

## New Perspectives of ASD - Integrative Psychodynamic Approach

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### Abstract

This presentation is based on new methodologies that are recently present in different psychodynamic approaches who are multidimensionally combining in one, offering integrative view in understanding and serving treatment for autism spectrum disorders (ASD).

Today many definitions (Abrahams & Geschwind, 2008; Bailey *et al.*, 1995; Baron-Cohen *et al.*, 2009; O’Roak & State, 2008; Veenstra- Vanderweele & Cook, 2004) [1], shows that Autism Spectrum Disorders (ASD) are neurodevelopmental disorder which are characterized by symptoms manifested in mostly four areas; communication skills, social interaction skills, different types of behavioral skills, and general cognitive skills. Because of that, many clinical and etiological symptoms are heterogenous, that’s why diagnostic symptoms variate from many different components.

Children with ASD have unique symptoms, they need to receive treatment that meets their specific needs. In earlier decades, where treatment focus was on cognitive and behavioral changes, children with deficits were accept as not usual in social environment, by trying to have main impact in social behavior. In now days, approaches as play therapy, behavioral therapy, applied behavioral analysis (ABA), relationship development intervention (RDI), speech therapy (Logotherapy), brainspotting

technique, breathing therapy, and occupational therapy, are competitive to each other by trying to have primacy in social media environment. One approach may play incredible efforts to show dominant position among others.

In recent days new developments of different modalities in psychotherapy, offers new approaches that are not focusing only in “old” symptoms and manifestations, but also having a new developments in neuroscience and medical technology. These results are emphasizing on human personality as a whole structure of capacities not only to know but also and to love. These two basic capacities are integrate in one, where as a whole will develop an integrative psychotherapy approach in treatment of ASD.

The focus in this presentation will be on new facts that neuroscience, medical technology and psychotherapy approaches offer new dimensions in treatment of ASD by using the variety of methods and techniques how children will feel in present time his own personality and being accepting in the social environment.

Particularly, in this presentation will be used two main psychodynamic and humanistic approaches; body-psychotherapy and positive psychotherapy. In these two approaches the symptoms and manifestations are not focal emphasizes, but a person, as human being with his/her capacities to do something, and not necessary to change something.

With integrative psychodynamic approach, will interfere in capacities, abilities, possibilities, skills, mental states, and needs of person as human being who attend to be part of his/her environment, but not to force on changes to follow the needs of the others.

## **From History to New Developments of Autism**

From the last decades, when Kanner (1943) [2] and Asperger (1944) [3] emphasized some functional and processing difficulties in children developments, psychiatric literature and Diagnostic Statistical Manuals (DSM and ICD), autism classified as mental disorder. Later on, autism was classified as Pervasive Developmental Disorder (PDD) and for some years later this developmental disorders start to seen as wide spectrum of disorders named as Autism Spectrum Disorders. In this spectrum was include Rett's disorders Childhood Disintegrative Disorders, Asperger's Disorder, Pervasive Developmental Disorders-Not Otherwise Specified, and Autism Disorders. From that time, researches on ASD, PDD and AD was focused on two main fields; biological and cognitive studies [4].

Today is known different theories about ASD, PDD and AD particularly starting from cognitive, biological and neuropsychological studies, marked as impaired development in social interactions, communication skills, mental functioning and emotional disabilities. Theory of Mind (TOM) starts from the premise that mental states are not directly observable, but have 'to be inferred, requiring a complex cognitive mechanism' [5].

The neurodevelopment theories show that some parts in the cortex of the brain is different in autistic children. So called Amygdala theory, insist that amygdala is abnormal in autism, and that the 'amygdala plays a key role in establishing the social significance of a face, interpreting it as threatening or fearful, monitoring eye gaze, and assigning hedonic values to stimuli in general' [6].

The Neural connectivity theories differentiate local connectivity within neural assemblies from long-range connectivity between functional brain regions and distinguish physical connectivity associated with synapses and tracts from the computational connectivity associated with information transfer [7].

The Central Coherence Theory proposed that autism is characterized by a 'specific imbalance in integration of information at different levels' [8].

The Theory of Executive Functions is about planning and organizing the task by demonstrating the flexibility in doing things. This means, when child is receiving the order to do something but has difficulty to execute in the right way [9].

All these theories may be best explained by a developmental failure of 'neural connectivity in which high local connectivity develops in tandem with low long-range connectivity, perhaps as a consequence of wide-spread alterations in synapse elimination and/or formation' [10].

The new development in neuroscience shows how bodily sensations are involving parts of the brain who are responsible for reactivating of somatosensory cortices [11] and to regulate the limbic brain where emotions are processed and they work together to help modulate arousal levels in behaving, guide appropriate actions, processing cognitive functions and stimulate emotional expressions (Schoore, 2009) [12].

According to Daniel Siegel's theory of the mindful brain the prefrontal regions are deeply involved in the process of being aware of our own feelings and the feelings of others [13]. This is the main point that it present in autistic children when they are not able to express their own feelings while they are reacting in a way of being present and to understand the feelings of others. Practicing the mindfulness of emotional and bodily experiences, it is possible to build new neural pathways between the middle parts of the prefrontal cortex and the limbic brain [13].

The new finding of Steven Porges (2011) [14] about polyvagal theory, brought new interpretation about neural changes in "synapses when the memory circuit can move from a locked state into a malleable state in which new energy an information can fundamentally rewrite them". This is important fact for neuroscience regarding the implicit and explicit memories when the neural changes will restored and reconsolidated in different implicit pattern with modified bodily sensation as behavioral impulses, emotion, perception, and global mental models, including models of relationship [14]. This is very important statement when we are working in play therapy with autistic children to integrate the body sensations in harmony with emotions and behaviors in building the social relationships. Polyvagal Theory is brain -body model of bonding two parts in communication between brain and bod, how they are reacting in behavior and processing in different psychological and autonomic states [15].

## Actual Situation about Autism and Neurodevelopmental Disorders

In our daily life, often, we are hearing the sentence “they have their world”, and because of that, the autistic child is perceiving things differently, observing, behaving, thinking and processing from their point of view. This is because their brain is functioning “slowly” and sequence by sequence, where the puzzles are not immediately putting all together. The puzzles, known as “jigsaw puzzle”, in autistic child is observing partly from each other where the pieces of information are not completing as a whole information in the cortex, and that’s why the whole picture is not instantly formed. An autistic child will not open the door after bellringing even he/she will see someone heading for the front-door. So he/she will not react immediately, connecting these three functions in one; seeing the person, hearing the bellringing and opening the door. For him/her it may take time to connect all these “huge” information at the same time, because his/her brain needs time to process. They have capabilities to put together, but not automatically as we want, because they have their own way of reacting, even for us is not “normally”.

Some treatment approaches are forcing to re-educate by changing the patterns of applying behavior analyses (ABA therapy), which is focusing on modification of behaviors by using the old method from learning theories such is operant conditioning learning and radical behaviorism. The founder of ABA as it exists today, Ivar Lovaas, who is also the father of gay conversion therapy, derived the principles of his therapies from radical behaviorism. The general point of ABA therapy believes that everything we do is a behavior???. Everything means thoughts, feelings, capacities, skills, abilities and all of them can be modified or altered through reward and punishment as consequences.

All we know, that this kind of operant conditioning technique was used with Pavlov’s conditioning reflexes by dogs. Are we dogs? How can we use the same techniques and methods also with human being? We may learn from different experiments, but we need to apply differently with humans.

In modern psychology, radical behaviorism is out of date for the main reason that not everything can be a behavior. For example; the creative language or storytelling and music are not behavior. So it is not the same as training with animals (dogs); they cannot speak, talk or singing, and what is main important, they cannot feel empathy. So, ABA therapy simply is seen by psychology professionals as a simplistic and restrictive theory which is useful in certain situations but cannot sum up the entirety of the human experience.

So let summaries about ABA therapy. Benefits from applying ABA therapy in communication skills, social skills, memory skills and repetitive patterns of behavior, are central focus to change, modified or altered through rewards and punishments. But the ABA therapy at all is not taking care in development and improvement the quality life of children.

Three main differences that autistic children may have are with central coherence (CC), executive functioning (EF) and with theory of mind (TOM). This means that they differently see the objects in one situation (CC), differently react to execute some actions (EF) and differently understand other’s inner self (TOM).

All we somehow, sometime, with somebody, in some occasions, for some reasons, are Autist. Let’s try to understand, even you don’t want or you don’t like to accept; this is what’s happening to all of us. The question

raised here is about; is this a disorder or a-typic strange behavior? Diagnostic manuals (DSM and ICD) this type of a-typic behaviors puts in five different categories; (1) Pervasive Developmental Disorder (PDD), (2) Autism Spectrum Disorder, (3) Asperger Disorder, (4) Rett Disorder, and (5) Childhood disintegrative disorder. (DSM IV, V, 1994, 2013-2017 and ICD 10, 1992).

To understand the reactions, we need *to know*, who we are, how we grow up, with whom we lived, and how was the circumstances. We need to be aware about these facts. By knowing our past it is easier to accept and to be in the present. When we are in the present we have *to love* ourselves. To love somebody, emotionally means to accept, even we don't like, we are investing all our capacities to be with somebody. Living together means understanding each other, in our thinking's, feelings, behaviors, patterns, world of our being, without prejudice, critics, or stigmas. Can we do it all, of course, we cannot. That's why we are here; to know each other and to love each other. The mutuality of reactions are the patterns of all human beings, and the problem is how we *know* and *love* each other [16].

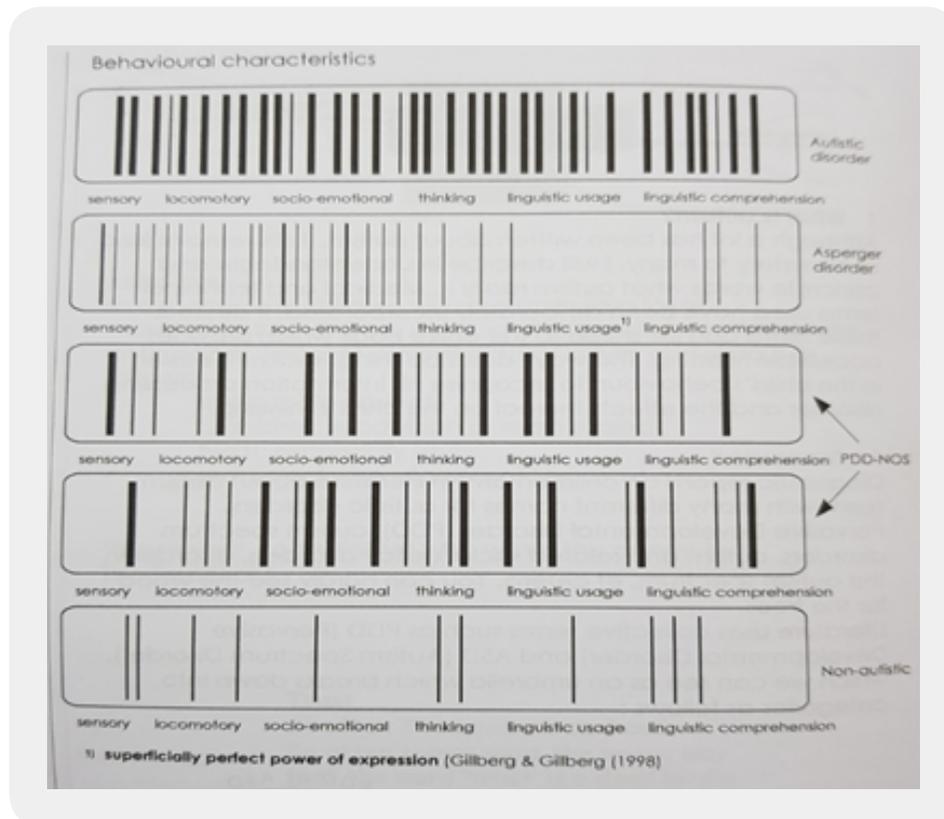
If we are starting from the paradigm; "where we are differ, in what we have in common" (Peseschkina, 1990), this may bring to use the two main capacities; knowing our differences by having our similarities. This activates awareness in our brain. Left hemisphere is eager to know why is differ my reactions from others, but corpus calosum is connecting to the right hemisphere to find where we are in common with others [17].

From the mentioned paradigm, "where we are differ, in what we have in common", "they" are "not differ, but we are thinking differently" [18], means that we need to be with "them", inviting, bringing and living together. Differences make us to be stronger to develop the commons for reaching the goals and finding the meanings.

For the autistic children it is hard to feel that someone else has his own personal inner self, because of that, they can't understand why the other person's perception of reality should be different from their own's [18].

If we are looking to see the main symptoms of ASD it is possible to find six behavior characteristics which can be put in three major spheres; a) social interaction, b) language development, and c) patterns of behaviors (restricted and stereotype). Each of these three spheres are belonging to the human capacities, known as actual capacities which are consist from primary and secondary capacities [16] developed from early child (primary) and influenced from social environments (secondary), and these capacities are part of six behavior characteristics; sensory capacities, locomotor capacities, socio-emotional capacities, thinking capacities, linguistic usage capacities, linguistic comprehensive capacities.

In the below picture it is shown different code with all these six behavior characteristics where the lines are presenting how often the symptoms of acting are presenting for each type of disorders by dominating from striking and fewer characteristics [18].



**Picture 1:** Barcodes for different types of disorders with six behavior characteristics [18]

According to researches, the wide prevalence of ASD is approximately 1% in population and it is more common in males than females (4:1). Approximately 5-20% of cases involve large effect de novo copy number variants. Genome-wide association studies are frequently used to compare the frequencies of single-nucleotide polymorphisms (SNPs) in ASD DNA samples. While no replicable single SNP variants have been identified, the cumulative contributions of inherited genetic variation over many small effect loci has recently been estimated to be as high as 40% (Klei *et al.*, 2012).

## Integrative Approach in Treatment of Autism and Neurodevelopmental Disorders

Psychodynamic and humanistic approaches in treatment of Autism and Neurodevelopmental disorders are based on results from neuroscience researches explained above. In this presentation I would focus on Body oriented psychotherapy approaches (W. Reich, 1957., W. Davis, 1980.) [14,17-20], and Positive and Transcultural Psychotherapy (N. Peseschian, 1978, *et al.*, 2000).

Daniel Siegal's theory on pathways of integration is focusing on nine levels that in treatment is using. These nine levels are as following.

**1. Integration of Consciousness** - Awareness of the body, mental/emotional, relational, and outside world. Openness to things as they are. To create change and choice.

**2. Horizontal (Bilateral) Integration** - Left and right hemispheres working in synchrony. Left hemisphere is logical and linear, very literal, developed later. Right hemisphere is more creative, holistic, nonverbal, metaphoric, and symbolic, developed earlier.

**3. Vertical Integration** - Linking together information from the body proper, the subcortical circuits (brainstem and limbic areas), and the prefrontal circuits in the right hemisphere and the cognitive awareness of the left hemisphere.

**4. Memory Integration** - Implicit and explicit memory integration. When traumas become implicit memory, a schema, we are stuck in the past. To integrate memory, we make implicit memories explicit.

**5. Narrative Integration** - Biographical memory, weaving our left hemisphere's narrator function with the autobiographical memory storage of our right hemisphere.

**6. State Integration** - we are multiple selves sharing a body, integrating the fundamental drives and needs. Three parts: We need to learn to honor our states (**intrastate**), **interstate**, honor that we have different needs at the same time and we need to pay attention to that, and **interpersonal states**, maintaining my own states while in relation with others.

**7. Interpersonal Integration** - Connecting intimately in relationship while, retaining our own sense of identity and freedom. It's about nurturing energy. Parent-child interactions that create healthy attachment work in this way.

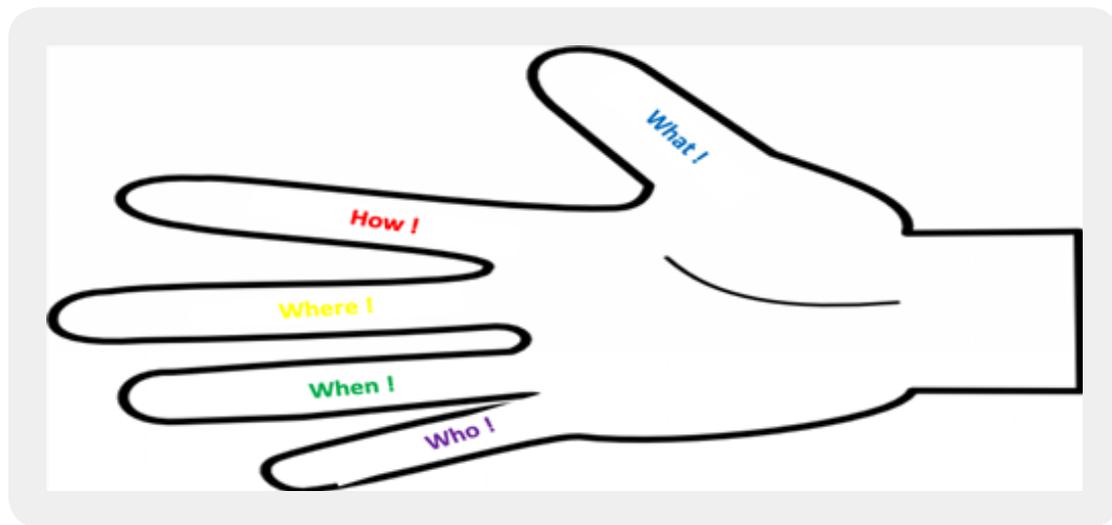
**8. Temporal Integration** - Making maps of time. Finding comforting connections in the face of uncertainty. Connected to narrative - we seek certainty, but change is the only constant. We also become aware of our eventual death.

**9. Transpirational Integration** - Awareness of being part of a larger whole. The identity of a bodily self expands beyond the boundary of the skin - we sense our interconnection time, place, and people. Integration of integration [17].

In the therapeutic sphere, especially in play therapy, the hierarchical relationship between the structure of brain development in earlier stages, the brain stem (limbic region, comprised of the amygdala, hippocampus, hypothalamus, and thalamus), and later neocortex, are known two models of treatment.

One is Bruce Perry's (2009) Neurosequential Model of therapeutics based on the hierarchy of brain structure and function, and the second is Jaak Panksepp's (2011) concept of a nested brain and mind hierarchy that explains how core emotions impact our cognitive processing [21].

The technique developed from Colette de Bruin (2012) [18] by using the five fingers as a symbol of "The Essential 5" where she is directing the process of treatment in five aspects. *What* everything the child has to do; the way *how* the child has to perform the tasks; *where* (at what) location the task should be performed; when does the tasks started and *when* they it will be finished; *who* is going to it? Is he/she going to do it himself or does the others has to do (see picture 2).



**Picture 2:** Five fingers, symbol of “The Essential 5”.

All these five aspects has to cover with question that almost consist with previous questions, and this question is *why* has to be done all these five activities. She is also using the so called “jigsaw puzzle” to develop new patterns in seven behavioral capacities (sensory capacities, locomotor capacities, socio-emotional capacities, thinking capacities, linguistic usage capacities, linguistic comprehensive capacities) [18].

All these findings are integrated in treatment of many difficulties/disorder in variety of symptoms with different clients (anxiety, depression, psychosomatics, trauma, as well as neurodevelopmental disorders). Body oriented approaches, such as Hakomi method (Kurtz, 1990) [19] can use this possibility of building the new neural networks into their body’s experience. When the autistic child is becoming aware about his body he starts to react usually with body expression, and this is for him a new language; he may use his motoric movements, usually repetitive patterns of behavior, facial sensory-motoric expressions or paternal communication. Practicing this method with autistic children it is possible to engage the new language of bodily experience to help the autistic child immerse more deeply into whole environment of being calm, in balance and aliveness.

All organismic processes are based on energy that is pulsating by natural biological rhythms starting from the core to the periphery and contraction from periphery to the core. (Reich,1973). By breathing we are pulsating our energy from a single cell in our body to the more complex processes. And this breath pulsation is cyclic, from periphery to center and from center to periphery which push to the movements. According to Will Davis (2001) the concept of pulsation is showing the direction of the pulsation and the quality of its movement. These pulsating movements are antagonistic to each other. One is named *outstroke*, when pulsation is from center to the periphery, and the second is called *instroke* when pulsation is from periphery to center [22].

Today is known very specific breathing technique that is using specially with autistic children and adults which is called The Scotson Technique-TST, established by Linda Scotson (1994) and developed in 2002 as

a gentle therapy involving the application of light gentle pressures over the child's trunk particularly over the lower ribcage the diaphragm. This technique is practicing 6 days in lasts five minutes with five minutes break repeating 2-3 time during one session.

Normal breathing is with diaphragm but autistic children have fast shallow upper thoracic breathing and this kind of breathing with upper thoracic does not fully oxygenate the lungs which directly impact to the immune system. Because of that children with autism have disordered breathing during sleep which impacts on initiating and maintaining sleep. Deep diaphragm breathing increases oxygen supply to the circulating blood (and therefore the bowels). Deep breathing increase oxygen to deliver through the areas of the brain that impact the limbic system where are based our emotions.

Studies involving yoga also found improvements in eye contact among children with ASD (Deorari, Bhardqaj, 2014; Ehleringer 2010; Narasingharao, Pradhan, Navaneethan, 2017; Radhakrishna, Nagarathna, Nagendra, 2010). An improvement of body awareness, co-ordination and sensory integration was also found in many studies (Deorari, Bhardqaj, 2014; Ehleringer 2010; Koenig, Buckley-Reen, Garg, 2012; Radhakrishna, Nagarathna, Nagendra, 2010; Rosenblatt, Gorantla, Torres, *et al* 2011). A study done by Ehleringer (2010) found that when yoga therapy was implemented, children with ASD experienced an increased ability to self-regulate stress levels. Other studies found that children with ASD had generally better behavior including the ability to sit for long periods of time (Deorari, Bhardqaj, 2014; Hwang, Kearney, Klieve, *et al* 2015; Narasingharao, Pradhan, Navaneethan, 2017; Rosenblatt, Gorantla, Torres, *et al* 2011).

Finally, it was found that yoga allowed children with ASD to shift attention to themselves (Deorari, Bhardqaj 2014). This allows for the child to focus on internal factors which can be regulated more easily than external elements that are less easily manipulated. In this way, it was found that children were better able to self-regulate and cope with change (Deorari, Bhardqaj 2014).

Different kind of meditations coming from ancient cultures shows good results in balancing the neuro system and many psychological difficulties caused by stress and internal or external factors. The studies done in last years, "share the objective of self-relaxation, self-healing and consequently, improved cognitive and behavioral performance. There is much to be gained by exploring meditation as a strategy to override impaired brain synchronicity and debilitating symptoms arising in early years of persons with autism" [23].

After the terrorist attacks in 9 Eleven, Davide Grand (2013) [24], developed his specific technique who used for fast treatment of trauma survivors. He called his approach Brainspotting technique, which was a new type of therapy designed to help people access, process, and overcome trauma, negative emotions, and pain, including psychologically induced physical pain.

Its work on limbic system that play a role in emotion, long-term memory, cognition, motivation, impulse control, and several other psychological factors that can affect well-being.

Grand's technique, was a Natural Flow EMDR which was integration of somatic experiences (SE) and eye movement desensitization and reprocessing therapy (EMDR). This might be another good technique to

use with different type of neurodevelopmental disorders who have no severe brain and mind damages as a cognitive and mental disfunctions.

Today in many disciplines and especially the new developments of scientific psychotherapy, the Polyvagal Theory developed from Stefan Porges (2011) [14] shows how the brain and mind are functioning and can restore new neural of healthy restoration. He has laboratory institute where is offering possibilities for researches on traumatic stress disorders, focusing on four major understanding of new findings in neurodevelopment's of brain and mind.

- **Polyvagal Theory** - model of communication between the brain and the body
- **Polyvagal Theory** - provides to understand how the neural reactions may returned to a state of safety
- **Polyvagal Theory** - provides to explain how mammals could shift from fight-flight state to a calm state through development, growth and healthy restoration.
- **Polyvagal Theory** - originate from neuroanatomical and neurophysiological shifts in the regulation of the vertebrate heart that occurred through evolution.

Professionals who are working with autistic people, know that many of them are not aware what is going in their inner world. Usually their inner world is very often mystic for others, but they can sense with own, but cannot explain to others, because the function of the cognitive net is disrupted. In this functioning of cognitive net it needs to grow the inner strength where inner strength are built from brain structure mainly from positive mental state, that are turned to positive neural traits. Mirror neurons, the amygdala, and hormones have all been labeled culprits for behavioral shortcomings at the expense of more ground level investigation into our clients thoughts and feelings (Hanson, 2018).

It is important to understand people with special needs who are not able to do always things that regularly many people are doing. Not everybody is functioning in the same. It is need to know how they are functioning in society, and how they are understanding and how they want to be understand from the "others"? Are they reacting differently in common and different situations and what makes them "typical"? what is the function of hormones, neurotransmitters, ganglia's, vitamins, genes?

Everything is right if it is not damaging the others. They have their own way of behaving, functioning and processing. In this planet has place for everybody.

Every human being has his/her capabilities that he/she shows in their own way. Let's know better ourselves how to know the others, and the others know us, and then is easy to accept others and to be acceptable from each other. Don't think that they are differ, but we are thinking differently. Only differences in functioning makes difficulties in keeping and maintaining the relationships. Sometimes, they becoming easier frustrated, expressing the anger and usually keeping aside from society, not loneliness but being in their inner space and inner way of functioning. The MRi images are showing that autistic people usually have their left hemisphere of the brain is less developed or functioning.

The matter is how to understand the ASD. For ASD people mind is everything; they are generalizing with whole body that's why they have difficulties to distinguish how they feel the body from how they work with mind. As Colette de Bruin, is saying ASD people cannot differentiate the position of boxes; he/she will say always the box let is closed to mind, but not the box staying on lower part of body. Mind is identifying with "Him/Her". Body is somebody else which not "Self" but "Others". The center of him/her is not body but mind. They are grounded, but not with the body but through their mind. They are conscience for they mind but subconscious for the body. They are more oriented inside rather than to see and accept outside. This the main difficulties and problems that the "Others" are not as usually. ASD people are masters in monolog but they are not able to have good dialog information in the brain is arriving bits by bits, apart from each other, no coherent and meaningful overall picture is not instantly formed [18].

From the Positive Psychotherapy approach, by the nature, human being is good, but influences from outside incentive to use capabilities in developing the new ways of acting according the situations. Using the five steps in counseling and treatment of difficulties and disorders, it is possible to understand the ASD people, to know how they are operating in society, what are the challenges to be present in society, differentiate from past to present and to change the features for new adventures. Using the primary and secondary capabilities that are dominant through behaving in different situations, their central coherent is processing information from the senses as add bits and pieces instead of one entity. The patience, time, order, trust, self-confidence, achievement, love are the most present capabilities that ASD people occur in their daily life.

The process of treatment is a long way with many curves; which has to start from two basic capacities', "to know" - from where I came...; observe the behavior and discover the history of childhood, and capacity "to love" - to where we want to go, is the main strategy in treatment of ASD people [25-29].

## Conclusions

All these findings presented in this article, shows that scientists continue to define mechanisms of heritability and influence of shared environmental factors for the incidence of ASD and many other neurodevelopmental disorders. There is still much research to be done and to show the actual factors of ASD and other disorders. From the biological aspect, even many researchers believe that the biological causes of autism are genetic, it is still unclear functional operation of the formative neural net, is impaired by distribution of gray matter.

From the psychological aspects it is clear that social factors are in the same line as well as the biological which are occurring by technological developments climatic changes. Summarizing what was present in this article, new perspectives in treatment of ASD are resulting from new findings of neuroscience and using the same in psychotherapy but also the technological developments in smart communications between human beings and robot beings. So let's end my opinion by remembering what was said in the beginning; know yourself, love yourself, and you will accept yourself easier by not asking to change but to develop the behavior. And to practice this it is need three steps; a) *let be*, b) *let go*, and c) *let inn*. It is in our obligation to work further in development of new perspectives from humanistic psychodynamic approaches to support by joying autistic people as we are.

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