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**ABSTRACT**

States of Mind as inclusion strategies in different educational and training contexts Summary Through the mental image it is possible to establish Monoideisms and ideoplasias. Considerations of Neuro-Pedagogy and Bio-Education introduce a theoretical model which, if based on versatility and curiosity, is effective both for the participatory and inclusive push for the group. This suggests that these strategies can evoke epigenetic drives useful in different educational and training contexts with a modulating action on motivation and relationships.

Mediante l'immagine mentale è possibile instaurare Monoideismi e ideoplasie. Considerazioni di Neuro-Pedagogia e Bio-Educazione introducono un Modello teorico che se basato sulla versatilità e curiosità, risulta efficace sia per la spinta partecipativa che inclusiva per il gruppo. Questo suggerisce che tali strategie possono evocare spinte epigenetiche utili nei diversi contesti educativi e formativi con azione modulante sulla motivazione e sulla relazione.

**KEYWORDS**

Bio-Education; Emotional education; Epigenetics; Mental image; Neuro-Pedagogy.

Bio-Educazione; Educazione emozionale; Epigenetica; Immagine mentale; Neuro-Pedagogia.

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## Introduction

The fertile territories of conceptual and analytical synergy of pedagogy with the sciences of human behavior allow us to occupy prolonged spaces and critical issues in the territories of the affective and motivational experience of the new generations and, therefore, to seek the meaning and directions of educational action in every registered office. The nature of the educational relationship indeed maintains centrality and meaning in the reflection processes of pedagogy (Galanti, 2001) and the overall behavioral sciences. From an analytical perspective it is a reason for quality and effectiveness in reference to depth of bond between the significant adult and the delegation of alliance that it receives from the primary figures, for training/qualification support during childhood stage. The depth of this bond is directly proportional to the trust established and generated through the methods of taking charge by Professional Educator. In a shared Pedagogical Medical Model, that is in the flog of Bio-psico-sociale System a neuro-biological support project of emotional and affective development, that commits, activation of motor cortical areas, with related functionals involvements, primarily concerns sub-cortical structures, the most archaic (Nardi, 2020).

The Consciousness is indeed the psychic function that interprets Awareness, with natural evolution in personal experiences and Transcendence. Along this process of bio-psychic activation, the sense focusing ((visual, auditory, kinesthetic, olfactory, gustatory or even synesthetic) represents a condition of Monoideism that insists on half-brain dominance engaging it in dynamics of modification of interhemispherical relations

Stimulates rational hemisphere analytical, logic (left in the not right-handed) and gives more activity to the emotional hemisphere (right, analog, emotional, holistic, belonging)

In this mode of brain function you can induce a altered state of Consciousness through an Ideoplasia (dominant idea) (Granone F., 1989) which tends to generate psychic, somatic and visceral modification.

### 1. The Mental Image

An educational method based on an integrated approach transversal and medical-pedagogical needs a global approach to person and then at the beginning essentially somatic, where the body accused is wisely recovered (Mariani, 2012)..

To promote or to encourage then a contact of sensorial-perceptive continuity and therefore of neuro-motor, effectiveness it is necessary to identify the preferential sensory channel, selecting it mainly among visual, auditory, cenesthetic but also olfactory and gustatory.

The research work, in this direction, according to a guideline social and dynamic Pedagogy are mainly involved of recent developments in the concept of Epigenetics, that interface within the broader domain of Biology, dealing with how individual neuronal function by

the effect of emotions conveyed through educational practices and educational and educational paths, not only is it transmissible from one generation to another.

As a result of the emotions transmitted through educational practices and educational and educational paths, not only can it be phenotypically modulated during the same generation but also transmitted from one generation to another. All this confirms the idea that our lifestyle, the modes of beliefs, how the beliefs are implemented, certainties, opinions, fears and hopes that constitute the same dominant thought, through processes of epigenetic interaction with the external environment, influence also our genes. First temporarily then then subsequently, for the effect of continuous stimulation and of an evolutionary advantage to environmental adaptation, in a permanent manner.

The characters of each individual, which we could consider as an expression of his original genetic heritage, if inserted into his own environment, constitute a limit for any possible identification with perspective and prognostic value of development and educational processes (Galanti, Sales. 2017).

In fact, in order to pursue social and cultural norms, emotions have long been considered expressions to be repressed rather than encouraged and channeled to educate.

On the other hand, they appear to be fundamental to the complex and individual learning processes and and for the emotional, affective and relational development, at the base of sociality.

Too often care and protection of emotional and affective states in developmental age are neglected and disregarded, as is the case in certain group or class dynamics, in school gyms or in Family Court proceedings ,where it may happen that childhood and adolescence and parenthood represent legal and economic entities, sometimes goods of advantageous utilitarian and patrimonial exchange.

## **2 Modified States of Consciousness**

In relation to the central assumptions of neuro-psycho-dynamics the sensorial visualization (therefore not only direct visual but also synesthetic) which constitutes the carrier of the mental image represents a powerful force that evokes emotions, affections, feelings, can create the realization of Monoideism (dominant idea) which we define ideoplastic through the activation of all ultrasensory psychic functions. Perception, Attention, Memory, Ideation, Affectivity, Will and finally Consciousness with its shift towards the Modified State of Consciousness, they are all involved.

The need to understand how this neurophysiological dynamic is realized in the educational processes is important to understand why some relationship scenarios (Laborit, 1992) , enjoying greater authenticity and depth of communication unlike others, then take on greater effectiveness by reaching educational excellence, non-random phenomenon and worthy of analysis and activation.

A theoretical reference approach of medical-pedagogical origin, on the one hand it sinks in the great tradition of the doctors-pedagogists (Bocci 2011, Crispiani 2016, D'Alonzo 2019) and for the other it confronts with models of psychiatric and psychodynamic analysis.

In this scientific field is referred the Biological Aesthetic Structural Model (Villanova, 2006) that refers centrally to the structural and biomolecular bases which relate the environmental and behavioural morphology evoked from the original imitative processes. Phylogeny is repeated then in ontogeny and this in embryogenesis and therefore in neurodevelopment, always taking into account of constant interaction with the learning process in the educational dimension, therefore the need for such awareness cannot be ignored (Fabbri, 2021).

The emotional gradient deriving from the educational relationship and the combined action of both on the phenotypic expression of the genetic heritage therefore make awareness important on the part of those who participate in the modulation of this trajectory through the structuring of educational projects and paths aimed at constantly conveying reference examples educational that, in this theoretical perspective, are defined such as Valued Identity Models (Villanova M.2008).

### **3. Epigenetic activation**

Epigenetics (Waddington, 2012) explains the mechanisms of gene silencing and activation that lead to selective phenotypic expression according to the emotions evoked by the environment (Nurture) and present in the genetic heritage of the individual (Nature) and of the Species in terms of Evolutionary genomics.

The same environment in which we live is the basis of continuous changes in every living organism, acting on various factors: food, lifestyle, physical activity, exposure to radiation and toxic substances, stressors, the same dysfunctional and conflictual family system.

The educational relationship as a source of modifying emotions can be calibrated and used with awareness to modulate the parable of evolutionary development not only in childhood, adolescence but in every condition of existence of neuronal plasticity, which can be reprocessed and reorganized according to the lines of emotional development prevalent in the emotional environment of systemic-relational immersion that Education Professionals can structure according to training needs.

The relationship between genotype and phenotype is regulated by various factors that determine its penetrance in the population and its individual expressiveness.

Penetrance is the probability of developing the phenotype starting from a certain genotype, while expressivity is the intensity with which the genotype manifests itself.

The independence from environmental influences, (Luria and Delbrück, 1943), research and experiments on animals, have clarified the possible existence of a "third component", different from the genome and the environment, capable of explaining the phenotypic variations and they indicated it precisely in the epigenetic mechanisms, identifiable essentially in the pedagogical field in the emotions transmitted by the educational relationship with the significant adult.

The interpretative evidence of phenotypic variations, already strong as regards plants, is also starting to be consistent for mammals, including the human species.

The greater possibility of meiotic, as well as mitotic, epigenetic inheritance therefore explains the transgenerational transmission of characters acquired through education, offering the explanation of what happens in educational processes and paths and providing the best direction for their planning.

In the same individual and with the same genetic heritage, the reading of this thanks to the emotional contribution of the educational environment in which he is immersed, represents the difference in expression from a phenotypic point of view. The emotional regression to an emotional environment upon emotional stimulation during the suggestions administered in the hypnotic trance state can awaken gene sequences which can then express themselves phenotypically, allowing the synaptic heritage to be expanded and therefore the banks of useful and useful neuronal arborizations (Villanova M., 2016). still in potential neuronal plasticity.

At an epigenetic level, the modulation of acetylation and methylation processes in DNA reading regulate gene expression which becomes more adaptive in a dialectic of modulation offered by the natural environment.

Some genes, even previously silenced in previous generations, are recovered and activated to be read according to what is evoked by the educational relationship, if the scenarios that compose it activate and maintain an effective Monoideism.

#### **4. Bio-Education**

In bio-molecular terms then every consideration of a Neuro-pedagogical (Villanova, 2021) order is therefore to be considered at the same time of a Bio-educational order.

Administering restructuring imaginative contents through the suggestions imparted in the State of Modified Consciousness (hypnotic trance) serves to prepare the process through which the continuous interaction with the emotional environment is then implemented.

The Genome present in a subject defines its own expression of the result of an educational path as a pedagogical objective.

The concept of Mind inherent in the relationship, and certainly not in the cerebral anatomy, highlights and recovers from a neuro-physiological point of view the close connection present between training processes and education through the mental image, the movement and the activation of significant molecular modifications of a morpho-structural or biological nature.

The powerful suggestive effect evoked in childhood, adolescence and also in young adults through the Neuro-activation obtained through the States of Modified Consciousness or the activation of the hypnotic Trance both awake and somnambulistic, induces strong feelings which act by strengthening self-esteem and ability of self-inspection and social interaction.

The profound wonder or Awe (Chirico A. and Gaggioli A., 2021) generated in those involved produces interest, curiosity, amazement. In the neurophysiological reality, modalities are established which, through attentional and sensorial Monoideism, allow the parasympathetic activation and epigenetic solicitation of ancient genetic heritages which are difficult to exploit in phenotypic activation through a solely cognitive-behavioural practice.

The emotions generated by the depth of the established relationship trigger a Biophilia reaction which leads to eutrophication of the psycho-neuro-endocrine-immune axis with the innumerable advantages that can derive from it towards the maturation and global well-being of the Person.

## 5. Neuro-Pedagogy

The educational action can be oriented towards completing existing skills or sowing new ones through imaginative focusing and is the subject of studies and research in the field of Neuro-Pedagogy, on the importance of using attentional stimuli aimed at biochemically modifying the neural networks of the individual (Emoto, 2004).

The neuro-pedagogical concept of education therefore concerns both the formative aspects and the neuronal educability and must therefore be considered in terms of "plasticity" understood precisely as "maturational modifiability".

Each individual combines morphology, physiology and emotionality that distinguish it from other individuals of the same species, but these characteristics, only partly determined by heredity, are influenced at different levels by environmental factors in an apparently imponderable way. In fact, the environment interacts with the subject's hereditary baggage, determining important transformations in him which constitute his adaptive response.

Today we can represent the individual as an open system, in continuous relationship with the outside and therefore with the "different", from which he constantly defines himself (Mura, 2016). Perception and contact with the "other than oneself" occur in the organism through the immune system and the sense organs, from which afferent signals originate which are then processed, integrated and interpreted in relation to individual uniqueness in the higher nervous centers.

*The interconnections between the nervous system (through the psychic Function of Sense-perception), the endocrine system and the immune system are therefore operating through short and medium-term regulatory signals; these interconnections form the integrated PNEI (psycho-neuro-endocrine-immune) system, or the "third component".*

Pioneering studies in this direction documented as early as 2009 the presence of epigenetic alterations in adults who had suffered abuse, trauma and negative stress in childhood.

These discoveries were simply the beginning and subsequent studies have shown that the same molecular mechanisms are also involved in the epigenetic effects induced by parental care after birth (Lipton B., 2012).

The idea that is spreading, in fact, is that the traumas suffered in life or ACEs (Lanius, Vermetten, Pain, 2012) can be transmitted to the offspring via epigenetics, strongly influencing the anatomy and the behavior of subsequent generations.

"Transgenerational epigenetics" (Pembrey, Bygren, Kaati, et al., 2006) concerns the link between the well-being of an individual's somatic and psychic growth and that of his ancestors.

In the presence of traumatic experiences present in remote family history, even transgenerational ones, the neuro-biological dimension of the so-called "*Callous-unemotional*" or "*Indifferent-affective*" temperament trait is often identified, characterized by Insensitivity, Affectionlessness and Impassibility. Educational projects structured around this need are particularly useful. Evolutionary genomics could identify the cause of this genetic modification in the fragility of affective Education present in past generations

## Conclusions

In a desirable transversal alliance of all the Primary Training Agencies, both the early ones such as the Family, the School and the Places of social, cultural and religious aggregation, and the late ones such as Social and Mass media and the host Country and again through the comparison with other foreign states, in the need for awareness of a possible globalization (Pinter, Gramigna, Pancera, 2012), the often structuring effect would be notable, preventing the fragility of neuro-plasticity already from developmental age and even in genomic construction of the Species.

The need to transmit positive examples such as identity models of values in an effective and sustainable educational system is a precise transversal ethical and deontological duty that engages every significant adult and every level of support in the modulation of the parable of evolutionary development, especially of the professions of the helping relationship, training and in the journalistic professions.

This disadvantageous competition explains how it can happen that some parents try to realize their existential expectations through their offspring and emblematic are, for example, beauty contests and the selections to participate in television programs and auditions involving minors and adolescents, where the differences rather than being precious strengths (Lopez, 2018) can unfortunately become disadvantages.

There are therefore feelings of early adultization for commercial and functional use and a commodification of minors by the adult often bordering on an emotional and sexual risk.

The conscious use of mental imagery with the consequent activation of ideoplastic Monoideisms that can derive, if built into the pedagogical culture and training ethics, generate deontological practices of high human depth in the project of Educating to "save the world".

In the absence of awareness and in wild and opportunistic use ("influencers", "pieders of Hamelin"), the risk of educational damage from traumatic manipulation is often the only consequence witnessed with variable catamnesis in neurodevelopment and its compensations risk such as substance use, self-harm, gender crimes (Villanova, 2021).

For these reasons it is necessary for Pedagogy to return to the use and scientific control of these methods of approach to the collective and individual imagination (Borruso 2005), making them usable in the best possible direction, with passion and kindness.

Studies of neuro-pedagogy show the close interrelation between the neurological environment and the experiential environment in the sense that the physical-organic processes are intimately connected with the formation processes. The mind rules thoughts and emotions and is governed by the impressions acquired in the course of life situations. The mind shapes the body at least as much as the body shapes the mind. This awareness thus becomes the very subject of education and conveys the possibility of the responsible growth of both adult educators and young training subjects. Only when we understand the mutual transparency of mind and body do we become able to direct ourselves towards effects that build up the human person with significant cultural inputs. Faced with the risk of the unreal split between the bio-evolutionary apparatus and the pedagogical paradigm, the urgency to mend the vital ganglia that give structure and shape to the human organism emerges.

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