

The Play of Life – A Biological View of its Impact on Behavioural Change

by Carlos A. Raimundo

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This article presents, through the medium of a case study, the effect of the Play of Life and other expressive, ludic (playful) methods and interventions on complex brain connectivity. This approach provides a platform for sustainable behavioural change. It gives a brief view of the biology of behaviour and relating, and the potential therapeutic effect of the method.

A CASE STUDY

Troy is a mechanical engineer; he is a husband and a father; senior manager and active member of welfare organisations. He is very active in his religious community, respected for his social position, donations, teachings and insights. He has a great memory, something that helps him to quote the most relevant, uncommon quotes from remarkable people and has great ability to compile research and create clear and powerful presentations. Many people have been benefiting from his teaching, but his personal life is in turmoil and his

work associates find it difficult to relate to him. His wife and three children oscillate between loving and hating him, something he does not understand. He also suffers from eczema and diabetes.

Troy is very confused by the reactions he receives from people around him. He felt laughed at last Christmas by his wife after he gave her his Christmas gift. He gave her a thermic-ionic vacuum cleaner, the most expensive in the market. He had been researching internationally to be able to find what the best vacuum cleaner in the market was. What he omitted, once again, was that his wife hates presents for the house for her birthday or Christmas. Then his son got very upset when he gave his father a copy of a poetry book his grandmother used to read to him, a book his father always wanted to have, but which has been out of print for 20 years. After searching heaven and earth for it, he found it and gave it to his father in a beautiful huon pine box¹. When Troy

opened the box he said a formal thank you, gave his son a mechanical hug and said: "This is a wonderful present. You probably got it at Paddington markets and payed \$4.50 for it. The box is great." He then gave a lecture about huon pine, placed the box aside and changed the topic. Troy is also confused about how people respond to him at work and why people don't choose him to be part of project teams.

Does he think correctly? Yes he does, but with the wrong brain.

LOOKING AT THE BRAIN

In 1848 Phineas Gage changed the way we see the brain. His story was the historical beginning of the study of the biological basis of behaviour. Gage was a construction foreman for the Rutland and Burlington Railroad. They were laying new tracks in Vermont, and a lot of blasting was necessary to level the terrain. Gage was in charge of the detonations, and on that fateful day, he was so distracted that he set off the blast before everything was ready. The tamping rod which he was using to set off the blasts was sent through his face, into his brain, and out the top of his skull, and came to rest many yards away. Gage was stunned, but quickly regained consciousness, and was talking and walking soon after the accident. In fact, he never showed any impairment of movement or speech. His memory was intact, and he was still capable of learning new things. He remained an intelligent individual. However, he was not unaffected. Before the accident, he was well-liked, well-adjusted, and responsible; he was a model employee. After that rod went rocketing through his brain, he became capricious, profane, and disrespectful. He was fired from his job because he could no longer be trusted to complete even the most mundane of tasks.

"Gage was no longer Gage". He wandered for over a decade, and eventually was put into his family's custody. He died in 1861, and was buried with that tamping iron which ruined his life. (J.M.Harlow)

Gage became a classical case in the textbooks of neurology. The part of the brain which was damaged forever was associated with the mental and emotional functions which he lost. He continued to communicate verbally with people around him, but his emotional connecting and ability to "relate", and respond appropriately with others was seriously damaged. There are some similarities to Troy.

The brain is formed by three specific, well-differentiated and connected neurological configurations: the hypothalamus or reptilian brain, the limbic system and the neo-cortex.

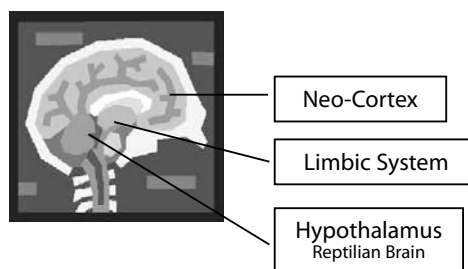
According to Lewis et al. (2001) the main function of the reptilian brain is homeostasis, or maintaining the body's status quo. Factors such as blood pressure, body temperature, fluid and electrolyte balance, and body weight are held to a precise value called the set-point. Basic survival instincts such as display of aggression, courtship, mating, territorial defence and automatic responses (such as reflex arch - impulsive reactions) derive from the hypothalamus and spine. This is the most archaic brain structure. The reptilian brain does not have any participation in the functional structure of the emotional brain. "It is very difficult to imagine a lonelier and more emotionally empty being than a crocodile" (Julio Rocha do Amaral, 1998).

Emotions are a domain of the limbic system², a neurological structure between the hypothalamus and the neo-cortex³. This is the distinctive mark of mammals that

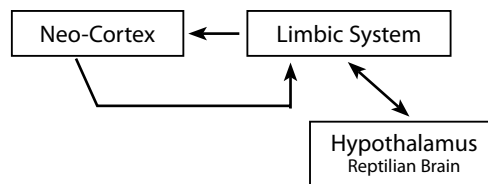
need parenting assistance including food, physical contact (affection), environmental protection, and play (ludic interest) in order to survive. This is the place for affection, emotions, care for others (not seen in reptiles) and love. (Lewis, 2001). Memory resides also in this structure. This is a flexible and adaptable formation ready to function at birth, and where the earlier communication between offspring, parents, siblings and the environment exists. Movement, sound, smell and contact are the language utilised. We can really say that communication exists before the rest of the brain matures. Attachment theory (Bowlby: 1969, 1982) the concept of imprinting (Mead: 1964) and the idea of the nucleus of the ego (Bojas-Bermudez: 1979) all base their relational foundations on this structure suggesting that the relationships established at this point in time are transcendent and create a stable structure throughout life. This means that if the child has been appropriately attached, this solid structure will be there forever, or if not the damaged structure will also persist. If later the child or adult is under pressure or suffering, he or she will have more possibilities, and a quicker means of restoring wellbeing than a person who has not been appropriately 'attached'. This article suggests that using the Play of Life and other experiential and ludic methods the mind can develop healthier and more appropriate reparatory mechanisms to compensate these incomplete or damaged structures. "Flexible brains have yet to germinate the ideas, the songs, the societies of tomorrow. They can create the next world or they can annihilate it' (Lewis, et al, 2001)

The neo-cortex is the newest neurological structure and the most distinctive part of the human brain. It is the base for strategy, planning, reasoning and language. Life constructs and ideologies are developed in

this brain. The neo-cortex also has the power to take control over the limbic brain and the reptilian brain. This is why ideology can be stronger than instinct. It has the power to override emotions and feelings. Examples include revolutionaries using their children as shields, or people reporting relatives to the police for having different political views. It also overrides physiological automatic reflexes as seen in toilet training.



The neo-cortex has bilateral connections with limbic system structures and this in turn with the reptilian brain. McLean calls this three-structure brain the triune brain, (Lewis, 2001) describing a neural web structure that needs constant interconnected activity to function as a unit. The Papetz circuit below shows the brain interactions in a simple way.



The brain is seen as a complex web of connections that enables this hardware to act in a specific way creating the mind. It governs the way humans think, process information and relate.

RELATING THROUGH DIFFERENT BRAINS

Looking at Troy's response in the light of the brain functioning we can suspect that Troy processes information in an unconnected way.

Christmas comes and he wants to give his wife the best present. As she is allergic, "he wants" to be sensitive to her need, show care and love. She has been saying to him since they got married that he's not thoughtful. This time he wants to be! His desire to be helpful is based on the limbic brain but his processing is neo-cortical. Thoughtful for him means "to think". So he thought through all the presents he could give Jan and as she had a very bad allergic season in the previous spring, what could be better than something to help her feel well: an allergy-proof vacuum cleaner. He didn't put in the equation that she has told him very clearly that she hates anything for the house as Christmas or birthday presents.

Jan, and his children, friends and colleagues have been telling him they cannot relate to him. He feels sad, confused, frustrated and impotent. He doesn't know what to do. They have been in verbal counselling a few times without much result. Troy has not been able to understand what is wrong.

THE PLAY OF LIFE

In a new attempt to save the marriage Troy and Jan attend a counselling session in which the practitioner utilises the Play of Life.

I developed the Play of Life, which derives from psychodrama and action methods created by J.L. Moreno and from the Argentinean School of Psychodrama created by Dr Jaime G. Rojas-Bermudez. This method is designed to transform intangible feelings to visible, three-dimensional representations. These can then be re-directed in order to offer novel and appropriate solutions to problems. It can be utilized as a language-independent method as it is based in universal "forms - shapes" of communication. Like other contemporary psychodrama methods that employ aesthetic-

visual techniques, the purpose is to bring subjective and one-dimensional information, into a three-dimensional setting where it can be observed, evaluated, explored and photographed or videoed.

The Play of Life uses a small board, called a stage and small figures that are placed by the client (protagonist) on the stage to represent a specific life situation. Dynamic and interactive techniques (such as soliloquy, role reversal, maximisation) are utilised to provide insight, clarity and understanding to the client about the situation analysed, also giving the therapist a visual language and thus independent information about the client. Through Relationship Mapping (applied sociometry) the protagonist (guided by the director) is able to observe at a glance, simultaneously and three dimensionally relevant issues involved in the client's situation. This mapping also gives the therapist a wide perspective of the whole situation as a social analyst. The objective dynamic created on the stage facilitates the naming of roles played and which roles need to change from fragmented to progressive roles.

After a short introduction to the problem the practitioner asks, "Can you show me?" while opening a bag on the table containing small figures and white boards. Troy and Jan have smiles on their faces. The practitioner places one board in front of each person:

Practitioner: "This board represents your relationships. Each of you choose a figure from the bag that will represent you symbolically. The use of the figure is arbitrary."

The practitioner follows the Relationship Mapping Play of Life technique by which they are guided to objectively depict how

they see themselves, in the present, in relationship with other relevant people in their social atom. The representation is three-dimensional and objectively describes how each person perceives the relational dynamics.

After this, they are invited to represent an ideal relationship dynamic, and then they are asked to look at the two pictures they have created and choose what would be the first movement needed towards obtaining the ideal.

Jan (Fig 1-1) sees herself as frustrated - in the middle facing her husband who is moving in circles (Fig 1-2) without stopping, and she sees their children facing different directions. Her ideal picture (Fig 2) is to have the family sitting around peacefully. Jan's first movement, called the First Step in the technique, is to put her arms down and not be so frustrated (Fig 3).



Fig 1

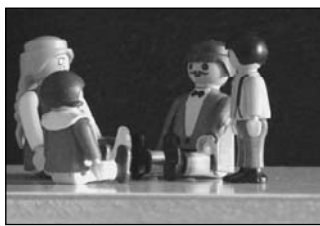


Fig 2



Fig 3

Troy places himself in the middle (Fig 4-1), standing up quietly with everyone around him (Fig 4-2,3) demanding something from him that he must satisfy. He sees them tense and irritable, something he does not understand. His ideal picture is very similar to Jan's, but with people standing up instead of sitting down (Fig 5). When he is invited to look at the first step he is unable to find what else could he do. He can only see that people around him should be more understanding and put their hands down.



Fig 4

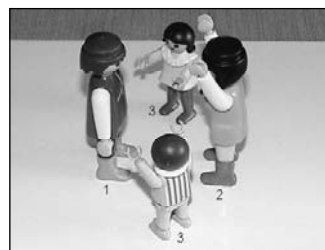


Fig 5

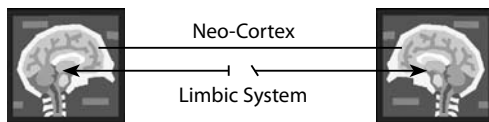
They share with each other their pictures and Troy openly shares that he does not understand what people want of him. Jan brings the issue of the vacuum cleaner to the conversation. He says how thoughtful he was regarding the present. Jan interrupts saying "I'm very angry. You don't understand do you?" He shrinks in his chair and looks at the counsellor saying, "I don't know what else to do."

The counsellor invites him to express his view about the vacuum cleaner issue.

He says that he knew how bad she had been with allergies and that the doctor

recommended her to remove all the carpets and heavy curtains from the house, something they did three years before, without much change in her allergic reactions.

Troy can give a lecture about allergies and the suffering of the person affected by the illness. He has researched the topic extensively. He can connect with it from his frontal lobe, the neo-cortex, but is unable to relate in a "heart to heart" way.



Jan comments to Troy that she feels bad and she doesn't need a professional explanation of the problem or a vacuum cleaner. She has a very good doctor and can buy the vacuum cleaner herself. She needs something else but Troy is not aware of it yet.

The aim of the practitioner in the next direction is to by-pass the neo-cortex, go beyond words, and to stimulate the limbic brain.

Practitioner: "Troy, could you create on the stage, using a figure that represents Jan, a picture of Jan suffering from the allergy."

Troy chooses a figure and creates (Fig 6) a picture of a woman bent over in pain.



Fig 6

Practitioner: "Troy, what do you see in this picture?"

Troy: "A person that needs help."

Practitioner: While revolving the stage, "I would like to invite you to imagine being that person. Project yourself in that position (role reversal technique) and say aloud what you feel in that position" (soliloquy).

Troy looks at the figure and touches it with his hand. "It's like feeling lonely, tired, in the dark and fearful."

We can assume that we are close to our objective. A new way of connecting is happening. The visual attribute of the Play of Life, the three-dimensionality of the figures and the tactile play with the figures forces the brain to activate other parts than the neo-cortex. The emotion felt and the change in the way he is talking now shows he is connecting differently.

Practitioner: (After a few seconds) "Troy, continue imagining you are in that position, what would you need from that position?"

The Play of Life follows the Strategic Relationship Mapping as a theoretical model where everything is looked at in relationships. Every emotion or position is in "relationship with" something else. If we just stay in this individual insight Troy may come back to a cortical rationalization limiting his awareness of this situation. The issue is not the woman in pain, but what is in between her and someone else whom we call the "other". It is in the relationship "between" them that the healing power exists. This is what Moreno calls the auxiliary-ego; he uses the mother as a perfect example of a natural, efficient and life giving force that helps the child to grow in their early developmental stage when they cannot assist themselves.

Troy: "Somebody close to me."

This answer is verbalised in the neo-cortex but it's a limbic insight.

Practitioner: "Move out from that position and chose another figure to represent 'somebody close to that person'".

Troy choses a male figure and places it beside her in a sitting down position (Fig 7)



Fig 7

Practitioner: "Troy, what would be the ideal dynamic in that relationship?"

Troy lifts the arm of the man and makes the woman place her head on the leg of the man.

Practitioner: asking Troy to repeat the action, "What is the meaning of lifting the arm?"

Troy: "Opening a space for her to relax and inviting her to rest on his lap."



Fig 8

Practitioner: "Troy, become that person. What do you feel?"

Troy: with tears in his eyes, "I feel for her. It's like something is opening in my heart."

The power of role reversal is not that "I comprehend", and technically know what the other person feels or thinks, but that is 'as if' I become that person. This is also a limbic connection, the other and I are so close that "I can feel it" and can identify as either person. Isn't this the power that exists between mother and baby? This is what makes her 'know' emotionally and physically (responding with milk from her breasts to the cry of the baby) than her embrace of the baby is more profound than a physical arm around him. I believe that the power of healing resides in this space, 'in between'.

Practitioner: "What is it happening for you?"

Troy: "I think I have never done that. It's nice you know!"

Troy is experiencing, not reading and intellectually rationalising about it. This experience has the power of a new imprint.

Practitioner: "Now become the woman." (There is a role reversal). "This man has opened a space for you and invites you to lie on his shoulders. Feel where the man touches you."

Troy: "He touches my shoulder. It's warm. I like it and I can rest my head."

Practitioner: "What is that like for you?"

Troy: "I can't find words for it. It's wonderful!"

Practitioner: "Have you ever experienced that in your life?"

Troy: "Never. I've always had to stand up for myself. My father was a good man but always away. My mother was too busy with

my four younger brothers. I always needed to be a support for her."

Practitioner: "Touch yourself in a way that could represent this feeling."

Troy embraces himself and stays in that position for a short time. The role reversal and the action of touching himself creates a new relational imprint in the brain and body, but this will have to be stimulated with consistency and regularity to really have a lasting effect.

Practitioner: "Troy, what have you discovered today?"

Troy: "That Jan needs me to just sit beside her with my arm around her."

Practitioner, taking a digital photo and giving it to him: "Troy, this photo is for you to keep and to look at. Every time you relate to Jan, face to face or on the phone, bring this picture into your mind. And you can think: Does she need a vacuum cleaner or a hand around her?"

Troy: "I got it! I think it's not only Jan I need to do this with. It will not be easy."

Practitioner: "No, not easy but possible now."

The session finishes here. Jan has been observing the whole process. She has tears in her eyes. She's very touched by Troy's insight and she's now able to better understand him.

For now, there is not much explanation or rationalisation needed. The idea is to leave the client with a *picture* in his mind not with a *clear strategy*. The assumption is that after leaving the picture as it is the neo-cortex will

utilise that information in the best possible way following the internal brain connectivity. If this information were explained in rational terms, through rational interpretations and a detailed strategy plan, the cortex would be directly stimulated and would probably restrict the limbic insight into a culturally learned 'box'. Each client needs to reaffirm this new imprint in his mind; photos or other visual aids may assist the process.

MAKING THERAPEUTIC METHODS AVAILABLE TO PEOPLE

A new personal Play of Life kit has been developed which enables individuals, families and business people to access the power of this technique by themselves.

Dr Jaime G. Rojas Bermudez was a pioneer in developing this branch of therapeutic techniques. He proposed the use of ludic alternatives in therapy more than 25 years ago in the Jose T. Borda Psychiatric Hospital, Buenos Aires, Argentina, for people with chronic mental illness, ranging from children to adults. His methods were uniquely effective, but unconventional, so they were rejected by the hospital hierarchy. But he received love and acceptance from patients and their families. Despite this scepticism, he developed his work with puppets and the theory of the intermediate object. In 1970 he created the Centre for Psychodramatic Interventions, where he developed and researched the use of masks, puppets, play, drama and psychodrama. He produced films: "Puppets and Psychodrama", "Puppets, Music and Psychodrama", "The Machine", and "Psychodrama with Adolescents" as well as several professional presentations in international congresses of Psychodrama, Psychiatry and Group Therapy.

Dr Rojas-Bermudez' research showed that we do not need to "know" everything. We do not need to be afraid of the expression of the soul of the client, but rather we need to find ways of allowing the person to express the most vital, emotional manifestation of their soul without restricting it to predefined analytical (cultural) constraints. He has proven by empirical research that people who have been professionally guided through ludic interactions, including physical touch and emotional expressions, are able to heal the soul more quickly. They have more profound insights and more permanence in behavioural change and above all relate better with their internal world and with others. Physical contact is an important factor in this profound limbic connection.

This is not surprising at all when we look at the brain. Instead of restricting the communication to the neo-cortex, ludic communication expands and enlarges communication by stimulating the limbic system. This is the centre of the emotions, feelings and love. These interactions activate the intra-brain connectivity in two basic ways. Firstly, connectivity to the neo-cortex, which will later process that information and interaction, developing new and healthier behaviours, but without mindful awareness of that process. (Dr Marcel Ponton, Director of Persona, a centre for neuro-physiological research and therapy in California and professor of Neurophysiology at UCLA is currently researching this method with aphasic patients who have brain damage. He has found a new way of relating with the patient and the patient with their family.) This way of connecting simultaneously with the triune brain has great therapeutic potential for people including those suffering from schizophrenia, severe mental dysfunctions and sex offenders.

Secondly, connectivity to the hypothalamus or reptilian brain, affecting physiological functions such as blood pressure, breathing, glucose balance, digestive system and so on. (Dr Hermes Garbano⁴ suggests that with the use of these methods different neuro-immunological associations are created that will potentially affect immunological responses such as eczemas, allergies, asthma, gastrointestinal disorders and unspecific inflammatory processes.) Research utilising the Play of Life in palliative care is also underway.

In the next session Troy was invited to look back at the pictures and translate them into role dynamics. Unsurprisingly, his eczema almost disappeared in the next few weeks and he has been able to better control his diabetes.

Jan attended a Communication and Relationship Mapping workshop. She also participated in Helping Myself and One-Another (a research project on making therapeutic methods available to the general public). She was able to 'play' at home with the family using the Play of Life. As the major focus of the method is "What can I do?" each person was able to find his or her part in the family dynamic. Through play, they were able to look at their family system from an a lively and fresh perspective.

The way that Troy's family and work colleagues respond to him in the future will also be important in his new limbic development. I must reinforce that this limbic learning process is not the result of a rational research on the topic, rather a 'relational' experience. People around him will also need to learn how to tolerate possible clumsiness and inappropriate responses from Troy for a period of time.

The techniques utilised in the Play of Life are based on psychodrama. The Play of Life is often used by psychodramatists instead of or as a complement to psychodrama, as it requires a smaller room, it is portable, it does not need a group, it is easy to apply, and people have fewer difficulties in expressing themselves through their bodies.

CONCLUSION

The Play of Life enables us to have access to areas of the brain that have been neglected by an over-emphasis on verbal language. This is not to devalue the verbal language but to expand it with other communicational paths. The utilisation of the Play of Life in this case has shown that behavioural change that stimulates the limbic system as an extension of the neo-cortical brain can be more stable than neo-cortical insights and strategies. We have also observed that for change to happen the new stimulation must be repetitive, consistent and for a significant period of time.

FOOTNOTES

1 The Huon Pine is one of Australia's longest living trees. Some individuals are more than 2,300 years old.

2 Diana Weedman Molavi, PhD, neuroscience tutorial at the Washington University School of Medicine.

3 I acknowledge that the use of 'limbic system' as a generic term for this neuro-structure is limiting. It is only a shorthand description of a neural area that is still under discovery and there are some discrepancies among neuro-physiologists regarding which neuro-structures should be under this network.

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