Fisher, President of Educology Research Associates/USA (ERA/USA), a non-profit organization with the mission to improve home, school, and community education through the development of educology, and, the organization's initiative of the Institute of History and Philosophy of Educology for Developing Democracies in the World.

### Introduction by Author

The purpose of the paper is to inquire into the subject matter of ecology so as to establish a philosophy of educology for democratically integrating the world, where the meaning of the locution 'philosophy of educology' refers more specifically to the epistemology of educology, i.e. to the philosophical inquiry guided by the question "What is knowledge about education?"

Where educology is the body of knowledge claims about education and education is conceived as both the educational process conducted in homes, school, and communities in the world and the educative experience conducted in the educational process and in general life experiences, the paper focuses on the reflective thinking experience as the educative experience for educology's knowledge claims to refer to.

With this focus, then, the reflective thinking experience will be demonstrated to be organically connected to the subject matter of ecology, whereby the subject matter of ecology provides an orientation for the development of a philosophy of educology. Such an ecologically oriented philosophy of educology provides worthwhile ideas for meeting the future challenges in the World.

### Part 1 Basis of Paper

This paper is based on the one presented by Professor Wieslaw Sztumski, Social Science Faculty, University of Silesia, Katowice, Poland, the title of which is, in regard to the European countries, "Are We Ready for Integration in the World?"

Professor Wieslaw is European by birth, as I am by heritage. I am an American with ancestry, I believe, in England and/or Germany. I can make only belief claims, and not knowledge claims, because I have not made my heritage the subject matter of disciplined inquiry.

I can make knowledge claims, however, about the fact that Professor Wieslaw and I, in the month of October, 2002, collaborated in the presentation of a series of lectures and seminars in

universities in Poland, the content of which directly and indirectly impacts on the matter of the future challenges of integrating Europe and the World.

Professor Wieslaw's approach to this matter, as I see it, is that as an ecologist concerned about educological matters, and mine, as I see it, is as an educologist concerned with ecological matters. Our approaches, however, both consider the import of the matter to be that of when and where, in the future, "Life itself becomes the highest good." (From page 3 of Professor Sztumki's paper)

As an educologist, I approach this goal of the matter, i.e. the goal of the matter of life itself becoming the highest good for humans in the world, from wondering about the meaning of the locution 'life' and what it is used to refer to in connection to the significance of education in meeting future challenges of the integration of Europe and the World, including America. This wondering is carried through the content of this paper, as guided by its purpose.

The purpose of the paper is to inquire into the subject matter of ecology so as to establish a true philosophy of educology for democratically integrating the world, where the meaning of the locution 'philosophy of educology' refers, more specifically to the epistemology of educology, i.e. to the philosophical inquiry guided by the question "What is knowledge about education?"

With the belief that knowledge claims about education, i.e. with the belief that educology, ought to be conceived as being composed by meanings that are used to knowingly refer to the human experience of life, as it is conducted in the natural environment of the world and universe, I have selected to inquire into the subject matter that has been intentionally formed by meanings to reference this natural environment, i.e. the meanings formed in the subject matter of ecology.

It should be noted that the question "What is knowledge about education?" is not the same as the question "What is education?" To this latter question, I can say, I came to a settlement on the following answer, which, in my wondering about the matter of life itself becoming the highest good for humans in the world, I came to as a necessary settlement to proceed with the question "What is knowledge about education?" i.e. What is educology?" question.

The answer to the question: "What is education?" I have settled on as being divided into two answers; Answer 1 and Answer 2, accounted for, as follows:

Answer 1: Education is the educational process as it is conducted in homes, schools, and communities in the world.

I have conceived the meaning of the locution 'educational process' to refer to the process that involves:

- (i) someone, e.g. a parent, teacher, preacher, "boss," or "politician" teaching
- (ii) someone, e.g. a child, student, church member, business employee, or political party member;
- (iii) to study for learning something of value, e.g. the subject matter formally and informally composing a curriculum of, e.g. the home, school, church, business, or political party;
- (iv) somewhere, e.g. in the home, school, church, business, or political party,

(v) at some time, e.g. time in the home, school, church, business, or political party.

Answer 2: Education is the educative experience as it is conducted in: (i) the experience of the educational process; and in (ii) the experience of life in the natural environment of the earth and universe, in general.

I have conceived the meaning of the locution ‘educative experience’ to refer to the experience that involves the reflective thinking experience of the mental organic phases of the human consciousness as in a reciprocal trans-ductive relationship with the reflexive and non-reflexive functions of the physical organic systems of the human body, as they are both synergetically driven to inter-act and trans-act in and with the physical, physical organic, and mental organic aspects of the circumstances in the natural environment.

As an ecologically oriented educologist, I assume that it is the knowledge of the educative experience, composed by meanings referencing the reflective thinking experience, as a mental organic trans-active experience, conducted in and within physical organic inter-active functions in the natural environment, is the knowledge that ought to be the something of value that is taught, studied, and learned in the educational process in homes, schools, churches, businesses, and political parties and in general life experiences in democracies in the world while meeting the challenges of integrating Europe and the World, now and in the future.

Both of the answers and this assumption are somewhat explained in an outline form in a paper I published in the European journal, *Pedagogika*, Vytauto Didziojo universiteto leidykla, Kaunas Lithuania, 51, 2001, with the title of *An Outlined Introduction to the Universal and Unifying Experiential Research Methodology in the Domain of Educology: The Discipline of Educology Introduced to Graduate Students*, however, the second answer and its assumption continues to be the subject matter of my philosophizing about educology in this paper, as I wonder with the matter of life itself becoming the highest good for humans in the world, as conceived in the subject matter of ecology for orienting the continuing development of a philosophy of knowledge about education, i.e. for continuing the development of a philosophy of educology, the matter being motivated by Professor Wieslaw and his paper in regard to the primary challenge to the integration of the world.

From Professor Wieslaw, we come to understand that the primary challenge to the integration of the world is that of how to integrate human beings in countries of the world, where the use of the meaning of the locution ‘integration’ is accounted for as follows.

“Integration is more than the mere joining together, unification or association. Integration means merging in many respects. As a result of such merging comes the full *synergy of actions*. Integration takes place especially under the influence of *internal factors* having an effect over longer period. It is possible on the basis of fundamental interest. At present, such common interest is to *survive* in very critical *situations* of our *life environment* and to *secure living conditions* for us and for *future generations*.” (From page 1 of Professor Wieslaw’s paper with my italics added.)

With this statement, then, I shall proceed by standing on its referential use of the meaning of the locution ‘integration’ by directly considering the referential use of the two meanings of the italicized locutions ‘*synergy of actions*’ and ‘*internal factors*’, and by indirectly considering the referential use of the meanings of ‘*survive*’, ‘*situations*’, ‘*life environment*’, ‘*secure living conditions*’, and ‘*future generations*’, in relation to the meaning of the locution ‘transfer of physical energy’ as a key meaning formed in the subject matter of ecology.

The meaning of the locution 'synergy of action' will be considered beginning in Part II and continuing through Parts III, then, the meaning of the locution 'internal factors' will be considered, continuing through Part IV.

## Part II Synergy of Action and Transfer of Physical Energy

Where the locution 'synergy of action' means 'cooperative and integrative action of two or more complementarily connected living organisms', its meaning can be used to refer to the cooperative and integrative action of two or more complementarily connected human living organisms in the bio-physical organic circumstances of the natural environment of the world as the subject matter of biology.

Where a human living being is conceived as a physical living organization of skeletal, muscular, digestive, circulatory, lymphatic, respiratory, excretory, urinary, nervous, sensory, endocrine, reproductive, immune, and integumentary systems, then, he/she is conceived as a biologically characterized physical living organism cooperatively and integratively active, i.e. synergetically active, in and with the physical organic circumstances of the natural environment.

And, then, where a human living being is conceived as a biologically characterized physical living organism, it follows that, he/she is conceived as an ecological organism cooperatively and integratively active, i.e. synergetically active, within and among eco-systems, where eco-systems are constituted by biotic, i.e. physical living organizations like plants and animals, and abiotic, i.e. physical non-living factors like light, temperature, water, and soil, circumstances of the natural environment.

A human living being, then, becomes a biologically characterized physical living organism, in short a biological living organism, as part of the eco-systems of communities and populations and of habitats and niches, and as part of the bio-geo-chemical water, oxygen, and nitrogen eco-cycles. Further, being a biological organism as part of eco-systems and eco-cycles, a human living being is cooperatively and integratively, i.e. synergetically, involved in the transfer of physical energy within a physical living and non-living, i.e. a biotic and abiotic, natural environment, involving the trophic, i.e. nutritive, pyramids of feeding levels, food chains, and food webs.

A human living being, then, within the context of meaning, as constructed in the subject matter of ecological inquiry, becomes a bio-living organization of physical systems physically connected to physical eco-systems and eco-cycles, cooperatively and integratively, i.e. synergetically, involved as a physical organism physically connected in and with the physical living and physical non-living circumstances of the natural environment, through a transfer of physical energy.

Whether considered to be:

- (i) a being evolved naturally in a physical living and non-living natural environment; or
- (ii) a being created super-naturally and placed in a naturally physical living and non-living natural environment,

it is known, through the subject matter of ecology, that a human being can be conceived as a bio-living physical being that must, to realize the good of physical life, sustain the cooperative and integrative, i.e. the synergy of action, involvement:

- (i) of his/her bio-organization of systems within and among themselves;
- (ii) of his/her eco-organization of systems, cycles, and pyramids within and among themselves; and
- (iii) of his/her bio-and eco-organizations within and among themselves, as living physical organizations, i.e. as living physical organisms, in the physical living and non-living circumstances of the natural environment.

From the ecological perspective, then, a human living being is a physical living organism, i.e. a physical living organization, that must, for the good of physical life, transfer physical energy to sustain his/her synergy of action, i.e. his/her cooperative and integrative action, in the biotic and abiotic physical organic circumstances of the natural environment.

The synergy of action of a human being as a physical living organism, i.e. as a human living body, involves the organization of physical systems of the human body, with provision as follows.

#### Human Body Systems Organized by Surface and Internal Systems that are Provisions of the Synergy of Action

##### Surface Human Body Systems

The integumentary system providing for the physical organic skin covering for, and assistance to the respiratory system of, the human body

The ingestive system, as part of the digestive system, providing physical organic assistance to the digestive system of the human body (mouth)

The sensory system, as part of the nervous system, providing physical organic assistance to the nervous system of the human body (eyes, ears, nose, skin, and tongue of mouth)

The inhalation and exhalation system, as part of the respiratory system, providing physical organic assistance to the respiratory system of the human body (mouth)

The urinary and defecation system, as part of the excretory system, providing physical organic assistance to the excretory system of the human body (penis and anus)

The penis and vagina system, as part of the reproductive system, providing physical organic assistance to the reproduction system of the human body (penis and vagina)

##### Internal Human Body Systems

The skeletal system providing physical organic structure for the human body

The muscular system providing physical organic movement for the human body

The digestive system providing physical organic assimilation of nutrients for the human body

The nervous system providing for physical organic control and coordination of the human body

The circulatory system (blood system) providing for the physical organic transport of nutrients, gases, chemicals, and waste for the human body

The lymphatic system, as part of the circulatory system, providing physical organic assistance to the circulatory system of the human body

The respiratory system providing for the physical organic intake of oxygen for and the elimination of carbon dioxide and water from the human body

The excretory system providing for the removal of physical organic cellular wastes from the blood of the human body and for the maintenance of its fluid and chemical balance

The endocrine system providing for physical organic hormones that regulate growth and maturation of the human body

The reproductive system providing the physical organic means for producing offspring in order to maintain the species of the human body

The immune system providing the physical organic means for protecting the human body from diseases

From this organization of human body systems by surface and internal systems, emphasis will be placed first on the significance of the surface ingestive system and then on the surface sensory system as they are organically connected with the internal muscular system in the synergy of action, i.e. to the cooperation and integration of human body action, in physical organic and inorganic circumstances of the natural environment.

The surface of the human living body, from the ecological perspective, then, participates in a synergy of action involving an organization of systems providing protection and transfer of physical energy to and for the internal systems, where the skin, as an organ constituting the integumentary system, provides for the protection and the eyes as organs of the head, the ears as organs of the head, the nose as an organ of the head, and the mouth as an organ of the head, constituting the organs of the sensory system, provide for the transfer of physical energy.

The mouth, though it is considered here as a surface sensory organ of the sensory system of the human body, it is also a surface ingestive organ as part of the internal digestive system, as both systems provide for the transfer of physical energy. The mouth will first be considered as a surface ingestive organ, after which the tongue of the mouth will be considered as a surface sensory organ, along with the organs of the eyes, ears, nose, and skin of the surface sensory system as part of the internal nervous system, as they provide for the transfer of physical energy.

The mouth, as a surface opening in the head, is the organ through which the human body ingests physical food and in which the cavity behind it, and internal to the body, is the means of biting and chewing the physical food for the beginning of its involvement in the internal physical digestive system.

By the ingestion of physical food, through the surface body opening of the organ of the mouth, and the digestion of the ingested physical food in the internal digestive system constituted by the stomach and intestines, physical energy, as formed into physical food, is transferred by ingestive and digestive systems into and through-out the human physical body.

Through the ingestive and digestive systems, then, as they are involved with physical energy in the form of physical food, there is a transfer of physical energy from the physical organic circumstances of the natural environment and back to the physical organic and inorganic circumstances of the natural environment through the synergy of action, i.e. through the use of physical energy having a physical organic stimulus and response function causing the cooperative and integrative activity in and with the physical organic circumstances of the natural environment of the human body as a living physical organism. In short, there is a physical organic inter-action of the human body in and with the physical organic and inorganic circumstances of the natural environment, i.e. the human body is cooperatively and integrally acting, as synergetically driven, to organically involve itself in and with the physical organic and inorganic circumstances of the natural environment.

### Part III

#### The Human Body as Synergetically Driven to a Physical Organic Inter-Action in and with the Physical Organic Circumstances of the Natural Environment

The human body, as characterized in the subject matter of ecology, is as a physical organic living being with surface and internal systems organized to provide various ways of being synergetically driven to a physical organic inter-action in and with the physical organic and inorganic circumstances in the natural environment.

The human mouth, as characterized above, is a surface ingestive organ and is part of the internal system of organs of the stomach and intestines that are synergetically driven to physically interact in and with, i.e. to physically be cooperative and integrative in and with, the physical organic and inorganic circumstances of the natural environment by the organic ingestion and digestion of physical energy in the form of physical food.

The human mouth, stomach, and intestines form a system of organs that are organized to provide, through the organic force of the physical stimulus and response function, for the assimilation of nutrients from the physical organic circumstances of the natural environment by the meta-bolic aspect of the transfer of physical energy into and through-out the human being's physical organic body and back into the physical organic circumstances for synergizing physical organic body actions, e.g. walking, running, jumping, etc. In short, the human being's body, through the force of the physical organic stimulus and response function of metabolism, is synergetically driven to physical organic inter-action, i.e. to cooperate and integrate itself, with the physical organic and inorganic circumstances of the natural environment.

This cooperative and integrative physical organic inter-action, also, through the force of the physical organic stimulus and response function, is synergetically guided, by the surface sensory organs of the eyes, ears, nose, skin, and tongue as part of the internal nervous system, to provide physical organic control and coordination of the internal muscular system in the physical organic inter-action of the human body in and with the physical organic and inorganic circumstances of the natural environment.

This control and coordination of the human's physical organic body, being synergetically driven by the force of the organic stimulus and response function to be inter-active in and with the physical organic and inorganic circumstances of the natural environment, is involved in the organic trans-ductive aspect of the transfer of physical energy by the means of the surface and internal sensory, nervous, and muscular organs as they are organized in and of the physical organic human body.

By means of special types of sensory receptors in the human body's eyes, ears, nose, skin, and tongue these surface organized sensory organs function as organic trans-ducers, i.e. they transform one form of physical energy into another form of physical energy.

For example, when light rays, in the physical organic and inorganic circumstances of the natural environment, strike and are detected by the sensory receptors in the eyes of a human physical organic body they are changed, i.e. organically trans-ducted, into electrical impulses. In this "eye case," then, the physical energy of light rays is trans-formed into the physical energy of electrical impulses through sensory receptors in the eyes as organic trans-ducting surface organs of the human being's physical organic body. The electrical impulse then moves from the eyes into and along nerves into the internal nervous system to the brain's visual center where it is trans-formed, by the organic trans-ductive function of this area of the brain, into sight. The organic trans-ductive aspect of the transfer of physical energy, then, in this "eye case," involves the eyes as organic trans-ducers of light ray energy into electrical impulse energy and the brain as an organic trans-ducer of electrical impulse energy into sight, i.e. into the seeing activity of the surface physical organic structure of the eyes.

Another example is the "ear case." This case can be accounted for by making the set of locution substitutions in the above paragraph, as follows.

'ear(s)'	substituted for	'eye(s)'
'sound wave(s)'	substituted for	'light ray(s)'
'visual'	substituted for	'auditory'
'sound'	substituted for	'sight'
'hearing'	substituted for	'seeing', as follows.

For example, when *sound waves*, in the physical organic and inorganic circumstances of the natural environment, strike and are detected by the sensory receptors in the *ears* of a human physical organic body they are changed, i.e. organically trans-ducted, into electrical impulses. In this "*ear case*," then, the physical energy of *sound waves* is trans-formed into the physical energy of electrical impulses through sensory receptors in the *ears* as organic trans-ducting surface organs of the human being's physical organic body. The electrical impulse then moves from the *ears* into and along nerves into the internal nervous system to the brain's visual center where it is trans-formed, by the organic trans-ductive function of this area of the brain, into sound. The organic trans-ductive aspect of the transfer of physical energy, then, in this "*ear case*," involves the *ears* as organic trans-ducers of sound wave energy into electrical impulse energy and the brain as an organic trans-ducer of electrical impulse energy into *sound*, i.e. into the *hearing* activity of the surface physical organic structure of the ears.

Other examples, i.e. the examples of a "nose case," "skin case," and/or "tongue case" can be exactly and or very approximately characterized by using the following chart of locutions for substitution in appropriate places in the paragraph.

Chart of Locutions for Substitution in Appropriate Places in the Above Paragraph



Organ Receptors as Organic Trans-ducers Locutions	Forms of Physical Energy Locutions	Brain Organic Trans-Ductions of Physical Energy Locutions	
'eyes'	'light rays'	'visual'	'sight' 'seeing'
'ears'	'sound waves'	'auditory'	sound 'hearing'
'nose'	'odor molecules'	'olfactory'	'smell' 'smelling'
'skin'	'physical touch forces'	'tactual'	'touch' 'touching'
'tongue'	'taste molecules'	'taste'	'taste' 'tasting'

In general, the function of organically receiving and organically trans-ducting physical energy from the physical organic and inorganic circumstances of the natural environment by a human physical organic body involves both the surface sensory organs of the eyes, ears, nose, skin, and tongue and the specific areas of the internal organ of the brain. The surface sensory organs are ones that organically receive the physical energy from the natural environment and organically trans-duct it into electrical impulse energy that moves through nerves to selected areas of the brain where the electrical impulse energy is organically trans-ducted into sight, sound, smell, touch, and taste i.e. where it is organically trans-ducted into the human body inter-actions of seeing, hearing, smelling, touching, and tasting aspects of the physical organic and inorganic circumstances of the natural environment.

The sensory organs of the human physical organic body, then, are physical organic structures, i.e. biotic, organic, or living physical structures in the natural environment, that function as organic sensory receptors and organic trans-ducers of physical energy, e.g. of light rays, sound waves, odor molecules, physical touch forces, and taste molecules i.e. abiotic, inorganic, or non-living physical structures in the natural environment. By means of these living, i.e. physical organic, and non-living, i.e. physical inorganic, structures, then, physical energy is organically received and organically trans-ducted by a physical organic living human body, as an organization of sensory, nervous, and muscular systems existing on the surface of, and internal, to the physical body, that provide, by a physical organic stimulus and response function of electrical impulses in the internal nervous system, for the human body's synergy of muscle action as it is involved in the control and coordination of human cooperative and integrative action, i.e. for synergetically driven action, within and with the physical organic and inorganic circumstances of the natural environment.

This synergy of human body muscle action is determined by the three physically different, but organically connected, kinds of muscles in the internal muscle system, i.e. the skeletal, smooth, and cardiac muscles, and the two physically different, but organically connected, aspects of the internal nervous system, i.e. the voluntary (somatic) and involuntary (automatic) nervous systems. These physical differences and organic connections are accounted for, as follows.

#### Skeletal Muscles and the Voluntary and Involuntary Nervous Systems

Muscles that move bones are called skeletal muscles. They are physically attached to bones either directly or indirectly by means of strong physical organic bands of non-elastic connective tissue called tendons.

Because skeletal muscles, though they are physical organic structures, they are generally under a human's conscious control and coordination, hence, they are also called voluntary muscles.

However, they sometimes move without conscious control and coordination, such as when interacting with physiological organic fear and/or pain, hence, they sometimes act involuntarily.

#### Smooth Muscles and the Voluntary and Involuntary Nervous Systems

Muscles that protect internal organs of the digestive, respiratory, and circulatory systems are called smooth muscles.

Smooth muscles are physical organic structures, however, they are not under conscious control and coordination so they are called involuntary muscles.

#### Cardiac Muscles and the Voluntary and Involuntary Nervous Systems

Muscles that are found in the heart are called cardiac muscles.

Unlike other types of muscles, cardiac muscles, also as physical organic structures, do not receive electrical impulses from the nervous system. Instead, the heart has its own means of control and coordination as a tiny block of special muscle fibers called the sinoatrial node that physically cause the cardiac muscles to contract, hence, the heart is not directly physically connected, but is organically connected, to the voluntary and involuntary aspects of the internal nervous system.

#### The Involuntary and Voluntary Nervous System

The physical organic stimulus and response function of electrical impulses, in the involuntary aspect of the internal nervous system, then, synergetically drive the human body muscles in their physical organic inter-action in and with the physical organic and inorganic circumstances of the natural environment without the involvement of what is referred to by the meaning of the locution 'conscious control and coordination'. However, the electrical impulses in the voluntary part of the internal nervous system are so involved.

How does the organic stimulus and response function of electrical impulses work in the involuntary, i.e. work with no conscious control and coordination, and work in the voluntary, i.e. work with conscious control and coordination, aspects of the internal nervous system as they are involved with the synergy of muscle action, i.e. involved in the control and coordination of the human's physical body muscles as they synergetically drive the human physical organic body into cooperative and integrative physical organic inter-actions in and with the physical organic and inorganic circumstances of the natural environment?

The answer to this question involves the understanding of the basic unit of the internal nervous system, i.e. that which is referred to by the meaning of the locution 'neuron'. The meaning of 'neuron' refers to the nerve cell, the significance of which is that it is the most basic physical organic structure in the surface sensory and internal nervous system in that it carries the organically trans-ducted electrical impulses from the surface sensory receptors in the organs of the eyes, ears, nose, skin, and tongue to the organ of the brain where they, the electrical impulses, are organically trans-ducted into the human body's physical organic inter-actions of the seeing, hearing, smelling, touching, and tasting experiences of various light ray, sound wave, odor molecule, physical touch force, and taste molecule aspects of the physical organic and inorganic circumstances of the natural environment by the human body.

In the subject matter of ecology, the meaning of the locution 'sensory receptor' is made more specific by the meaning of the locution 'sensory neurons', wherein, the meaning of the latter

location references specifically that which exists as sensory nerve cells, i.e. sensory neurons, that are involved in the physical organic inter-actions of the human body's organic reception and organic trans-duction of forms, i.e. in organic trans-formations, of physical energy in the natural environment into electrical impulse energy in the internal involuntary and voluntary nervous systems.

Necessarily involved, then, in the physical organic stimulus and response organic trans-ductive function of electrical impulses through out the internal involuntary and voluntary nervous systems and the internal human body muscular system, i.e. in the synergy of muscle action, is the sensory neuron, i.e. the sensory nerve cell.

The sensory neuron is a physical organic structure that is constituted by a physical body, dendrites, and an axon. Dendrites are extensions of the cell body that carry the electrical impulse to and into the cell body. A single, long physical organic fiber that extends from the other side of the cell body is an axon. An axon is a physical organic extension of a sensory neuron that carries the electrical impulse away from the cell body. Sensory neurons have many dendrites but only one axon.

An electrical impulse is received by one or more dendrites and then physically flows organically to and into the cell body and into and through the axon. From the axon the electrical impulse travels on to and into the next sensory neuron. In this way, electrical impulses are carried along an axon or dendrite.

Although electrical impulses move from sensory neuron to sensory neuron, sensory neurons, themselves, do not touch each other. Between any two sensory neurons, there is a gap called a synapse. A synapse is a gap where two sensory neurons exist very closely together and are coordinated for cooperating in an integrative physical organically controlled inter-action involving the electrical impulse crossing organically from one sensory neuron to and into another sensory neuron, i.e. a synapse is a gap between sensory neurons involving a synergetically driven physical organic inter-action of two sensory neurons.

This synergetically driven physical organic inter-activity involves the electrical impulse being organically trans-ducted into a chemical action and then a chemical action organically trans-ducted into an electrical impulse, by means of the syn-apsing function, i.e. the "to-gathering function," of sensory neurons in the internal involuntary and voluntary nervous system.

This organic trans-ductive physical organic inter-action, i.e. this continuous trans-formational transfer of energy from the electrical form of energy to the chemical form of energy and then to the electrical form of energy, etc., etc, is the syn-apsing function of the internal involuntary and voluntary nervous system and is conducted as follows.

When the electrical impulse reaches the end of an axon, a chemical is released from the axon into the synapse, i.e. into the gap. This chemical moves across the synapse, i.e. across the gap, to and into the dendrites of the next sensory neuron. The chemical stimulates the response of an electrical impulse to start into and through the second sensory neuron. Thus, the electrical impulse through the physical organic stimulus and response function moves from sensory neuron to sensory neuron in an organic receiving and organic trans-ducting physical organic neural synergetically driven inter-activity. In other words, the electrical impulse moves from sensory neuron to sensory neuron by the sensory neurons, as physical organic structures, organically working together in an electrical and chemical physical stimulus and response function as

involved in the surface sensory system and the internal involuntary and voluntary nervous systems of the physical organic human body.

The answer to the question of how the organic stimulus and response function of electrical impulses works in the involuntary and voluntary parts of the internal nervous system, then, is that involving the syn-apsing function as it is involved in the surface sensory system of the human body by the physical organic stimulus and response function of sensory neurons in the synergy of human action as controlled and coordinated by the internal muscular system.

However, the answer also involves the syn-apsing function as it involves motor neurons. Whereas, it is a physical organic fact that the sensory neurons organically receive, organically trans-duct, and organically trans-port electrical impulses from the surface sensory system to the spinal cord and brain of the internal involuntary and voluntary nervous system, it is also a physical organic fact: (i) that motor neurons organically receive, organically trans-duct, and organically trans-port electrical impulses from the spinal cord and brain of the internal involuntary and voluntary nervous system to other internal body systems specifically as involved with the physical transfer of energy in the synergy of the internal muscular system: and (ii) that association neurons organically receive, organically trans-duct, and organically trans-port electrical impulses within the spinal cord and brain of the internal involuntary and voluntary nervous system as it is involved with the physical transfer of energy in the synergy of the internal muscular system.

The syn-apsing function, then, involves sensory, motor, and association neurons as they are involved in the surface sensory and the internal involuntary and voluntary nervous and muscular systems in reflexive and non-reflexive synergetic human body physical organic inter-actions, accounted for as follows.

#### The Syn-apsing Function in Reflexive Human Body Synergetic Physical Organic Inter-Actions

The internal involuntary and voluntary nervous system is constituted by an internal central nervous system of the brain and spinal cord and an internal peripheral nervous system of branches of nerves. Some branches of nerves of the internal peripheral nervous system: (i) physically connect the surface sensory organs, i.e. the eyes, ears, nose, skin, and tongue, to the internal brain and spinal cord; and some (ii) physically connect the internal brain and spinal cord to the muscles of the internal muscular system, both physical connections of which are involved with the syn-apsing function in the involuntary and voluntary human body reflexive and non-reflexive physical organic inter-actions in and with the physical organic and inorganic circumstances of the natural environment.

Reflexive physical organic inter-actions are involuntary responses, i.e. without conscious control and coordination responses, respectively, to a stimulus involved in what is referred to by the meaning of the locution 'reflex arc'. The significance of a reflex arc is that it involves the internal peripheral and central nervous systems such that, through the syn-apsing function, the physical energy of an electrical impulse, in the form of a sensory neuron, travels from the surface sensory organs of the eyes, ears, nose, skin, or tongue, into physically connected branches of nerves of the peripheral nervous system and proceeds to the internal spinal cord of the central nervous system where it is trans-ducted to that of an association neuron that travels within the spinal cord and is trans-ducted to that of a motor neuron that travels from the spinal cord into the branches of nerves of the peripheral nervous system physically connected to organs of muscles in the internal muscular system with the travels of the trans-ducted electrical impulse by-passing the brain and stimulating the involuntary movement, i.e. without conscious control and coordination

movement, of muscles controlling and coordinating the human body to synergetically, i.e. cooperatively and integratively, inter-act organically with the physical organic and inorganic circumstances of the natural environment, through a reflex arc.

The syn-apsing function through a reflex arc, then, involves the sensory, association, and motor neurons in an involuntary, i.e. without conscious control and coordination, synergetically driven human body reflexive physical organic inter-action in and with the physical organic and inorganic circumstances of the natural environment in that the trans-duction of the electrical impulse is directed into, through, and out of the spinal cord and not into, through, and out of the brain of the internal central nervous system.

When the syn-apsing function is so reflexively involved, i.e. as involved in the transport of the electrical impulse into, through, and out of the spinal cord and not into, through, and out of the brain, the trans-duction is and only is from one form of physical energy to another form of physical energy involuntarily, i.e. without conscious control and coordination. There is, then, in reflexive human body synergetic physical organic inter-actions, only one possibility of trans-duction, into, through, and out of the spinal cord and it is that of the trans-duction of physical energy in one form trans-ducted into physical energy of another form.

#### The Syn-Apsing Function in Non-Reflexive Human Body Synergetic Physical Organic Inter-Actions

In contrast, when the syn-apsing function is non-reflexively involved the transport of the electrical impulse is into, through, and out of the brain and not the spinal cord. When the syn-apsing function is non-reflexively involved in the brain, then, there are three possibilities of organic trans-duction,

##### Possibility 1: Brain reflex inter-actions with physical circumstances

Possibility (1) involves the trans-ductive possibility that the physical energy in one form is organically trans-ducted into physical energy of another form, e.g. physical energy in the forms of light rays, sound waves, odor molecules, physical touch forces, and taste molecules in the physical circumstances of the natural environment is organically received and trans-ducted into physical energy in the form of electrical impulses by sensory neurons, to, into, and through the brain, whereby the physical energy in the form of electrical impulses are organically trans-ducted into physical energy in the form of physical organic human inter-activities of seeing by the eyes, hearing by the ears, smelling by the nose, touching by the skin, and tasting by the tongue of aspects of the physical organic and inorganic circumstances of the natural environment, i.e. a transfer of physical energy into and through sensory neurons to, into, and through only the brain and then into the human body inter-activity of seeing, hearing, smelling, touching, and tasting of the physical circumstance of the natural environment;

##### Possibility 2: Spinal cord reflex inter-actions with physiological circumstances

Possibility (2) involves the trans-ductive possibility that the physical energy in one form is organically trans-ducted into physical energy of another form; e.g. the physical energy of the electrical impulse being organically trans-ducted: (i) from physical energy in the form of sensory neurons to physical energy in the form of association neurons; (ii) from physical energy in the form of association neurons to physical energy in the form of motor neurons; (iii) from physical energy in the form of motor neurons to physical energy

in the form of physical organic muscle movement; (iv) from physical energy in the form physical organic muscle movement to the synergy of physical organic human body inter-activity in and with the physical organic and inorganic circumstances of the natural environment; i.e. a transfer of physical energy into and through sensory neurons to, into, and through only the spinal cord and into, for example, the human body inter-acting with physiological organic fear and/or pain circumstances of the natural environment.

### Possibility 3: Brain non-reflex trans-actions with mental circumstances in the natural environment

Possibility (3) involves the trans-ductive possibility that physical energy in its many forms being organically trans-ducted by the syn-apsing function in the surface sensory and internal nervous system into mental energy in the form of mental feelings, e.g. the physical energy of electrical impulses being organically trans-ducted by means of sensory, associative, and motor neurons to the cooperative and integrative synergy of physical organic inter-actions in the physical organic and inorganic circumstances of the natural environment to that of this cooperative and integrative synergy of physical organic inter-actions being trans-ducted into the synergy of mental organic trans-actions in the physical organic and inorganic, the physiological organic, and the mental organic circumstances of the natural environment, i.e. a transfer of physical energy into and through sensory neurons to, into, and through only the brain and then into the human body trans-activity of the reflective thinking activity as involved with the physical organic and inorganic, the physiological organic, and the mental organic circumstance of the natural environment;

Possibilities (1) and (2), i.e. the trans-ductive possibilities of the syn-apsing function being involved involuntarily, i.e. without conscious control and coordination, by the organic trans-duction of forms of physical energy into other forms of physical energy with the outcome being the cooperative and integrative synergy of physical organic human body inter-actions in the physical organic and inorganic circumstances of the natural environment is actualized, as accounted for in the paper to this point. The account has been drawn from the subject matter of ecology.

However, possibility (3), i.e. the trans-ductive possibility of the syn-apsing function being involved voluntarily, i.e. with conscious control and coordination, by the organic trans-duction of forms of physical organic energy into forms of mental organic energy in the form of mental organic feelings with the outcome being the cooperative and integrative synergy of mental organic human body trans-actions in the physical organic and inorganic circumstances of the natural environment, though actualized in the physical organic and inorganic circumstances of the natural environment, has not been, because it can not be, accounted for in this paper, as drawn from the subject matter of ecology.

The subject matter of ecology, including that of the transfer of physical energy as involved in voluntary, i.e. in conscious control and coordination, of the human body, does not include that of the transfer of mental organic energy. The subject matter of the ecology of human beings, as accounted for in Parts I, II, and III, is as a physical living organism, i.e. a physical living organization of systems existing on the surface of the body and internal to the body that must, for the good of physical organic life, transfer physical organic energy to sustain his/her synergy of action, i.e. his/her cooperative and integrative action, in the physical organic, biotic, living and organic, abiotic, inorganic circumstances of the natural environment.

## Part IV

## Internal Factors and the Transfer of Physical Organic and Mental Organic Energy

The subject matter of the ecology of human beings includes meanings, in regard to internal factors and the transfer of physical energy that: (1) refer to only the physical existence of organic systems, i.e. organization of systems, existing internally to the physical organic human body; and that (2) are composed to constitute ecological knowledge that, whether existing;

(i) as a being evolved naturally in a physical organic and inorganic natural environment;  
or

(ii) as a being created super-naturally and placed in a physical organic and inorganic natural environment,

the human being, to continue the good of his/her physical organic life, i.e. to continue his/her physical organic survival, must sustain the synergy of physical organic action. That is, we human beings to continue the good of our physical organic life, we must sustain cooperative and integrative physical organic inter-activity in and with the physical organic and inorganic circumstances of the natural environment, whether existing as human beings of natural evolution or as human beings of super-natural creation.

The subject matter of the ecology of human beings, then, demonstrates that the internal factors of the human body, i.e. the physical organic organization of a skeletal system, muscular system, digestive system, nervous system, circulatory system, respiratory system, excretory system, endocrine system, reproductive system and an immune system, as physically connected to function organically with the surface factors of the human body, e.g. the physical organic organization of an integumentary system, ingestive system, and sensory system, as accounted for above, but also as could be accounted in regard to an inhalation and exhalation system, and a urinary and defecation system, are, for the good of physical organic life, necessarily involved in the synergy of physical organic energy.

### The Internal Factor of Metanoia

However, the subject matter of the ecology of human beings does not, whereas, the subject matter of the educology of human beings, as philosophically oriented by the subject matter of ecology, does demonstrate what the internal factors of the human consciousness are, where the meaning of the locution 'metanoia', is conceived by Professor Sztumski, when he says;

"Metanoia means a radical change in human mentality on a mass scale. It is a form of the reorientation of collective social awareness. It is preceded by a replacement of a system of values binding at given levels of social evolution." (From page 6 of Professor Sztumski's paper.)

Professor Sztumski's conception of the meaning of the locution 'metanoia' as 'a radical change of human mentality' I will interpret, with an ecologically oriented philosophy of educology, to mean 'a radical change in human thinking as conducted by the human organic consciousness, with the meaning of the locution 'human organic consciousness' implying that the human consciousness is a mental organic existent as the human body is a physical organic existent, therefore, both exist, synergetically connected, as organic circumstances in the natural environment.

The implication of this ecologically oriented philosophy of educology meaning of 'metanoia', without, at this point, connecting it with the meaning of the locution 'radical', then, is that the

human consciousness and human body both exist organically with internal consciousness factors and internal body factors that are operating through an organization of physical and organic systems that synergetically relate the internal factors, i.e. that operates through an organization of organic systems cooperatively and integratively related to the physical organic energy of electrical impulses, as they are involved in the syn-apsing function operating in the human body's nervous and muscle systems, being reciprocally trans-ducted as they are involved with the mental organic energy of emotional feelings, hence, as they are involved in the mentally organic thinking activity that is operative in the organic human consciousness' thinking pattern of phases.

In short, the educological implication is that the human body's surface sensory and internal nervous and muscular systems of organs are synergetically driven to organically operate in cooperation and integration with the human consciousness' thinking pattern of phases through the reciprocal trans-duction, i.e. through the mutual reformation, of the forms of mental organic energy of human consciousness, i.e. forms of mental feelings, as forms of organic energy, and forms of physical organic energy of human bodies, i.e. forms of electrical impulses as forms of organic energy.

In that the human consciousness operates by organic energy and the human body operates by organic energy, in a reciprocal trans-duction of each, and in that;

- (i) they both exist organically conjoined, not organically disjoined; and
- (ii) they both exist as natural aspects of human beings naturally conducting the thinking experiences that control and coordinate the physical organic and inorganic, physiological organic, and the mental organic circumstances of the natural environment, as synergetically driven toward cooperative and integrative inter-actions and trans-actions in the physical inorganic and organic, and also the mental organic circumstances of the natural environment, the thinking experience is conducted as synergetically driven by the mental organic energy of mental feelings.

### The Thinking Experience

The thinking experience, from the educological perspective, can be considered to be conducted in two patterns of phases referred to by the meanings of the locutions 'reflective thinking experience' and 'day-dream thinking experience'.

The reflective thinking experience compares and contrasts with the day-dream thinking experience, as follows:

- (1) the reflective thinking experience is conducted for the purpose of establishing its value through the experience of thinking FOR the trans-actions involved in the testing of the truth of the ideas being thought and through the experience of thinking IN the trans-actions involved in the testing of the truth of the ideas being thought, whereas:
- (2) the day-dream thinking experience is conducted for the purpose of establishing its value through the experience of thinking FOR the trans-actions involved in the testing of the pleasure of the ideas being thought and through the experience of thinking IN the trans-action involved in the testing for the pleasure of the ideas being thought.

The similarities between the reflective thinking and day-dream thinking experiences are that:



(i) both are conducted for the purpose of establishing the value of the ideas in the thoughts used in the thinking experience, where the values are truth and pleasure; and

(ii) both are conducted in two mental organically related phases, where the phases are those of;

Phase 1, as thinking *FOR* the trans-actions involved in testing the value of the ideas being thought in the thinking experience, and of

Phase 2, as thinking *IN* the trans-actions involved in testing the value of the ideas being thought in the thinking experience.

Within these similarities there are two differences in the thinking experiences. They are that:

(i) truth is the value used to judge the value of the ideas in the thoughts used in the reflective thinking experience; and that

(ii) pleasure is the value used to judge the value of the ideas in the thoughts used in the day-dream thinking experience.

And, within this difference there are two differences, whereby in Phase 1, in both types of thinking, the trans-action being thought of to involve in the testing of ideas for; (i) truth, will be different than the trans-action being thought of to involve in the testing of ideas for; (ii) pleasure.

Whereas, the meaning of the locution 'trans-action' refers to reciprocal and conjoint human conduct controlled and coordinated by the operation of the meaning that is endowed on the mental organic energy of mental organic feelings by the conceptual experience of using, constructing, and endowing meaning on the mental organic feelings in the thinking experience, then:

(i) in the reflective thinking experience, where truth is the value, then, the conceptual experience will be that of using and constructing meaning to endow on mental organic feelings that will control and coordinate them toward using meaning to cohere and correspond significantly in the perceptual experience of the various and changing particular aspects of the reality of physical organic and inorganic, physiological organic, and mental organic circumstances in the natural environment; and

(ii) in the day-dream thinking experience, where pleasure is the value, then, the conceptual experience will be that of using and constructing meaning to endow on mental organic feelings that will control and coordinate them toward using meaning to cohere and correspond in-significantly in the perceptual experience of the various and changing particular aspects of the reality of physical organic and inorganic, physiological organic, and mental organic circumstances in the natural environment.

#### The Conceptual and Perceptual Experiences in the Reflective and Day-Dream Thinking Experience

The conceptual experience is that of the experience of continuing the use of previously constructed meanings and/or constructing new meanings for use in the thinking experience by endowing them on the mental organic energetic feelings, i.e. on the synergy of feelings in the

consciousness, by penetrating and impregnating the feelings with the meanings, hence, controlling and coordinating feelings in and for the perceptual experience;

(i) toward truth in the two mental organically connected phases of the reflective experience and

(ii) toward pleasure in the two mental organically connected phases of the day-dream experience.

The perceptual experience is conducted through the organically connected extro-spective and intro-spective perceptual experiences, whereby:

(1) the extro-spective perceptual experience is that which is conducted by the human body's sensory neurons in the surface sensory organs of the human body, i.e. the eyes, ears, nose, skin, and tongue, that detect, receive, and trans-duct the physical energy of the reality of the various and changing particular aspects of the physical organic and inorganic circumstances of the natural environment, i.e. the light rays, sound waves, odor molecules, physical touch forces, and taste molecules into the electrical energy of electrical impulses transported and trans-ducted by the neurons by the syn-apsing function through the involuntary and voluntary aspects of the internal to the human body central and periphery human body's nervous system's to, into, and through the brain and spinal cord to the internal to the human body's muscular system and through, the synergy of the electrical impulses, stimulating the human body to synergetically inter-act, i.e. cooperate and integrate itself, with the physical organic and inorganic and the physiological organic circumstances of the natural environment.

(2) the intro-spective perceptual experience is that which is conducted by:

(i) the human body's sensory neurons in the internal body organs that detect, receive, and trans-duct internal to the human body physiological feelings of, for example, muscle pains and pleasures, stomach aches and nausea, head dizziness, and the physiological feeling of human body orgasm; and

(ii) the human consciousness's conscious experience of the emotion's experiences of detecting its mental feelings, the imagination's experience of constructing mental images, and the volition's experience of determining the mental will.

Both the extro-spective and intro-spective perceptual experiences are of various and changing particular aspects of the physical organic and inorganic, physiological organic, and mental organic circumstances of the natural environment on which the meaning of the conceptual experience is endowed:

(i) by penetrating and impregnating mental organic circumstances internal to the human consciousness with meaning; and

(ii) by enveloping and encompassing the physical organic and inorganic and physical organic circumstances internal and external to the human with meaning.

and by which the perceptual experience becomes meaningful.

Without the conceptual experience in and with thinking experiences, i.e. without meaning being endowed on the various and changing particular aspects of the circumstances of the natural environment, including the physical organic and inorganic, physiological organic, and mental organic aspects of the human body and consciousness synergetically cooperating and integrating themselves in the natural environment, human beings, individually and collectively, can not participate in the perceptual experience necessary to the trans-active experience, though participating in the non-conceptual and non-perceptual experience of the inter-active experience in the circumstances of the natural environment.

### The Trans-Active and Inter-Active Experiences in the Conceptual and Perceptual Experiences

The meaning of the locution 'inter-action', I restrict to refer to the synergy of action as involved in the physical organic and inorganic and the physiological organic aspects of the circumstances of the natural environment. In regard to the human thinking experience, the meaning of 'inter-action' is used to refer to physical energy as electrical impulses being trans-ducted and transported into and throughout the human physical body as a synergy of inter-action, i.e. as a synergy of cooperation and integration, in and with the physical organic and inorganic circumstances of the natural environment. The human body, then, conducts, involuntarily, the inter-active experience, with this meaning of the locution 'inter-action', wherein the human body exists organically connected with but not consciously aware of the trans-active experience.

The inter-active experience, in the thinking experience, then, in consideration of the human body and its relationship to itself, other human bodies, and other physical organic and inorganic and physiological organic circumstances in the natural environment, involves only an involuntary inter-active experience of the human body and not the organically related voluntary trans-active experience of the human consciousness.

Where the inter-active experience, in the thinking experience, involves the reality of the various and changing particular aspects of the synergy of the physical organic energy of the electrical impulse in the human body, the trans-active experience involves the reality of the various and changing particular aspects of the synergy of the mental organic energy of mental feelings in the human consciousness.

However, only as the reality of the various and changing particular aspects of:

- (i) the synergy of the mental organic energy trans-ducted into the form of mental feelings internal to the human consciousness is endowed with, by being penetrated and impregnated with, meaning composed in and by the conceptual experience, and its controlling and coordinating effect;
- (ii) the synergy of physical organic energy trans-ducted into the form of electrical impulses internal to the human body is endowed by, by being enveloped and encompassed by, meaning composed in and by the conceptual experience, and its controlling and coordinating effect; and
- (iii) the synergy of physical inorganic energy trans-ducted from the forms of light rays, sound waves, odor molecules, physical touch forces, and taste molecules external to the human body is endowed by, by being enveloped and encompassed by, meaning composed in and by the conceptual experience, and its controlling and coordinating effect;

can the perceptual experiences of extro-spection and intro-spection be involved in the synergy of cooperative and integrative conduct by human beings in the reality of the various and changing particular aspects of the physical organic and inorganic, physiological organic, and mental organic circumstances of the natural environment.

From the perspective of a philosophy of educology, as oriented by the subject matter of ecology, then:

(i) the meaning of the locution 'inter-action' as being restricted to refer to the synergy of physical organic energy in the form of electrical impulses as they are involved in the synapsing function in the human body's organization of the sensory, nervous, and muscular organ systems, as organically related to

(ii) the meaning of the locution 'trans-action' as being restricted to refer to the synergy of the mental organic energy in the form of mental feelings as they are involved in the thinking activity in the human consciousness' organization of patterns of phases in the thinking experience.

With these educologically composed restriction of meanings, then, through the synergy of mental organic energy the conceptual and perceptual experiences are involved in synergy of trans-actions in the reality of the natural environment, as involved in both the reflective and day-dream thinking experience.

Also involved in the trans-active conceptual and perceptual experiences is the inferential experience.

#### The Inferential Experience in the Trans-active Conceptual and Perceptual Experiences

The inferential experience is organically involved with both the conceptual and perceptual experience, where:

(i) the conceptual experience provides meaning to the perceptual experiences of extro-spection and intro-spection;

(ii) the perceptual experiences of extro-spection and intro-spection are experiences of the reality of the various and changing inter-active particular aspects of the natural environment, including particular aspects of the human body; and

where:

(iii) the perceptual experience, using the meaning provided by the conceptual experience, trans-ducts the extro- and intro-spective experiences of the reality of the various and changing inter-active particular aspects of the natural environment, including particular aspects of the human body, into a meaningful reality, i.e. a reality experientially extro- and intro-spected and endowed with meaning from the conceptual experience in the human thinking experience.

The perceptual experience, then, is of the extro- and intro-experiences of a various and changing particular reality endowed with meaning constructed and endowed in the past by the conceptual experience as it i.e. as an endowed with meaningful reality, is, through, the trans-active thinking

experience as conducted in the present. However, the human being's conduct of thinking experience is not limited to the perceptually oriented trans-active thinking experience of a present meaning endowed reality of various and changing particular aspects of physical organic and inorganic, physiological organic, and mental organic circumstances of a natural environment.

The human being's consciousness, as it conducts the reflective or day-dream thinking experiences, is not limited to only the perceptual experience of a here-and-now various and changing reality endowed with meaning. It takes these perceptual experiences, of a here-and-now various and changing particular reality endowed with meaning, and infers into the immediate, intermediate, and/or the remote future a reality or fantasy, endowed with meaning, based on the here-and-now reality as it is endowed with meaning.

The inferential experience in the human being's thinking experience is organic to the conceptual and perceptual experience, as conceived in this paper using the subject matter of ecology to orient the development of a philosophy of educology.

So, from the perspective of the educology, being philosophically composed in this paper, the inferential experience is the experience in the human being's thinking experience from which another difference between the reflective thinking experience and the day-dream thinking experience can be demonstrated, as follows:

The essential difference is that in the reflective thinking experience:

- (i) truth is the criterion used to judge the quality of ideas being thought in the thinking experience;
- (ii) the conceptual experience in the thinking experience is used to endow meaning on a various and changing particular here-and-now reality, including the here-and now reality of the mental organic feelings of the human conducting the reflective thinking;
- (iii) the endowed meaning is composed so that the meanings cohere and correspond significantly in the perceptual experience, and;
- (iv) the composed coherent and significantly correspondent meanings are used to infer into an immediate, intermediate, and/or remote future reality with endowed meaning.

Whereas, in the day-dream thinking experience:

- (i) pleasure is the criterion used to judge the quality of ideas being thought in the thinking experience;
- (ii) the conceptual experience in the thinking experience is used to endow meaning on a various and changing particular here-and-now reality, including the here-and now reality of the mental organic feelings of the human conducting the reflective thinking;
- (iii) the endowed meaning is composed so that the meanings cohere and correspond insignificantly in the perceptual experience, and;
- (iv) the composed coherent and significantly correspondent meanings are used to infer into an immediate, intermediate, and/or remote future fantasy with endowed meaning.

This demonstration indicates that the difference between the reflective thinking experience and the day-dream thinking experience is the difference in the criterion to judge the value of the thinking is organically connected to the inferential experience.

In the reflective thinking experience, where truth is the criterion of value, the inference into the future is that of a future reality with endowed meaning, whereas, in the day-dream thinking experience, where pleasure is the criterion of value, the inference into the future is that of a future fantasy with endowed meaning.

### TRUTH and truth in the Reflective Thinking Experience

Essential, then, to the reflective thinking experience is that the human being conducting the reflective thinking experience value truth. The meaning of the locution 'truth', however, refers to:

- (i) a judgment made by a human being about how significantly meanings cohere and correspond, in the perceptual experience, to the various and changing particular aspects of reality in the natural environment,
- (ii) the existence of some particular aspect of the various and changing reality in the natural environment; and
- (iii) the existence of a super-natural being in a realm of various and unchanging reality that transcends the various and changing reality in the natural environment.

When the meaning of the locution 'truth' is used to refer to (iii), it is commonly structured in all caps, such as 'TRUTH' or with the first lettered capped, such as 'Truth'. Here I will use the all capped structure.

Where, then, the criterion of value used in the reflective thinking experience is TRUTH, the following demonstrates the inference in (iv) as it relates to (i).

- (i) TRUTH is the criterion used to judge the quality of ideas being thought in the thinking experience;
- (ii) the conceptual experience in the thinking experience is used to endow meaning on a spiritual being in a realm of various and unchanging reality in a super-natural realm that transcends the various and changing reality in the natural environment.
- (iii) the endowed meaning is composed so that the meanings cohere and correspond 100% significantly in the perceptual experience, and;
- (iv) the composed coherent and 100% correspondency of meanings are used to infer into a remote future realm of various and unchanging reality in a super-natural realm that transcends the various and changing reality in the natural world, with endowed meaning.

The essential difference, then, in the inferential experience, as it is conducted in the reflective thinking experience, where truth is the criterion of value and where TRUTH is the criterion of value is that in the former the meaning of the locution 'truth' refers to a judgment made by a human being about how significantly meanings cohere and correspond, in the perceptual experience, to the various and changing particular aspects of reality in the natural environment,

and in the latter the meaning of the locution 'TRUTH' refers to the existence of a super-natural being in a realm of various and unchanging reality that transcends the various and changing reality in the natural environment.

In both cases, however, the reflective thinking experience is being conducted with the value of truth, not of pleasure, though of two different meanings of the locution 'truth'. This difference makes a difference, only, in the inferential experience involved in the reflective thinking experience in that the meaning of 'truth' coheres the meanings used in the reflective thinking experience toward less than a 100% correspondency of meanings used to infer into the future, whereas the meaning of 'TRUTH' coheres the meanings used in the reflective thinking experience toward a 100% correspondency of meanings used to infer into the future.

The point is that the inferential experience, as involved in the reflective thinking experience, with using the reference of the meanings 'truth' or 'TRUTH' as the criterion of value, is organically involved with the conceptual and perception experiences in both cases. Both are cases of human being conducting the reflective thinking experience in their trans-active experience of the various and changing particular aspects of reality in the natural environment.

#### Summary and Conclusion to Part IV

In the summary and conclusion of this part of the paper, I will return to my interpretation of Professor Sztumski's conception of the meaning of the locution 'metanoia', which is that it refers to a radical change in human thinking as conducted by the human organic consciousness, and make the following summary statements.

Summary-Conclusion Statement 1: Using the subject matter of ecology, I have presented a demonstration that human thinking experience is organic to the reality of the circumstances in the natural environment of the world and follows a general pattern of two phases, where:

Phase 1, is thinking *FOR* the trans-actions involved in testing the value of the ideas being thought in the thinking experience, and

Phase 2, is thinking *IN* the trans-actions involved in testing the value of the ideas being thought in the thinking experience.

Summary-Conclusion Statement 2: Using this general pattern of two phases of the thinking experience, I presented a demonstration that the pattern is conducted by human beings in the forms of the reflective thinking trans-active experience and the day-dream thinking trans-active experience:

The reflective thinking trans-active experience uses truth as the criterion of value to judge the quality of the ideas thought in the thinking experience, and

The day-dream thinking trans-active experience uses pleasure as the criterion of value to judge the quality of ideas though in the thinking experience,

Summary-Conclusion Statement 3: Using the meaning of the locution 'truth' to refer to:

a judgment made by a human being about how significantly meanings cohere and correspond, in the perceptual experience, to the various and changing particular aspects of reality in the natural environment;

and, using the locution 'TRUTH' to refer to:

the existence of a super-natural being in a realm of various and unchanging reality that transcends the various and changing reality in the natural environment;

I presented a demonstration, that in both cases, the trans-active experience is organic to and involves the general pattern of phases of the reflective thinking experience in which the criterion of value to judge the quality of the ideas being thought in the thinking experience, whereas, in the day-dream trans-active thinking experience, though being organic to and involving the general pattern of phases of the reflective thinking experience the criterion of value to judge the quality of the ideas is pleasure, not truth or TRUTH.

**Summary-Conclusion Statement 4:** The point of the demonstrations is that, using the meaning of 'metanoia' to refer to a radical change in human thinking, where human thinking is organically conducted in accord with a general pattern of phases, then:

(i) to radically change the pattern of phases would be to change what is organic to the human consciousness; and

(ii) to radically change the criterion of value to judge the quality of the ideas being thought, i.e. truth, TRUTH, and pleasure would be to change what is organic to the human consciousness.

**Summary-Conclusion Statement 5:** Considering this point, then, in my opinion, what can and should be radically changed is the competency of human beings doing better what is organic to their nature, i.e. conducting reflective thinking trans-active experiences more competently for the purpose of truth.

**Summary-Conclusion Statement 6:** With this opinion, then, I take it that the following steps are ones that can and should be taken by educologists of the world:

Step 1 is for educologist's of the world to conduct inquiry into the nature of the mental organic energy, i.e. into the synergy of the thinking experience, as the educative experience, especially the organic thinking experience referred to by the meaning of the locution 'reflective thinking experience'.

Step 2 is for educologist's of the world to conduct courses, for example named the "Synergy of The Thinking Experience as the Authentic Educative Experience In and For Democracies in the World," first at the university level in colleges, department, and divisions of educology, in which the subject matter of this inquiry is taught, studied, and learned in the educational process in that setting.

Step 3 is for educologist's of the world to plan conferences in, for example, the "Educology of the Thinking Experience as The Challenge of Integrating the World."

In my opinion, these are three steps that need to be taken to bring about, in Professor Sztumski's words, "a replacement of a system of values binding at given levels of social evolution," that precedes a "reorganization of collective social awareness," i.e. that precedes metanoia as "a radical change in human mentality on a mass scale," where the system of value is that of the value of a life in which the reflective thinking experience is conducted as well as it can be



conducted in the pursuit of truth. Such a life experience would lead to the reorganization of the collective social awareness of humans in the world and affect a social evolution at many levels.

#### Part V Summary and Conclusion of the Paper

The purpose of the paper was to inquire into the subject matter of ecology so as to establish a philosophy of educology for the democratic integration of the world, where the meaning of the locution 'philosophy of educology' refers, more specifically to the epistemology of educology, i.e. to the philosophical inquiry guided by the question "What is knowledge about education?"

Where educology is the body of knowledge claims about education and education is conceived as both the educational process conducted in homes, school, and communities in the world and the educative experience conducted in the educational process and in general life experiences, the paper focuses on the reflective thinking experience as the educative experience for educology's knowledge claims to refer to.

With this focus, then, the reflective thinking experience was demonstrated to be organically connected to the subject matter of ecology, whereby the subject matter of ecology provides an orientation for the development of a philosophy of educology. And, for such an ecologically oriented philosophy of educology to provide worthwhile ideas for the future challenges of the Integration of Europe and the World.