

A
*General Theory
of Love*

Thomas Lewis, M.D.,
Fari Amini, M.D.,
Richard Lannon, M.D.



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getically unfavorable within a neural network. New lessons must fight an uphill battle against the patterns already ingrained, because existing Attractors can easily overwhelm and absorb moderately novel configurations. The nature of neurovirtuality ensures that it trims the ambiguity from reality, and portrays largely what has already been seen. And so, left to his own devices, a child who knew and loved a deceitful, selfish, or jealous parent does not often learn to love differently at age twenty, forty, or sixty.

Every child stores his Attractors and lives out his adult life on a neurally generated soundstage. If his Attractors mislead him, is there any way out? Can he manage to escape the trap of seeing what he's always seen and doing what he's always done? Once emotional learning has gone awry, can it be set right?

Despite the longevity of Attractors and the waning of neural flexibility, the emotional mind *can* change in adulthood. The old patterns can undergo revision, although the task is not easy. You may think that we have given late emotional learning short shrift in this brief section, but the topic is so near to our hearts that it merits a chapter to itself.

Eight

BETWEEN STONE AND SKY

WHAT CAN BE DONE TO HEAL HEARTS GONE ASTRAY?

The real voyage of discovery consists not in seeking new landscapes, but in having new eyes.

—Marcel Proust

In the heart of Rome stands the world's most magnificent fountain: Trevi, named for its location at the juncture of three roads (*tre vie*). Poseidon rises tall in his chariot as stamping horses pull him through an angry sea; sheets of water cascade down rocks to the basin below. As legend has it, the traveler who tosses a coin into the fountain's pool will ensure his return to the Eternal City.

Imagine that between one breath and the next, time freezes. The glittering coruscations at Trevi hang immobile. One high-flung drop floats in the air, a gleaming jewel against the motionless blue of the Italian sky.

We might struggle to determine the history of the aqueous pearl—how the meaningless plungings of water and wind produced *that* globular permutation of molecules. For any feature of the physical world, drawing on knowledge of the relevant forces, we can look down the corridors of time and frame a sequence that could have culminated in the outcome before us. The question a developmentalist seeks to answer, whether of a raindrop or an emotional mind: *how did it turn out this way?* Starting with the same structure, and pivoting on time's axis to face the future, a different riddle confronts: *what is the fate of this system?* What contour will it assume after a minute, an hour, a year?

The side street of mathematics called *chaos theory* declares such a

pursuit impossible. With time arrested, the location of those teardrop molecules is knowable. Unstop the tableau, allow a moment to pass, and the drop disperses. Nobody can foresee where its component molecules will end up a few seconds later. In the city of Rome, yes; in the fountain of Trevi, probably, but *exactly* where? The universe denies a more specific glimpse to any being less than God. The surging possibilities attending turbulence are too numerous for mortals to tabulate.

So it is with the emotional mind. If the fountain water were frozen as solid as the rock that cups it, we could predict its conformation over the next minute with certainty. If *all* possible arrangements of water molecules were equally probable, we could throw up our hands in graceful defeat before infinity. It is the *liquidity* of the water and the mind that befuddles, their ability to assume an array of forms with immense—but not limitless—variety. Like a bead of sea spray, the future of an emotional mind hangs between the immobility of stone and the freedom of the summer sky. Identity can change, but only within the outlines its architecture commands.

So much depends on the emotional learning that adult neurophysiology permits. Can the neglected or abused child hope for a healthy life? Will his adulthood replicate his past and prove again the principles he knows too well? Considering the neural impediments to progress, how does healing happen? With Attractors ready to shoehorn reality into the mold of the familiar, how does an emotional mind break free?

Psychotherapy grapples with these questions daily. A 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.

Few agree on *how* the metamorphosis occurs. The secret identity of psychotherapy's mutative mechanism has prompted enough hot-tempered debate and factional feuding to fill a history of the Balkans. And rightly so. The centerpiece of therapy is also the focal point of the human heart.

PARADIGMS LOST

Twin factions warred over the mind up and down the length of the twentieth century. Smoke and clamor from the battle still obscure psychotherapy's central concern.

On one hand, a "biological" group holds that mental events emanate from the material world of the brain. Mental pathology therefore begins in deformations of that physicality: misshapen receptors, defective genes, brain damage. All true. This school favors remedies like medications, electric current, and magnetic fields. Sometimes they work.

On the other hand, the venerable "psychological" cadre sees emotional disturbances flowing from an intangible realm, wherein memory's ghosts walk, feelings have force, and relationships order themselves on past patterns. Again true. This camp advocates cure through a somewhat bewildering multiplicity of psychotherapies—also intermittently effective.

Each party to the fracas cites evidence favorable to its side, as if the weight of unilateral testimony could tip the scales to victory. But dividing the mind into "biological" and "psychological" is as fallacious as classifying light as a particle or a wave. The natural world makes no promise to align itself with preconceptions that humans find parsimonious or convenient. As it happens, light confounds the deceptively simple dichotomy that beckoned to scientists for decades. Every experimenter who tried to prove light particulate succeeded, as did every test of its wave nature. Impossi-

ble, in theory. Particle and wave are mutually negating ideas; a thing cannot be both itself and its opposite. In reality, "particles" and "waves" exist in minds, not in nature. These crude categories cannot capture the essence of light.

The emotional mind likewise transcends the facile and appealing dualism separating its psychological and biological aspects. Physical mechanisms produce one's experience of the world. Experience, in turn, remodels the neurons whose chemoelectric messages create consciousness. Selecting one strand of that eternal braid and assigning it primacy is the height of capriciousness. In our post-Prozac nation, most are aware that modern medications can modify personality traits. Of less renown is the reciprocal finding (provided by advanced imaging technologies) that psychotherapy alters the living brain. The war over the mind can be halted and a truce proclaimed, but only because both armies have always occupied all the territory. As the Dodo observes to Alice in Wonderland, everybody has won, and *all* must have prizes.

The mind-body clash has disguised the truth 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 systems. 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 rapid banter some people suppose it to be.

"Where id was, there ego shall be" was Freud's battle cry, a magisterial encapsulation of the talking cure as prolonged explanation. Freud saw insight and intellect vanquishing the mind's dark undergrowth like conquistadors beating back jungle to build a city.

Speech is a fancy neocortical skill, but therapy belongs to the older realm of the emotional mind, the limbic brain. Therapy should 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 an end for therapy; it is also the means whereby every end is reached. In this chapter we will examine 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.

CHANGING THE EMOTIONAL MIND

LIMBIC RESONANCE

Every person broadcasts information about his inner world. As a collection of dense matter betrays its presence through electromagnetic emissions, a person's emotional Attractors manifest themselves in a radiant aura of limbic tones. If a 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, and pets 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. Take a few measures from the Italian composer Ottorino Respighi's "Fountains of Rome," a tone poem meant to evoke (among others) Trevi. How can its meaning be disclosed? One could dissect the notes, scrutinize the sound frequencies, chart and measure the silent intervals. But anyone wishing to receive what

Respighi has to say need only listen. Part of the brain enables us to assemble certain sounds in a loftier coherent dimension. As a result, Respighi's exuberant outpouring requires no schooling to grasp. 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 shadows 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. Then 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.

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*, from the Latin for "about a day." A more fitting appellation is *circumbucent*, 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*. When people are hurting and out of balance, they turn to regulating affiliations: groups, clubs, pets, marriages, friendships, masseuses, chiropractors, the Internet. All carry at least the potential for emotional connection. Together, those bonds do more good than all the psychotherapists on the planet.

Some therapists recoil from the pivotal power of relatedness. They have been told to deliver insight—a job description evocative of estate planning or financial consulting, the calm dispensation of tidy data packets from the other side of an imposing desk. A therapist who fears dependence will tell his patient, sometimes openly, that the urge to rely is pathologic. In doing so he denigrates a cardinal tool. A parent who rejects a child's desire to depend raises a fragile person. Those children, grown to adulthood, are frequently among those who come for help. Shall we tell them again that no one can find an arm to lean on, that each alone must work to ease a private sorrow? Then we shall repeat an experiment already conducted; many know its result only too well. If patient and therapist are to proceed together down a curative path, they must allow limbic regulation and its companion moon, dependence, to make their revolutionary magic.

Many therapists believe that reliance fosters a detrimental dependency. Instead, they say, patients should be directed to "do it for themselves"—as if they possess everything but the wit to throw that switch and get on with their lives. But people do not learn emotional modulation as they do geometry or the names of state capitals. 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.

People who need regulation often leave therapy sessions feeling calmer, stronger, safer, more able to handle the world. Often they don't know why. Nothing obviously helpful happened—telling a stranger about your pain sounds nothing like a certain recipe for relief. And the feeling inevitably dwindles, sometimes within minutes, taking the warmth and security with it. But the longer a patient depends, 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.

BALANCE THROUGH MEDICATION

A limbic connection can steady a person whose emotions are tumbling out of control. But some states are beyond the power of attachment to modulate. Limbic regulation does relatively little to remedy problematic adult temperaments, for instance. Severe depression is also outside the reach of relationships. Depression often leads a person to shun social contact, nullifying the regulatory impact of his affiliative ties. Even when he does interact, a depressed person is likely to avert his gaze, cutting himself off from the interchange of emotional signals. And depression shuts down limbic circuits: in one study, depressed patients were no more able to recognize facial expressions than patients who had sustained brain damage to the area responsible for that function. Thus does depression render someone immune to the healing force in others that might counterbalance his despair.

Medication can sometimes steer emotions when attachment cannot. Directly manipulating the neurochemistry of emotion is a tricky enterprise—exciting in its promise, and frightening in the scope of the damage if the intervention is inexpert. Using medica-

tions to alter the emotional mind means tinkering with the stuff the self is made of. In the right hands, that alchemy can rescue lost lives.

A psychiatrist who employs medication can count on meeting some stiff opposition. Treating major depression with chemicals invites a paradigm clash between physician and patient rivaling the collision between Galileo and the Pope. One side recounts with tenacity the iron inevitability of despair, durable hopelessness, monolithic bleakness, pain, apprehension, horror, and death. The other side answers with the prospect of optimism in pill form.

From the patient's perspective, the physician's claim is otherworldly. Depression's dark prism has often thrown into shadow whatever credibility he might have extended to medication in his happier days. Now, evaluating all propositions is an uncertain business. Like any other momentous shift in emotion, depression is not an occupation by a foreign army; it is civil insurrection, the subversion of identity's republic from within. A depressed person loses more than energy and appetite—he loses himself and the capacity to make the decisions his former, *precomp* self would have made.

If he takes an antidepressant, therefore, it is rarely for logic's sake. He can't see and does not wholly (or sometimes remotely) believe in the sunnier world the psychiatrist dwells in. The oblong capsule becomes for him a crucifix, a Star of David, a cross of Lorraine: the emblem of faith in the promise of a better world.

The seed of that trust must precede psychotherapy and psychopharmacology both. Psychiatrists seldom advertise the prerequisites for treatment. Perspicacity is optional; a patient doesn't have to spy any reality but his own. Indeed, he usually cannot—it's a therapist's job to span two worlds at once. But a patient has to stomach the proposition that his emotional convictions are fiction, and someone else's might be better. Not everyone can do it. A psy-

chiatrist's office should bear a placard analogous to the posted minimum height for roller coasters: YOU MUST BE AT LEAST THIS TRUSTING TO RIDE THIS RIDE.

One young woman, for instance, demanded that her therapist explicate a supporting framework to bolster what she saw as an absurdly slender claim of trustworthiness. "Why should I believe you, and not myself?" she asked doggedly. "Give me one good reason." Hers seemed a sound request; the two searched and argued and pondered for months. They found no reason because none exists. A psychiatrist's training and education, his credentials, his years of practice, establish nothing absolutely. An authority can be wrong, and a novice correct (if by accident), on any issue. A seasoned professional, while more *likely* to be right on topics falling within his domain, can neither prove nor guarantee his rectitude where two virtualities meet. Psychiatry runs on the same elixir that fuels the rest of medicine: a fervent wish that somebody else knows better. People who trust a little can gamble and learn to trust more; people who have no faith from which to leap are out of luck. Mental health is a substance that attracts itself as readily as money or power: the more you have, the more you can get.

Some find trust an incongruous companion in the pharmacological treatment of emotional illness. After all, shouldn't the potency and reach of modern medications effectively supplant reliance on ancient faith-healing tools? Since the patients in question are inescapably social creatures, the answer is no. Placebo response rates for depressive conditions routinely scatter in the 30 percent range; for anxiety disorders, 40 percent and up. Some observers have erroneously taken this data to mean that a placebo does nothing and that if drugs can't do better, they must be exceedingly weak. Quite the opposite. The result of the limbic interaction between patient and healer is so efficacious that only the most powerful medications can be definitively *proven* stronger.

For the depressed person, medication can be an ax for the frozen sea within. Sleep and appetite respond first, gliding back into alignment from their former deviations. Spouses and friends begin to catch inklings of someone fractionally more familiar. Interest returns, then pleasure, and finally, the ability to laugh. Bleak ideas recede in relevance; morbid thoughts slip away down dim corridors. After several months, depression may fade as a bad dream does by midmorning, leaving only an afterimage of unpleasantness.

Given the dual agents in his armamentarium—one of them human, one chemical, both limbically formidable—a psychiatrist must decide when to use each. The first issue is easy: the best of biologically minded healers always wield the limbic component, since it is inherent, effective, and side-effect free. But when to prescribe an agent other than the doctor himself? In some cases, medications are literally lifesaving: major depression and bipolar disorder still claim thousands each year. Easing frank suffering and curbing emotional morbidity are goals that, in these pharmacologically sophisticated times, most people accept without question.

Still, many clinical encounters do not contain the defining element of such urgency. Often, patients contemplate taking medication not to stave off death or a recognized illness, but simply to help them reach a happier state. To some people, a pharmacological route smacks of an immoral shortcut, as though they are snatching a boon without enduring arduous qualifying trials that a stern universe surely demands. If a person enters psychotherapy and emerges, years later, with his moodiness banished or anxiety erased, nobody thinks he has cheated destiny or disapproving gods. If he takes a pill, and reaches the same goal in a few days or weeks, many will wonder—is that permissible, legitimate, *fair*? "People must *work* to better themselves" is an intuitive (and often correct) philosophy, one that in this instance finds a voice in the therapists,

still numerous, who tell patients that medication and psychotherapy's edifying labor don't mix.

In reality, the naysayers have little to worry about. For most of history, humanity has employed a handful of emotional regulators—alcohol, opium, cocaine, cannabis, a few others. All have had major drawbacks. The truly effective chemical modulation of emotionality is a dazzling scientific achievement, even if the underlying mechanisms remain impenetrable mysteries. But medications cannot resolve all limbic predicaments, not by half. What they lack in nuance they make up in strength, but sometimes nuance is called for. Early emotional experiences knit long-lasting patterns into the very fabric of the brain's neural networks. Changing that matrix calls for a different kind of medicine altogether.

LIMBIC REVISION

Knowing someone is the first goal of therapy. Modulating emotionality—whether by relatedness or psychopharmacology or both—is the second. Therapy's last and most ambitious aim is revising the neural code that directs an emotional life. Somewhere within a person's brain lie the myriad connections embodying his limbic knowledge—the strong Attractors that bend emotional perceptions and guide actions in love. When a therapist wants to help a patient who suffers from unfulfilling relationships or an immobilizing deficit in self-esteem, he wants to alter the microanatomy of another person's brain.

If any agency can build or destroy the bridges between neurons, strengthen or weaken them, then neural knowledge can change. But the brain has multiple learning systems, and all information does not change in the same way. Seven plus three equals ten, wrote Augustine, not now but always. "In no circumstances have seven and three ever made anything else than ten, and they never will. So I maintain that the unchanging science of number is common to me and to every reasoning being." Suppose Augustine spun in his

grave, and the rules of mathematics underwent a convulsive shift that sent seven plus three hurtling all the way to eleven. Anybody could read this update in the morning newspaper and modify additions immediately. The neocortical brain collects facts quickly. The limbic brain does not. Emotional impressions shrug off insight but yield to a different persuasion: the force of another person's Attractors reaching through the doorway of a limbic connection. Psychotherapy changes people because one mammal can restructure the limbic brain of another.

REVISING RELATIONSHIP PATTERNS

A person cannot choose to desire a certain kind of relationship, any more than he can will himself to ride a unicycle, play *The Goldberg Variations*, or speak Swahili. The requisite neural framework for performing these activities does not coalesce on command. A vigorous self-help movement has championed the hoax that a strong-willed person, outfitted with the proper directions, can select good relationships. Those seduced into the promise of a quick fix gobble it up. But the physiology of emotional life cannot be dispelled with a few words. Describing good relatedness to someone, no matter how precisely or how often, does not *inscribe* it into the neural networks that inspire love.

Self-help books are like car repair manuals: you can read them all day, but doing so doesn't *fix* a thing. Working on a car means rolling up your sleeves and getting under the hood, and you have to be willing to get dirt on your hands and grease beneath your fingernails. 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 relationships 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 relationship the patient 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 force field 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 a different melody. Coming close to a patient's limbic world evokes genuine emotional responses in the therapist—he finds parts of 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. Progress in therapy is iterative. Each successive push moves the patient's virtu-

ality a tiny bit further from 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.

Therapy's transmutation consists not in elevating proper Reason over purblind Passion, but in replacing silent, unworkable intuitions with functional ones. Patients are often hungry for *explanations*, because they are used to thinking that neocortical contraptions like explication will help them. But insight is the popcorn of therapy. Where patient and therapist *go* together, the irreducible totality of their mutual journey, is the movie.

Recall the child from chapter 7 who grows up hearing only Japanese. While English has two different phonemic Attractors for the discrete sounds of "r" and "l," Japanese has only a single broad Attractor encoding for an intermediate noise. A Japanese adult, armed with his original overlapping Attractor, hears no difference between "right" and "light."

Researchers recently trained Japanese adults to make the sonorous distinction for which their youth ill prepares them. Dr. Jay McClelland at the Center for the Neural Basis of Cognition played standard English conversations for Japanese speakers, and found that listening to common talk actually degraded any ability they had to discern "r" from "l." This result reflects an Attractor's *modus operandi*: each individual "r" and "l" fell into the broad basin of the Attractor's r-l funnel. The outer reality of two discrete intonations was reduced to the inner virtuality of one, and the mind's ear registered "rl." Reiteration naturally strengthened that unselective Attractor.

But when McClelland gave his subjects serial exposure to a purified "r" and "l," with accentuation of the formative sound characteristics, each person's inclusive r-l Attractor gradually divided into a pair of distinctive ones. Japanese adults could then distinguish "right" from "light" as well as any resident of Brooklyn or Manhattan Beach. McClelland's work demonstrates not only that the adult brain retains sufficient plasticity to encode fresh Attractors, but also that a specialized experiential environment can instill neural lessons when ordinary life cannot. Psychotherapy performs the same process on emotional discriminations.

The set of all possible relationship stories, all styles of loving that lead to misery, is illimitable. That infinitude makes the daily practice of psychotherapy a mind-expanding enterprise. When a patient first walks through the door, we can reasonably expect him to strike up the relationship he knows, but we have never seen one quite like it before. But a therapist doesn't need an encyclopedic compendium of every unhappy relationship variant. Instead, his indispensable tools are the strong template of healthy relatedness within himself, and the keen sense of wrong when he and the patient depart familiar territory.

When therapy modifies how someone lives a relationship, it corrects *whom* he may join in love. Decision cannot effect such an alteration. Knowing that a recurrent partner haunts you doesn't adjust a heart's direction. Many people suppose that therapy gives people a clear picture of a tormenting *amour* so they can spot and thereby avoid future deadly incarnations. Not so. You can't tell someone with faulty Attractors to go out and find a loving partner—from his point of view, there are none. Those who could love him well are invisible. Even if the clouds parted and a perfectly compassionate and understanding lover descended from heaven on a sunbeam to land at his feet, *his* mind would still be tuned to another sort of relationship; *he* still wouldn't know what to do. A wise

therapist, paraphrasing T. S. Eliot, would advise him to wait without hope, because his hope would be hope for the wrong thing, and to wait without love, because his love would be love of the wrong thing.

Therapy doesn't clarify the object of desire so an intoxicated traveler can spend the rest of his life dodging it. Therapy worthy of the name changes what he wants. When he finishes, his heart tends in a healthier direction, the allure of former pathology diminishes, and what once was barely noticeable becomes his new longing.

If psychotherapy exerts its healing touch through limbic connections, one wonders, why aren't *other* attachments curative? If he were willing to put in the time—why couldn't a spouse, friend, bartender, or bowling partner guide a lost soul into a healthier emotional world?

The matter is one of probability rather than destiny. A person who needs limbic revision possesses pathologic Attractors. Everyone who comes within range feels at least some of the unhappiness inherent in his world, and that intimation repels many potentially healthy partners. Those who stay often do so because they recognize a pattern from their own pasts. For them it is a siren song. Relatedness engenders a brand loyalty that beer companies would kill for: your own relationship style entices. Others are wearisome and, in short order, unpalatable. Thus people who bond share unspoken assumptions about how love works, and if the Attractors underlying those premises need changing, they are frequently the last people in the world who can help each other.

And yet, on a planet of six billion personalities colliding and meeting with the frenetic energy of infinitesimal molecules in their perpetual Brownian dance, the improbable is occasionally bound to occur. A person with maladaptive Attractors *can* encounter another by chance who will teach him what he needs to learn. The instructor fate provides, whether husband or wife, brother, sister, or

friend, is often amiably unmoved by the other's problematic emotional messages. Through the reach of their relationship and the utility of his relative imperviousness, he can gently and incrementally dissuade his student from headlong flight down paths that terminate in sorrow. Because of the tremendous variability in the configuration of human hearts and the randomness that throws people together, such felicitous combinations are as inevitable as they are precious. Against the odds, as it has since the beginning, life finds a way.

WHEN PSYCHOTHERAPY GOES ASTRAY

When a therapist establishes a limbic conduit to influence his patient, he simultaneously opens himself to the other's emotional Attractors. A therapist's odd gift lies in tuning into strange melodies enough to hear them, while he resists falling into complete harmony. This arrangement is plainly precarious, the gaping voids on either side of the tightrope all too visible. When therapy falters or fails (and that is far from rare), the twofold reasons are just what one might suppose: the mishap of missing the patient's limbic communication entirely, and the blunder of being swept into unpleasant alignment with foreign Attractors.

SOLID ICE

We should always remember that the work of art is invariably the creation of a new world, so that the first thing we should do is to study that new world as closely as possible, approaching it as something brand new, having no obvious connection with the worlds we already know. When this new world has been closely studied, then and only then let us examine its links with other worlds, other branches of knowledge.

Nabokov was setting forth the requirements for reading a novel, but he might as well have been describing the outlook most congenial to apprehending the parallel limbic realities of the people around us. A capable therapist shares much with a good reader: he must willingly suspend his belief in the rules he knows and approach a personal universe whose workings should be unimaginable to the uninitiated. If he is able to attain a state of sufficient receptivity, a therapist can allow the other mind to burst onto the scene like great art does—"as a more or less shocking surprise."

The therapist who cannot engage in this open adventure of exploration will fail to grasp the other's essence. His every preconception about how a person *should* feel risks misleading him as to how that person *does* feel. When he stops sensing with his limbic brain, a therapist is fatally apt to substitute inference for resonance.

Therapists prone to surrender limbic vision come from schools that offer cookie-cutter solutions. The formulaic assumptions revolve with the passing of years, but the mistake remains the same. At the turn of the century, emotional troubles were all due to penis envy and castration anxiety. The prevailing political climate forbids these ailments, but repressed memories and attention deficit disorder have taken their place as today's sacred afflictions. Tomorrow it will be something else.

How do some illnesses disappear, while others arise *de novo* with a flourish of psychopathological vitalism? Popular prejudices alternately obscure and exaggerate the prevalence of emotional ailments. But those seeking treatment have enough to worry about without being saddled with predetermined pathology. To perceive another person with the least error that virtuality will permit, a therapist must retain above all his childlike capacity for wonder, his readiness to discover something wholly astonishing under this leaf, behind this tree, or in this mind. Those who have lost this quality

will find patients like Reader's Digest condensed books—where, by purging the particular, the stories are strangely identical.

The acquisition of stereotypes is not the only disadvantage of a therapist's education. Nothing kills a treatment faster than the stupefying inertness that psychotherapy training studiously cultivates. Freud's instructions: "The physician should be opaque to the patient, and, like a mirror, show nothing but what is shown to him." He commended the coldness he thought necessary in surgeons and advised his disciples that a successful therapist "pushes aside all his affects and even his humane compassion and posits a single aim for his mental forces—to carry through the operation as correctly and effectively as possible." These words formed the basis for teaching generations of prospective therapists to assume the immobility of a statue. Some of the profession's oddest moments have resulted: practitioners who balk at disclosing their marital status, refuse to shake hands with patients, and in one case, a therapist who announced to patients his policy of not laughing at their jokes.

While purists like this took him at his word, Freud's own practices ranged far from the sterility he prescribed. He had patients to dinner and developed friendships with his favorites. He treated his pal Max Eitington while strolling through the streets of Vienna. He solicited large donations to psychoanalytic causes from his wealthier clientele. He psychoanalyzed his own daughter.

Freud's enviable advantage is that he never seriously undertook to follow his own advice. Many promising young therapists have their responsiveness expunged, as they are taught to be dutifully neutral observers, avoiding emotional contact more fastidiously than a surgeon shrinks from touching an open incision with his unsterilized hand. The result is lethal. If psychotherapy were just lengthy discourse, blankness would be merely a bore. But since therapy is limbic relatedness, emotional neutrality drains life out of the process, leaving behind the empty husk of words.

SWEPT INTO THE CURRENT

A responsive therapist feels the traction of his patient's mind, and he comes to share in some of those silent emotional convictions—to *know* what the other knows. His perceptions, memories, and expectations bend in the winds of another's storm. At his best, a therapist feels this pressure *and* its wrong elements together. Then he can work to counter it, step by miniature step: *not that way*, he may say to himself or the patient, *this way*. But if the patient's mental magnet is strong or his own weak, he may be swept into the current of strange Attractors without realizing it.

Their relationship then enters the realm of traumatic repetition: patient and therapist live out whatever principles a patient's mind already contains. Then a therapist criticizes the adult who was castigated as a child, or rejects the patient a mother once abandoned, or opposes the independence of someone stifled by his father's neediness, or tramples on the accomplishments of one whose youthful talents were resented. The strength of a therapist's own Attractors, creating the power and resilience of his own emotional world, keeps him grounded, just as a mountaineer can extend a hand to a slipping climber when his own anchoring lines and pitons are strong enough to enable that daring. The therapist keeps a foot in both virtualities. If his own insides cannot resist the influence of the patient's Attractors, if his own limbic moorings are not as strong as he thinks they are, he may lose his footing and both will tumble into the patient's world.

An irony of the therapeutic process (and one unpopular with patients) is that successful therapy cannot avoid triggering the same Attractors it seeks to disarm; the patient cannot escape reliving the emotional experiences he most wishes to rid himself of. If we could hone psychotherapy to an instrument of inconceivable precision, it would still entail instances of traumatic repetition.

The only guarantee against them is an emotional distance that dooms limbic effectiveness.

WHERE WORLDS MEET

Psychotherapy is as specific as any attachment. When Lorenz imprinted goslings, they followed him but not other Austrian ethologists. A golden retriever outside a grocery store has only his owner in mind. And a patient attaches to the therapist he has.

The unsettling corollary: a therapy's results are particular to *that* relationship. A patient doesn't become generically healthier; he becomes more like the therapist. New-sprung styles of relatedness, burgeoning knowledge of relationships and how to conduct them, unthinking moves in the ballet of loving—all shift closer to those in the mind of the healer a patient has chosen.

A gathering cloud looms over the patchwork landscape of psychotherapy: the growing certainty that, despite decades of divergent rectification and elaboration, therapeutic techniques *per se* have nothing to do with results. The United States alone sports an inventive spectrum of psychotherapeutic sects and schools: Freudians, Jungians, Kleinians; narrative, interpersonal, transpersonal therapists; cognitive, behavioral, cognitive-behavioral practitioners; Kohutians, Rogerians, Kernbergians; aficionados of control mastery, hypnotherapy, neurolinguistic programming, eye movement desensitization—that list does not even complete the top twenty. The disparate doctrines of these proliferative, radiating divisions often reach mutually exclusive conclusions about therapeutic propriety: talk about this, not that; answer questions, or don't; sit facing the patient, next to the patient, behind the patient. Yet no approach has ever proven its method superior to any other. Strip away a therapist's orientation, the journals he reads, the books on his shelves, the meeting he attends—the cognitive framework his

rational mind demands—and what is left to define the psychotherapy he conducts?

Himself. The *person* of the therapist is the converting catalyst, not his order or credo, not his spatial location in the room, not his exquisitely chosen words or denominational silences. So long as the rules of a therapeutic system do not hinder limbic transmission—a critical caveat—they remain inconsequential, neocortical distractions. The dispensable trappings of dogma may determine what a therapist *thinks* he is doing, what he talks about when he talks about therapy, but the agent of change is who he *is*.

That makes selecting one's therapist a life decision with (in mild terms) extensive repercussions. An uncomfortably large number of therapies yield neutral results; the only record of their existence is time spent, words spilled, and money that changed hands. But if therapy *works*, it transforms a patient's limbic brain and his emotional landscape forever. The person of the therapist will determine the shape of the new world a patient is bound for; the configuration of *his* limbic Attractors fixes those of the other. Thus the urgent necessity for a therapist to get his emotional house in order. His patients are coming to stay, and they may have to live there for the rest of their lives.

MYTHS AND MOUNTAINS

Revising limbic Attractors takes vast vistas of time—three, five years, sometimes more. People blanch when therapists speak of their profession's yawning temporal gulch. That dismay is understandable: therapy is as time-consuming and costly as a college education. But, to paraphrase Harvard's president, Derek Bok, those put off by the expense of education may find ignorance an even costlier indulgence.

Emotional perplexity exacts at least as high a life price as intel-

lectual benightedness. Wouldn't it be fabulous if one could compress a course of limbic instruction from years into weeks or even days? The tantalizing mirage of a short (and cheap) psychotherapy, a cool and inviting oasis, has lured many across the parched sands of impossibility. The architecture of the emotional mind makes effective, fast-food therapy as much a creature of myth as the unicorn.

Psychoanalysts first explained the annoyance of therapy's requisite duration by positing *resistance*: a patient's motivated unwillingness to change, hiding like a troll under a bridge beneath his stated *desire* to change. Uncovering the iterative nature of emotional learning dispenses with that goblin, but psychotherapy's stubborn span of years remains. Limbic templates form when the brain's plasticity is fresh, when neural networks are young and malleable. By adulthood, durable Attractors roll on with the easy momentum of a bowling ball. The process capable of deflecting lives in flight operates by the progressive, painstaking transformation of one intuition into another. And so therapy consumes time. But our society has scant patience for the gradual. It keeps trying to invent instant remedies—now more than ever, when the pressure from insurance companies to sideline long-term treatments of every sort has a powerful impetus of its own.

Denying access to services, whether they are effective or not, is now the *raison d'être* of the insurance industry. Pesky legal entanglements, however, impede those carriers from a straightforward stiff-armed rebuff—patients must be discouraged, diverted, connived by gentler means. And thus insurers have taken up extolling the virtues of the shrinking morsels they are willing to provide. "Who needs psychoanalysis for eight years if you can get your needs met in 20 sessions?" trumpeted Michael Freeman, president of the Institute for Behavioral Health Care, in a 1995 *Wall Street Journal* article.

In 1995, the vaunted twenty sessions were occasionally obtainable; today, such largesse is unthinkable extravagance. Managed care offers anywhere from two to six initial sessions, but the recipient cannot know when or where it will end. Perhaps the clerk overseeing his case will grant a two- or three-session extension. Perhaps not. Every few meetings requires the filing of further reports. The treatment proceeds in convulsive fits and starts, under a perpetual pall of uncertainty incompatible with a limbic bond.

The brevity of minitherapies is another efficient forestaller of healing. The neocortex rapidly masters didactic information, but the limbic brain takes mountains of repetition. No one expects to play the flute in six lessons or to become fluent in Italian in ten. But while most can omit Ravel and Dante from their lives without sacrificing happiness, the same cannot be said of emotional and relational knowledge. Their acquisition requires an investment of time at which our culture balks.

As treatments withered under the penurious gaze of insurers, they went from minimal to functionally nonexistent. Three sessions do not differ from no sessions, except in the degree of honesty that accompanies the offer. Industry boosters backing microminitherapies may deceive the hopeful and the unwary today. If their practices continue long enough, an entire generation of patients and practitioners will forget that the treatment of people in emotional pain was ever done another way. If managed care providers were to disallow mental health treatments entirely, patients could at least be sure of what they're not getting. The current climate asks patient and therapist to wrap themselves in the emperor's new clothes and pretend that doing so will warm them both.

Despite the insignificance of complicated canons and calculated technique, all therapies are not created equal. Some are compatible with the human heart and work within its architecture to maximize

health. Others, including the short and sputtering treatments now prevalent, flout limbic laws and thwart potential. That waste is painful to witness, because the limbic connectedness of a working psychotherapy requires uncommon courage. A patient asks to surrender the life he knows and to enter an emotional world he has never seen; he offers himself up to be changed in ways he can't possibly envision. As his assurance of successful transmutation he has only the gossamer of faith. At the journey's end, he will no longer be who he was, and his guide is someone he has every reason to mistrust. What Richard Selzer, M.D., once wrote of surgery is as true of therapy: only human love keeps this from being the act of two madmen.

Nine

A WALK IN THE SHADOWS

HOW CULTURE BLINDS US TO THE WAYS OF LOVE

*It is difficult
to get the news from poems
yet men die miserably every day
for lack
of what is found there.*

—William Carlos Williams

The evolution of the limbic brain a hundred million years ago created animals with luminescent powers of emotionality and relatedness, their nervous systems designed to intertwine and support each other like supple strands of a vine. But in life, as on the Greek stage, every attribute confers a matching vulnerability; each heroic strength finds its mirror image in a tragic flaw. So it is with the neural skills that constitute emotional life. The limbic brain bestows experiential riches denied simpler creatures, but it also opens mammals up to torment and destruction. An alligator never feels the pain of loss, and a rattlesnake never suffers illness or death upon separation from its parents or progeny. Mammals can and do.

The neural structures responsible for emotional lives are not infinitely adaptable. Just as the dinosaur body was built to live within a range of temperature, so the limbic brain chains mammals to a certain emotional climate. The giant reptiles vanished when the skies darkened and temperatures fell. Our downfall is equally assured if we push our living conditions beyond the limits our emotional heritage decrees.

Because our minds seek one another through limbic resonance,

- Page I12 Implicit nature of phonological and grammatical rules: Pinker, 1995, pp. 174, 273.
- Page I14 Letter from Freud to Fliess in which the former claims he was able to "hear again the words that were exchanged between two adults": Freud, S., as quoted by Borch-Jacobsen, 1998, p. 50.
- Page I14 Babies' memory for mothers' voice and face shortly after birth: DeCasper and Fifer, 1980.
- Page I14 Effect of mother's language on infants: Moon et al., 1993; Fifer and Moon, 1994.
- Page I15 The adventure of patient Boswell: Tranel and Damasio, 1993.
- Page I15 The devil's finest trick is convincing the world he doesn't exist: Baudelaire, 1998. His character says, "*Mes chers frères, n'oubliez jamais . . . que la plus belle des ruses du diable est de vous persuader qu'il n'existe pas!*" After disappearing for a century, the line popped up in the middle of the film *The Usual Suspects*.
- Page I19 "All things appear to us as they appear": Eco, 1995.

Chapter 6: A Bend in the Road

- Page I22 Computer program that diagnoses heart attack: Baxt, 1991. For physicians, the sensitivity (how often their prediction of heart attack was borne out) was 78 percent, and their specificity (how often their exclusion of heart attack was correct) was 85 percent. The computer had a sensitivity of 97 percent and a specificity of 96 percent.
- Page I22 Computers excelling at various diagnostic tasks: Baxt, 1995.
- Page I23 The role of neural networks in mutual fund forecasting: Ridley, 1993.
- Page I23 Impossibility of determining how a neural network makes the predictions it does: Robinson, 1992.
- Page I25 Neural network modeling: Rumelhart and McClelland, 1986.
- Page I27 "This storage scheme": Hebb, 1949.
- Page I27 Experimental validation of Hebb's hypothesis: Ahissar et al., 1992.
- Page I31 Abused children exhibit exaggerated brain waves upon seeing an angry face: Pollak, 1999.
- Page I34 Fallibility of eyewitness testimony: Loftus, 1993.
- Page I35 Memory for the *Challenger* explosion: Neisser and Harsch, 1992.
- Page I38 The Kanisza triangle: While we have described the process whereby experience creates Attractors, the same basic neural structure—a collection of powerful links that channels perception and determines experience—can as easily be part of the brain's genetically endowed wiring scheme.

- Page I39 Learned Attractor for H's and A's: adapted from Selfridge, 1955.
- Page I41 "In scientific work, we find": Tucker and Luu, 1998.
- Page I42 Dr. Remen's story: Remen and Ornish, 1997.
- Page I43 "your homecoming will be my homecoming": Poem 40 in "73 Poems," E. E. Cummings, 1994.

Chapter 7: The Book of Life

- Page I45 "From a drop of water": "A Study in Scarlet," by Arthur Conan Doyle.
- Page I45 "compelled to reason backward from effects to causes": "The Adventure of the Cardboard Box," by Arthur Conan Doyle.
- Page I46 The logical impossibility of the Holmesian method: See, for example, Truzzi, 1983, who concludes that "[t]he simple fact is that the vast majority of Holmes's inferences just do not stand up to logical examination. He concludes correctly simply because the author of the stories allows it so."
- Page I51 "My heart, still full of her": From "Souvenir," by Alfred de Musset.
- Page I52 Anxiety-prone rodents: Eley and Plomin, 1997.
- Page I53 Nurturant rearing can override anxious temperament in monkeys: Suomi, 1991.
- Page I53 "In faith, I do not love thee": Shakespeare, Sonnet 141.
- Page I57 Increased rate of depression in mothers of children with AIDS: Mitchell et al., 1992.
- Page I57 Heart rhythm stability and attachment security: Izard et al., 1991.

Chapter 8: Between Stone and Sky

- Page I68 Psychotherapy alters the brain: Baxter et al., 1992, found that behavior therapy and Prozac produced similar changes in the basal ganglia of patients suffering from obsessive-compulsive disorder as observed by PET (positron emission tomography) scanning. Viinamki et al., 1998, demonstrated via SPECT (single positron emission computed tomography) scanning that psychotherapy changed serotonin uptake in the basal forebrain of a patient with personality disorder and depression. At the 1999 meeting of the American Psychiatric Association, Dr. Stephen D. Martin reported that SPECT scanning shows that interpersonal psychotherapy causes changes in the basal ganglia and cingulate gyrus of patients with depression (as described by Zvillich, 1999).

- Page 168 "Where id was": Freud, 1953, Volume XXII, p. 80.
- Page 172 Inability of depressed people to recognize facial expressions of emotion: Rubiniow and Post, 1992. See also Bench et al., 1993, and Mayburg et al., 1994, who both found substantial decreases in limbic brain activity in depressed patients.
- Page 174 Mistaken assumptions about placebos and the effectiveness of medications: See, for example, Horgan, 1999. His account of the placebo response manages to cram conceptual confusion and factual errors into just over five hundred words, which may be a record for achieving a local concentration of misstatement.
- Page 176 Mechanisms of antidepressant efficacy are mysterious: Most people have heard that antidepressants work by "raising serotonin," a descriptive account but one devoid of explanatory power. (One might similarly observe that in open-heart surgery, the doctor makes an incision and hours later the patient is cured.) The inner workings of antidepressant efficacy, what altering serotonin receptor binding patterns does in the brain that culminates days or weeks later in mood change, remain totally obscure.
- Page 176 Seven plus three equals ten: Augustine, as quoted by Park, 1988.
- Page 179 Teaching Japanese speakers to distinguish between "r" and "l": Blakeslee, 1999.
- Page 182 "We should always remember": Nabokov, 1980.
- Page 183 Art "as a more or less shocking surprise": Nabokov, 1955.
- Page 184 Freud on the emotional coldness he thought requisite for psychotherapy: Freud, 1953, Volume XII, pp. 115, 118.
- Page 187 Bok's words: "If you think education is expensive, try ignorance."
- Page 188 "Who needs psychoanalysis": Michael Freeman, as quoted in Hymowitz and Pollac, 1995.
- Page 190 Only human love keeps surgery from being an act between two madmen: Selzer, 1982, p. 106.

Chapter 9: A Walk in the Shadows

- Page 193 Spock on children in the parents' bed: Spock, 1945, p. 169.
- Page 193 Ferber on the multifarious hazards of cosleeping: Ferber, 1986.
- Page 194 Robert Wright refutes Ferber: Wright, 1997.
- Page 195 Cultural variability in SIDS rates: McKenna, 1996.
- Page 195 "The temporal unfolding of particular sleep stages": McKenna et al., 1990.
- Page 195 Correlation of SIDS rates and intolerance of cosleeping: McKenna et al., 1993.

- Page 199 Internet use causes depression: Kraut et al., 1998.
- Page 199 "We were surprised to find that": Carnegie Mellon University press release, September 1, 1998.
- Page 199 An emotional void's lethal impact on babies: Spitz, 1945.
- Page 199 Neglect produces children with smaller head circumferences and brain shrinkage visible on scanning: Perry and Pollard, 1997.
- Page 199 Maternal depression produces cognitive deficits in children: Murray et al., 1991; Murray, 1992.
- Page 199 Attachment research showing that responsive parenting confers long-lasting personality strengths: For a lucid summary, see Karen, 1994.
- Page 199 The neural devastation following isolation of young monkeys: Kraemer, 1985; Kraemer, 1992; Kraemer and Clarke, 1990; Kraemer and Clarke, 1996.
- Page 199 Producing permanent changes in a monkey's brain by subjecting his mother to conditions that create an emotional state of uncertainty: Andrews and Rosenblum, 1994; Rosenblum and Andrews, 1994; Rosenblum et al., 1994; Coplan et al., 1998.
- Page 199 Degree of maternal nurturance related to the stress resilience of adult rats: Liu et al., 1997; Meaney et al., 1991.
- Page 202 Developmental psychology researchers refusing to voice an opinion on the impact of day care: Karen, 1994, p. 230.
- Page 204 Impact of divorce on children: Wallerstein and Kelly, 1980.
- Page 209 Bertrand Russell on love: Russell, 1998.
- Page 211 Neglected children become sensitized to stress: Francis et al., 1996.
- Page 211 Suicide rates in adolescents: Singh and Yu, 1996.
- Page 213 Studies demonstrating that close family relationships produce a substantial decrease in rates of adolescent substance abuse: Just to cite a few, see Bell and Champion, 1979; Nicholi, 1983; Jurich et al., 1985; Cadoret et al., 1986; Reynolds and Rob, 1988; Stoker and Swadi, 1990; Nurco et al., 1996; Risser et al., 1996; Nurco et al., 1998.
- Page 214 "a clarification of life": Frost, 1995, p. 777.
- Page 215 "When you love, you wish to do things for": Hemingway, 1995, p. 72.
- Page 217 "I said, 'Mr. Brown, do you mean to tell me'": Testimony of Charles Roemer about the meeting, in 1942 or 1943, of Unarco officials with Johns Manville president Lewis Brown and his brother Vandiver Brown. Deposition taken April 25, 1984, *Johns-Manville Corp et al. v. the United States of America*, U.S. Claims Court Civ. No. 465-83C. Castleman and Berger, 1996. (Our deep appreciation to Roger G. Worthington for supplying this citation.) See also Brodeur, 1985.

- Page 218 Patterns of correspondence between aggression and levels of serotonin, norepinephrine, and dopamine: Kraemer and Clarke, 1990; 1996.
- Page 218 Isolation-reared monkeys do not "conform to the usual social rules": Kraemer and Clarke, 1996.
- Page 218 "What do I care?": Damon, 1999.
- Page 221 "I wouldn't demand a lot of my doctor's time": Broyard, 1990.
- Page 222 Teaching acting to medical students: Finestone and Conter, 1994.
- Page 224 Managed care physician confesses to causing a patient's death by denial of care: Carlsen, 1997.
- Page 224 New York managed care organization uses death rate data to funnel patients into the worst and cheapest facility: National Public Radio broadcast of "Marketplace," December 3, 1997.
- Page 224 "modern man is estranged from being, from his own being": Percy, 1992.
- Page 225 Impact of industrial revolution on the family: Laslett, 1984, p. 18.

Chapter 10: The Open Door

- Page 229 *Reason's last step*: Pascal, 1972, p. 267.

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Every book comes to life in that luminous place wherein minds intersect and hearts meet. From the first germ of an idea to the neat flutter of pages a reader holds in his hand, a book owes its existence to the collaborative efforts of a dedicated band—and this work, with its trio of primary collaborators, more so than most.

In 1991, when I encountered Dr. Amini and Dr. Lannon at the University of California, San Francisco, the former had been there for twenty-eight years and the latter for twelve; they had been working together since 1970. Between them they had treated thousands of patients and taught hundreds of physicians and therapists-in-training. I was in my training residency at the time, reeling under the bombardment of contradictory and dubious doctrines that constitutes a modern psychiatric education. While I knew little about psychiatry and less about people, I was able to recognize that the seminars Dr. Amini and Dr. Lannon led were remarkable—a psychoanalyst and a biological psychiatrist teaming up, with amity and respect, to discuss psychotherapy, development, mood disorders, and love. Readers unfamiliar with the divisive quality of academic psychiatry may not appreciate the rarity of such a pairing—comparable, say, to finding a Montague and a Capulet taking turns quaffing beer out of a single stein in the local pub.

That notable conjunction was only the beginning of the unexpected. The richly complex seminars that Drs. Amini and Lannon wove were not easy for the intellect to grasp or words to frame. A good many residents were dazed and baffled. At first blush, I took my teachers' apparent and maddening imprecision to be evidence of a certain vagueness of thought fairly epidemic in the field. Eventually, with a dawning sense of wonder, I realized that my incomprehension represented not ineptitude on anyone's part, but necessity—the two were