I was watching from across the room at the Child Welfare Visitation Center as one of my clients was having a supervised visit with her 6-month old child. The child was born drug-free, although the Mom had used meth through her first trimester. Fortunately, the foster parents report that the baby appears to be developing normally. Yet something was going noticeably awry with the visit. The baby interacted normally when the foster mom brought her in—cooing and smiling. When the birth Mom took her, she began rocking and talking to her baby like any mom would... and the baby looked confused. After a few moments, she began to fuss and cry, and couldn’t be comforted. It was a long visit, as Mom struggled to soothe her baby, and the child just squirmed, whimpered and cried.

This wasn’t a “strange situation” experiment from child psychology—Mom and baby had 2-hour visits three times a week. So what was going wrong? The thought occurred to me that my client was a third-generation meth addict; both her mother and grandmother had been addicted, and my client had grown up with multiple placements in the foster care system. Yet she was doing everything right today—sober, making eye contact, rocking her baby and talking to her—but her daughter looked confused. The baby looked relieved when she went back to the foster mom, and calmed almost immediately. My client looked heartbroken—and angry.

What was at play here? Birth mom was doing everything she could to connect with her baby, but the relationship was failing miserably—for both of them. This puzzling observation led to some research on mirror neurons. These isolated bundles of neurons are scattered throughout the cortex, and allow us to form a “mental mirror” of others actions, feelings and intentions. Have you ever been in a meeting when somebody yawns? Soon others are yawning too, and don’t know why. Mirror neurons are at work.

Mirror neurons are a relatively recent discovery in neuroscience—they were first observed in Macaque monkeys in the mid-1990s. Since then there has been an explosion of research and educated conjecture on their functions, and their importance in the behavioral sciences is becoming clear. Mirror neurons and the mirror neuron (MN) system are neurons that not only fire when you enact a certain intention, they also fire when you watch or attune to someone enacting the same action. From the study of mirror neurons it appears this part of the brain is responsible for the natural ability to create representations of others minds—to form attachments. When a mother soothes her baby, she is also (through the MN system) teaching the baby to self-soothe.

The need to attach is a biological imperative for humans—we are born dependent, and remain so longer than most other
species. So we depend on the ability to find that one “other” who will always be there for us, and satisfy our wants, needs and desires. If we are unable to do this, the limbic “survival brain” takes over, and autonomic arousal (fussing and crying) tries to make sure that somebody will notice and come and soothe us. What happens if nobody is there? The infant’s mirror neurons—the basis of attachment are pruned away, and that developmental window for healthy attachment is closed. More importantly, according to Graham (2014), these early experiences of abandonment, frustration or trauma are stored in pre-conscious, or implicit memory, not subject to conscious recall. The hippocampus, which codes and stores conscious memories, is not functionally developed until 2 or 3 years of age. So the experience of deprivation, trauma and the inability to obtain needed nurturing is stored as a pre-conscious “body memory.” Hence, the difficulty of talk therapy alone to resolve early trauma: there simply are no words.

What happens when we cannot form a healthy attachment as infants? We cannot take the position of the other. We cannot experience empathy. We have lost the ability to form a mental map of a healthy relationship. If mom is unable to satisfy the infant’s attachment imperative in the first year of life, the baby may never get it. And if mom never got it from HER mom, she couldn’t form the mental and emotional mirror to reflect it forward to her children. So the cycle continues.

So what does this have to do with substance use disorders? If a person has never developed the ability to self-soothe his or her anxiety over feeling alone in the world, drugs work because they have their effect in that same limbic survival brain. The term “monkey brain” is used by social scientists and psychologists to describe the mind that races around in conflicting directions. Both healthy attachment and drugs flood the limbic monkey brain with dopamine and other neurotransmitters that make both experiences so intensely pleasurable. If the attachment imperative remains unsatisfied, the client’s first experiences of intoxication are likely to be more than satisfactory. To coin a phrase, “loaded feels like love.”

The diagnostic criteria for the diagnosis of attachment disorders have been appropriately moved from the “Disorders of Infancy, Childhood or Adolescence” section of Diagnostic and Statistical Manual of Mental Disorders, 4th ed., (DSM-IV) to the “Trauma and Stressor-related Disorders” section of DSM-5. Both Manuals require a pattern of extreme insufficient (“pathogenic” in DSM-IV) care characterized by neglect or deprivation of basic needs, repeated changes of primary caregivers, and/or being reared in settings incapable of providing stable attachment. While there is much literature about adult attachment, the current DSM still focuses on early lifespan—infants and children. The author contends that childhood attachment disorders grow into adult personality disorders, as the person’s life posture continues to be shaped by pre-conscious survival mechanisms. The “reactive attachment disorder” may manifest in adults as Paranoid, Schizoid or Avoidant; the DSM-5 “diffuse or disinhibited attachment” is more likely to manifest as Cluster B (Antisocial, Borderline, Histrionic) or Dependent. The old saying that “as the twig is bent, so grows the tree” seems to hold true for attachment.

Attachment challenges can also complicate treatment and recovery. The traditional wisdom in the treatment community is that “treatment romance” seldom leads to a satisfactory conclusion of either the treatment, or the romance. Hence the famous “13th Step” of Alcoholics Anonymous and Narcotics Anonymous: “Thou shalt not go to Meetings to date!” The temptation to find somebody else to “fix” so I don’t have to deal with my own issues is pretty obvious; but there’s a neurological substrate as well. New romantic/sexual encounters not only tease the addict’s dopamine-depleted limbic system with dopamine, they also flood the monkey brain with other powerful neuuropeptides—oxytocin (the “bonding chemical”) and phenylethylamine (or PEA—the giddy, “love-struck” chemical, which amplifies the impact of dopamine). Lacking the healthy neurochemical roadmap for attachment and healthy relationships, and no longer able to resort to pharmaceutical self-soothing, the temptation to “hook up” and milk the monkey brain for pleasure chemicals becomes very powerful.

According to Flores (2005), if problems in attachment are a primary cause of substance abuse, then a therapeutic process that addresses the client’s interpersonal relations will be needed for effective long-term recovery and to quell environmental cues that trigger inappropriate behaviors, providing positive reinforcement and support, cultivating positive habits that endure, and developing secure and positive attachments.

Perhaps the reason for the success of therapeutic modalities like process groups, Dialectical Behavioral Therapy, interpersonal therapy, and even peer support meetings like Twelve Step and Women For Sobriety is that they provide a safe, nurturing, yet challenging environment for clients to experiment with healthy attachment in a safe setting, with appropriate safeguards and boundaries. As clinicians, we can support and encourage them as they risk turning preconscious, implicit memories of panic or despair into conscious connections and healthy attachment.

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**References:**
