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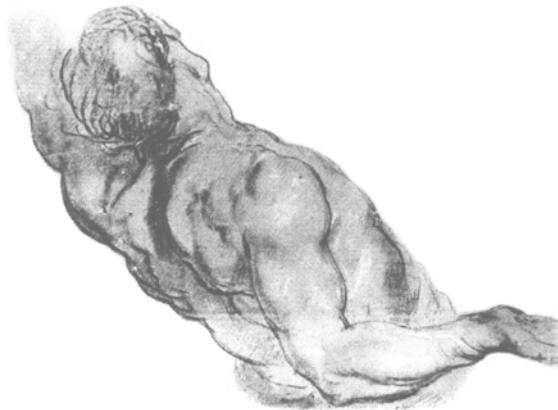
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USABP Mission Statement

The USABP believes that integration of the body and the mind is essential to effective psychotherapy, and to that end its mission is to develop and advance the art, science, and practice of body psychotherapy in a professional, ethical, and caring manner in order to promote the health and welfare of humanity.

Stream of Consciousness: The Impact of the Positive Relationship in Contrast to Prolonged Isolation

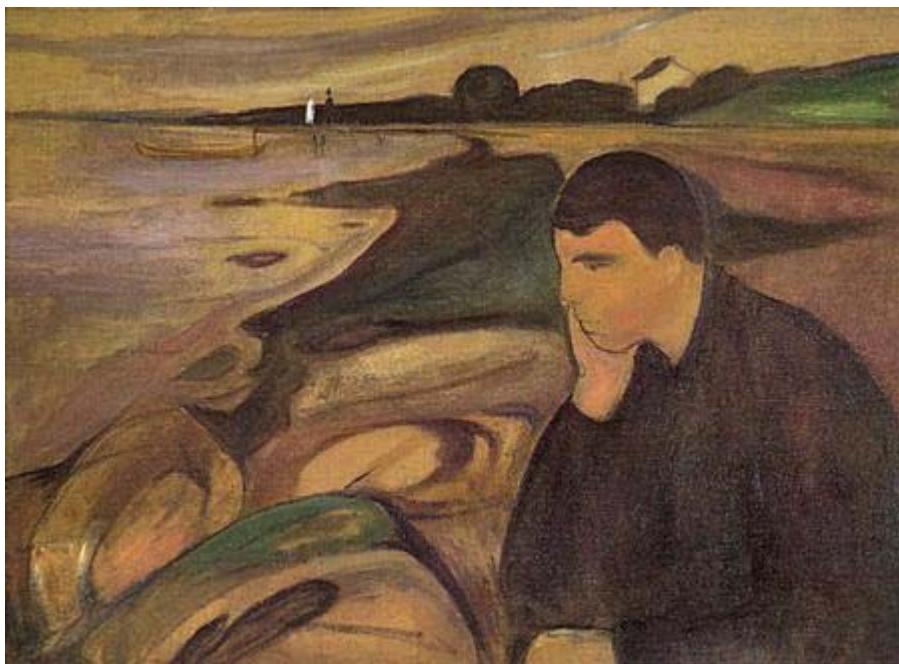
Jerome Liss, M.D.

Abstract

Our awareness of the stream of consciousness can shift our inner attention from real events experienced with others to the repetitive thoughts of those real events that occur when we are totally alone. This is called the impasse. The mind's labyrinth reinforces an unhappy event until we are desperate, anguished or even terrorized. Sometimes the Impasse experienced in solitude, and especially prolonged solitude, becomes more intense than the original event that created the disturbance. This article explains that real events with others occur during dyadic consciousness while the inner repetition of the event, the impasse, occurs during monadic consciousness. Systems theory helps account for the collapse of monadic consciousness, which can feel like "falling into a hole" or by "being pulled under by a whirlpool. What produces the impasse? The subcortical structures of the brain underlie every moment of consciousness, which is chiefly a cortical process of the brain. Our "daytime logic" of interactions with others and performing tasks is guided by the subcortical basal ganglia, while our "logic of the night" is the outcome of the subcortical limbic system that determines both our emotional states and self-other states of trust or alienation. The therapist's job is to involve the subcortical systems in the therapeutic process. Body-oriented psychotherapy does this effectively, because the patient's language flow (from Broca's area in the cortex) is always accompanied by body dynamics that engage and mobilize the subcortical basal ganglia and limbic system.

Key Words

Stream of Consciousness - Prolonged Isolation - Basal Ganglia - Limbic System - Subcortical



What is the Impasse during the Stream of Consciousness?

The Logic of Daytime creates a stream of thought that is clear and rational, guided by a strategy of action, and easily recorded and reproducible by verbal communication. This logical stream of cortical consciousness is guided by the underlying action routines regulated by the subcortical circuits of the basal ganglia.

The Logic of Night-time, in contrast, is a stream of thought that is usually less clear, less rational, pushed by emotions, more readily forgotten, or else represented by a single element that obsesses the mind, while all other components are buried out of awareness. In addition, it is difficult to reproduce this Stream of Thought with verbal language. This is our basic experience when we are alone. (See "stream of consciousness I," in Bibliography)

Passivity that is Not Regulated by the Genetic Code.

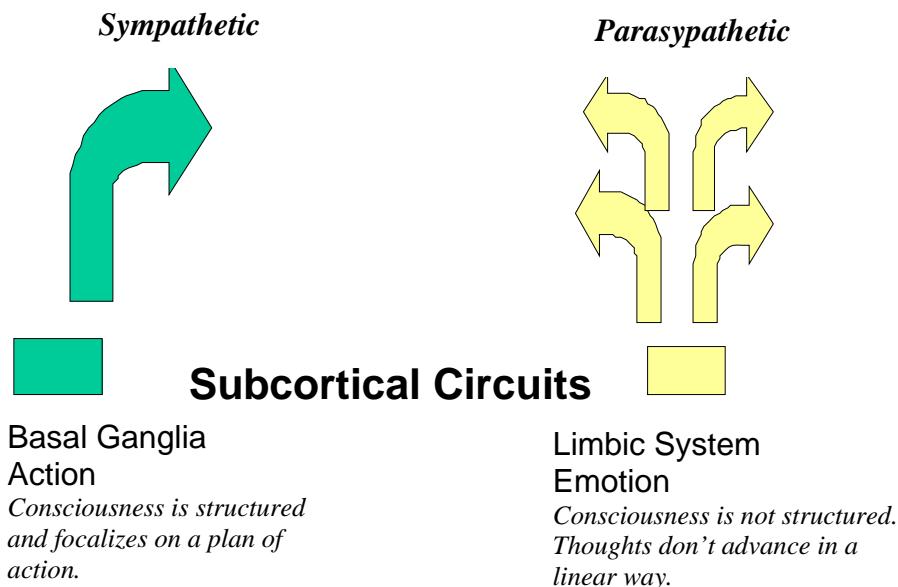
When does our night-time logic get stuck and become an impasse? When we are assailed by inner thoughts like, "What a mess!", "I'm just no good!", "It's like Hell!", "I'm trapped, there's no way out!" etc. This might be called our inner prison. **But how has it come about that evolution has left us in this inner dilemma that has no exit?** The reason is that

our brain has been programmed so that we can adapt to a community. **We have no genetically based adaptation to prolonged isolation.** Studies of prehistoric communities have revealed that between the period of earliest man, 200,000 years ago, and the onset of civilization, 10,000 years ago, human beings lived in tribes. When civilization began to spread itself, due to the cultivation and storage of grain, a series of difficulties began to crop up. The genetic code was not adapted to certain features of civilization, especially our living in a house with four walls and nobody there.

Prolonged Solitude.

Two factors combine to make us very unhappy, because they didn't occur in our primitive tribe life -- prolonged solitude and passivity. In primitive circumstances there was always a reason to get up and do something. There was always something to do, if just to put more wood on the fire. And a day of being alone could take place, for example, going out for the hunt all alone, or picking berries and digging up roots. But the modern combination of prolonged solitude and passivity didn't habitually happen and therefore wasn't coded for by our genes. While in this civilized life, especially in modern times when economic production depends upon the individual and no longer upon the family unit, we can come home from work, close the door, put on the microwave and spend an evening absolutely alone and with absolutely nothing to do! That's when negativity creeps into our consciousness. And with repetitions that are not interfered with by dialogue with another person, we get trapped in our impasses. Repeated impasses make us anxious and then depressed.

Activity Vs. Passivity



The Dyadic State and the Monadic State

Dyadic Consciousness Prepares Us to Adapt to Monadic Consciousness.

Prolonged solitude was studied by Rene Spitz.(1945) Children living in a situation of prolonged isolation, separated from their mothers, were found to lose their vitality, mental focus and capacity for relationships (self-other capacities).

Research by Harvard Professor Edward Tronick (2005) shows that during the self-other relationship between the mother and the child, (called “the dyadic relationship”), the child learns the fundamental reactions necessary to maintain both physical and psychological equilibrium during “connection with the other.” (see also Stern, 1985; Downing, 1997) Of great use, the equilibrium is “remembered” and continues when alone. Therefore the connected child has better resistance to short and long periods of solitude. In contrast, the isolated child does not have this formative experience; solitude wreaks its havoc. Disequilibrium, discoordination, fear, terror.

Even the strictly physiological reaction of maintaining body temperature while alone is dependent upon contact with the mother, and this as well as other psycho-physiological adaptations become extremely disturbed during prolonged solitude, concluding, in the most severe cases, in infant death. This is evidence that the adaptation by means of sufficiently complete contact with the mother penetrates to **the brain's lower subcortical circuits**. Our argument in the previous article on the Stream of Consciousness, namely, that **the Impasse in the stream of consciousness is due primarily to subcortical circuit dysregulation**, is further supported.

Tronick's terminology is useful. The infant in contact with the mother is in "a **dyadic** state of consciousness." The infant, when alone, is in "a **monadic** state of consciousness."

Two States of Consciousness

Dyadic State of Consciousness	Monadic State of Consciousness
	

The impasse during the stream of consciousness is the adult's major form of unhappiness and occurs during one's **monadic** state of consciousness. Solitude has been prolonged and, therefore, too long. Beyond this, insufficient contact during one's **dyadic** state of consciousness, either during infancy, or else as an adult, has produced this unhappy situation of repetitions leading us into the hole of anguish. The self-other relationship has been insufficient to keep consciousness buoyed up and above water in solitude.

What Is Missing in States of Prolonged Solitude? Contact, Expression and Elaboration.

If we look at the *praxis* of psychotherapy, we can better understand how the **dyadic** state keeps the brain in equilibrium, even when adapting to periods of aloneness, and how **the monadic state becomes vulnerable to the negative impact of solitude because there has not been sufficient preparation by means of good self-other relationships**.

Psychotherapy creates a beneficial dyadic state because of three factors:

1. **Contact** with another person with whom there is a feeling of **trust**.
2. **Saying out loud** what we are thinking and feeling.
3. **Elaborating** our thoughts so that they emerge **in sequences**.

Solitude means the opposite: The trusted other is **not present**. We don't speak to someone **out loud**. We don't develop our thoughts with their **natural sequences**.

Therefore, experience can become easily **blocked** during solitude. That's the **impasse**:

1. **Contact:** "I'm feeling so alone... Nobody understands... Nobody can help..."
2. **Expression:** "I'm thinking. Nobody to talk to."
3. **Elaboration:** "Every time I hit up against the same wall. The same thing, over and over..."

Some moments and periods of being alone are necessary for everyone, children and adults. We need to be alone and away from stimulus inputs to allow the mind to calm down. The brain needs periods of quiet to auto-regulate itself. But we are talking about something else. Our problem of the Impasse comes from excessive periods of solitude, a situation which can occur too frequently and then, in depression, that becomes self-reproducing and inescapable.

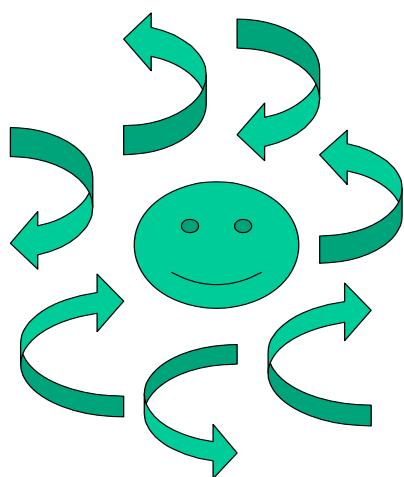
The Contribution of Systems Theory

The Mental-Neuronal Spirals Turn Around in Emptiness Until There is Exhaustion.

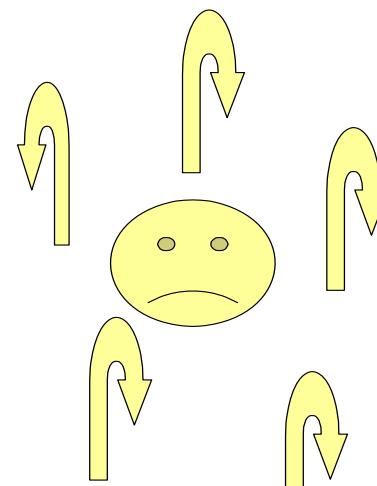
How can we understand that dramatic difference between positive self-other contact and prolonged isolation? In Tronick's terms, **what makes the difference**, even when we are alone, if that aloneness has been preceded by sufficiently good **dyadic contact**, or if we have been living, instead, in a state of excessive **monadic solitude**?

Let's imagine spirals that turn round and round. Our neuronal circuits work like this, turning round and round. (We are now in systems theory applied to the brain.) When we have contact with the psychotherapist and when we have satisfying contact with other people in daily life (always at issue, the self-other relationship), **the brain neuronal circuits are continuously enriched by the three factors indicated above: relationship contact, saying out loud our thoughts and developing our thought sequences**. Because the repeating circuits are continuously enriched, they maintain their equilibrium, complexity, ongoingness and energy. Beyond this, if the relationship experience is lively, trustful, intense and participative, the brain circuits of the experience are equally lively, coherent and equilibrated. **The positive regulation of the brain during its dyadic moments will carry over to maintain brain regulation in its monadic moments.** Thus, the sufficiently positive and prolonged self-other relationship protects us during our moments and periods of solitude. "I really like solitude," says the person with positive relationships. "I don't feel happy," says the person who experiences impasses during solitude. But the problem of missing positive self-other relationships may be denied. "How about spending more time with others?" asks the naive helper. "That would be even worse," says the person entrapped by impasses. The alternative of being with others doesn't seem at all attractive. That means that positive self-other relationships have not been developed, or are no longer available, and the impasse of solitude feels a relief – or so it seems at the moment – in comparison to being with others who are either "too lively" or "too depressed." The impasse of the repeating neuronal circuits makes the person feel "the world is out of tune with me," or vice versa, "I'm not in tune with the world." In a sense, this person, isolated and depressed, may be, unfortunately, right; the subcortical circuits of the Impasse make the person dissonant with normal social relationships and so there is, using Daniel Stern's term, a self-repeating cycle of continuous "disattunement."

The Dyadic State and the Monadic State



Richness and complexity of the neuronal circuits



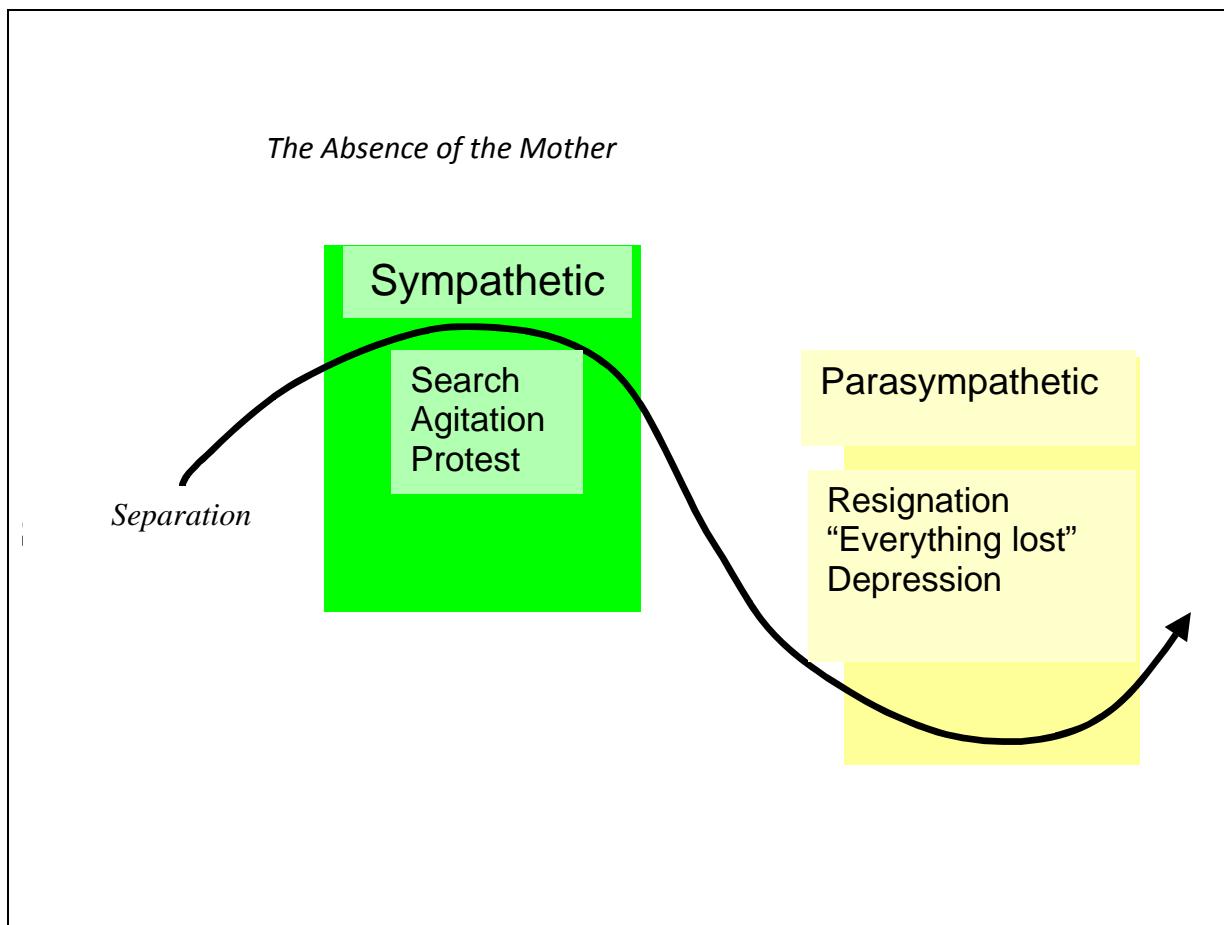
Impoverishment and collapse of the neuronal states

Let us look more deeply into the dynamics of the impasse in isolation. (But not only in isolation. Even when we are in the company of others, the negative thoughts and feeling of alienation could continue unrolling in the back of the mind.)

A single thought repeats itself, “I’m a loser. “I’m good for nothing.” “I can’t get anywhere.” Spirals of thoughts running on the same obsessive rails create aridness, dryness, pessimism, closure, rigidity. The ivory tower is being built. When the external event becomes overwhelming, and traumatic, the reaction gets more vigorous and breaks out with more energy. “A disaster.” “Betrayed.” “Hell!” “It’s impossible!”

While these self negations run through the mind, one or two images may appear as momentary “flashes”: A face showing contempt, a shoulder turned away in refusal, a moving toward the person feeling rage, or the moving away from the person feeling shame. Even the sound of a criticism or of an unjust judgment echoes in the mind while the visceral sensations become turbulent and upsetting. This period of an “active reaction” against the stress does not last. After a time, there will be a fall of energy.

We see the same sequence when the child does not see the mother. Should the absence last briefly, there will be no problem. The problem is dosage. If circumstances create an absence that goes on for too long, the child’s first reaction is one of activation and agitation, even desperation. Then we have the “rebound” into the phase of low energy and depression. (Bowlby, 1969) Adults live out the same energy sequence: In the first moment of stress lived in solitude, the brain is taken over by a state of agitation and desperation, while the mind turns about in every direction looking for what is missing or a way out of some sort of labyrinth. After this there is a collapse of energy and the person falls into a state of resignation, hopelessness, impotence. “Everything is lost!” or “There’s no way out of this trap!” The energy and inner structures of ongoingness that were developed during dyadic relationships are completely lost. The neuronal spirals turn in the emptiness, cut off from all external resources of nourishment, and the hole in the psychic ground grows with every turning of the circle, “wish-disappointment.”



How can we explain the impoverishment and the deterioration of the neuronal circuits during prolonged solitude?

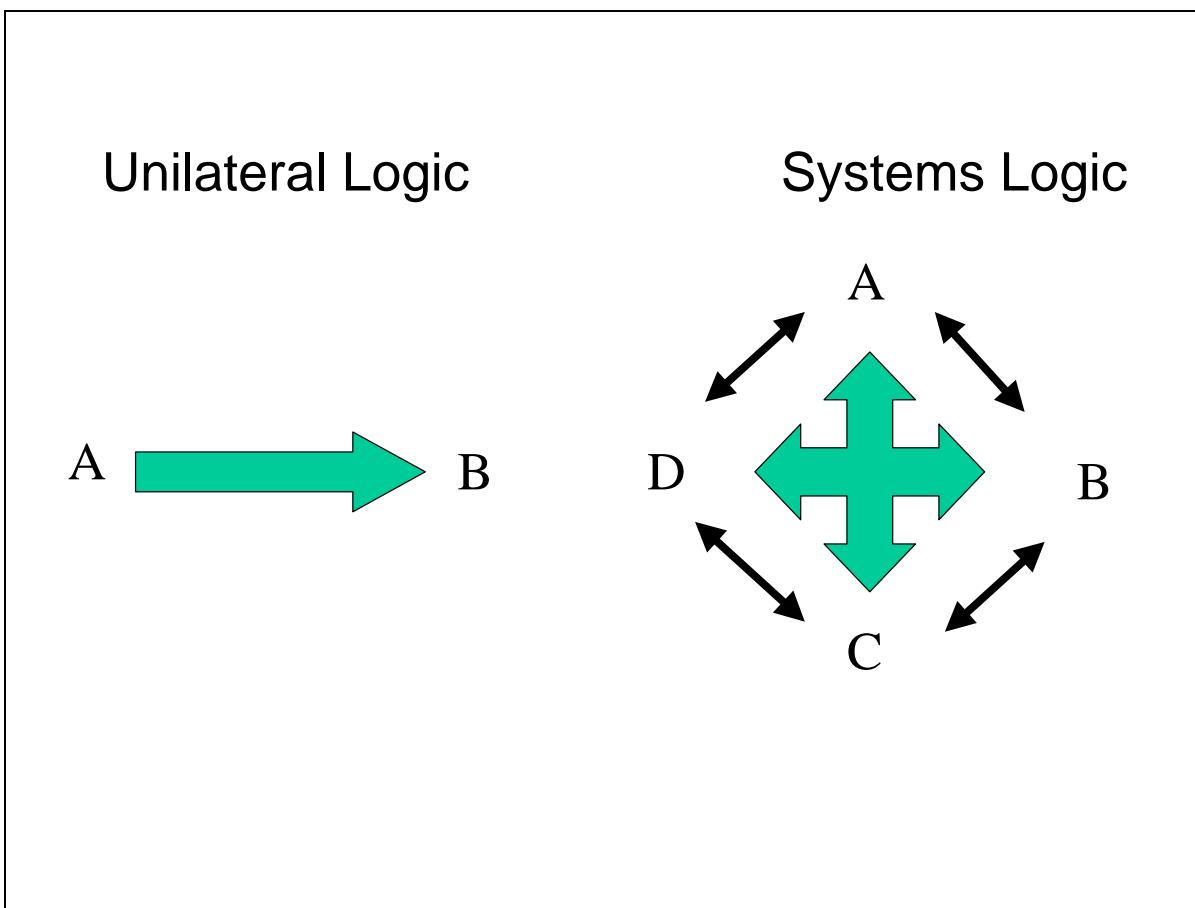
We will now turn to systems theory in order to illustrate how brain areas interact. This will clarify the richness of making good connections and the impoverishment due to excessive solitude.

Systems Dynamics: Brain Regions are “Semi-Autonomous Systems in Interaction.”

The brain is an enormous system composed of many regions. (Further on, we will emphasize differences between cortical and subcortical regions.) Every region is a subsystem. Systems theory offers tools for understanding interactions among Subsystems. (see Bertalanffy, 1981; DeRosnay, 1975; Gray et al., 1969)

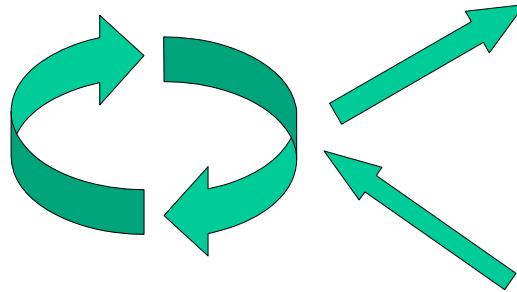
The Biosystemic Method is inspired by the concepts of systems dynamics. “Bio” refers to “biology,” that is, the biology of our body and mind as an underlying substrate that guides our conscious and unconscious mind. And “Systemic”? Systems theory offers maps that help understand and guide us when we are in complex territories, which is of great use when we are facing the mind-body components of any important experience or experiential sequence. (See Liss & Stupiggia, 1996)

Unilateral logic and systemic logic are illustrated in the next design. Unilateral logic is like a single pathway from A to B. Systems logic starts out with a complex terrain, simplified by the regions A, B, C and D. Notice the richness of the interactions! A single pathway of A to B is a gross simplification and, thus, a misleading distortion. The illustration in the design shows that among the four regions (and the brain has many more than four sub-regions), we have six bi-directional arrows that create 12 interactions. If we take this unit or system as a whole, any state moment of four interacting regions is being caused by 12 interactions plus 1 (the “whole” as a causal unit) = 13 causalities. If we want to keep all this in the mind at one moment, we could say it is mind-boggling. So the schematic systems design helps keep the complexity in place.



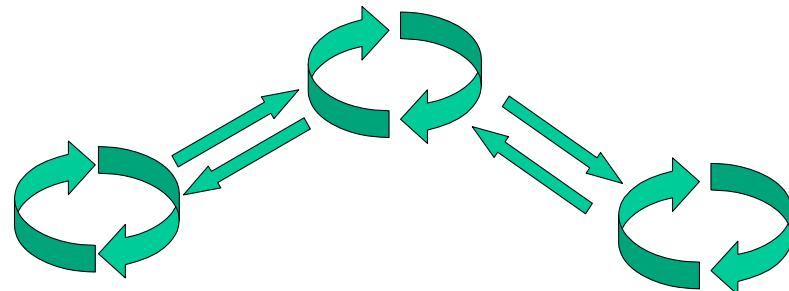
One moment, please, the situation is not so simple! A brain region is not only a system in interaction with outside systems. The brain region has an inner dynamic of self-perpetuation. Brain regions are both interactive and self-reinforcing. For this reason we call brain regions and neuronal circuits “semi-autonomous systems in interaction.”

A Semi-Autonomous System is Both Self-Reinforcing and in Interaction with Other Semi-Autonomous Systems



Let's look at the complexity that this double action – within and with the outside – can create for any group of systems. We will reduce our figure to three brain regions with only two interactions, for the sake of simplicity.

A Network of Semi-Autonomous Systems in Interaction



We have 7 causalities. Three are internal; four are interactive (counting the arrows).

These simplified systems designs help us overcome the mind's tendency to search for single causality when we are looking at complex mind-body phenomena. It will help us better understand the psychology of the Impasse during the stream of consciousness. It also averts us to the epistemological dangers when schools of psychology declare, "We have found the truth!" and brandish their single-causality theories as proofs of their superiority. Rational versus emotive theories of brain function can overemphasize one region against another. In the long run, cortical and subcortical regions are in continuous interplay. "Depth psychology," at various times in its history, has declared different "basic causes," from "periods of fixation" to the Oedipal trauma, to pre-natal traumas, to the vision of the primal scene. The systems map shows that the brain has multiple causality at different levels, and this initiates our sense of adventure! This is to explore the complex territory, like going from island to island in an archipelago of a thousand islands.

Developing the Concept of "Internalization"

Do "Inner Structures" Experienced during Relationships Carry Over into Solitude?

We are now in a position to understand how prolonged solitude can deflate and collapse *the bubble of normality*. The dynamics of systems theory show that the spirals of normal experience between two people can create the sense, "I'm intact, I feel together," even when the person is later alone. In contrast, a disequilibrium resulting from insufficient relationships and excessive solitude, past or present, sets us up for the inner collapse and feeling of desperation that comes from the grip of the Impasse. The inner spirals that feel solid when we are "connected," become weak and insubstantial, and we lose our grounding. Thus the design showed the arrows of impoverishment.

Let's examine more closely the two states of consciousness: rich vs. poor. The rich state occurs with satisfactory interpersonal dynamics. On the other hand, the poor state occurs when we are alone and losing force of "inner structure," as we enter into internal dimensions, often trying to face memories of hurt from the past or fears for the future. In the rich interpersonal state, we are "connected" – the baby with the mother, the patient with the psychotherapist – and we are having rich experiences of contact and self exploration. The brain is being nourished, and the neuronal-chemical circuits are activated to create good feelings, reasonable perceptions, and active capacities for adaptation. The more "intense and profound" the therapeutic experience, the more sturdy and resistant the spirals of activation. We can call these activated circuits that can be somewhat maintained in our solitude as "internal structures."

But what happens when these "internal structures" do not sufficiently carry over during the stream of consciousness in solitude? What seemed solid and sturdy, our sense of equilibrium, can then collapse, when we return to our inner world. It may feel like a bubble that deflates or pops when our inner life (whose components and dimensions are like "inner currents,") brings us up against an impasse of doubts, uncertainties, hurts and fears, and we feel we are "up against the wall." There is a visceral feeling, it could be like a punch in the stomach or of collapsing in the desert; this has been hiding behind the curtains and suddenly springs up when we are face to face with our selves, alone...

The Inner Terrain: A Growing Forest or an Enlarging Desert?

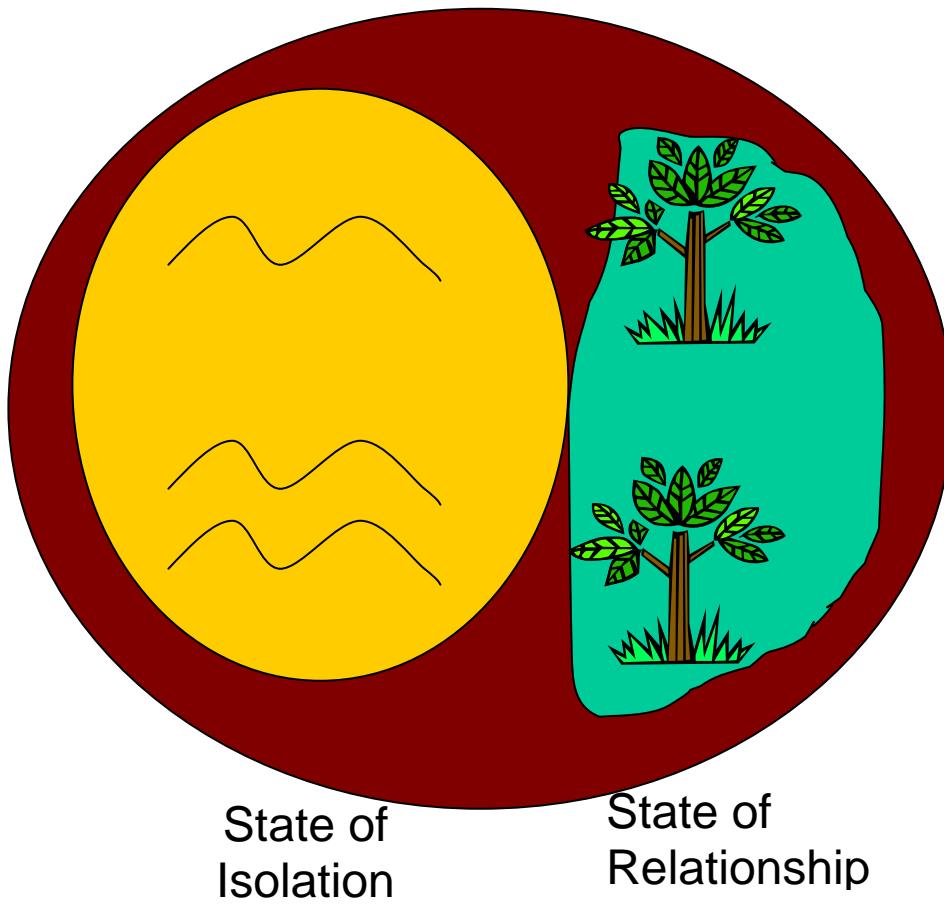
Melanie Klein offered the concept of "internalization" forty years after Freud opened the door to the unconscious. (Klein, 1952) A simple way to think of this fundamental process: "What happens when the other's presence repeats itself in solitude?" Because this is a mixed cortical-subcortical process, certain aspects are conscious – "I felt good speaking with her" – while other aspects are totally unconscious, but influence our mood – "Something feels perking in me," or "I feel I can get my scene together," or "Now I feel calm." What might occur between mother and child? The mother has just paid a brief visit in the night. After she leaves, the child moves his hands and legs, looks at the moving lights of a car on the ceiling, and laughs. And in the same way we can feel replenished and "okay inside" when we have had an experience of deep exploration, helped by our psychotherapist. If the contact was fruitful, this presupposes that there was "attunement" during the self-other interaction. (See Chapter VI and VII in Stern, *The Interpersonal World of the Infant*, 1985.)

Now let's look at the other side of the coin. We find ourselves alone and flooded by some painful memories: a hurt, a loss, a defeat, a disappointment. With the therapist or helpful listener present, we could elaborate it, get it off the chest, discharge the tensions and reach some kind of conclusion or "completion," at least for the moment. "Oh, well, I understand, and I see how to approach it the next time." But alone, the impoverished circuits rarely carry on the dialogue with the helpful listener in an autonomous way and with full elaboration of sequences, at least, not after a few minutes.

Losing the thought-emotion pathways experienced momentarily with the helpful listener (the Dyad), the brain circuits turn in on themselves, becoming emptied of their original richness and focusing obsessively on one or two elements (the monad). The repeated phrases of self-negation burrow more deeply into the terrain of our Self structure, and the hole is deepened. The dimensions of the problem, with no specific itinerary for evolution, expand and generalize, and the mind becomes a mined field with holes in the ground, reminding us of battlefields after a war. Sooner or later the circuits die out, the land loses its vegetation, and the terrain of the inner Self looks like a desert.

Let's imagine that we have a camera in outer space looking at our inner world. Two continents will be seen, varying in size and quality from person to person, and also changing their form and extensiveness during a single person's evolution. The camera shows one continent with forests and rich foliage, the other terrain reduced to a desert. These two continents represent two states of consciousness, either of which can dominate our mental focus when we are alone: the state of empathic dyadic consciousness or the state of prolonged isolation.

Two states of Consciousness

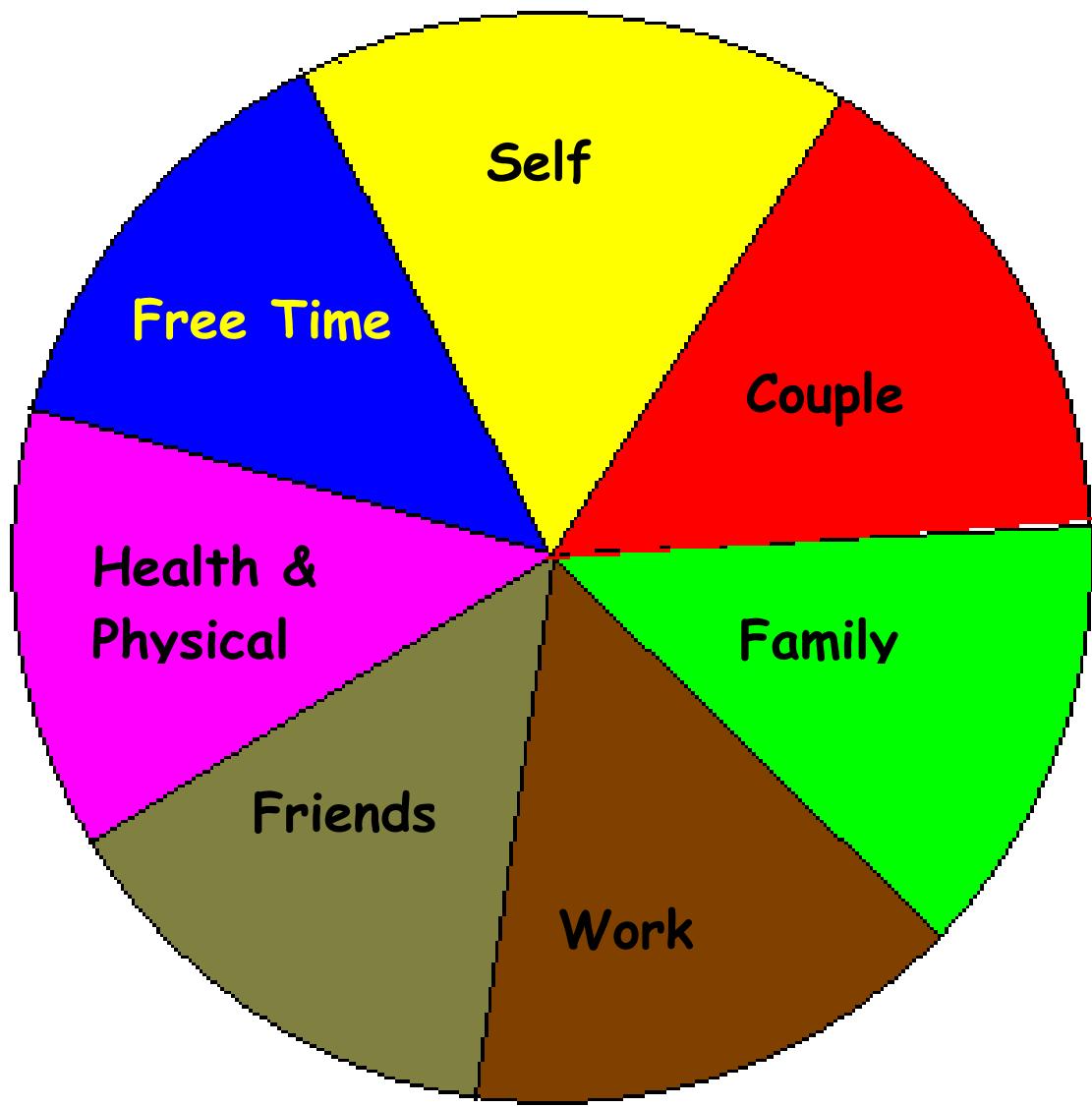


Each continent grows larger or smaller over time, depending upon the quality of the self-other relationships. Is there attunement or misattunement? Connectedness or alienation? Engagement or indifference? Intensity and interest or blandness and boredom? The waves from the dyadic consciousness, influenced by these qualities of the self-other experience, then flow over into our aloneness.

And what to do alone? “Cultivate your garden,” comes the counsel of Voltaire. But alone, our intentions will often be over-ruled by deeper forces. Whether our tendency is to have a stream of consciousness that truly “cultivates our garden” and offers us rich harvests, or else experience our inner life like a dried out riverbed that is leading to desertification, depends upon these subcortical forces that rise up automatically. In conclusion, if we can at least understand the brutal fact that there are automatic unconscious subcortical impulses which become unleashed when we are alone, and more so when we are alone for a long period of time, we can better understand the helplessness of our minds when we are submerged and blocked by Impasses.

A Systems Map: “The Dimensions of Life”

We'll now return to our potential richness. There are many issues of our life that are important for us, that are ongoing, dynamically developing or blocked and stagnant, and that periodically require our attention. To summarize these countless issues, the following design, “The Dimensions of Life,” attempts to picture the areas that are essential.



Looking at this diagram, we can better understand what areas are going well and which dimensions are creating problems. But it reveals another truth. When one problem is taking up our entire inner world of attention, other dimensions are not being considered. Let us imagine that we have just experienced an extremely unhappy event – a disappointment in an important relationship, a failure, a threat, a loss that happened suddenly and was not expected – and we find that this event continues to circle in the mind. If we talk about this to an untrained listener, we might find ourselves hurt and imprisoned by the comment, “You’re exaggerating,” said for our benefit, presumably, and therefore said with good intentions, but nevertheless stifling the inner feeling.

The impasse repeats itself because it has not been elaborated and organically transformed by means of sharing with a helper who offers deep listening. A verbal recounting from the head is insufficient. The words must embody the deeper (subcortical) feelings that are spiraling inside like an unharnessed wild stallion.

But until such a fortuitous sharing and “working it out,” we are entrapped by the impasse of negative repetitions. If we look again at the diagram of “The Dimensions of Life,” we can see that we are being obsessed by one particular dimension. It may last for days, months, years. The mind-body dynamic is following “the Law of Oxygen.” What does that mean? It means that when oxygen is missing and we feel suffocated, we can think of nothing else! In the same way, when we have one unresolved dimension, all other life regions fade away, are taken for granted, elicit no energy, give no special satisfaction, and remain neglected by a stream of consciousness that is absorbed by its Impasse.

Many Impasses are Possible.

We can be impressed by the stupendous number of situations and problems that enter the human mind. But for each person who suffers, that particular dimension of difficulty becomes an entire world. The inner subcortical push takes up the entire cortical terrain of consciousness. One person suffers from a lack of personal esteem, another has distrust of everybody

else, another feels constantly anxious when with others, another has a constant feeling of guilt, another suffers from moments of panic and worries that any moment it can come on again, another has psychosomatic pains or asthma, another just has no desire and feels depressed. Let's go on with the panorama: A woman thinks, "If I don't have a man in my life, I'm not like the others. How can I have satisfaction if I can't share it?" A person who grew up in an *orphanage*, "I'm not normal. Everybody else has parents. I'll never be a normal person." Someone has been in *prison*. "What a disaster. What misery. And anybody who looks at me can just see that I've been in prison. What a humiliation!" *Homosexuality*, an abnormality in the body, even if unseen by others, *sexual abuse* during infancy, coming from parents who were poor or from an "*inferior*" *social class* and, in some cases, a person lacking a certain level of instruction and diploma. I remember a young woman who was oppressed by the following memory: "My father was a drunkard, an alcoholic, and he fell on the sidewalk in front of the house. My mother told me to go out and clean up the vomit." Shame, fear, bitterness, suppressed anger, the baggage that we can each carry around within us when we are submerged by the Impasse that blocks the flow of consciousness.

A Brain Map for the Impasse

A Brain Map to Help Understand the Variety of Impasses that Make People Suffer

Seeing this enormous variety of potential impasses, we may rightly ask ourselves, "How is it that people can suffer from such different problems?" while in each case the suffering is intense, total, tenacious and unrelenting. We gave an image previously of states of consciousness like different "islands" inside the mind, and going through our mind is like a trip through an archipelago. In fact, in different periods, a different island of suffering might appear. Nevertheless, each person probably has a limited number of such islands of vulnerability, and becomes surprised that others find no difficulty with one's type of problem, but can be vulnerable, instead, to other types of disappointments and fears.

To explain this variety and, at the same time, give some order to the complexity and variation of inner Impasses, we will return to our basic point: Each experience in the stream of consciousness is a cortical phenomenon floating at the surface of currents whose source is the subcortical unconscious.

Here are some examples:

Cortical Experience of the Impasse

Subcortical Circuits

"I don't know... I'm always anxious that something can happen."

Fear

"If somebody offends me, I go out of my head!"

Anger

"They disappointed me. It was a betrayal! I can't trust anybody again."

Rupture of the Self-Other Relationship

"I can't do anything. I'm blocked, a piece of cement..."

Inhibition of Action

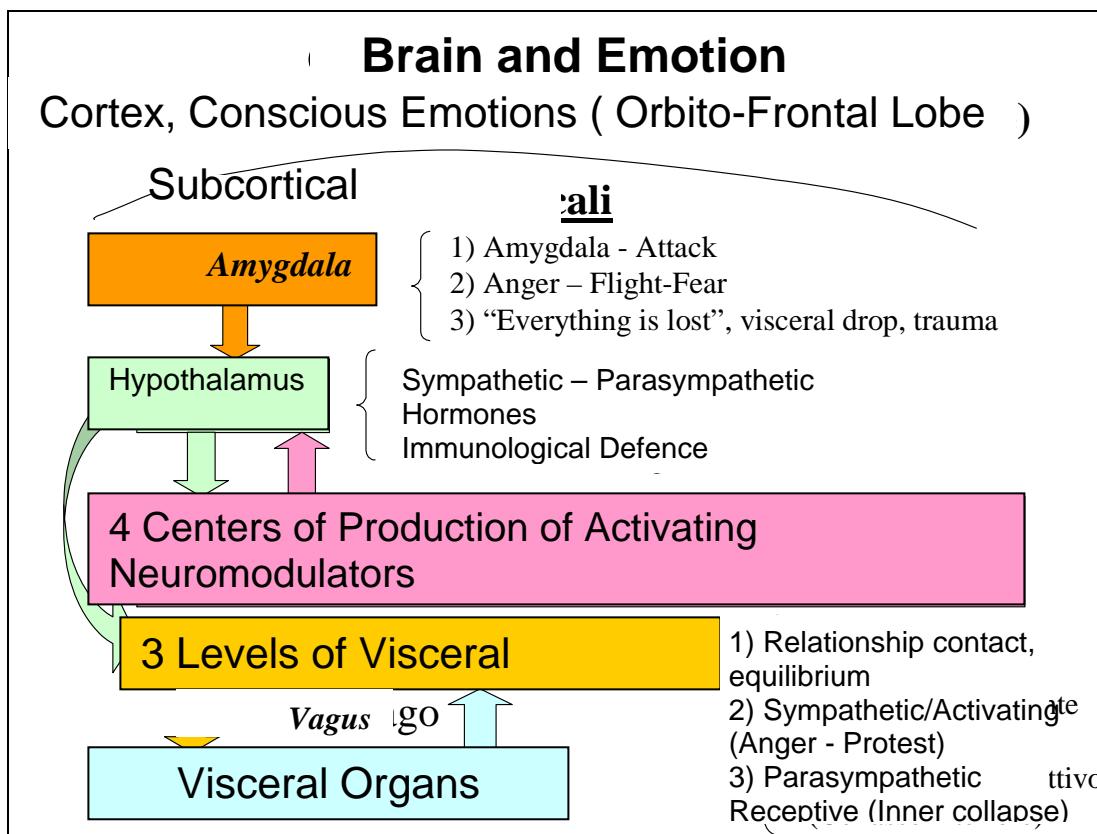
"There's nothing I want... Nothing matters... Empty."

Energy exhausted

These are merely simplified examples. They are meant to show that the nucleus of an impasse is a force that is regulated in the bottom part of the brain, the subcortical regions, and that passes upward to create dysregulation and incompleteness in the upper cortex. From the subcortical unconscious to the cortical consciousness!

While a psychiatric diagnosis will speak of "pathology," we use a more neutral term, "dysregulation." The advantage of "dysregulation" is that it presupposes that all of the forces in play are positive potentials. The only problem is that certain forces are excessively present, such as the amygdala-based emotion, while other forces are insufficiently present, such as the basal ganglia system for directing effective actions.

The next design gives a "map" of the subcortical systems that are producing the impulses that come to surface in the cortex. (This map will be modified in the coming years as research regarding states of consciousness and brain mechanisms continues to advance.) It is useful to keep in mind that no single area has total responsibility for a function. A function, such as an emotion, has many brain areas contributing to its ongoing process. The map just helps us pinpoint central functions and central areas.



Amygdala Attack – Anger, Flight-Fear, “Everything is lost,” visceral drop, trauma

Each of the above subcortical areas can contribute to the experience of an impasse. That means that each subcortical area impacts on specific psychological functions, whether acting separately or with other regions. We will present a Table to show these connections among specific Impasses and their subcortical components.

Table: Typical Impasses in the Stream of Consciousness and Subcortical Regions that Create Them

Impasse	Function of the Brain Area	Subcortical Area
Anger	Emotion / Sympathetic	Amygdala and Hypothalamus
Fear	Emotion / Parasympathetic	Amygdala and Hypothalamus
Rupture of a Basic Relationship	Self-Other	Cingular Gyrus and Hippocampus
Inhibition of Action, Paralysis	Action	Basal Ganglia
Energia Used Up	General Brain Activation	Subcortical Areas in Pons (Tegmentum, Locus Coeruleus, etc.)

Our model of the connection between the experience of the impasse and its neurophysiological roots becomes clearer now. Each element of the experienced impasse, coming from the brain's cortical dynamics, and visible to us through introspection, finds its roots in specific regions of the brain's subcortex, and this is invisible, even to ourselves. To understand a particular impasse from a researcher's point of view means to understand the particular cortical – subcortical connections that drive the experience forward like a relentless train.

For the Future.

The reader familiar with recent research regarding brain neurophysiology can already see limitations of the above model. It is too simple. Several regions must be linked and activated together in creating the full blown experience. For example, the Table suggests that amygdala-based rage reactions must be connected to hypothalamus-based sympathetic processes, when the emotion is intense anger. On the other hand, the emotion of fear must involve both the amygdala and the hypothalamus-based parasympathetic processes. (The hypothalamus is the “hub” of sympathetic-parasympathetic alternation. (Gellhorn, 1972) But this is still too limited. We can now add the research contributions of Steven Porges, namely that the “visceral drop” in intense fear, loss and or disappointment, has been shown to be regulated by the dorsal-vagal visceral nuclei. (Porges, 2003)

Other research currents must be added to enlarge the mind-brain model. Gerard Edelman’s hypothesis of the “dynamic core” concept adds other neural routes for the study of consciousness. (Edelman, 1989) The “dynamic core” involves the interplay between the thalamus and the cortex; the thalamus changes its attention regulation of the cortex according to whether the major input for the thalamus, at any one moment, comes from the action-oriented basal ganglia or from the emotional-oriented amygdala. This just means that as research regarding brain mechanisms and human experience advances, new doors of understanding will be opened.

Summary.

The theme is to study the dynamics of the impasse that blocks the stream of conscious. This impasse is tenacious, unrelenting and expansive, taking up the whole attentional focus of the mind when the person is alone. It cannot be easily shaken off, and the person wishing to merely “change direction of thoughts” is surprised and disappointed that his conscious efforts are to little avail.

The power of this force is the subcortical unconscious. Various areas of the subcortex contribute to the final picture of the impasse, whether it comes from a situation of loss, disappointment, betrayal, rage, fear, distrust, or loss of vitality.

The work of Tronick, Stern and Downing has brought to light how the dyadic relationship -- mother and child, or therapist and patient – can create an “introjection” of the other which lasts into periods of solitude. This dyadic relationship helps develop capacities and their corresponding cortical-subcortical brain circuits during high stimulation moments that spill over into the reduced stimulation circumstances of solitude. Thus, sufficiently developed dyadic relationships are our main protection against the suffering and unhappiness that result from the continuous impasse. In contrast, an insufficiency of positive dyadic relationships, whether present or past, can create the conditions in which the unhappy person keeps falling into the same hold of inner misery, and cannot find a way out by himself.

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Biography

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