

## What makes a treatment "neuropsychanalytic?"

Brian Johnson M.D.

Having psychoanalyzed patients with addiction for ¼ century, I grow more confused by the day regarding what exactly I am doing. Is my treatment really psychoanalysis, or has it mutated by virtue of comfort with my own psychopathology into something that is idiosyncratic, self-indulgent, and entirely ungeneralizable? I do know that much of my thinking, and that of my patients, is unconscious. I know that as innocently and supportively I begin a psychoanalysis, by some time in the middle we begin to have intense transference, enactments, and I feel angry and frustrated as the hostile relationship the patient initially had with their addiction begins to be supplanted by sobriety and the hostility is redirected towards me (Johnson 1992). So if our definition of psychoanalysis can be that it includes unconscious thinking and transference, then however deviant my work has become, it will still fall under this broad definition.

Neuropsychanalysis concerns the interrelationship between 21<sup>st</sup> century neuroscience and contemporary psychoanalysis. While neuroscientists are currently investigating many phenomena that were originally described by psychoanalysts, psychoanalysts are currently employing 21<sup>st</sup> century neuroscience concepts in our clinical work (Pally 2007). To my knowledge, no one has articulated exactly what makes a treatment "neuropsychanalytic," and described how a clinical neuropsychanalytic approach would be different from a more standard psychoanalytic treatment. However, Solms and Kaplan-Solms (2000) essentially described the approach that I will discuss at more length, "The aim of a depth neuropsychology is not to replace our psychic model of the mind with a physical one. Rather, our aim is to supplement the traditional viewpoints of metapsychology with a new, *"physical" point of view*. The aim is to gain an additional perspective on something that can never be known directly."

For purposes of illustration, I have chosen a particular kind of case; a patient with cocaine addiction who I saw on the couch 5 days per week. The reason to choose cocaine addiction is that the neuroscience is so well established. By virtue of cocaine's ability to disable the dopamine reuptake transporter protein there is a sensitization of the SEEKING system. The result is constant preoccupation with obtaining and using cocaine (Robinson & Berridge 1993). If we know the pathophysiology of the illness, it should be possible to interpret the psychological manifestations of this known neurological impairment.

Panksepp has developed two central concepts that are relevant for my explication. A "special" concept was his identification in 1981 (Panksepp 1981) of what he later called the SEEKING system; this is an updated version of Freud's

drive system (see the Shevrin quote below). Animals such as us become sensitized to environmental incentives. The need for the incentive is tuned by hypothalamic inputs onto the drive pathway as it runs rostral from the midbrain to the nucleus accumbens. Natural incentives include food, water, sex, and nurturance (Panksepp 1998, Depue & Morrone-Strupinski 2005). Addictive drugs upregulate dopamine in this system by mostly known mechanisms (Nestler 2005). As noted above, cocaine causes a storm of dopamine neurotransmission from the ventral tegmental area of the midbrain to the nucleus accumbens shell of the forebrain by paralyzing the functioning of the dopamine reuptake transporter protein. The result is constant SEEKING of cocaine. Hence, persons who become "physically" (rather than "psychologically") addicted to drugs struggle with having added a biological appetite for their drug to their natural appetites (Johnson 2003).

Shevrin (2003) discussed the congruence of Panksepp's SEEKING system and Freud's drive system. He said in part,

"The classical view of motivation embodied in Freud's drive theory is supported independently by substantial neuroscience evidence. This independent evidence based on non-clinical methods demonstrates that two key presuppositions of clinical motivation theory, *motive pressure* and *functional equivalence*, have convergent validity. A clinical theory of motivation based on these assumptions acquires greater cogency. Based on this convergence, a theory of agency is presented as well as implications for our understanding of the primary process. In effect, I am proposing that motivation in all its forms, from drives to the so-called tamed motives, are the engines of agency, or better still, they *are* what we mean by agency. The word itself, *motive*, derives from the Latin *movere*, to move or be in motion, as do most of our own words denoting activity. The first motives, whether conceived in developmental or evolutionary terms, were just that - motions, modes of action, simply moving about in the world. As active agents people and animals adaptively learn and prosper. But there is also a pathology of agency occurring when agency is hyperexcited and fixations in psychoanalytic terms, or sensitization of the NAS DA circuits in neuroscience terms, form and result in neurotic or psychotic primary process replacements of reality. Finally, the neuroscience evidence provides a neurophysiological and neuroanatomical grounding of drives."

So since drives are a manifestation of this subcortical pathway, in the psychoanalysis of a patient with a newly-created drive, the result of drug exposure, we should be alert to the presence of drive derivatives. The psychoanalyst would want to interpret evidence that the drive is producing thinking and behaviors in a way that the patient may not be conscious. The concept that unconscious factors can be interpreted with amelioration of an

illness is what differentiates psychoanalytic from cognitive-behavioral treatments (Beck 2005).

Panksepp's general concept of basic biological command systems for emotions is that there are seven.

- SEEKING is the overarching system that energizes everything; it makes animals interested in exploring and excited when rewards may be near.
- RAGE is activated by frustrating the exploration motivated by the SEEKING system; it energizes attack.
- FEAR causes signal anxiety indicating the presence of possible pain or destruction.
- PANIC is a powerful emotional system that is provoked by separation. Emotional pain and eventually depression (Panksepp & Watt – submitted) are produced by signals from this system.
- CARE and LUST are social systems that are mediated by interactions between the drive system and hormonal systems.
- PLAY is a system aroused by glutamate, acetylcholine and opioids and diminished by serotonin, norepinephrine and GABA that is built in to social animals to facilitate exploration of affiliative group organization.

Since there is a constant interplay with one and another of these biological command systems, upregulating the SEEKING system and tuning it to cocaine is likely to skew the balance with other systems. We know that rat mothers need their drive system, and they are strongly influenced by parturition-induced oxytocin release, in order to form an attachment to their pups. We know that postpartum rat mothers prefer their pups to cocaine at day 8, and prefer cocaine to their pups at day 16 (Insel 2003). Why do some human mothers prefer cocaine to their children? We would want to be aware of the biology of cocaine addiction in providing treatment to mothers with cocaine addiction.

One person or two person psychology? Do persons have drives that are object-seeking as Freud asserted, or are humans primarily object-seeking as Fairburn asserted? Idealist arguments, or "In MY clinical experience" assertions, give way to using a biological basis for our understanding of patients. The drive system is installed at birth, it is in one person, but it is studded with opiate receptors that make it object-seeking because human contact provokes endorphin release/pleasure. The CARE system explains why mothers before birth wonder how they will ever relate to the born fetus, and yet why they can feel flooded with love for their child after a flood of parturition-induced oxytocin. The PANIC system gives individuals a severe negative feedback of anxiety when their behavior provokes potential distancing from individuals they depend on. (All above emotional biology explained in detail in Panksepp 1998.) Since we can parse addictive illness into physical and psychological components (Johnson 2003), we can make interpretations that relate to each aspect. The physical

component of cocaine addiction has to do with the upregulation of dopamine neurotransmission in the drive system. The advantage of using neuroscience as the basic science of psychoanalysis (Shevrin 2006) is that the biology informs and constrains the construction of models that guide interventions with patients.

Yet we are aware that compulsive addictive behaviors, whether they involve direct alteration of the drive system, or have to do with compulsive gambling, sex or spending, solve many human problems (Dodes 1996, Khantzian 1999). Treating the psychological aspect of addiction requires that the analyst be interpreting manifestations of forces that provoke addictive solutions; solutions that may be gratifying. It may be that, for example, that an addictive behavior could be used to punish someone on whom one depends but cannot bear to be angry at consciously (Dodes 2002).

By now the use of psychoanalytic therapy for addiction has been well described by a number of psychoanalysts (Wurmser 1974, Mann 2002, Dodes 2003), although it is generally NOT accepted in the broader community of addiction specialists (Miller & Wilbourne 2002). However, no one has ever spelled out how the neuroscience of addiction would be integrated into a psychoanalytic treatment. A Medline search of "neuropsychanalytic therapy" turned up only one contribution regarding this modality (Johnson 2001), a report of a sequence of drug dreams during a patient's psychoanalysis. Therefore, the following treatment is reported as an example of the use of neuropsychanalytic therapy.

### Case Report

A 40 year old married mother of two young girls was referred during her psychotherapy with another practitioner because her husband's psychoanalyst felt her treatment was not optimal in the context that she was injecting cocaine.

The patient had begun sniffing cocaine with a boyfriend at age 15. By age 20 she had to drop out of college because of drug use. She began treatment with a social worker. He recommended she go to Alcoholics Anonymous. The patient was sober from ages 21 – 24. She returned to college and was an outstanding student until she met a boyfriend that used cocaine. He injected her with heroin, and she realized that drugs should be used intravenously, but cocaine was her drug of choice.

At age 26 she saw a hypnotist for cigarette smoking. Somehow his suggestion that she stop smoking worked for cocaine. The patient continued to drink and smoke cigarettes and marijuana. Two weeks after a DUI arrest she met her future husband and decided that he was just the kind of straight arrow

to bring her under control. She was married at 34 and had her children soon after. She found life stressful and her drinking accelerated. She spoke fondly of a birthday dinner at an elegant restaurant where the martinis were huge and beautiful, and that her husband found her a lot of fun when she was drinking. One year before she saw me she returned to cocaine use. She began affairs that centered around the use of cocaine – provided by the lovers. Eventually a boyfriend called her husband, told her that she was in trouble, and she attended inpatient treatment at Hazelden in Center City, Minnesota. She relapsed on her return to Boston and went back for another treatment; two months total. The patient returned to psychotherapy with her social worker, who was also now doing her couples therapy.

The husband saw tracks on her arms because the cocaine use was continuing. He threatened emergency custody of the children. This was the context of the referral by her husband's psychoanalyst.

The psychiatric history started with a hospitalization at age 20 for cutting. She also burned herself. She had been treated with fluoxetine, trazodone, and lithium. Methylphenidate had been prescribed for ADHD that was often in evidence because of motor hyperactivity, even while lying on my couch. At the time of her referral she was on bupropion 300, venlafaxine 150, clonazepam 0.5 prn and dexamethylphenidate time-released 20mg.

Family history was significant for a father with alcohol and drug addiction, and a maternal grandfather with depression.

Social history: Parents were divorced when the patient was 1. She and her two older sisters were sexually abused by the father during visitation. Her stepfather was abusive, emotionally explosive and drank alcoholically until he stopped drinking without treatment several years previously. She felt that her two younger half-sisters were favored by both parents.

Mental status was a casually dressed, articulate woman. Her Hamilton Rating Scale for Depression score was 12, she had good insight and judgment. A careful cognitive examination showed no impairment. I told the patient to taper off venlafaxine, increase her bupropion to 450mg/day and that dexamethylphenidate and clonazepam were not to be used because they were potentially addictive. She took 25 mg of quetiapine for sleep at times.

### Neuropsychanalytic Treatment

The patient was seen four times and then hospitalized because she could not stop using cocaine intravenously. The inpatient psychiatrist felt that the

patient had been suicidal in her use of cocaine. She returned to me eight days sober.

I suggested to the social worker that he turn individual treatment over to me, and continue as the couples therapist. He ignored my input. Over the course of the neuropsychanalytic treatment reported, I would hear about both individual and couples hours with the social worker.

The patient came six more times, then was put on the couch; initially four times per week, but the frequency was soon increased to a baseline of five times per week with frequent weekend additional hours when the risk of relapse to cocaine use appeared especially high. This report concerns the first 60 hours of neuropsychanalytic treatment that occurred over a four month period that included interruptions of 19 days when I took a vacation in July after six couch hours, and 17 days when the patient took an August vacation after 3 more hours. The patient was abstinent from cocaine from the time of her hospitalization until her return from her vacation; six weeks. She then struggled with intravenous use for a month and began a sustained remission of all drug use with the exception of cigarettes. The report below ends with the achievement of 30 days sober. A further disruption of the treatment was caused by my announcement that I would be leaving town to take an academic position. This occurred soon after the last time (in this report) that she last used cocaine. I gave all my patients six months to terminate their treatment before I left.

My experience of working with this patient is that she was intelligent, sincere, and did her absolute best to work with me. She came, she associated well, and there was a warm relationship. She really wanted my help. At the same time she was dishonest with me; mainly by leaving out associations regarding her intentions to use cocaine. She found it impossible to use cocaine and participate fully in the psychoanalytic process. Therefore, when she felt irreversibly compelled to inject cocaine, she wouldn't tell me.

## Method

I take verbatim notes of all psychoanalytic hours. At times I am unable to keep up with everything that is said when I am talking, so I summarize those parts. The patient lied to me about injecting cocaine in a way that will be described below, and sat up for nine hours with the thought that it would be harder to lie to me if she was looking me in the face. I wrote a summary of the content of these hours, and included it in the study. When this issue of lying had been sufficiently analyzed, she was able to lie down again, and my verbatim notes resumed.

I created a rating system regarding all of my communications, and read through the first 60 hours of notes. I have learned that saying something conventional is less input than saying nothing, so if the patient says, "How are you?," I answer "Fine." This type of verbalization was not counted. I included a category "chatting" in my rating system, looking for times I initiated something that was not an interpretation, but I could not find any examples of this. This left three kinds of interpretations; neuropsychanalytic, psychoanalytic and culturally competent. I found that I had to add a fourth category, medication. During the treatment I there was an uncomfortable venlafaxine discontinuation syndrome, discussions of dexamethylphenidate and clonazepam that the patient wanted me to prescribe, a trial of baclofen for cocaine craving, and I encouraged her to be compliant with all 450 mg of bupropion.

My definition of a "neuropsychanalytic" interpretation is a discussion of impingements on the patients thinking that clearly had to do with known biological factors. These included drug dreams, craving, justifications of using clearly influenced by craving such as, "No one will know," and telling her that the peak period of cocaine craving was two weeks until 3 months of abstinence (writing this report, I cannot find the reference for this item).

A "psychoanalytic" interpretation includes Kernberg's four basic interventions; clarification, confrontation, defense interpretation and transference interpretation. Poland's (2000) concept of "witnessing" was a central feature of the treatment, and was evident in long periods of silence during which the patient described amazing experiences such as surfing the internet to meet men with whom to use cocaine, the ferocious frustration of craving cocaine and not using, or the adventure of attending 12 Step meetings.

Working with addicted patients requires knowledge of the drug culture and the recovery culture. Without this knowledge, one cannot speak the language of the patient. Many of my interventions, statements that Kernberg might term clarifications, were also statements about the reality of the illness of addiction within the context of certain behaviors that are necessary for recovery.

"Our operating definition of culture is the shared values, norms, traditions, customs, arts, history, folklore, and institutions of a group of people. Within this perspective and from this definition cultural competence is a set of academic and interpersonal skills that allow individuals to increase their understanding and appreciation of cultural difference and similarities within, among and between groups. This requires a willingness and ability to draw on community-based values, traditions and customs and to work with knowledgeable persons of and from the community in developing focused interventions, communications, and other supports." (DHHS 1992)

Codependence is a form of addiction that has three cardinal features (Johnson 1998):

- Fear of abandonment, that the addicted partner will leave, is assuaged by assuming a role an irreplaceable helper of a addicted person
- Low self-esteem is improved with the fantasy that only the codependent can understand and manage difficulties for the addicted person
- The codependent person loses a sense of boundaries and believes that their advice will allow the addicted person to function well despite using drugs.

A central “culturally competent” interpretation regarded her husband’s codependence. We could see together that he became more anxious as her sobriety lengthened. He picked a fight about feeling lonely and abandoned when she was about to go off to Alcoholics Anonymous and made her late. He was so obnoxious when her sponsor stopped over for a visit that the sponsor became incensed, insisted that the patient get an immediate divorce – poor advice when the focus needed to be on sobriety, and left abruptly. The context was that the husband had stopped his treatment with his psychoanalyst. By assiduously hewing to the concept that she was responsible for her recovery, and that her husband’s distress was his to address, the husband returned to his addiction psychoanalyst, and the husband’s behavior moderated.

Another culturally competent focus was that there was nothing more important than achieving her first year sober, and that she should be polite to her husband while she devoted all her energy to this goal. The social worker was urging divorce while she was using cocaine, and I told her that I disagreed with this advice.

### Informed Consent

The patient read my first draft of this paper and made requests for further changes in the distortions I had made regarding biographical information. Our understanding together was that publishing this paper was important, but no one should be able to read the paper and identify who it was really about.



## Data

### Neuropsychanalytic interventions (28 in 60 hours)

- 1 Alcohol/cocaine dream reflects craving
- 2 Craving is distressing
- 5 Hydrocodone prescribed for an accident may provoke craving
- 6 "I lose my train of thought in mid-sentence" may be cocaine-induced cognitive dysfunction. Persistent tinnitus probably due to cocaine
- 10 Quitting cigarettes may reduce craving for cocaine by decreasing activity in the craving pathway
- 14 Shame of using interpreted as unwarranted when struggling with a neurological illness with craving as the main manifestation
- 15 Feeling her choices were "alive and destructive" versus "boring and normal" interpreted as due to downregulation of dopaminergic pathways
- 20 Cocaine drug dream interpreted as a warning about craving
- 21 When the patient saw white specs on my rug, which I have not seen before or since (they really were there, nearly invisible) this was interpreted as a sign that she was searching her environment for cocaine (orbitofrontal/frontal eye fields biased)
- 24 Dream of eating and drinking alcohol a manifestation of craving
- 25 When her mother shamed her by comparing her to a friend struggling with ovarian cancer who had "no choice" about her illness, I interpreted that cocaine addiction was just as biological as cancer
- 26 I interpreted her statement that sex with men for cocaine was a "sick turn on" reflected the excitement of her seeking system in searching out her drug, and that men were a drug cue
- 28 I noticed that cigarettes and marijuana were linked in her associations to affairs; again men as a drug cue
- 30 I clarified the difference between anger and frustration; that she wasn't an "angry" person, she was frustrated to be craving so intensely and not using
- 32 I suggested her persistent headache might be due to recent cocaine use
- 33 Her statement, "I want to use to beat cocaine to the punch" (by using) was a reflection of craving
- 34 Craving is a lifelong problem
- 36 I noticed her excitement as she described the flag of blood in the syringe just before injecting, and the frantic search for the phone number of a man who gave her cocaine for sex, as manifestations of activity in her SEEKING system
- 40 As she told me of using cocaine during a four day period when I was away, my only interpretation was that she had been unable to withstand the intensity of her craving
- 46 I responded to her request for dexamethylphenidate by replying that it might help her brain function better as cocaine would help her brain function

better, but that our focus was on letting her brain readjust to functioning without stimulants

49 Drug dream about marijuana reflects craving

51 I responded to her complaint about being emotionally labile, "You are 17 days sober and your brain is a wreck"

53 Persistent headache attributed to cocaine

55 Intense craving related to 25 days sober (dopamine regenerated)

58 I responded to "Why am I crying?" that she was so frustrated to be craving and not using. Later she and I remarked on her thought about how beautiful her veins looked; a drug cue

59 Craving for affairs linked to craving for cocaine

60 Dream of husband injecting her with cocaine interpreted both as a manifestation of her craving and of her recognition that her husband also longs for her to return to using because of his codependence

## Psychoanalytic Interpretations (53 in 60 hours)

- 1 Boundaries: talk about yourself, not your husband
- 2 Boundaries: keep the focus on you, not husband  
Transference: has to turn around and look at me while discussing standing up to abusive stepfather
- 3 Boundaries: keep the focus on you, not husband
- 4 Blames self for feeling sad, "I'm feeling sorry for myself" – I asked, "Who said that about you?"
- 5 Clarification of plans for sobriety
- 6 "It is hard to buy into AA the second time" – I noticed the use of the passive voice and suggested she may not WANT to buy in
- 7 Boundaries: keep the focus on you, not husband  
Fear that I will abandon her if she uses in the context that her social worker is threatening this. I tell her that I am here to treat her because she is sick; regardless of the course of her illness
- 8 Husband's passive-aggressive behavior is difficult to bear, but she must keep the focus on herself
- 9 Boundaries: keep the focus on you, not husband
- 10 Boundaries: keep the focus on you; even though husband was so rude to your sponsor that she left your house
- 11 Lateness is a communication  
Boundaries: keep the focus on yourself, not husband
- 12 Transference that I will judge her seen as judgments she has introjected
- 13 Let's understand why you were dishonest with me (she had been planning cocaine use and not told me; for example, she stored clean urine in preparation so she could pass her urine drug screen)
- 14 Silence interpreted as screening her associations about planning to use cocaine. Her statement that not telling me about how she obtains the drug (through men) is "protecting my girls" is really protecting her intent to use cocaine
- 15 Reluctance to come to analytic hours is interpreted as, I am disrupting her cocaine use (she was on a week-long run)
- 16 Boundaries: keep the focus on you, not husband
- 17 Boundaries: keep the focus on you, not husband
- 18 You feel awful because things ARE awful
- 19 Your fear that "people" will know about your cocaine use is a projection
- 20 Used and lied to me, what that might be about?
- 21 Used and lied to me, what that might be about? Use of marijuana, alcohol and cocaine as a solution to difficulties with husband
- 22 Fantasy that she will use until she has lost all her supports and then she can REALLY get sober is interpreted as a conflict between the wish to use and the fact that losing her supports will make it harder to ever come back

23 Chronic lateness is a communication. Finding men who give her cocaine for sex is a form of prostitution (not a really cool, bad thing only she can do – that is an idealized fantasy)

24 She behaves in a way to get her husband to say, “Step over this line and there will be consequences” as a goad to her using

25 Mother’s comparison of her to a friend with ovarian cancer, “You can choose to be sick, she can’t” is seen as an example of devaluation by her mother

26 Late because she drove in the wrong direction is interpreted as a wish to be caught doing the wrong thing. Her work in psychoanalysis provides her with a place to be enterprising and successful

27 Associations about being late for her hour are linked with her associations about being angry at a man she had an affair with who was controlling

29 Conflict about being honest with me versus wish to use cocaine and “get away” with using; in the context that she used cocaine

30 Clarification of her feelings of frustration, not anger, when craving and not using

31 Boundaries: You see me, I take care of you. Your husband sees his analyst, who takes care of him

32 Boundaries: Focus on you, not husband  
Conflict between wish to use and spiritual value to be good to husband and children

33 Fear of being abandoned for using contrasted with the unconditional love of the psychoanalyst

34 We discuss her wish to be “cool” – driven by internal values rather than outside influences

35 She offers me a freshly-picked apple, which I decline. Later there is a discussion of honesty between us. She calls a man who gave her cocaine, “a nice guy,” and we discuss what kind of man offers a drug that could kill her or cost her custody of her children, rather than just money, for sex

36 Idealization of drug use as a defense against her fear of it

37 As patient is more confident in her sobriety, husband has more anxiety

38 Boundaries with husband

39 Boundaries with husband, dream about mother’s lovers, who called on the children’s phone line when she was a teenager; mother involved her in affairs

42 We had been discussing her final cocaine use of that run, which came before hour 40 and her dishonesty with me. A key transference became apparent to us; she has been trying to get me to draw a line that she would jump over. We had already decided that there would be no more hospitalization for cocaine use, that the battle was located between us. We saw that her mother was dishonest with her brutal stepfather, that she (mother) defied him, and taught the patient disregard for authority as illegitimate. The patient set up the same dynamic with her husband, and now her older daughter is showing complete disregard for authority and behaving in a defiant way. We saw that she had been trying to put me in the stepfather role, and that I am not

interested. With this transference interpreted our alliance to work together against her craving for cocaine became powerful in a way that it had not been

44 Wish to defy me/stepfather/husband

45 Boundaries with husband

47 When I asked for associations to her sitting up in order to counteract her urge to lie to me, she responded with gut-wrenching stories of emotional abuse by stepfather

48 Boundaries with husband

49 Conflict between wish to be honest and introjection of mother's dishonesty

50 Boundaries: Difficulty talking about own feelings rather than what disruptive members of AA; not "you shouldn't do that" but rather, "That bothers me"

53 Boundaries with husband

54 Boundaries with me; a wish to help me out

55 Intense cravings combined with associations (fantasies) about daughter dying interpreted as fear she will die from using cocaine (displacement)

Boundaries with husband who complained vociferously that he was lonely when she was at 12 Step meetings; interpreted that they both would feel less anxious if she used

56 Boundaries with husband; his rages interpreted as controlling rather than expressions of feeling

58 Boundaries with husband; his support is to let you get to 12 Step meetings

59 Moral approach to affairs versus the insight that men are just drug cues

60 Dream of husband injecting her with cocaine sums up many of the above interpretations about boundaries with husband, who wants what

( In 25/60 hours interpretations relate to boundaries with husband.)

A key transference interpretation that occurred several hours after 60 was that my quiet listening was replicating her experience that she had no sense of self because neither mother nor stepfather had intense interactions unless she had done something wrong; their interventions were responses to misbehavior. This was contrasted with the current relationship where I was fascinated by the direction her life and her recovery would take, but that I had to give her space by quietly listening rather than by being controlling. My occasional responses, especially clarifications, were ways that she would develop an inner sense of self.

## Culturally Competent Interpretations (36 in 60 hours)

- 2 Clarification of what "sober" means; absolutely no mood-altering chemicals, therefore she has only been sober ages 21 – 24
- 4 Overslept for an hour because she was up late helping a friend in recovery, "You have to put your own recovery first."
- 5 I explained the concept of a sober diet as she thinks she may have to use cocaine to slim down
- 6 One day at a time a response to her projecting a fear of relapse after more than a year sober (this is also an interpretation of displacement)
- 8 Drug test positive after she used Fioricet, contains butabarbital
- 11 Husband was reported to be behaving as if he's codependent
- 12 You must focus on sobriety for your first year, then worry about whether you will stay married
- 13 Call me if you intend to use, don't use no matter what
- 14 Stay sober today
- There is no shame in having an addiction, it is just an illness. The shame is in using when you have an addiction
- 15 In response to her question, "Are we getting anywhere?" I interpreted that both her addiction and her recovery were progressing, she would get better or there would be a catastrophe. She responded that she used cocaine the day prior to that hour
- 16 In the middle of a week-long run I suggested hospitalization, she responded, maybe day treatment. I asked what her sponsor said. "Honey, I love you. I don't want you to die." I responded that she had a contribution to make for me, her husband, children, and many others (had a spiritual contribution to make)
- 17 In response to her association, "Every time I close my eyes I see white powder" I suggested a safety plan that included AA daily
- 18 I suggested she needed a place in her house to be alone in response to her associations that her codependent husband could not tolerate being without her
- 20 In response to her association that she used I recommend hospitalization and she answered she would go to meetings daily and speak to her sponsor
- 21 We discussed how drinking and smoking marijuana allowed her to tune out her husband and how every addicted person wants to use and also have a nice life
- 22 We discussed her fantasy of using until she had lost everything so that then she could REALLY get sober - in the context of the poor prognosis for skid-row progression of addiction
- 24 Spend the first year only focused on sobriety
- 25 The concept of higher power is that someone can be there for you
- 26 Urges to find a supplier for sex/cocaine discussed by "thinking the drink through" method; if she starts it, where will it end up?

- 27 Conflict between using her husband to have children and then divorcing him and living a spiritual life
- 28 Need to focus on only sobriety for the first year
- 29 Men would like to give you cocaine and take your children. If you are not honest, you won't make it
- 30 Continued efforts at sobriety are a very positive response to recent using
- 31 Peak of craving is 2 – 12 weeks after using
- 33 Fear of being abandoned for using responded to with the concept of unconditional love
- 34 In order to achieve one year sober, will have to become a different person
- 36 Where could I find an AWOL group? Call AA Central Service
- 37 Husband seems codependent, more anxious as she is more competent at sobriety
- 46 Use of clonazepam and dexamethylphenidate means you are not sober
- 50 Need for supports for sobriety, including her sponsor
- 52 Husband picked a fight specifically to prevent her from getting to AA
- 54 I differentiate craving cocaine and "entertaining the thought" by planning use
- 55 Husband's complaint, "I am lonely when you are at AA meetings" understood as a manifestation of his problem with codependence
- 57 We discuss using male supporters in NA/AA as excellent help versus using them for sex – at which time they would be drug cues. We discuss that AA/NA are cults (Galanter 1999); cults for health with the culturally aberrant idea that you don't use drugs or drink. We discussed husband's pleasure in buying her drinks and his feeling how much fun she is drunk
- 58 We discussed how her guilt over not doing household chores is not warranted when she is so successful in recovery, her priority
- 59 Wish to have affairs contrasted with working on sexual relationship with husband

## Medication Interventions (14 in 60 hours)

- 2 Need to take bupropion and avoid diphenhydramine (sedating)
- 4 Very depressed, urged to be compliant with both doses of bupropion
- 6 Need to be compliant with bupropion
- 8 Management of venlafaxine discontinuation syndrome
- 12 Need to be compliant with bupropion
- 15 My response to complaints of persistent depression is that we cannot differentiate depression caused by use of cocaine from lack of efficacy of bupropion
- 16 In the middle of a run on cocaine, I give her an abstract of a case series on the use of baclofen and amantadine for cocaine craving, and a prescription for both
- 19 Need to be compliant with bupropion
- 21 Depression is probably due to cocaine use, not lack of efficacy of bupropion
- 22 Nausea and vomiting side effects of baclofen
- 23 Flu-like feeling may be due to baclofen
- 36 Final trial of baclofen, it definitely caused nausea, dizziness and vomiting
- 51 Venlafaxine discontinuation syndrome discussed
- 53 Stop the venlafaxine, endure the rest of the discontinuation without it



## Discussion

There is nothing remarkable or special about this treatment. It follows the ordinary psychoanalytic approach of having the patient free associate, and the analyst interpret. Comments about medication are required in the context that the patient is very ill, and medications are part of the effort to facilitate her being sober. I have used the term "cultural competence" to reflect knowledge of the social context of the illness – especially the availability of wonderful 12 Step support groups for people with addiction, and the phenomenon of codependence.

A "neuropsychanalytic" approach means that the neurobiology of the patient is taken into account in the interpretations made. Of course, this is nothing but what Freud, the neuroscience researcher, did in his work with patients using his "psychology for neurologists." Freud tried to convey his unique sensitivity to the way drives influence thinking. He did not have the 21<sup>st</sup> century knowledge to explain that one must observe "drive derivatives" because drives are a manifestation of dopaminergic activity in the mostly subcortical ventral tegmental / nucleus accumbens shell / frontal, amygdalar, cingulate gyrus, hippocampal SEEKING system (Panksepp 1998). But he knew that the dream was a drive manifestation that started with a wish and that it both disguised and told the truth about neural activity as read by consciousness. Saying that one is a "neuropsychanalyst" is a little like a psychiatrist claiming to be a "psychopharmacologist." All psychiatrists should be familiar with psychotropic medications, and all psychoanalysts should continue Freud's project for a scientific psychology.

There is no need to pose a neuropsychanalytic approach to patients in opposition to any other psychoanalytic approach. Pine (2006) has illustrated how each particular "psychology" of psychoanalysis is used by the practitioner according to the patient and the particular situation of the moment. Thus the neuropsychanalytic approach to treatment takes its place along with relational, self-psychology, ego psychology, etc. approaches.

One could read many of my interventions as supportive, informative, psychoeducational, cognitive, motivational, advisory or reductionistic. I would respond with an extension of Ablon and Jones (1998) comparison of cognitive-behavioral and psychoanalytic treatments; based on Q-sort descriptions of each treatment by experts in their disciplines. Psychoanalysts use many cognitive-behavioral interventions, but cognitive-behavioral therapists do not make psychoanalytic interventions. In treating a patient who could have been dead the next time she injected cocaine, I certainly made interpretations of unconscious thinking and behavior in the context that a reasonable response to craving was not only to speak to me, but also to be sure to go to Alcoholics

Anonymous and speak to her sponsor. But my model of amelioration of her illness was that while she had to be alive to continue her psychoanalysis, the final outcome of her treatment depended on her becoming conscious of the forces driving her. Similarly, I may have taken a position of medical authority, that I knew that cocaine exposure created craving, drug dreams and skewed her natural motivational systems; but I had no illusions that my knowledge or authority would control her behaviors. In fact, I would view an opinion that medical expertise can affect the outcome of a psychoanalysis as a codependent countertransference.

In terms of differentiating this approach from others, I will use Kernberg's (2007) description of his psychoanalytic treatment of a similar patient using a non-neuropsychanalytic approach.

"In patients who suffer from these conditions (alcohol and drug abuse and dependency), the direct effect of the addiction has to be differentiated from its dynamic function. In the context of such predominant and extreme self-aggression, that function may be a determined commitment to self-destruction that well deserves the name *death drive*. For patients with narcissistic pathology in whom the addiction is self-perpetuating by the physiology of drug dependence, detoxification and rehabilitation in the early stages of psychotherapeutic treatment may permit the psychoanalytic psychotherapy to proceed...Sometimes addictions serve to rationalize failures in work or a profession that might otherwise threaten the patient's grandiosity..."

One can see that the neuropsychanalytic approach DOES NOT differentiate the direct effects of the addiction from its dynamic function. The direct effect of the addiction CONTRIBUTES TO its dynamic function. For example, my patient's wish to have affairs was not interpreted as having the men shore up her narcissism; the men were interpreted as giving drug effect – desired because they were drug cues. Her wish to have affairs was a drive-derivative; the drive to use produced by blockade by cocaine of the dopamine reuptake transporter protein in the ventral tegmental dopaminergic seeking pathway, not the innate drive for sex that of course is initiated by the same neural pathway. The self-destructive nature of injecting cocaine WAS NOT interpreted as a manifestation of the death drive. It was interpreted as a conflict between her biological drive to use cocaine and her insight that it was destructive to her; harm that she very much wanted to prevent. We acknowledged that her extreme, biologically-based craving could distort her thinking – denial – so that she could rationalize (a defense) her use with explanations like "no one will know."

The initial treatment at Hazelden was not regarded as a "preliminary" treatment that permitted the neuropsychanalytic to proceed. It was regarded

as helpful, but limited, because the focus of cognitive-behavioral treatments is limited to conscious material. We needed to uncover the unconscious determinants of my patient's behavior in order for her to have a chance at sobriety.

And my patient's failures in life were not understood as failures rationalized by addiction, they were understood as a direct effect of her failure to attain sobriety, as unfortunate consequences of her continuing illness with addiction. In all these neuropsychanalytic conceptualizations; rather than shameful moral/character problems as the source of the illness, the source of the illness is biological and the treatment acknowledges the need for treatment of character issues as a modulator of the otherwise untamable drive for drugs.

Pally (2007) has stated, "The 'neuroscience interpretation' can be used to reduce shame." References to drug use as "manifestations of the death drive" seem likely to this psychoanalyst to foster a countertransference that militates towards shaming interpretations, whereas the concept that drug addicted patients have had their ventral tegmental dopaminergic seeking systems poisoned by exposure to toxic chemicals during vulnerable childhood periods gives the treater a built-in alliance with a patient who is now sick in a way that they never intended to be. This use of the "medical model" of addiction is consistent with the 12-Step approach that alcoholism/addiction can be treated but not cured. In the case presented, we can see why complete abstinence is required for recovery; adding any addictive drugs to the ventral tegmental dopaminergic seeking system results in increased craving. This effect has been nicely demonstrated for individuals in treatment for alcohol or opiate addiction who use or do not use cigarettes. The one-year abstinence rate is four times higher in non-nicotine using individuals (Stuyt 1997).

There is no conflict between neuropsychanalytic and 12-Step treatment. Attendance at 12-Step meetings can be viewed as similar to support groups for cancer patients; they allow the patient to know that the unique feelings they experience in combating the illness are shared by other victims. The patient can use the help of their 12-Step group, and of the neuropsychanalyst, as complementary treatments.

What about outpatient cognitive behavioral treatment (CBT) for cocaine addiction? Kathleen Carroll's (1998) manual has awareness of craving as a central focus of treatment. Unfortunately, she stated at the outset of her manual, "The underlying assumption is that learning processes play an important role in the development and continuation of cocaine abuse and dependence. These same learning processes can be used to help individuals reduce their drug use." Her approach reflects the behaviorist's assumption that the brain is a black box, and that events occurring inside it are to be disregarded in favor of

measuring the outcomes of interventions (Panksepp 1998, Johnson, Strong and Rosenthal, in press). There is no mention of consciousness or interpretation in her approach; the therapist takes the initiative, asks the patient to make a list of experiences of craving and how they got through them without using. The therapist aims to “teach” the patient how to be sober. Central concepts used in this patient’s treatment, such as her need to focus on her own issues in the context that her husband was codependent, or that she set up relationships, including with the psychoanalyst, so that she was told what to do and then defiantly used cocaine, could not be touched with a CBT psychotherapy. Drug dreams are disregarded in CBT rather than used to understand unconscious processes.

So, while there is nothing remarkable or special about the treatment of a biological illness that initiates a new drive for cocaine and other drugs that then distorts the thinking of the person with the illness, no one in the addiction treatment community seems to be taking this approach. Some psychoanalytic practitioners ascribe all psychopathology to psychological factors as if there were no underlying neurobiology. CBT psychotherapy of addiction takes a teaching/learning approach as if there were no underlying neurobiology, and as if there were no such thing as unconscious determinants of behavior. A culturally competent neuropsychanalytic approach to addiction treatment is commonsense and true to the nature of the illness.

So, what makes a treatment “neuropsychanalytic”? There is some attempt by the psychoanalyst to use what they know about neurobiology in their thinking about their patient. This thinking eventually makes its way into interpretations of unconscious determinants of thinking and behavior. A neuropsychanalytic treatment is not reductionistic by insisting that neurobiology is the only possible way of thinking about the exchanges between the patient and the analyst. But by anchoring the model of psychopathology in material reality, it avoids an idealist drift away from science and the possibility that testable hypotheses will emerge from empathic observations is always a consideration.

## References

- Ablon, J.S. & Jones E.E. (1998) How expert clinicians' prototypes of an ideal treatment correlate with outcome in psychodynamic and cognitive-behavioral therapy. *Psychotherapy Research*, 8:71-83.
- Beck, A.T. (2005) The current state of cognitive therapy. *Archives of General Psychiatry*, 62:953-9
- Carroll, K.M. (1998) *Therapy Manuals for Drug Addiction, A cognitive-behavioral approach: treating cocaine addiction*. Rockville, Md.:National Institute of Drug Abuse
- DHHS (U.S. Department of Health and Human Services) Publication # (ADM)92-1884, Cultural Competence for Evaluators, p. 3-4.
- Depue, R. A., Morrone-Strupinsky, J.V. (2005). A neurobehavioral model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behavioral and Brain Sciences*, 28: 313-95.
- Dodes, L.M. (1996) Compulsion and addiction. *Journal of the American Psychoanalytic Association* 44:815-35.
- Dodes, L.M. (2002) The Heart of Addiction New York:Harper-Collins.
- Dodes, L.M. (2003) Addiction and Psychoanalysis. *Canadian Journal of Psychoanalysis*. 123-34.
- Galanter, M. (1999) Cults: Faith, Healing and Coercion NY:Oxford U. Press
- Insel, T.R. (2003) Is social attachment an addictive disorder? *Physiology and Behavior* 79:351-7.
- Johnson, B. (1998) The mechanism of codependence in the prescription of benzodiazepines to patients with addiction. *Psychiatric Annals* 28:166-71
- Johnson, B. (2001) Drug dreams, a neuropsychanalytic hypothesis. *Journal of the American Psychoanalytic Association* 49:75-96.
- Johnson, B. (2003) Psychological addiction, physical addiction, addictive character, addictive personality disorder: a new nosology of addiction. *Canadian Journal of Psychoanalysis* 11:135-160.

- Johnson, B., Strong, P., Rosenthal, R. Psychoanalytic therapy, cognitive behavioral therapy or motivational enhancement therapy; which approach to take with addicted patients? *Contemporary Psychoanalysis* (in press)
- Kalivas, P.W. & Volkow, N.D. (2005) A neural basis of addiction: A pathology of motivation and choice. *American Journal of Psychiatry*, 162: 1403-13.
- Kernberg, O.F. (2007) The almost untreatable narcissistic patient. *Journal of the American Psychoanalytic Association* 55:503-39.
- Khantzian, E.J. (1999) *Treating addiction as a human process*. Northvale, NJ: Jason Aronson, p.167
- Miller, W.R. & Wilbourne, P.L. (2002) Mesa Grande: a methodological analysis of clinical trials of treatments for alcohol use disorders. *Addiction* 97:265-77
- Nestler, E.J. (2005) Is there a common molecular pathway for addiction? *Nature Neuroscience*, 8:1445-9.
- Pally, R. (2007) The predicting brain: unconscious repetition, conscious reflection and therapeutic change. *The International Journal of Psychoanalysis* 58:861-82
- Panksepp, J. (1981). Hypothalamic integration of behavior: rewards, punishments and related psychological processes, in P.J. Morgane & J. Panksepp, eds, *Handbook of the hypothalamus*. Vol. 3, part B, Behavioral studies of the hypothalamus, pp.289-431
- Panksepp, J (1998) *Affective Neuroscience* NY:Oxford U. Press
- Pine, F. (2006) The psychoanalytic dictionary: a position paper on diversity and its unifiers. *Journal of the American Psychoanalytic Association* 54:463-91.
- Poland, W. (2000) Witnessing and otherness. *Journal of the American Psychoanalytic Association* 48:17-35
- Robinson, T.E. & Berridge, K.C. (1993) The neural basis of drug craving: an incentive-sensitization theory of addiction. *Brain Research Reviews* 18:247-91.
- Shevrin, H. (2003) The psychoanalytic theory of drive in the light of recent neuroscience findings and theories. 1<sup>st</sup> Annual C. Philip Wilson M.D. Memorial Lecture, New York City 9/15/3.
- Shevrin, H. (2006) Pfeffer Award Presentation Speech, May 6, New York Psychoanalytic Institute.

Solms, M & Kaplan-Solms, K. (2000) Clinical Studies in Neuro-Psychoanalysis  
London:Karnac, p.251.

Stuyt, E.B. (1997) Recovery rates after treatment for alcohol/drug dependence.  
Tobacco v. non-tobacco users. *American Journal on Addiction* 6:159-67.

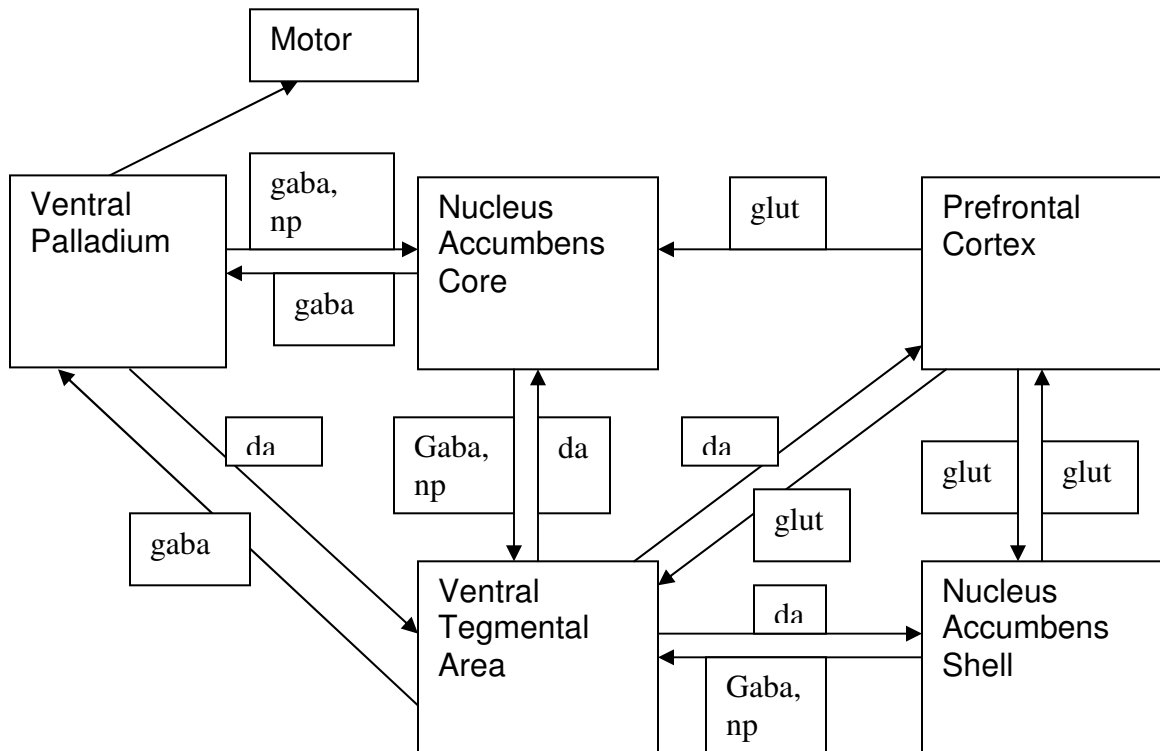


Figure 1 (based on Kalivas and Volkow 2005) Addiction allows us to look at the drive system without people being involved. DA=dopamine, GABA=gamma amino butyric acid, NP=neuropeptide, GLUT=glutamate