The CTP Alumni Association Presentation on Damaged Bonds by Micheal Eigen and A General Theory of Love by Thomas Lewis, Fari Amini and Richard Lannon Friday November 21, 2003.

When I first conceived the idea of this presentation I was up in Tobermory reading a book I borrowed from Sue Chernin entitled Damaged Bonds by the psychoanalyst Micheal Eigen. Because I was spending three weeks this summer up on the Bruce Peninsula Susan and John very generously extended their ample bookshelves to me. I loaded up on an armful of books about Zen Buddhism, Jewish mysticism and of course psychonalaysis.

Since life in Toronto is endlessly busy constantly filled with engagement and attachment to husband, family, friends, clients and colleagues the prospect of a solitary retreat by the waters of Georgian Bay with only squawking seagulls for company seemed like a good idea. Taking oneself outside and away from all those intense and intimate encounters in the city offers a wider perspective and view on the year's events. As a therapist and a person like all of you here, I find myself constantly pondering and inquiring into the nature of human communication. We know from our experience and training in the therapeutic field how powerful and deep is one's unconscious communication to the other. In our analytic world we always seek to comprehend what is unknown, unrevealed, below the surface of conscious awareness. It is rarely what we know that gets us into trouble. It always seems to be that which is unknown, mysteriously hidden yet exerting a force that transcends into conflict, frustration, thwarting experiences. It is in the pressure cooker environment of the therapeutic frame that such hidden energies flow into form. It is also in our intimate relationships that we see and be seen, learn through the eyes of others what we cannot see in ourselves.

I was thoroughly captivated by Micheal Eigen's poetic description of the projecting personality. He writes, "We seek someone to project ourselves into. We seek someone who will let us in, dream us, make us part of his or her depths and reverie. Someone who will think about us and have feelings for us, so that his/her unconscious waking thinking contributes to our sense of self. Winnicott refers to a time when the infant and mother are a kind of unit, so that the mother's state of being is part of the infant and vice versa. What happens if one or the other rejects or cannot enter into such a unit or enters into it in deforming ways? Because of our permeability, we do affect one another, and our refusal or deformation of this flow is, also, part of mutual impact.

Seeking and projecting go together. Seeking is part of the projecting personality. Seeking and projecting constitute a kind of drive to communicate self and touch reality. One reaches into outer space to find the inner space of another person. The image of sending signals into space in the hope that our messages will be met applies to what happens in fast motion between ourselves moment to moment. We try to communicate our capacity to communicate at the same time as we attempt to communicate ourselves.

At times, self-to-self transmission connects, and faith in communication grows. Often difficulties stimulate struggles and effort, resulting in partial communication, enough to make attempts at further communication worthwhile. We partly let each other in, partly get each other's attempts to communicate. Mutual correction and nuanced approximation become part of our way of life. Nevertheless, there are times when a ghastly result of self signals being unmet, sent back unanswered or deformed, is that a mad part of personality, hostile to communication grows where communication might have been. This is different from regrouping after communication failure to try again. When projective identification comes up against on intolerant object as personality forms, the very attempt to communicate can become persecuting."

Going back to Eigen's idea of sending signals into space in the hope that our message will be met along with the notion of "selfto-self" transmission connects and faith in communication grows sparked within me remembrances on another poetically written book about the neurobiology of love. A General Theory of Love is written by three psychiatrists; Thomas Lewis, Fari Amini and Richard Lannon. These authors deftly integrate psychoanalytic insight with the latest physiological and biological research on the brains neural activity. They reveal how the emotional mind transcends the dualism separating its psychological and biological aspects.

Here is how they bring together the scientific underpinnings with the art of healing a human heart: "Physical mechanisms produce one's experience of the world. Experience, in turn remodels the neurons whose chemoelectric messages create consciousness. It has been found that through advanced imaging technologies that psychotherapy alters the living brain. The truth is that psychotherapy is physiology. When a person starts therapy, he isn't beginning a pale conversation, he is stepping into a somatic state of relatedness.

Evolution has sculpted mammals into their present form: they become attuned to one another's evocative signals and alter the structure of one another's nervous system. Psychotherapy's transformative power comes from engaging and directing these ancient mechanisms. Therapy is a living embodiment of limbic processes as corporeal as digestion or respiration. Without the physiologic unity limbic operations provide, therapy would indeed be the vapid banter some people suppose it to be. Speech is a fancy neocortical skill, but therapy belongs to the older realm of the emotional mind, the limbic brain. Therapy does not seek to overrule the primeval forces predating civilization, because like love, therapy is already one of them. People do come to therapy unable to love and leave with that skill restored. But love is not only and end for therapy; it is also the means whereby every end is reached. This book examines how love's

three neural faces – limbic resonance, regulation and revision - constitute psychotherapy's core and the motive force behind the adult mind's capacity for growth.

Limbic Regulation Balance Through Relatedness Certain bodily rhythms fall into synchrony with the ebb and flow of day and night. These rhythms are termed circadian for "about a day". A more fitting appellation is circumlucent, because they revolve around light as surely as Earth. Human physiology finds a hub not only in light, but also in the harmonizing activity of nearby limbic brains. Our neural architecture places relationships at the crux of our lives, where blazing and warm, they have the power to stabilize. Mental health is a substance that attracts itself as readily as money or power, the more of it you have, the more you can get. Early emotional experiences knit long-lasting patterns in the very fabric of the brain's neural networks. Therapy's most ambitious aim is revising the neural code that directs emotional life. The therapist wants to alter the microanatomy of another person's brain. Psychotherapy changes people because one mammal can restructure the limbic brain of another."

Michael Eigen writes about damaging emotional experiences from the perspective of interfering with the capacity to evolve one's unconscious emotional processing ability. He writes of therapy as offering a potential bond to support the growth of unconscious processing. "Therapy affirms the reality of unconscious processing and helps to jump-start or reset the latter. We need a somewhat self-healing unconscious, but once the latter becomes self-damaging, we need another's unconscious to right things. Therapy provides a kind of auxiliary unconscious until one's own gets the hang of it.

What supports a dream supports a person. The ability to create a dream, to see an experience through, to process affects, to support a self – such generative work can suffer immense degradation. Damaged bonds damage unconscious processing. Unconscious processing tries, in part, to work with its damage. Such a circle can spiral - damage adding to damage. What damages a dream damages a person. Compassion in the background seeps into damage. It is not a case of saying or not saying. One feels the spot where hope dies out, where screams vanish and feelings disappear and rise again. One feels oneself coming back, a little less knotted, a bit more dependent on unconscious depths, will in water - another "feel", tone, guiding spirit, good angels in the air.

Personality is object - seeking or has object – seeking needs, drives, requirements. Parasitic, murderous, creative needs require another being, a partner, for processing, sharing, for contact with reality. We reach for reality in many ways, with amazing fusions of creative/destructive tendencies. It is all too easy for reality to fail us, all too easy to have urges with no place to go.

So often psychonalaysis emphasizes frustration and break of object contact as crucial for building a sense of reality and capacity for symbol formation. It is important to balance this with emphasis in the actual prescence and work of the object in supporting an infant's sense of reality. The basic situation is fraught with difficulties. Wilfred Bion depicts an infant's seeking tendencies as too strong for its own personality – and perhaps too much for parents as well. The possibility that as a species we may be too much for ourselves is a theme that runs through Bion's work. Our task is an evolutionary challenge. Can we take ourselves? Can we take what we put into each other? Bion suggests that we cannot take ourselves unless we can take each other. At the same time capacity to take one another is poorly evolved. We do not take each other very well. We hope that the capacity to support mutuality presses further into existence because of need and practice.

A personality may have supported and collapsed areas, less and more psychotic aspects. Bion links the development of psychotic parts of personality to the breast's intolerance of projective identification. An object responding to murderous, parasitic, creative urges with an overabundance of anxiety, persecution, hate, apathy throws the self back on unmodified aggravated urges.

Nourishment is the object's ability to modify the mess of murder, parasitism, creativeness so that personality can use its tendencies decently. Breakdown of this modifying capacity results in a breakdown of the communicating capacity and a loss of contact with reality. Contact with reality is dependent on work others do for us when we reach out. To be nourishing means helping personality survive its projections, enabling projection to be a tool of communication and self-control, fostering matrices in which we use each other to grow. Bion describes the "helpless infant" as a "growing annihilating force". The impact of new life – actual and potential – can be too much to bare. The parents shut the infant our or deform it in order to avoid being annihilated. The infant puts too much into the other's insides- too much aliveness, deadness, sameness, otherness, raw intensity, urge to grow without knowing how to. The infant threatens to awaken the parent to an aliveness that pushes life out of cages, at the same time chaining parents to its needs. One does what one can to shrink the infant into what is workable. At the same time if the infant were not too much it would not be noticed.

If the projecting personality cannot hit paydirt, it cannot develop. It may stagnate, grow in warps, suffer deformation. Life goes on in strangulated, sometimes determined ways. One may become passive or die out, but one may also become a monster. In everyday living, our monster selves often baffle us, interacting in seamless ways with our benign and well-formed aspects. By the time we awaken to ourselves, we have an entrenched sense of being excluded/included with regard to the desire of others, partly as a result of whether and how we found our way inside another and what became of us there. Here we are speaking about the transmission and digestion of feelings involved with one's sense of being. One way of saying this is that the therapist needs to dream the patient. The patient has to make his way into the therapists dream-work, and the therapist not only has to let this happen but has to enable it or move with it. The analyst is in the position of maintaining sufficient alpha function/dream-work to jump-start that of the patient in the face of pressure that annihilates or vastly compromise psychic work. To learn to use one's psyche is more difficult than it is for a child to learn to walk, if psychic " muscles" are atrophied, missing, or malformed. The analyst must support the patient in the face of disability, as ability slowly grows.

Over time nourishing aspects of the environment do get through often osmotically if one does not totally succumb to the gravitational pull of damaging-object/damaging capacity and if real nourishing aspects outlast or co-exist with damaging aspects. In so far as the possibility of nourishment is there, the possibility of someone noticing it may increase. Partly it is a matter of mutual endurance, long-term interpenetration of nourishing/anti-nourishing forces, gradual shifts of balance." So let us now return to an exploration of the psychobiological level underpinning Eigen's concept of long term interpenetration of dream-work and nourishing aspects entwining therapist and client.

"The brain is a network of neurons, the individual cells of the nervous system. The peculiar calling of a neuron is cell-to-cell signaling. Those signals are both electrical and chemical: the molecules that send the chemical portion of the message are the neurotransmitters. The purpose of this assemblage of cells ceaselessly signaling one another is survival. A collection of signaling cells can engineer sudden reactions to instantaneous changes. Information from the environment can be translated into inbound signals, and after a flurry of internal processing within a centralized group of neurons, outbound signals produce action. Equipped with the best neurons firing in the best order, animals live longer.

The neural systems responsible for emotion and intellect are separate. Because of the brain's design emotional life defeats Reason. The nature of love and attachment has an intrinsic order, an architecture that can be detected, excavated, and explored. Emotional experience in all its resplendent complexity originate in dynamic neural systems humming with physiologic machinations as specific and patterned as they are intricate. Because it is part of the physical universe, love has to be lawful. Like the rest of the world, it is governed and described by principles we can discover but cannot change. If we only knew where to look, we should be able to find emotional laws whose actions a person could no more resist than he could the force of gravity if he fell off a cliff.

At the end of the nineteenth century brilliant pioneers like Sigmund Freud and William James worked on assembling the earliest scientific accounts of human mental faculties to unravel the heart's mysteries. But they could know nothing about the mind's physicality, about the miniscule neural mechanisms that combine and conspire to create the stuff of mental life – sights, sounds, thoughts, ambitions, feelings. Love's secrets remained buried within the most impenetrable treasure chest the world has ever known: a tangle of a hundred billion cells, whose innumerable electrical currents and chemical signals come together to create a single, living human brain. The human brain is comprised of three distinct sub-brains, each the product of a separate age in evolutionary history. The trio intermingles and communicates, but some information is inevitably lost in translation because the subunits differ in their functions, properties, and even their chemistries. The three-inone, or triune brain consists of the reptilian brain, the limbic brain and the neocortical brain.

The reptilian brain is the oldest part of the trio that houses vital control centers such as breathing, swallowing, heartbeat and vision. It is essential for sustaining life but it does not hold the qualities that set us apart from other animals or that distinguish one person from another. It is an archaic conglomeration of cells that permit rudimentary interactions: displays of aggression and courtship, mating and territorial defense all in the service of basic survival.

In 1879, the French neuroanatomist Paul Broca published his most important findings: that the brain of all mammals hold a structure in common, which he called the great limbic lobe. He could see a "line of demarcation" between this convolution and the rest of the cerebral hemisphere. Broca coined his term from the Latin word limbus, meaning "edge, margin, or border."The structure he discovered marks the evolutionary division between two disparate ways of life. Humanity's second or limbic brain

drapes itself around the first reptilian brain and blossoms a fresh neural structure splitting mammals off from the reptilian line. This brand new brain transformed not just the mechanics of reproduction but also the organismic orientation toward offspring. Detachment and disinterest mark the parental attitude of the typical reptile, it lays its eggs and slithers away. Mammals bare their young live; they nurse, defend and rear them while immature, entering into subtle and elaborate interactions with them. Mammals form close-knit, mutually nurturing social groups – families – in which members spend time touching and caring for one another. Parents nourish and safeguard their young, and each other, from the hostile world outside their group. A mammal will risk and sometimes lose its life to protect a child or mate from attack. The limbic brain permits mammals to sing to their children. Vocal communication between a mammal and offspring is universal, along with the activity of play, unique to animals possessing limbic hardware.

The neocortex from the Greek word "new" and the Latin word for "rind" or "bark" is the last and in humans, the largest of the three brains. Mammals that evolved long ago have only a thin skin of neocortex covering the older sub-brains. Neocortical size has grown in mammals of recent origin, so that dogs and cats have more, and monkeys more still. In human beings, the neorcortex has ballooned to massive proportions.

Speaking, writing, planning, and reasoning all originate in the neocortex. So do the experience of our senses, what we know as awareness, and our conscious motor control, what we know as will. Another gift the neocortex bestows is the skill of abstraction: every task that calls for the symbolic representation, strategy, planning, or problem-solving has its headquarters in the neocortical brain. Human beings have the largest neocortex-to-brain ratio of any creature, and inequitable proportion that confers upon us intelligence and capacity to reason. Capacious neocortical abstraction also underlies the uniquely human gift of spoken and written language, the grandest and most useful abstraction we have. Evolution has fashioned a brain that is fragmented and inharmonious, composed of players with competing interests. The cleavage between reason and passion is an ancient theme, it has endured because it speaks to the deep human experience of

a divided mind.

The scientific basis for separating neocortical from the limbic brain matter rests on solid neuroanatomical, cellular, and empirical grounds. As viewed through the microscope, limbic areas exhibit a far more primitive cellular organization than their neocortical counterparts. In humans, the neocortical capacity for thought can easily obscure other more occult mental activities. It is a fallacy to believe "I think, therefore everything I am is thinking." But in the words of a neocortical brain as mighty as Einstein's: "We should take care not to make the intellect our God; it has, of course, powerful muscles, but no personality. It cannot lead; it can only serve." The swirling interactions of humanity's three brains deftly disguise the rules of emotional life and the nature of love. Words and logic mean nothing to at least two brains out of three.

The scientist and the artist both speak to the turmoil that comes from having a triune brain. A person cannot direct his emotional life in the way he bids his motor system to reach for a cup. He cannot will himself to want the right thing, or to love the right person, or to be happy after a disappointment, or even to be happy in happy times. People lack this capacity not through a deficiency of discipline but because the jurisdiction of will is limited to the latest brain and the functions it contains. Emotional life can be influenced but it cannot be demanded. The emotional brain, although inarticulate and unreasoning, can be expressive and intuitive. Like the art it is responsible for inspiring, the limbic brain can move us in ways beyond logic that have only the most inexact translations in a language the neocortex can comprehend. Poetry, a bridge between the neocortical and limbic brains, is simultaneously improbable and powerful, it is never a thought to begin with but a feeling that finds its way into words.

In a neural network, new experiences blur the outlines of older ones. The reverse is also true. The neural past interferes with the present. Experience methodically rewires the brain, and the nature of what is has seen dictates what it can see. What the brain has seen and experienced is formed into a prototype team of memory mechanisms that constitute an Attractor – a coterie of ingrained links that can overwhelm weaker information patterns. If incoming sensory data provoke a quorum of the Attractor units, they will trigger their teammates, who flare to brilliant life. An Attractor can overpower other units so thoroughly that the network registers chiefly the incandescence of the Attractor, even though the fading firefly traces of another pattern initially glimmered there. A network then registers novel sensory information as if it conformed to past experience. In much the same way, our sun's blinding glare washes countless dimmer stars from the midday sky.

No individual can think his way around his own Attractors, since they are embedded in the structure of thought. And in human beings, an Attractor's influence is not confined to its mind of origin. The limbic brain sends an Attractor's sphere of influence exploding outward. Because limbic resonance and regulation join human minds together in a continuous exchange of influential signals, every brain is a part of a local network that shares information – including Attractors.

Limbic Attractors thus exert a distorting force not only within the brain that produces them, but also in the limbic network of others – calling forth compatible memories, emotional states, and styles of relatedness in them. Through the limbic transmission of an Attractor's influence, one person can lure others into his emotional virtuality. All of us, when we engage in relatedness, fall under the gravitational influence of another's emotional world, at the same time that we are bending his emotional mind with ours. Each relationship is a binary star, a burning flux of exchanged force fields, the deep and ancient influences emanating and felt, felt and emanating.

The inner conception we carry of others may be reflected back to them in our presence and may affect them in ways we do not fully understand. The limbic transmission of Attractors renders personal identity partially malleable, the specific people to whom we are attached provoke a portion of our everyday neural activity. Identity is fluid and changeable.

The reach of limbic Attractors stretches beyond the moment. The sine qua non of a neural network is its penchant for strengthening neuronal patterns in direct proportion to their use. The more often you do or think or imagine a thing, the more probable it is that your mind will revisit its prior stopping point. When the circuits are sufficiently well worn such that thoughts fly down them with little friction or resistance, that mental health path has become a part of you – it is now a habit of speech, thought, action, attitude. Ongoing exposure to one person's Attractors does not merely activate neural patterns in another – it also strengthens them. Long-standing togetherness writes permanent changes in a brain's open book. In a relationship, one mind revises another; one heart changes its partner. This astounding legacy of our combine states as mammals and neural beings is limbic revision: the power to remodel the emotional parts of the people we love, as our Attractors activate certain limbic pathways, and the brains inexorable memory mechanism reinforces them. Who we are, and who we become depends, in part, on whom we love." One could think about the therapeutic journey along the lines of Marcel Proust's words: "The real voyage of discovery consists not in seeking new landscapes, but in having new eyes."

"In psychotherapy the therapist does not wish merely to discern the trajectory of an emotional life but to determine it. Helping someone escape from a restrictive virtuality means reshaping the bars and walls of a prison into a home where love can bloom and life flourish. In the service of this goal, two people come together to change one of them into somebody else. The centerpiece of therapy is also the focal point of the human heart. Every person broadcasts information about his inner world. As a collection of dense matter betrays its prescence through electromagnetic emissions, a person's emotional Attractors manifest themselves in a radiant aura of limbic tones. If a

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listener quiets his neocortical chatter and allows limbic sensing to range free, melodies begin to penetrate the static of anonymity. Individual tales of reactions, hopes, expectations, and dreams resolve into themes, stories about lovers, teachers, friends echo back and forth and coalesce into a handful of motifs. As the listener's resonance grows, he will catch sight of what the other sees inside that personal world, start to sense what it feels like to live there.

Therapists are sometimes tempted to catalogue and analyze the output of a patient's volubility – an inviting but hollow detour. Yet how can the meaning of a musical composition be disclosed? One could dissect the notes, scrutinize the sound frequencies, chart and measure the silent intervals. But anyone wishing to hear what the musician has to say need only listen. Part of the brain enables us to assemble certain sounds in a loftier, coherent dimension. Music, said Beethoven, is a higher revelation than philosophy. Another part of the brain is poised to translate emotional signals into revelations higher still. This music a therapist ignores at his peril.

The first part of emotional healing is being limbically known, having someone with a keen ear catch your melodic essence. A

child with emotionally hazy parents finds trying to know himself like wandering around a museum in the dark, almost anything could exist within its walls. He cannot ever be sure of what he senses. For adults, a precise seer's light can still split the night, illuminate treasures long thought lost, and dissolve many fearsome figures into shadow and dust. Those who succeed in revealing themselves to another find the dimness receding from their own visions of self. Like people awakening from a dream, they slough off the accumulated, ill-fitting trappings of unsuitable lives. The mutual fund manager may become a sculptor, or vice versa: some friendships lapse into dilapidated irrelevance as new ones deepen; the city dweller moves to the country, where he feels finally at home. As limbic clarity emerges, a life takes form.

People do not learn emotional modulation as they do geometry. They absorb the skill from living in the presence of an adept external modulator, and they learn it implicitly, knowledge leaps the gap from one mind to the other. But the learner does not experience the transferred information as an explicit strategy. Instead, a spontaneous capacity germinates and becomes a natural part of the self, like knowing how to ride a bike or tie one's shoes. The effortful beginnings fade and disappear from memory. The longer the patient can depend upon his therapist the more his stability swells, expanding infinitesimally with every session as length is added to a woven cloth with each pass of the shuttle, each contraction of the loom. And after he weaves enough of it, the day comes when the patient will unfurl his independence like a pair of spread wings. Free at last, he catches a wind and rides into other lands.

A person cannot choose to desire a certain kind of relationship any more than he can will himself to speak Russian. Describing good relatedness to someone, no matter how precisely or how often, does not inscribe it into the neural networks that inspire love. Overhauling emotional knowledge is no spectator sport; it demands the messy experience of yanking and tinkering that comes from a limbic bond. If someone's relationship today bear a troubled imprint, they do so because an influential relationship left its mark on a child's mind. When a limbic connection has established a neural pattern, it takes a limbic connection to revise it. An attuned therapist feels the lure of a patient's limbic Attractors. He doesn't just hear about an emotional life – the two of them live it. The gravitational tug of

this patient's emotional world draws him away from his own, just as it should. A determined therapist does not strive to have a good relationship with his patient – it can't be done. If a patient's emotional mind would support good relationships, he or she would be out having them. Instead a therapist loosens his grip on his own world and drifts, eyes open, into whatever the relationship has in mind – even a connection so dark that it touches the worst in him. He has no alternative. When he stays outside the other's world he cannot affect it; when he steps within its range, he feels the force of alien Attractors. He takes up temporary residence in another's world not just to observe but to alter, and in the end to overthrow. Through the intimacy a limbic exchange affords, therapy becomes the ultimate inside job.

Each emotional mind formed within the forcefield of parental and familial Attractors. Every mind operates according to the primordial principles absorbed from that charged environment. A patient's Attractors equip him with the intuition that relationships feel like this, follow this outline. In the duet between minds, each has its own harmonies and the tendency to draw others into a compatible key. And so the dance between

therapist and patient cannot trace the same path that the latter expects, because his partner moves to different melody. Coming close to a patient's limbic world evokes genuine emotional responses in the therapist – he finds himself stirring in response to the particular magnetism of the emotional mind across from him. His mission is neither to deny those responses in himself, nor to let them run their course. He waits for the moment to move the relationship in a different direction. And then he does it again, ten thousand times more. Each successive push moves the patient's virtuality a tiny bit further from the native Attractors, and closer to those of his therapist. The patient encodes new neural patterns over their myriad interactions. These novel pathways have the initial fragility of spring grass, but they take deep root within an environment that provides simple sustaining limbic nutrients. With enough repetition, the fledgling circuits consolidate into novel Attractors. When that happens, identity has changed. The patient is no longer the person he was."

LEAH LUCAS November 21, 2003

Writings compiled from DAMAGED BONDS by Micheal Eigen, H. Karnac Books Ltd. London, New York, 2001

A GENERAL THEORY OF LOVE by Thomas Lewis, M.D. Fari Amini, M.D., Richard Lannon, M.D. Vintage Books, Random House, New York, 2000

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