

Contemporary Reichian Analysis: Evolutionary Stage, Epigenetics, and the Neuromediator Dynamic

By Genovino Ferri



Increasing awareness and understanding of epigenetics and neuroplasticity in current research has resulted in a new perspective of psychotherapy that is integrated with neurobiological information. This information is at the root of an emerging paradigm shift in body psychotherapy that I call Evolutionary Stage Neuromediator Vegetotherapy.

I am proposing a route for descending into the depths of Analytical Time and for re-emerging at the surface without getting lost during the analytical-therapeutic journey. This process allows greater appropriacy and permits therapists and their clients to delve into Analytical Time and re-emerge without getting lost during the analytical-therapeutic journey.

Epigenetics and Psychotherapy

Conrad Waddington coined the term epigenetics in the 1940s when discussing environmental factors modifying gene expression that resulted in phenotypes— observable traits determined by our genes and the environmental influences on these genes. Psychology's interest in epigenetics arises from studies that have demonstrated that epigenetic mechanisms influence patterns of neurological development and brain function. While neurogenesis and neuroplasticity play a role in rewiring the brain, epigenetics highlights the role thoughts, behaviors, and experiences play in our gene expression, which in turn, impact our brain and body.

Moving neuroscience further into the world of psychoanalysis, geneticist Eric R. Kandel demonstrated that memories can be modified by learning processes, which are translated into new neuronal circuits (Siracusano & Rubino, 2006). From a neurobiological (and bodily) perspective, psychotherapy may cause changes in patterns of behavior utilizing a learning process that can influence gene expression and modify synaptic connections. Thanks to developments from Kandel's studies *words* have acquired the dignity of being therapeutic, by making modifications to the central nervous system's plasticity—our words, spoken and thought, can rewire our brain and impact our genetic expression resulting in new psychodynamic behavioral patterns.



Epigenetics and Human Patterning: Starting with the Arrow of Evolutive Time

The perinatal period may represent a critical window of opportunity during which environmental experiences can produce long-term effects on the nervous system and behavior. In particular, the process of learning goes as far back along our arrow of evolutive time as the embryo-fetus-newborn's earliest sensory experiences in the primary object

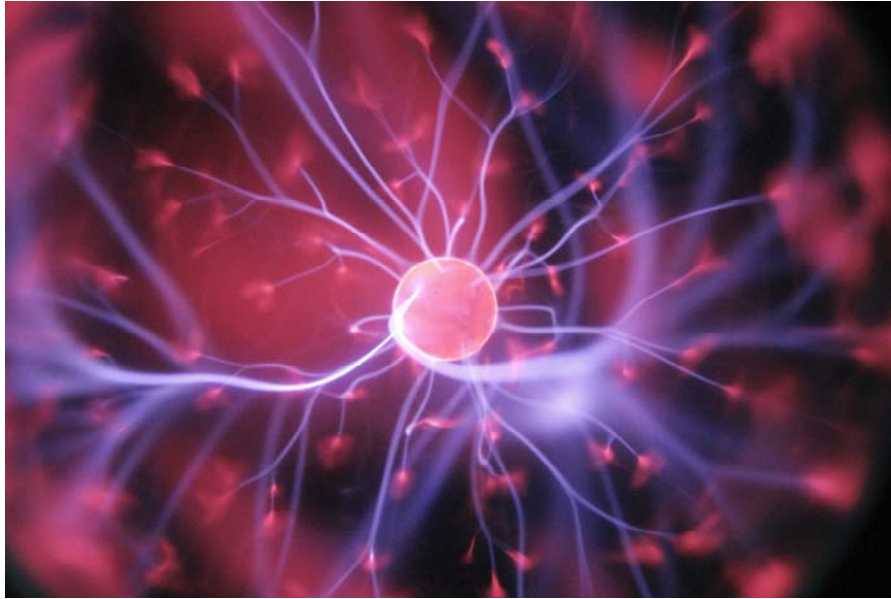
relationship, which is to say as far back as our inter-corporeal, intrauterine pre-subjectivity.

For example, insecure attachment styles favor imbalance on the hypothalamic-pituitary-adrenal (HPA) axis and the creation of an allostatic load, which is to say a condition of exhaustion of internal resources caused by prolonged stress or because of an organism's poor adaptive capability (McEwen, 2004). In particular, stress acts not only on the prefrontal cortex but also on the hippocampus and the amygdala – central nervous system structures that are in constant interaction with external input. Research using functional neuro-imaging techniques has demonstrated an increase in the volume of these brain structures in cases of clinical depression and anxiety disorders.

In women affected by depression during the final three months of their pregnancy, Oberlander et al. (2008) identified epigenetic processes in babies (an increased degree of methylation of the 1_F exon promoter of the glucocorticoid receptor (NR3C1)). Glucocorticoids play an important role in allostatic processes relating to an organism's stress response. The glucocorticoid receptors (membrane proteins coded by the NR3C1 gene) are most likely expressed by the influence of epigenetic processes acting on associated, encoding genes.

There is ever more evidence suggesting that psychotherapy is effective if it is accompanied by epigenetic changes, so this would mean that DNA methylation could be a potential biomarker for successful therapy. Could a sample of saliva, together with interviews and a map of the NR3C1 receptor methylation sites, at regular intervals, represent an opportunity to evaluate the efficacy of psychotherapeutic intervention?

These epigenetic processes, as suggested above, do not only occur during the development of the embryo, fetus, and newborn baby but also continue during adult life, although they do diminish with age. For example, a newborn baby has higher DNA methylation, a teenager would have a lower level, and an elderly person lower still.



Allan Schore (1997) states that the left hemisphere, which is responsible for thinking and reasoning, is highly verbal and analytical. It does not fully develop before the second year of life and so participates little in primary relationships. The first critical period of right-brain development starts during the last three months of gestation and continues until the second year of life. The development of the right brain is fundamental for emotional security and is modeled by our relationships with our environment during infancy.

In other words, Schore (1997) places the system regulating relational attachment in the primary dyad in the right hemisphere and compares highly significant relationships, such as the therapeutic relationship to attachment-like experiences, which can activate the circuits of the right hemisphere and can induce a series of modifications in the regulation of affectivity and emotional expression. The analytical-therapeutic relationship could, therefore, be considered as being capable of intervening, through epigenetic processes, and making changes to the person's emotive and affective modalities.

Stephen M. Stahl (2011) draws a parallel between the therapeutic relationship and a psychotropic drug. He suggests interpreting the relationship as neurobiological probing (therapeutic agent), which is sufficiently able to induce epigenetic changes in brain circuits thus acting as an 'epigenetic drug'.

Thus, the therapeutic relationship modifies brain circuits, obtaining therapeutic effects with the improvement in the effectiveness of information processes, which are the responsibility of those malfunctioning cerebral circuits on which pharmacological therapy and "talking therapy" act.

Further to this, Maurizio Fava's (2015) study also demonstrated the activation of μ -receptors by an appropriate Analytical-Therapeutic Relationship in an almost identical percentage to that seen for μ -receptors activated by citalopram, a serotonergic anti-depressive which also promotes DNA methylation, as well as interrupting serotonin re-uptake in inter-synaptic clefts, facilitating serotonergic transmission.

Moving away from words alone, let's look at the three active principles in Contemporary Reichian Analysis to be used in psychotherapy – the Relationship, Psychopharmacotherapy and Bodily Activations - and their role in Evolutive Stage Neuromediator Vegetotherapy to explore the question: What kind of therapeutic relationship is best for effective epigenetic action?

Epigenetics, Neuromediators, and the Three Active Principles for Psychotherapy

The Relationship: which style of relationship is appropriate for effective epigenetic action on the neuromediator dynamic?

There is a wide margin for the optimization of a *relationship* in the therapeutic setting, so analytical-therapeutic appropriacy and 4D corporeity (Breadth, Length, Height, and Time), should be imposed to achieve this.

The Relationship is a complex living system (Ferri & Cimini, 1999), which is created from the combination of character traits of the person being analyzed and the analyst. It is in dialogue with trait language (Ferri, 2014), which is a meta-language on body language and verbal interaction, including them. This dialogue is expressed by implicit requests that have been deposited in the character trait patterns over the course of the individual's life story. It is on the dialogue between these unconscious elements from people's own evolutive stages, in their verbal and bodily expression, that communication is based, and relationships are built, giving rise to liking or disliking, sustainability or unsustainability, alliance or symmetry, compatibility or incompatibility. In the therapeutic setting, this dialogue is translated into transference and, especially, trait counter-transference, which is another novel aspect of the great world of counter-transference.

It is, therefore, important that the analyst-therapist is aware of the appropriate *position* and the appropriate *how* necessary for counter-transference of the right trait and bodily level that can reach, encounter, and contact the person being analyzed, to move them towards sustainable evolution.

It is, therefore, important that the analyst-therapist is aware of the appropriate *position* and the appropriate *how* necessary for counter-transference of the right trait and bodily level that can reach, encounter, and contact the person being analyzed, to move them towards sustainable evolution. As these become marked over the fundamentally important repetition of sessions, new epigenetic drugs can successfully be produced by appropriate counter-transference.

Indeed, stabilization of emotional memory is necessary to effectively process reality, which can only happen through the repetition of new experiences promoting epigenetic stabilization.

One of the most interesting questions arising from Kandel's studies is the underlying need for repetition of experience for epigenetic changes to occur. This supports body psychotherapy practices and, especially, the use of Bodily Activations (or "actings") as used in Modern Reichian Analysis – the appropriate, systematic repetition of specific bodily activations can, thus, be more effective, in epigenetic terms, than a single moment of insight.



So, which relational pattern is the Other presenting to me, and with which implicit request? Inclusion or exclusion? Acceptance or threat? Support or annihilation? Self-confidence or instability? By comparing a person's life story and the construction of their character traits to a tall apartment building in which the various floors and apartments correspond to the person's different evolutive stages, we could ask from which "apartment", character trait, and evolutive stage they are looking out towards the Other from in the setting?

Which counter-transferential response from which of the analyst's own apartments would be the most appropriate in terms of selecting the best epigenetic drug available? Appropriate distance or contact? Inclusion or support? Silent careful listening or slow, intense reassuring prosody? Alternatively, is it also necessary to include appropriate bodily activations to provide and mark the experience of new insights, which travel

from the peripheral areas along the corticospinal pathways? I would strongly suggest that bodily activations, like psycho-pharmacological therapy and talking therapy, also represent neurobiological probing with novel neurogenetic mechanisms for the individual and the restructuring of their synaptic network. Furthermore, repetition is also indispensable for new epigenetic stabilization for bodily activations, as, too, is finding exactly the right bodily activation to guarantee appropriacy.

I prefer, for the sake of clarity, to discuss Psychopharmacotherapy (the third Active Principle) before examining Bodily Activations (the second Active Principle), because describing them psycho-dynamically facilitates a comparison between pharmacological effects on neuromediators and epigenetic modifications and those that may be produced by bodily activations.

Psychopharmacotherapy: which psychopharmacotherapy is appropriate for effective epigenetic action on the neuromediator dynamic?

In our settings, we find ourselves, more and more frequently, with people who represent beyond-threshold clinical cases and who are being treated with psychotropic medicines.

It is, therefore, important to be aware of which implicit and explicit requests are being made of the psychotropic medicines, as well as their epigenetic action. This should be interpreted as a precious opportunity to create negentropic appropriacy in the setting, utilizing all three of the active principles in synchrony and syntony.

Today, there are numerous psychotropic medicines which produce epigenetic changes:

<u>Anti-depressives:</u>		
Imipramine	<i>Tofranil</i>	<i>(histone acetylation)</i>
Amitriptyline	<i>Laroxyl, Adepril</i>	<i>(histone acetylation and DNA methylation)</i>
Fluoxetine	<i>Prozac, Fluoxeren</i>	<i>histone acetylation and trimethylation)</i>
Escitalopram	<i>Cipralex, Entact</i>	<i>(DNA methylation).</i>
<u>Anti-psychotics:</u>		
Haloperidol	<i>Serenase, Haldol</i>	<i>(histone acetylation, phosphorylation, phospho-acetylation, DNA methylation)</i>
Clozapine	<i>Leponex</i>	<i>(histone acetylation and trimethylation and DNA methylation)</i>
Sulpiride/ amisulpiride	<i>Dobren, Sulamid, Deniban</i>	<i>(DNA acetylation and methylation)</i>
Risperidone		<i>(histone phosphoacetylation)</i>
<u>Stabilizers:</u>		
Valproic acid	<i>Depakene</i>	<i>(histone acetylation and demethylation, DNA methylation)</i>

I must mention that one extraordinary anti-psychotic with epigenetic function is Haloperidol. This drug acts centrally on the D2 dopaminergic receptors of the R-Complex base-nuclei and, peripherally, in the 6th relational bodily level, the abdominal-umbilical area (Ferri, 2020). It interrupts and silences psychotic annihilation angst (Ferri, Cimini, 2020), a condition reflecting a primary intrauterine relationship with highly dysfunctional, invalidating, epigenetic consequences for the person which are not accessible to dyadic, intersubjective psychotherapy alone.

In 40 years of service working with acute psychiatric patients, Haloperidol, which acts epigenetically, as well as on neuromediators, has enabled me to meet hundreds of young people and establish a *chest-based* (4th relational bodily level, peripherally), affective, therapeutic relationship with them, which, sadly, would not otherwise have been possible. It is inter-subjective "thoracic" affectivity that marks the limbic circuits of the right brain, as Schore (1997) might put it, re-balancing them.

Haloperidol has permitted the therapeutic relationship and has also often permitted "completion" of the psychotherapeutic intervention, using the bodily activation "fixed point of light with eyes converging". This activation, interceding from the periphery and repeated over time, creates an afferent connection from the eyes (the first bodily level in modern Reichian Analysis) to the prefrontal cortex, the location of the Id's consciousness, facilitating the person's return to Subjectivity.



Evolutionary state vegetotherapy: which bodily activation is appropriate for effective epigenetic action on the neuromediator dynamic?

As Stephen M. Stahl (2011) speaks to us of the "Relationship as an epigenetic drug" and as M. Fava (2015) compares relationship, psychotropic medicine, and neuromediators, I must suggest that Bodily Activations can represent neurobiological probing, being able to make epigenetic modifications and induce changes in the neuromediator equilibrium in brain circuits. For example, escitalopram, which promotes DNA methylation, facilitates serotonergic transmission and modifies the μ -receptors like the relationship in the setting.

What follows could represent a useful guideline.

Didactically, from a psychodynamic perspective, the three neuromediators can be remembered as The Three "A"s:

Alarm = Norepinephrine (Noradrenaline),

Affectivity = Serotonin,

Action = Dopamine.

In each of us, the three neuromediators are in the dynamic equilibrium of a continuous dialogue, which is to say that they are interdependent – an increase in one of them can cause an adaptive response in the other two in attempting to maintain the Self's equilibrium. An increase in noradrenaline and dopamine, for example, caused by the loss of the affective object, can be lowered by an increase in serotonin which calms the fear and the pain of loss. In psychodynamic terms, it could be said that affectivity could reduce both fear and pain, as well as contain any of the angry-reparative, dopaminergic action, which is often correlated with loss.

The interdependent dialogue between the neuromediators should be separately interpreted for every distinct "apartment" within the person's own "Building". A careful anamnesis of the person's incised marks contributes to planning a highly appropriate project, using precise psycho-corporeal activations on the dysfunctional apartment to re-balance the three "A"s. There are also fine margins to achieve the optimization of the use of bodily activations in the setting. I would strongly advise that intelligent "anchoring" guidelines must be used for Bodily Activations to connect the body three-dimensionally with its stratified depths, with the full benefits of psychoanalysis and neuroscience. I would underline that epigenetic marks are stratified bottom-up, in a body-to-mind direction, along the arrow of time of our successive evolutionary stages.



In Contemporary Reichian Analysis, bodily activations are phylo-ontogenetic movements, which are common to all individuals, having been neurologically stratified during our successive stages of evolutive development. Using these movements as activations acts on the relational bodily levels of the re-actualized evolutive stages and on the trait patterns that have been imprinted by the real relationships that the person has experienced during their entire life story (Ferri, 2020). *Bodily activations are real passwords, giving access to earlier compartments— imprints received from the other than Self Relationship during the time of their evolutive stage— to be able to prescribe novel "epigenetic drugs" with surgical appropriacy.* Used in syntony with the words and the *how*, an appropriate bodily activation, which has been felt, experienced, and repeated over time, can add to, and modify synaptogenesis in the history of that "apartment" or "compartment".

For clarity, one example, the "suction movement of the lips", is a bodily activation that was first identified and suggested by Wilhelm Reich in 1935, the year that Vegetotherapy made its first appearance in the setting. It has been passed on to us for over 90 years and four generations, having, today, evolved into Evolutive Stage Neuromediator Vegetotherapy (Ferri, 2020).

Which evolutive stage is represented and which object relationship?

Which trait pattern was and is expressed phenotypically by the person during breast- or bottle-feeding in their life story?

Is it *oral* normal-threshold or is it above-threshold *oral excess* (from too much milk)?

Or is it under-threshold oral deficiency (from too little milk)?

In other words, has early feeding resulted in the expression of a lack or an excess of serotonin, with a reactive excess, or lack, of NE (NA), or DA, which is now expressed on the 2nd relational bodily level (mouth)?

Which epigenetic marks can we insert, using the password of the suction movement of the lips, to re-balance the epigenetic mechanisms and the neuromediators of the oro-labial evolutive stage *apartment*, together with the associated psychodynamic trait patterns?

The actings elaborated by Wilhelm Reich, Ola Raknes, Federico Navarro, and in my work line up in continuity, covering almost every possible *window* (interval) in the evolutive stages of development. This allows us to identify and insert the most precise password possible to enter the *compartments of time* (or *apartments*) in the *Personality Building*. This is to say entering through the peripheral relational bodily levels, to promote neuromediator and epigenetic modifications, in addition to associated analytical-characterological modification.

Conclusion

The arrow of evolutive time, in a body-to-mind direction, introduces *the where, the how, and the when*, which is to say the location in the stratified bodily order of possible dysfunctionality, and, with it, the opportunity for a three-dimensionally stratified, surgically precise psychotherapeutic intervention through the relational dimension and bodily activations, as well as psychopharmacology.

Psychotherapy and psychopharmacotherapy, interpreted along the arrow of time from a bottom-up, four-dimensional perspective, take shape in the body since we are now able to achieve personalized appropriacy in epigenetic and neuromediator interaction.



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