

THE SCIENCE OF PSYCHOTHERAPY



ADAPTATION
BRAIN NETWORKS AND HUBS
SAFETY AND DEVELOPMENT





EDITORIAL

There seems to be so much information available nowadays it begs the question: What is interesting? What is of value? I see these as very different questions. Everything has the potential to be interesting. “Interesting” depends on your curiosity. “Value” is something else. That depends on what you find that means something to you, that resonates with what matters to you. That is when we move beyond our simple curiosity for something new into our curiosity to create something of value for our personal benefit.

The articles in The Science of Psychotherapy are chosen because they allow us to see what our colleagues and associates are thinking about, discovering, developing and creating in the world of psychotherapy. What can we learn from these articles? I hope we learn a lot. But, most importantly, what do we create that is valuable and meaningful for ourselves and our professional practice.

To assist us in that purposeful challenge this month is an article from Fabio Sinibaldi that follows on from his fascinating recent article on the process he calls The Switch, “The Switch – the Science of Integration: 2 case studies”. I have asked him to share some case examples so we can get that “felt sense” of his program. In the same theme of the “felt sense” I have been given permission by Norton books to reprint a chapter from the new book by Oliver Morgan, “Addiction, Attachment, Trauma, and Recovery”. The ideas and theoretical discussion are brought to life in case studies and narrative. This chapter is so rich and valuable that it will be presented in two parts, the conclusion will be in the November issue. To complement this chapter, Helen Maxfield presents her views on attachment, “Paying Attention to Attachment”. Both Helen and Oliver draw our attention to the impact of poetry, prose and the metaphor in story. This inspired the selection of short pieces of creative writing from Lynn Hinderaker, “The Mystery, the Mirror and the Moment”, and myself, “Charlie and An Extraordinary Woman”, that remind us of the power of narrative to stimulate our imagination and our emotions, as well as deliver a valuable message.

It is always *interesting* to curate The Science of Psychotherapy each month. I wonder what the *value* is that you create?

RICHARD HILL | EDITOR

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THE SWITCH



The Science of Integration: Expanding Your Therapeutic Range of Action

Fabio Sinibaldi

In my professional life, the moment I come to find out about the latest research... I feel it is my duty to integrate these discoveries into my professional activity.

FEATURE

OVERVIEW

I believe that every patient that comes into my studio deserves all the help I can give. With this I certainly am referring to all the psychotherapy techniques and methods that are available today, but I am also including something more. In my professional life, the moment I find out about the latest research showing, for example, the impact of epigenetics on behaviour, the importance of neural plasticity as a basis for change or the influence daily nutrition can have on our ability to regulate emotions, I feel it is my duty to integrate these discoveries into my professional activity.

This means both in a clinical setting and when I am called in as a consultant or trainer.

Over the last few decades integrated methods have gained more and more importance and have significantly evolved. Initially, these methods were integrated with what we could call 'contingent territories': various types of psychotherapies based on different ideas were put into relation; or spirituality was introduced together with the emotional and cognitive dimension; the physical dimension too was included, or better recovered (mind and body were strictly intertwined in ancient medicines and philosophies), at a later date.

Over the last few years we have seen a qualitative leap relating in methodology and scientific research and in the potential of the tools at our disposal. This has enabled us to draw on information that was previously inaccessible

and to review what had been up to then merely abstract hypotheses.

It is now possible to see what happens in a single neuron mitochondrion and we have discovered that its optimal functioning depends on energy provided by medium chain fatty acids (found in readily available foods such as nuts and coconut butter), and not from sugars as we used to think!

By contrast, moving from micro to macro, game theory – that originates as a branch of mathematics – has enabled the analysis of more complex social behaviour such as trust and aggression when applied to neural networks, providing entirely novel ideas that are easily applicable to psychotherapy but also to organised social settings or schools.

In between these two extremes, the cell and social interaction, there are various other elements that can be integrated and can help us improve daily professional practice.

Years of research and fieldwork have enabled us to shape our *Integrative Sciences* theory which represents the theoretical and scientific foundation to our method and includes an ample spectrum of techniques and different schools of thought. In addition to schools of thought more traditionally devoted to mental and emotional aspects, we also integrate: interpersonal and behavioural neurosciences; psychoneuro-endocrinology, which is very helpful in providing a scientific understanding of the processes at the heart of somatisation and of the reciprocal mind-body inter-relation in general; functional biomechanics, which manages movement including stress-related posture and fight-or-flight behaviours; ethological and modern evolutionary theories and studies that

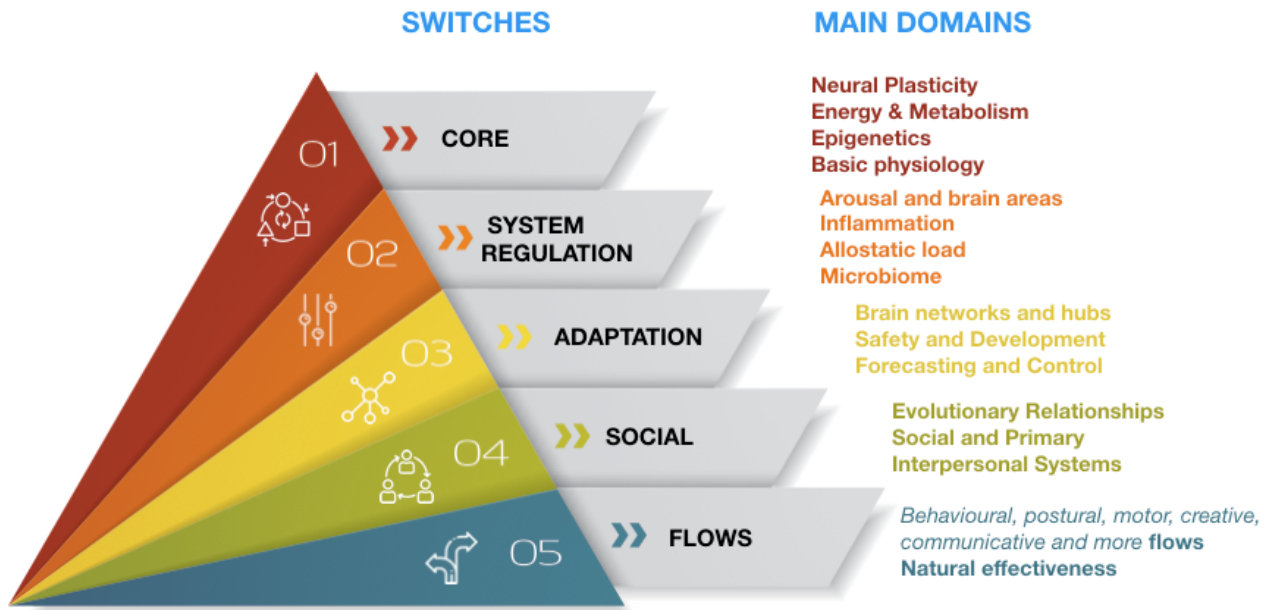
are the result of integration themselves such as behavioural immunology, the neuroscience of storytelling and much more.

There are other methods that play a central role in the development of the Integrative Sciences theory and the techniques that derive from it. We will look at some of them in the following practical examples.

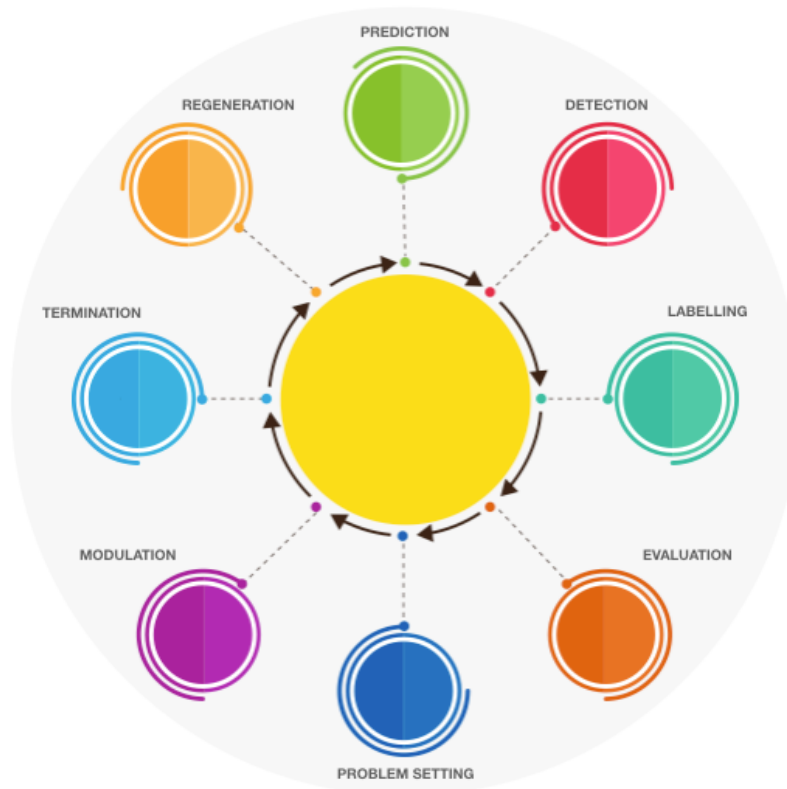
These are various different elements that require analysis and intervention. To help navigate these different levels we have developed and refined two models. These models can be seen as a middle ground between a map and a checklist as they help both the professionals and the patient move in between different levels of analysis while maintaining a clear view of where everything is and what can be analysed more in depth. It is thus possible to keep an eye on all the elements at play and to switch between different synergistically inter-related modes in order to reach the desired objectives.

The first is the *Switch* map (see illustration on the following page). Switches provide a way of working on all the systems involved: epigenetics, neural plasticity, mental-postural-motor flows, brain networks, circadian rhythms, inflammation, the brain-bowel axis and much more.

The second is the *Functional Integrative Patterns* map (see illustration on the following page). This map is useful to help keep an encompassing and process-focused view focusing on the sequence of events that lead to a specific type of behaviour, emotional experience, decision or other life experience.



INTEGRATIVE FUNCTIONAL PATTERNS



CASE 1 USING THE SWITCH MAP TO MANAGE ANXIETY AND SOMATISATION

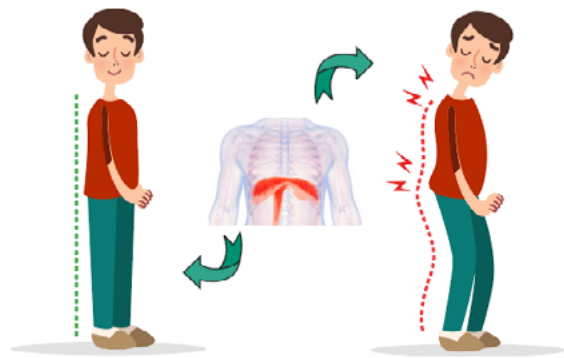
Let us look at a first practical example to understand how these models and the *Applied Integrative Sciences* can help us and our patients to include different elements of analysis and practice right away. Let us start with a simple case of limited scope and gradually broaden our perspective: An **anxious patient** with typical **cervical spine** and/or lower spine **somatisation** symptoms. In this instance, we can use the *Switch* model and start from the bottom by focusing on the mental, creative, physical and postural *flows* that are involved.

Let us focus a moment on a detail, among a variety of elements we could analyse, that is under-investigated by most psychotherapeutic methods, even when they are based on the body. This detail is an aspect on which it is critical to intervene to ensure efficient outcomes: it is the analysis of the **functional anatomy** of movement in a stress response and the understanding of how to manage it starting with muscle tone.



FLOWS:
somatic
relational
postural
cognitive
communication
motor
metabolic
motivational
energy
vitality
and more

In our example it is important to explain to the patient how **biomechanical movement** caused by their chronic adaptation response leads to their postural problem: If the diaphragm shortens and remains contracted longer than necessary the neck and lumbar curves increase, and the head moves forwards to compensate. When looked at side-ways, a person's cervical spine should be aligned with the shoulder blades and tailbone.



In the studios where I give consultations there is always an area that is free of furniture and pictures. You can now understand why this is – I need this area because, in cases like this one, I often suggest that my patients **rest their back against the wall**. First of all the tailbone adheres to the wall, then the shoulder blades and, in cases such as this one, the head is always a few centimetres (if not much more) further ahead!

During workshops I always ask participants to think about their studios and identify the ugliest picture in them... it's the one they could remove to free up a portion of wall to use in this, but also in many other techniques.

The further away the head is from the wall, the more stressed the person is. This simple

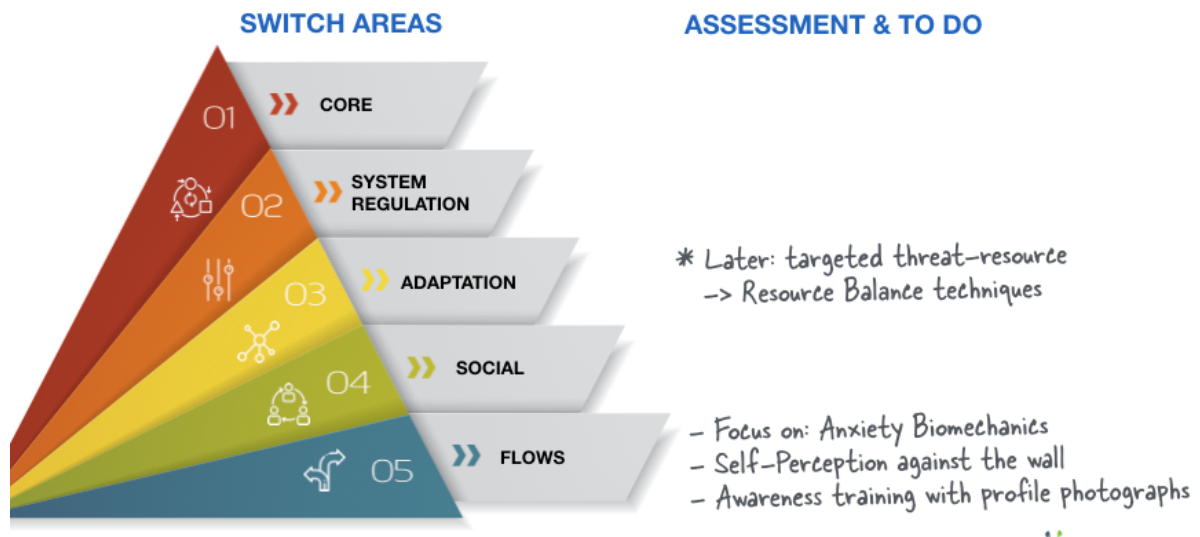
empirical measurement is very effective because the patient is able to physically perceive their lack of physiological state.

“*Feeling the body*” is a critical element of the switch area n.3 where we encounter different brain networks that are key to our self-regulation. One of these for example is the Saliency Network in which the **insula** evaluates physical resources available pitting them against a specific problem. In this case we can make a note on our sheet to remind ourselves to return to this area and carry out further **ad hoc techniques and evaluations** such as leveraging slow movements and during the negative phase those of larger muscles that help the insula in its work on awareness processes relating to available resources.

excellent meta-cognitive and objective assessment element that patients can compare with their own perceptions.

These are highly efficient methods that engage the patient making them play a more active part in therapy.

In some of our research we have seen very clearly that over time reducing stress via life choices (such as changing profession) or through deep psychotherapy, the distance between head and wall can be reduced a little as a result of the top-down release of the diaphragm (in other words the mind relaxing the body and benefiting from it too). On the other hand, if you combine psychotherapy with a technique that intervenes directly on the somato-emotional release of the diaphragm and the muscle



Above: Worksheet example 1

In cases such as this one – in order to favour the integration between postural flows (switch area n.5), awareness (n.3) and the meta-perception of the self and social image (n.4) – I also introduce activity including the use of cameras and video recordings that represent an

chains involved in the process, recovery is far more rapid and consistent.

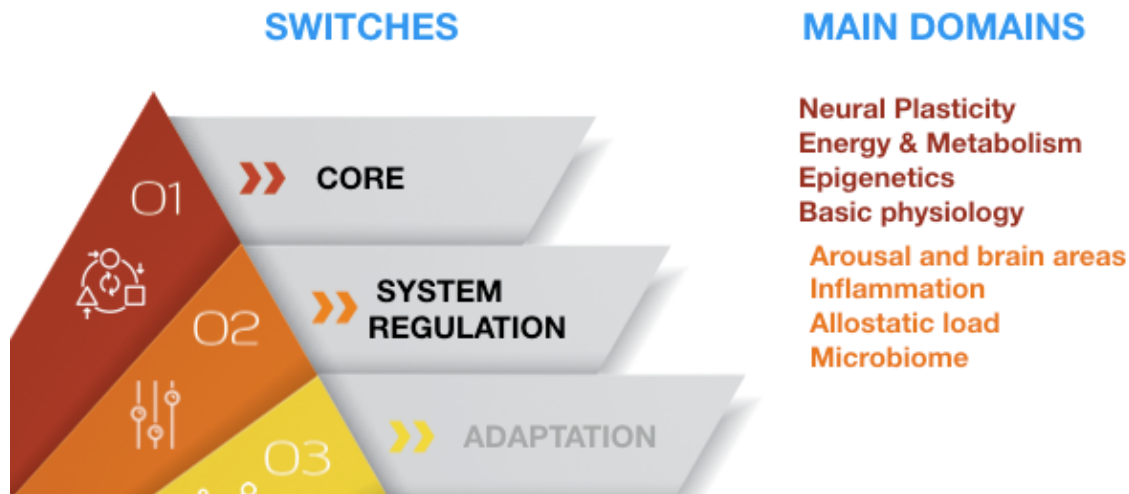
To achieve this we suggest the introduction of a targeted technique such as **Crossed Cycles Breathing** that can restore physiological balance in stress responses while at the same time provide relief to the cervical spine and tailbone

area thanks to movements of the head that are combined with breathing phases. At a later stage, when the physical part of the exercise starts to be assimilated, you can include some variations and combine some danger-and-resource analysis work, always being careful to maintain awareness of all elements at play in the brain networks that manage them.

In the previous example we only considered some of the elements present in areas 3, 4 and 5. Our analysis can – and must- proceed still further.

Just a few years ago there was little awareness of this fact, but nowadays we could even call it an epidemic as most of the western population presents a state of chronic inflammation and almost all the adult population presents markers for persistent subclinical inflammatory states combined with physical and/or mental issues.

We have introduced a series of questions to our first interview with the patient that are based on the Switches model and that relate to lifestyle, nutrition habits, circadian rhythms



In areas 1 and 2 we find primary elements in terms of complexity and functional hierarchies. For example, in 2002 the *American Psychiatric Association Task Force on DSM-IV* officially highlighted that it is possible to encounter an inflammatory state and metabolic dysregulation in any pathology or pathological dysfunction. The food that we eat every day, and in particular sugars that mobilise insulin, play a key role as cause – or at least as concurring element – that significantly amplifies anxiety and stress symptoms.

and other elements that significantly alter metabolism and inflammatory states. These are all conditions that can easily be verified through a routine blood test. Via a few simple expedients connected to physical activity and exposure to natural light – or on the other hand – to the reduction of blue light exposure as from digital devices, the reduction of sugar and protein intake and a series of other elements, patients start to feel a significant improvement in mood and available energy even when they are not also undertaking specific therapy within 3-4 weeks.

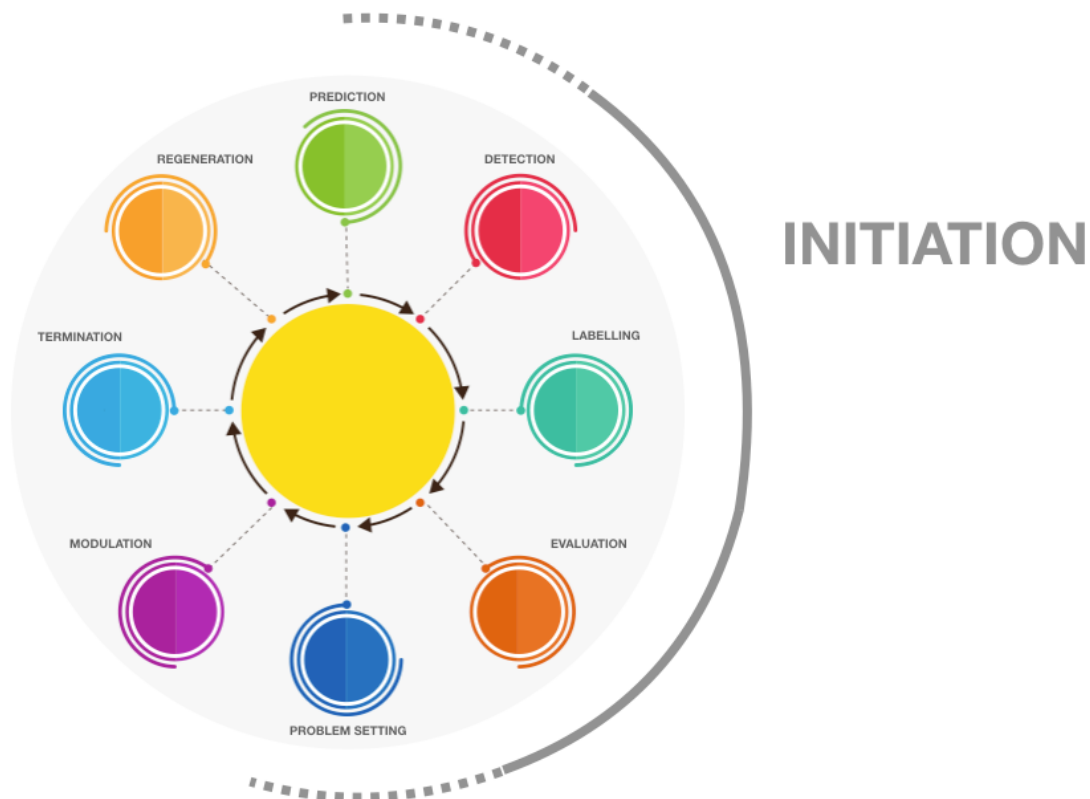
When these actions are undertaken alongside initial treatment phases, compliance increases and resistance to change decreases. These results are the fruit of lengthy research and are easy to understand when you consider the underlying neurobiological processes. Inflammatory states amplify emotional and defensive responses as shown by all studies on PTSD and chronic stress. A hyperactive system avoids danger and is not open to change. In addition to this, inflammation erodes the neural network, while change and learning require plasticity and energy to thrive. Restoring these favourable conditions is the first step to achieving the foundations of change which sets the scene for all later techniques and interventions.

CASE 2

MANAGING INTERPERSONAL CONFLICT AND RUMINATING MIND VIA THE FUNCTIONAL INTEGRATIVE PATTERNS

Let us look at another example. This time we will use the *Functional Integrative Patterns* as our guide. As previously mentioned, we will be working on the process of analysis and intervention on different phases of activation of a specific type of behaviour as they identified on the basis of the mental processes and related underlying neurobiological links.

Let us take the example of a young woman who tends to easily enter into conflict



and spends a lot of time stuck in ruminating thoughts.

We may analyse together the latest argument she had. Using the Functional Integrative Patterns we can identify whether the dysfunctional aspect in the argument is formed, for example, in the incorrect interpretation of interpersonal and contextual signals, in difficulties or resistance towards introducing new information into existing mental structures and ways of representing reality, or in the prediction of how things will work out that is independent and totally autonomous of data derived from reality and specific context.

All these processes take form in the **Prediction, Detection, Labelling and Evaluation** phases in a crescendo of phenomena that go from being totally beyond our level of consciousness towards increasing awareness and

finally become partially manageable according to our own volition.

In these cases we can take various routes:

- We can use visual and graphic representation to introduce new information and make it salient by promoting perception and integration of the latter with the specific point of view through the *Ideographic Thinking* technique for example;
- A feature shared by people who do not take new information or points of view into account is an *excess of glutamate* in their neurons. This feature can easily be controlled through nutrition;
- **Reboot techniques** are an interesting way of forcing a new correct evaluation of reality, by-passing negative predictions and automatisms. These tech-

ALL THIS IS SUPPORTED BY ALTERED

PRE-CONDITIONS:

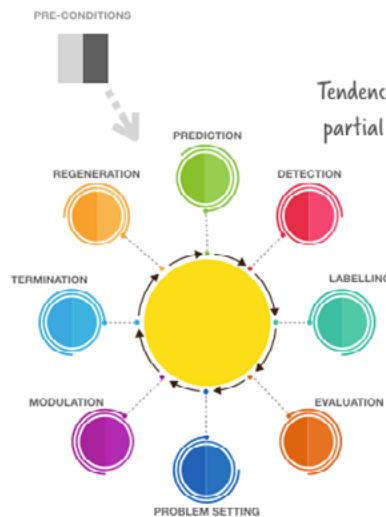
- inflammation
- glutamate
- circadian rhythms and blue light

- Dysfunctional Flows
- The Executive Network is always active

Mental flow and communication always excessive (illusion of control, no termination)

Destruction: all external, to save her inner world
Dysfunctional aggressiveness
+ Ancestral Needs altered

Requests in opposite directions and, in any case, destructive criticism



The Saliency Network is not working properly

Tendency not to see the reality: even with partial cues, she confirms the predictions

Uncertainty Network

Hyper-attention to detail (every single word of the message, every single gesture; etc.)
Never an overall view and over a long period of time



niques provide incoherent and unnatural stimuli to the perceptual system (i.e. hot and cold at the same time) and thus oblige it to reprocess incoming sensory data in the same way we reset our computer pressing *Control-Alt-Canc.*

As you can see in the worksheet example on the previous page this is a practical system that is shared with the patient. We use a series of worksheets that illustrate the different phases and their sub-sections and the patients take these home as aide-memoirs that enable them to fully understand what is happening and provide further elements for thought and reflection.

In addition to the work carried out during the sitting it is useful to use video or in the field observation when the environment allows it (such as a verbal conflict during a presentation). For the patient analysed for example, it was critical to see herself in a video arguing at the playground with her daughter so she was able to analyse each functional and dysfunctional element in herself and in the interpersonal dynamic (dominated by a lack of trust and attempts to impose power).

Observation and analysis of behavioural dynamics or of other flows (communication, creative, postural etc.) only represent the initial phase. At a second stage, active experimentation and the application of new behavioural and interpersonal patterns can take place. As per our model we are now in the **Modulation** phase, where behaviour takes form. At this stage, provided that earlier and later phases are managed correctly, it is possible to enact some very effective transformative experiences. In order for these to work it is necessary to isolate the spe-

cific processes that you want to work on. These can be easily identified via the sub-sections of the *Functional Patterns* or via the *Switches* (by blocking initial defence automatisms or isolating the Uncertainty Network or interpersonal challenge processes for example).

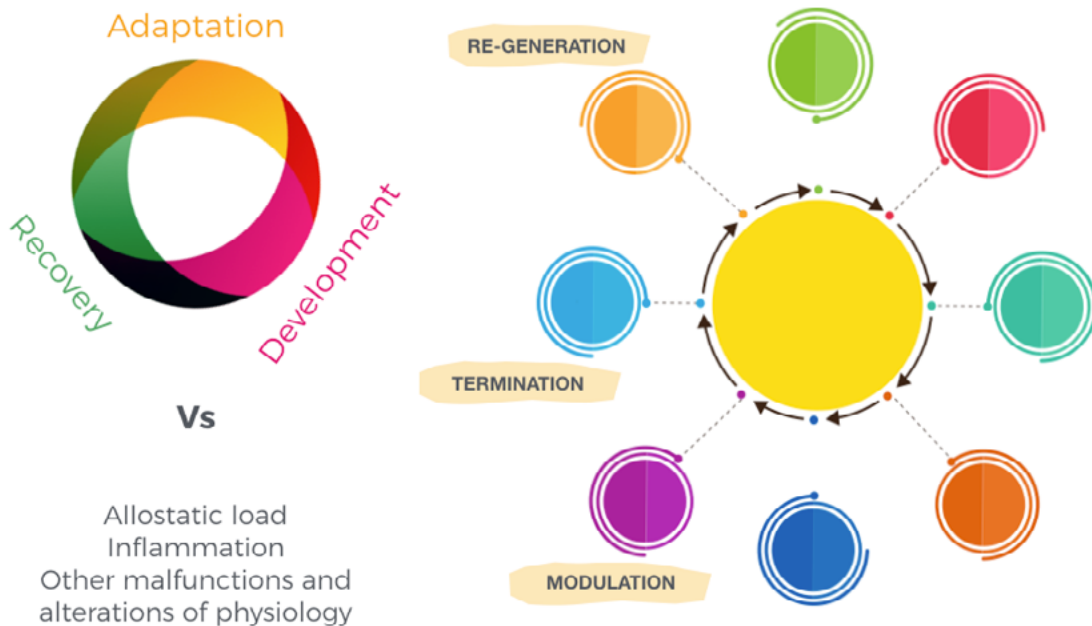
The other critical element is attention to sequences and activation times (this is the reason we call this process **HXD: Human eXperience Design**), in order to make the most of all the neural plasticity, reconsolidation and epigenetic transcription phenomena that are at the core of effective and lasting change.

I have never been a big fan of role playing as a psychotherapist or trainer. These exercises are certainly useful to get used to the basic principles, but there is always an aura of acting and detachment because people know they are 'pretending'. Via HXD we work on real-life experience which is realistic by definition and, thanks to planning and attention to detail, can provide positive transformative experiences.

Let us look at another area where Integrative Functional Patterns can be useful. We have said that this patient tends to ruminate so the argument with the other person ends in real-life but continues for hours in her mind. We need to remember – and to remind the patient – that every behaviour we enact has an objective. Once that objective has been reached the behaviour needs to be terminated so as to return to a state of quiet and regeneration or to take care of some other evolutionary or adaptation task. We can help the patient to conceptualise this process explaining that the Modulation phase, if managed correctly, must at some point come to an end. Whether the patient considers that she has won or lost the argument (depending

on how the early phases evaluate the outcome), continuing to argue in her mind is useless and wears her down. We can show that once the argument has ended, the process needs to end and another process starts. Via this next step it is possible to evaluate what happened, the effectiveness of our strategy (that was set in the Problem Setting phase in a more or less conscious fashion), to renegotiate self-image and elaborate a series of other processes. This is a virtuous analysis process that seeks improvement and avoids repetition of mistakes.

She also found that practising a new parallel motor and emotional schema for interpersonal dynamics as her first non-conscious reaction was very useful. To achieve this, we used a variation of the Interpersonal Accommodation technique that activates a defence response. Let us look at a simple example: when two people are talking standing in front of each other and one of them suddenly raises their voice and takes a step forwards, the other involuntarily enacts a schema that changes posture, way of speaking and perception of their role in the sit-



Many people, however, do not reach this stage or are unable to carry it out in a structured or independent way and end up angry and self-commiserating. Our patient for example, found that redefining her objective and the strategy of her behaviour in a more organised way – through Emotional Modulation technique – by developing a repertoire of different behaviours that she could consciously choose, instead of acting on impulse, was effective.

uation. Through the Interpersonal Accommodation technique, we go through various stages. Firstly, we set off this type of reaction and then we 'neutralise' it by finding the opposite schema (if the shoulders are raised we lower them, if the speed of talking increases, we slow it down more than normal). We thus stop the patterns from being reconfirmed and strengthened. We then work on periphery muscular memory with short intense contractions, for example, or with

aid of an ice spray such as those you use to treat sport injuries. This way, at the next trigger, the old schema will not find the usual set up of available elements and will be unable to start.

The patient is thus obliged to elaborate a new response that is more adequately suited to the context.



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Expert in Applied Neurosciences and PsychoNeuroEndocrineImmunology, Fabio combines these sciences with an evolutionary and ethological vision of mankind.

With an international career spanning, he is the founder of the Association for Integrative Science and of Real Way of Life. Working as a clinician, researcher and trainer, he is the creator of the Switch Model, the Integrative Functional Patterns, Isometric Emotions techniques, Ideographic Thinking, and several other integrative techniques (psychosomatic, trauma, self-regulation, etc.).

His work incorporates: neuroplasticity, brain and mental metabolism, brain networks, nutritional neuroscience, primal social intelligence, mental-postural-emotional-motor flows, and more.

He conducts seminars on The Switch Model throughout the world.

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