

## **PSYCHOANALYSIS AND THE CENTRAL NERVOUS SYSTEM**

### **THE RULES OF THE GAME**

The patient, a man in his early adult years, did not want to be in treatment. After acting in an impulsive, destructive manner; he was in my office, only because a colleague forced the issue by announcing – for him – that he intended to begin treatment.

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Page | 1

Our appointments were characterized by rants about incompetence, devaluations of treatment, and frustration that he could no longer travel to foreign countries and immerse in the drugs and sex that he professed to love. With hostility and impulsiveness, and not enough affect regulation, stability in self and object representations, or mature defenses, patients like this are usually referred for medications and highly structured programs – not for anything resembling a psychodynamic approach.

Nonetheless, as this man's treatment proceeded, he never missed an appointment, even as his vehemence and anger grew. But any attempt to contain his feelings within an interpreted context or to clarify or confront their destructiveness, failed to bring about a serious consideration of his state of mind, much less, meaningful change.

With his rage growing and my interventions ineffective, I became enthralled by the rhythm of his speech and the power of his feelings and would enter an altered state of mind during his appointments. At the end of one particularly intense appointment, in which he brought in racist, misogynistic, and anti-Semitic publications, I told him – out of the blue – “I want you to listen to something before you leave.” I took out my phone and I played this:

#### **“GOING SOUTH BLUES”**

[Google: “Going South Blues” Chicago Blues Harmonica Players]

As he walked out – after listening to the entire piece, he turned to me and said, “Well – alright” and then left.

The hostility stopped, the devaluation stopped, the bragging about dangerous foreign bars stopped – none of it to be heard in spontaneous expression again. Except for tentativeness in the way he said “alright” – which, I think expressed

**some dim awareness that something of impact had entered his mind – he made no notice of these changes. They occurred silently, were not accompanied by insight, and I suspect that if I had commented on the change, he would have been puzzled by my observation.**

Page | 2

**There are a multitude of psychological theories that we can apply to explain what happened. But using a psychodynamic theory to describe the global change that occurred in this man's presentation, and in his underlying state of mind, focuses on a singular aspect of an entity that is finely balanced dynamically and of extraordinary complexity.**

**We could say that with its fine balance and extraordinary complexity, one's inner world is primed for change and that my musical intervention touched this man in a way that utilized that potential. But I had no conscious awareness of making a choice about my response. It seemed impulsive to me at the time, although I was aware of letting go of my everyday reality and freeing myself from my typical verbal give-and-take with a patient.**

**I think this allowed me to be influenced by primordial sensory registrations involving rhythm and concrete communication with the result that my seemingly impulsive choice of playing the blues echoed this man's covered-over plaintive neediness, and provided evidence, not only that I witnessed his plight but that I felt his pain – even as I was unaware of any of this. What I was consciously experiencing, at that moment, was tediousness, which my choice of music also reflected.**

**Nonetheless, what I did transformed what my patient experienced as a constant but obscured sense-impression into a responded-to reality, which now included a sympathetic object who recognized his underlying feelings and was able to transpose them to another modality of expression – even as I was unaware that I recognized any of this. His underlying, persistent bluish feeling, which it appears, he unconsciously ascribed to evil intent on the part of others and was a complexity in his presentation that made attunement a challenge – now included a knowing other. This provided relief to both of us.**

**Instead of appointments permeated by barely regulated affect with no notice of me as a separate individual; unacknowledged guilt now prevailed. Our meetings**

**immediately filled with his sense that he was condemned to a lifetime of bad choices – while simultaneously, his behavior silently became steadfastly constructive.**

**So, how did this work? Just what is one's internal world and can we learn something about its fine balance and exquisite sensitivity – while not getting bogged down by pre-conceived assumptions about meaning?**

Page | 3

**The internal world is a virtual repository of one's experience in life dating from earliest sensory registrations to the current moment. One's internal world is the functioning of one's brain and mind.**

**We can conceptualize this world as consisting of a mixture of encoded sensory registrations of affective states, feelings, memories, and integrating concepts interacting in relatively stable form through networks of neurons connected physically. The internal world also involves non-contiguous neuronal networks interacting via rapidly changing connections utilizing some not-yet identified form of long-distance neuronal network interaction – maybe something to do with electro-magnetic waves generated by neuronal depolarization or maybe something associated with quantum theory and entanglement. We really do not know how neurons and neuronal networks rapidly interact at a distance. But they do.**

**Because interaction and connectivity are prime characteristics of neuronal function, and because the internal world is a composite of neuronal physical and functional structures encoding different developmental levels, different feeling states, different memories, and different integrating concepts; the very nature of the internal world facilitates transient interactions among its components.**

**This adds complexity, depth, and thrust to our internal experience. Applying a single theory to describe a patient's inner world diminishes the complex richness that can evolve from a more open engagement with the dynamic connectivity of one's inner world.**

**As an example, I never expected that my musical intervention would be anything but a slightly hostile way to gain some psychological space – which my**

**intervention accomplished. But it also stimulated a changed way of relating. In some way, it completed something – and this something had a global structural consequence. Conveyed in an appropriate mode – concretely; and organized around an appropriate quality – an irritated blue feeling; my patient’s experience of attunement facilitated the emergence of properties related to whole object relating.**

Page | 4

**I suspect that as part of the composite making up my patient’s internal world, there are functional structures – that is, transiently interacting neuronal groups – primed to respond when my patient’s “blues” were echoed and transformed just enough to make it clear that the echo originated from not-him. Evidence, not only that he was not alone, but also that he was seen. It reminds me of the “dawn chorus,” the cacophony of bird calls, commonly thought to be a bird’s way to defend territory or seek a mate. But I think, also a way to listen for an echoed, slightly changed response – evidence that one is not the only member of his or her species that is present.**

**As is clear from this vignette, engagement with another’s internal world is a complex affair. While the internal world can be a relatively stable virtual space composed of memories, affective states, and integrating concepts; it is also a dynamic space sensitive to the impact of ongoing experience, which can stimulate new combinations of encoded memories, feelings, and concepts.**

**In the vignette I just shared, my intervention – with its affective and developmentally tuned-in expression – catalyzed change. Playing “Going South Blues” by the Chicago Blues Harmonica Players to a man who was dealing with covered-over childhood blues was a pitch-perfect connection to his basic but obscured affective state. He felt heard after a lengthy time of not being heard and that change had something to do with his feeling intact and being more present. His inner world changed and changed behavior followed.**

**To more clearly convey the complex composite that is one’s internal world and the potential for change that that composite offers, consider – once again – one’s inner world as a combination of functional and physical structures encoding memories, affective states of mind, and integrating concepts. The integrating concepts, more often than not, contribute to a sense of harmony.**

**They allow an individual to perceive an underlying order in the seeming chaos of reality, and to make predictions, which enhance survival and functioning.**

**But one's contemporary or after-the-fact understanding of key developmental events can be flawed, leading to conclusions about reality – intra-psychic or external – not fully in-tune with the physical world or the emotional vectors one encounters as one interacts with another.**

Page | 5

**When mind states from one's primordial past surface, often in fleeting ways in a patient's free associations and behaviors, awareness of the mind's complex dynamics can be instrumental in putting that state of mind into a developmental context. What seems nonsensical or even crazy when observed from a whole object, symbolic perspective can make perfect sense when experienced from a part-object, concrete communication point-of-view. Paying attention to non-symbolic communications that are just within our awareness can enhance understanding of another's internal world – and foster development.**

**But this is a complex undertaking because non-symbolic and symbolic communications are interspersed. There is no one available to point out a changed mode of communication and most therapists – like most individuals – prefer to stay close to the safety of what they understand.**

**While it is constructive to consider a sudden change in communicative mode as an expression of inner world dynamics and an entrée to memories linked by affect or concrete meaning – a mode of communication and a level of organization involving rules different than the rules applied to make sense of symbolic communications; things are usually not so clear-cut.**

**Here is an example:**

**Early on in treatment, a middle-aged adult described his youthful participation in sports and how injuries limited and then ended his involvement in organized athletics. He and I understood that turning to sports was a substitute – among other functions – for not-fully-present parents. But when I interpreted his injuries as punishment to ease guilt about bypassing his parents – directly applying something that I had been taught in my training – he said, "I love**

sports” and then “But I never felt understood on any level by my coaches.” I felt stymied by this. His story fit my theory. But my theory did not touch him emotionally; we were at a dead-end – out of affective touch with one another because I failed to understand his repetitive injuries as a concrete communication and not solely a consequence of guilt.

Page | 6

In this instance, I was reaching a conclusion about the meaning of my patient’s communications without considering the dynamic, complex architecture of the internal world and the different rules required when dealing with non-symbolic expression. Working with systems developed under evolutionary and developmental pressures – and the central nervous system is one such system – requires sensitivity to the different organizational rules that govern different levels of development and different modes of expression.

This pertains to “scale confusion,” where one applies laws and understandings appropriate to one scale to phenomena that are organized on another scale where those laws and understandings do not apply [Primack and Abrams, The View from the Center of the Universe, 2006]. Scale confusion artifactually simplifies our experience of a patient’s complexity. It supports a false sense of understanding by arbitrarily fitting a patient’s communication into a scheme that we are familiar with. This limits our ability to be a witness to foundational events registered in one’s internal world.

Early in the 20<sup>th</sup> century, psychoanalysts divided the mind into conscious and unconscious realms, with the goal of making the unconscious conscious. Clearly, early psychoanalysts were recognizing the presence of dynamic functions within the mind, somehow created by interactions between one’s brain and mind, and one’s experience.

But early psychoanalysts could not conceptualize how these interactions created a dynamic inner world. They had no knowledge of the detailed working of the brain. Their evolving theories of how the mind created a subjective reality were based on empiric observations with little awareness of the global dynamics underlying the construction of subjective reality. Of equal significance, early psychoanalytic theoreticians had little knowledge of the impact of evolution on the central nervous system’s functional architecture and how that

**architecture contributes to the creation of a nuanced, complex virtual reality, which we label mind and internal world.**

**We now know that evolutionary and developmental pressures affect how we process sensory registrations and construct an internal world. The central nervous system – the organ system whose activity is one's internal world – cannot go off-line to “clean out” functional sensory integrations that have become irrelevant or dysfunctional because more sophisticated integrations of sensory registrations are created. Although super-ceded, what is encoded remains active, dynamically impactful, and sensitive to stimulation.**

Page | 7

**Making our task of engagement with another's mind richer – but also more complex – the universe of the mind is unlike the physical universe. The psychological universe does not have to conform immediately to the laws of physics that more or less govern our understanding of the external world. In the psychological world, we have transitional space, to which we can assign any meaning that makes psychological sense to us – including those meanings emanating from our earliest experiences. This freedom permeates our psychological reality – including our experience of relationships and our understanding of memories – even as affects and their physiologic components ultimately ground us to physical reality.**

**With this awareness and after 130 years or so of psychoanalytic experience and general scientific progress, in-depth psychodynamic treatment has progressed from the uncovering of unconscious fantasy to a more global approach involving how the mind makes meaning – at multiple developmental levels – of diverse sensory registrations, and how the mind integrates that meaning to master complex realities.**

**A vignette from the patient who loved sports but suffered repetitive injuries illustrates work with affects and other-than-symbolic modes of communication.**

**Later in the treatment of this man, affect was more in the air and we were experiencing powerful weekend separation reactions. Now when he talked about his injuries, I said, “giving up the sports you loved was evidence of your parent's lack of interest and support. They were not there emotionally to offer their love and power as you developed and faced obstacles in life. I think our**

**weekend separations remind you of your need for another.” This was not an interpretation about desire or anger; rather it was a connecting link between contemporary experience – weekend separation reactions – and not-productively-integrated historical experiences – recurrent athletic injuries.**

Page | 8

**In his next session – the next day – he described meeting with an individual, just after our last appointment, and developing a visual symptom – a flashing spot, typical of migraine auras, which enlarged to block his image of the man he was meeting. He described the man as acting “so pissed.” I said, “the man’s anger seemed to connect directly with something in you.” I was thinking of my patient’s mind as an acutely reactive system now vulnerable because he – or it – was immersed in a new, confusing reality involving absence and injury.**

**He said, “I don’t know what to do with people like that who have a misplaced sense of entitlement and seem inappropriately mad. I did not want to take in his anger.” I commented, “so your visual symptom has something to do with his anger?” He said, “it happened within a second of seeing him. You had to not be looking to miss his anger, he was exuding it.” I said, “it sounds like you tried to fragment your perception of his anger.” He said, “I was afraid I would get up and hit him.” I said, “so, your visual change had something to do with your anger?” He said, “I had to blunt my response.” Then – suddenly – he remembered a time when his mind went blank as he was giving a speech in grammar school – and in his appointment, he stopped talking.**

**A few days later, he reported that he was [now] acting so differently that others did not recognize him. He described getting angry at a group of children playing loudly; thinking that this was a sign of health because he could now express anger. But then he felt restricted and suddenly described an image of cleaning under his toenail with tweezers. Although, at the time, I was unaware of the concept of scale confusion, it was clear that this image had to be understood as a concrete communication. He was conveying the idea that something made access to his dirt difficult, if not impossible. We were facing an obstacle to empathic access.**

**After considerable thought, and comments that came to nothing; I realized we had talked about the absence of his parent’s support, so I placed myself in the shoes of an individual who felt he lacked something. Then I was able to say, “I**



**think you were envious of the emotional freedom you saw in the children and angry at your limited freedom.” He immediately described an image of a broken glass candy holder, which I understood as evidence of access accomplished – envy, not anger was on the cutting edge.**

Page | 9

**The next day he called in ill with fever, chills, and laryngitis. Nothing felt good. He felt spacey, curled up for 6 hours, and out of conscious concern about infecting me, missed his appointment. I said – and I now realize, this was not fully accurate; “I think you are trying to protect us both from your anger.” Although he had difficulty talking because of laryngitis, he described relationships ending when he lost control of anger – something I experienced as a compliant association, not one that added new knowledge.**

**I think it was envy, not anger that he struggled with. And, this new awareness had a dis-regulating impact, resulting in psycho-physiologic symptoms that interfered with his ability to function. Cancelling his appointment protected him from further disruption and gave him space to integrate newly conscious awareness of need and envy without my immediate influence. He was protecting himself, not me.**

**As his symptoms resolved over a week or so, he described a famous boxing match in such detail that I could almost feel the punches land from a ring-side seat. He felt he was staring his opponent in the eye and was scared to death as he remembered feeling alone as a child. In response to the immediacy of his need for an empathic presence, I said, “I think you are the one engaged in a fight; a fight with your own need and dependance, but a fight that this time around, while vicious, has rules and a referee.” He said, “I have never used all my resources, all my rage; I feel like I am dealing with the unknown. It is too much. I need a watered-down version of the world.”**

**But interventions tuned into the developmental level of this man’s communications, and oriented to their primitive context, did not result in a watered-down version of the world. Just the opposite; he was presented with his world in all its complexity, and it disrupted him. A state of mind defensively organized around competition and anger was evolving to include the more global realities of need, abandonment, and envy.**

**At the end of this two-week-plus interval and feeling better, he described an image of his ankle with hundreds of thin pencil leads holding it together. Individually, each lead was not very strong but hundreds of them could withstand almost anything. At the time, I understood this as a reference to our interactions.**

Page | 10

**Over the next several months, as he slowly came to terms with need and the deficits in care that he had experienced, he dealt with what he wanted in a more direct fashion; a change consciously noted – and thus validated and firmed up – by those who knew him.**

**The problem with this vignette – as rich as it is – is that it did not happen in the way I just described it. In summarizing what transpired between us, I clarified our back-and-forth communication. What actually transpired between us was murky; a series of images momentarily conjured up in our minds in the midst of easily registered descriptions of day-to-day happenings and easily interpreted symbolic communications.**

**When my patient spoke from a more primitive perspective, describing graphic images and psycho-physiologic symptoms, we both lost clarity about what he was expressing. I was aware of this only because I could not fit his primitive experiences and the images they stimulated in my mind into my ongoing cause-and-effect paradigm. All I could do was mark the weird images that my mind produced and puzzle about them as we continued to talk.**

**Essentially, I had to wait until I developed some perspective on the internal milieu that was stimulating him and then I was able to describe something that made emotional sense of his experience and concrete communications.**

**Our ability to work this way was based on a mutual capacity to tolerate altered states of mind, which obscure the cause-and-effect schemas we rely on to make sense of our day-to-day experience. Altered states enhance our awareness of primitive modes of mentalization. In this case, our altered states facilitated the surfacing and recognition of mental images that concretely expressed early developmental states of mind.**

**Like a telescope, altered states magnify mental images derived from the cognitive and affective world of early developmental experience. With scale transitions in mind, altered states can facilitate a new understanding of childhood developmental experience and a reworking of the emotional conclusions associated with that experience.**

Page | 11

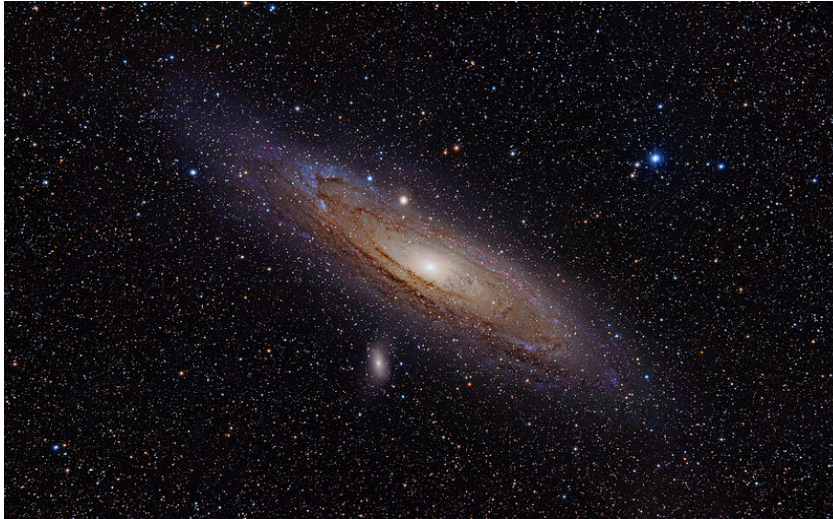
**In the appropriate context, new connections can stimulate a silent behavioral change – as in the case I first described; or provoke a sudden new understanding of one’s reality – an insight – as in the second case I described. Both – one out of awareness, the other in conscious awareness – are products of the mind’s ability to integrate varied sensory registrations – producing new ways of understanding reality. Typically, this is accompanied by newly emergent mental abilities, which require alertness – from oneself or from another – to be recognized and firmed up.**

**Treatment, from this perspective, centers around recognizing what the mind is creating as affect, transference, and feeling surface and interact anew.**

**Don’t believe you can see the past? Here is an example:**



**Seeing the night sky without a telescope.**



Seeing the night sky with a telescope.

**The Andromeda Galaxy 2,500,000 light years away, as it looked 2,500,000 years ago.**

**Not only are we seeing into the past; we are also seeing on a scale unimaginable given our day-to-day experience. We have to adjust any conclusions we reach because of the immense scale of what we are seeing – a galaxy 220,000 light years across containing at a recent estimate 1 trillion stars.**

**Back on planet Earth; my comment about his parent's emotional absence touched an organizing episode in this man's life. Consciously connecting childhood concrete expressions of damage – his recurrent athletic injuries – to his parent's emotional absence, while he was immersed in longing for and experiencing care, set off a chain of integrative processes. With multiple modes of expression stimulated, memories of powerful affective states activated, and conscious awareness of need; this man's mental system was besieged by stimulation.**

**This provoked a change from abstract concepts dominating expressiveness to physiologic sensation and concrete images intermittently surfacing as evidence of an ongoing process in the unaware unconscious.**

**The first evidence of this changed expressiveness was his visual symptom, which I reflexively conceptualized as an attempt to disavow connections with anger.**

**But this defense interpretation comingled sentient functioning – awareness, even if repressed – of anger, and defense against that awareness; with psycho-physiologic change – his visual field fragmenting. This is scale confusion. I did not account for scale transition. I applied laws and understanding appropriate to one scale, i.e., symbolic, to phenomena organized on another scale, i.e., concrete and physiologic – where those laws and understandings do not apply.**

**I made this mistake because I was oblivious to the impact of connecting my patient's athletic injuries to his parent's emotional absence, while he was actively experiencing care. What occurred was typical of a non-linear system where output cannot be predicted from input and where an incremental stimulus can provoke a global reorganization. In this instance, this man's inner reality was transformed from one dominated by abstract thought and refined feeling to one infiltrated by psycho-physiologic change and raw sensation expressed concretely through mental images.**

**Given how closely we were working together, I now understand his silence after my interpreting his physiologic state as a psychological defense as his reaction to my scale confusion. His immediate recall of a blank state of mind was a concrete expression of acute emotional isolation provoked by my mis-attunement. Interpreting on an abstract level when he was immersed in physiologic change left both of us isolated.**

**My patient's visual change – mediated by vascular changes in his brain – is his changed state of mind. It was not a defense. He also experienced changes in his affective tone – the silent surfacing of envy, and in his level of activation – his yelling at kids playing.**

**Identifying his envy stimulated a regulatory breakdown followed by a recognition of powerful internal conflict expressed by his image of a boxing match – all culminating in an image of a damaged ankle repaired by hundreds of pencil leads.**

**It is as if this man's new awareness of abandonment, injury, envy, and rage was autonomously percolating through the physical and functional structures that embodied his life experience, provoking somatic dysregulation, an intense but silent conflict, and mending – all occurring at primordial levels of the mind.**

Unlike the first patient I described who quietly found his place in the world once he felt heard, this second man's awareness provoked commotion. Now-conscious experiences of need, envy, anger, and fulfillment perturbed his sense of place and eventuated in some degree of unsafety. Long-standing organizations of reality encoded at various developmental levels were stimulated, modified, and ultimately integrated, altering his inner world.

With the structure offered by frequent appointments and the firm psychological holding he experienced, we were able to make sense of the occasional signposts stimulated by the underlying, mostly silent, integrating process he was "experiencing." This was crucial to keeping that process on its most constructive path. The image of hundreds of pencil leads repairing his broken ankle seems most accurately understood as a reference to hundreds of silent integrations – an allusion to his unaware unconscious, the mostly silent process of mending, and his awareness of "mendedness."

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With the goal of fostering a patient's development; psychoanalytic treatment is clearly a catalyst for change. But the definition of development is not agreed on. Is development an opportunity to achieve an inner state of peace through the application of theory, allowing individuals to feel calm in an intellectually conceptualized internal environment that is not fully integrated or regulated emotionally? Or, is development an opportunity to achieve change at a more fundamental level by responding to activated primitive organizational levels and non-symbolic modes of communication allowing individuals to re-contextualize – and therefore re-regulate – primitive affective organizational experience?

There is a vast literature focused on pre-symbolic mental activity dating from the earliest days of psychoanalytic thinking to the present. Articles written early in the development of analytic thinking tend to apply overarching theory to make sense of primitive communications and behaviors, but with little use made by the analyst of the analyst's own primitivity. Contemporary articles tend to make direct use of the analyst's primitive responses to the patient's primitivity and use these responses as a guide to the developmental milieu the patient has to contend with. The vignettes I described seem to fit in this category.

**But all of this literature overlooks the extreme vulnerability patients and therapists experience when deeply involved in transference and changes in state of mind. It is easy to get off track by not recognizing non-linear changes, as I did when I was oblivious to the degree of multi-level stimulation my patient was experiencing. It is also easy to misunderstand physiologic change – a physical indicator of one’s state of mind – interpreting such changes as part of the symbolic universe and then misunderstanding a patient’s association as confirmatory when, in fact, it is a concrete expression of the patient’s plight.**

Page | 15

**This is what happened when I interpreted my patient’s fragmenting vision as a defense against anger. In reaction, my patient remembered a moment of emotional isolation and then stopped talking. He was telling me as directly as he could – given the state of mind he was in – that my misunderstanding left him isolated and then, by his silence, he left me isolated – a concrete expression of his plight.**

**Clearly, in-depth interaction with another’s inner world is a complex undertaking. But if treatment is to result in the kind of re-regulation and revised experiencing of early-in-development affective states that then reverberate throughout a patient’s encoded mental experience, one must engage the inner world and abide by its rules. This requires a therapist to work at multiple developmental levels, while tolerating altered states of mind, and staying alert to scale transitions.**

**My sense is that the therapist’s ability to work this way has more prognostic significance than the patient’s psychodynamic and developmental situation.**

**Thank you for listening.**