

OUR HEART BRAIN AND THE CEREBRAL BRAIN

The three earlier brains

When that which veils the light is done away with, then comes the state of being called discarnate, freed from the modification of the thinking principle.

—Patanjali Sutra

We have a series of brains that have developed over eons, each on top of and created after the other. The first is the cerebellum or reptilian brain sitting over the most ancient part called the brainstem. They form the rapid response team, and are entirely in the here and now. Being concerned almost exclusively with survival, the ability to intuit through access to the Field is a major function.

Around and above this lies the second brain, being the emotional or limbic system that deals with feelings, relationships, and learning. It emerged first in mammals, and deals with past and present. It is the ‘gut’ of the brain, and affects all the others. If someone is strongly affected by their emotions and connections with other people, this is the part that gets fired up.

The third brain is the cortex, divided into right and left hemispheres. It added the new function of consciousness and awareness of the future, along with curiosity and all its realms of imagination. The earlier parts did not remain unaffected. When “each new brain developed it incorporated into its own functions the more primitive foundations upon which it is built and changed the nature

of that foundation into one that would be compatible with the new system.”¹⁸¹

Between the second brain and the right hemisphere of the cortex there are ample connections, but far less to the left hemisphere. The left and right parts are not always fully connected as the joiner between them; the *corpus callosum* is more developed in women than in men.

The left half of the cortex governs language, creates rigid categories, deals with surfaces and forms, uses logic and reason, while the right is concerned with recognition, the here and now, intensity of feeling, time as process, and artistic enjoyment. You could say that the left is an intellectual scientist, while the right is an ecstatic artist. When you are tired the left brain will often take over. When the right has gone off duty the world lacks insight and value.

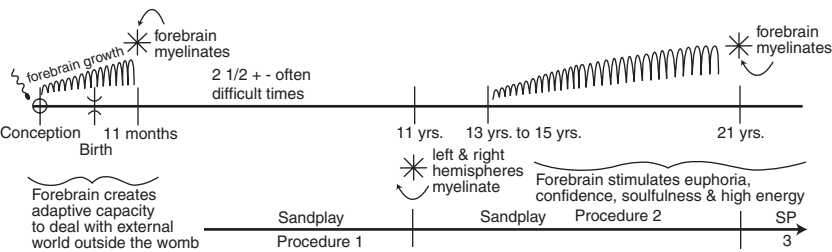


Fig. 22 — Changes in brain growth and myelination at ages eleven months, eleven years and at twenty-one.

Goldberg’s recent research shows that the right hemisphere is best at handling novel experiences while the left is best at working with fully developed structures of knowledge.¹⁸² The right, with its rich connections to the lower brains, handles the immediate and unlearned, and only when well established are these signals passed on to the left.

The one on the right is where the architects, designers, and artists are creating new ideas and forms, while the left is occupied by the bean counters, accountants, operations managers, and systems analysts who are responsible for turning the inspiration of the right into a practical reality. In this society and under modern education we mostly ‘identify’ with the left, as this is where words and concepts live.

However, the left can live in relative isolation, especially in men with their smaller *corpus callosum*. It can enjoy novelty and intellectual adventures without being overwhelmed by the rest, and can easily unbalance the system by rushing off on its own. It can stand outside emotions and events with objectivity, but as it is not directly linked to the heart nor to intuition nor feelings, its brilliant thoughts may lack some of the broader values in thinking we call intelligence — hence the limited intuition among civilized people.

The left is always in a hurry, loves to work out problems, and tends to treat the right with impatience. Where the right immediately *sees* the answer to a problem and passes it on instantaneously, the bureaucrat in the left has to organize its views rather more slowly.

The ideal state is one of close cooperation between the two halves, with the left treating the right as a wise counselor and trusted adviser rather than the village idiot, and the right treating the left as an essential form-maker rather than a boring sentimentalist.

The fourth brain, our neocortex or forebrain, is the most recent acquisition. The important development of these frontal lobes will be discussed in a moment.

Differences between men and women

The properties of matter and the course of cosmic evolution are now seen to be intimately related to the structure of the living being and to its activities. The biologist may now rightly regard the universe in its very essence as biocentric.

—Lawrence Henderson

There are two connective tissues between the hemispheres — the *corpus callosum* and the *anterior commissure*. The former connects conscious material such as words and thoughts between the two hemispheres, while the latter is more primitive and connects unconscious and raw emotions from the reptilian brain underneath. Through here conscious emotional material from the cortex is sent to the limbic for amplification into terror, rage, hunger, or lust, and passed back to the cortex to be processed into the more complex feelings we call envy, anger, or love. Both these bundles of tissue are larger in women than in men.

Women also have more tissue in the *massa intermedia* which connects the two halves of the thalamus. This shunts incoming information to appropriate areas with lightning speed, and is where automatic responses are triggered.¹⁸³ This may be why women are usually more in contact with their emotions than men, and why they have an immediacy with words that leaves most men flabbergasted. As the more emotionally sensitive right brain is able to pass more information across to the linguistically talented left, women's emotions are more easily and immediately incorporated into speech and thought.

This is the physical reason that women hold the emotional upper edge over men in verbal battles. Their mates, being less well endowed and slower to respond, get frustrated and naturally move into the one area where they are usually sure to win, their physical strength.

Imaging studies have shown that when women do complex mental tasks they bring both sides of the brain to the problem, while men tend to use only the side that is most suited to it. Women often take a broader view of life, bringing more aspects of any situation into decision making, while men are more focused. Depression is more common among women, for the emotional registers of the brain become overactive through feedback loops that are facilitated by women's enlarged *corpus callosum*, while the action-response sections that help men work their way out of their low feelings remain relatively quiescent.

This physical structure can make huge differences to the way we behave. People with a large corpus and with emotional centers that have been highly stimulated when young tend to be led by their feelings, while those with a smaller corpus and a desensitized emotional body will usually be more mental. The failure to develop the higher mental powers lies most often in a failure to develop its foundations, the older mammalian and reptilian. Such failure leads to an unending cycle of breakdown in which the neocortex cannot integrate the reptilian into its service in order to moderate its behavior. Confusion over which of the three gets to integrate the other two produces most of the problems we find in therapy. The results can be appalling if the reptilian brain dictates behavior without

being tempered by the neocortex, for then “trouble brews for that person, his society and the indeed the whole earth.”¹⁸⁴

The deep structure of the brain would be holographic

Union is achieved through the subjugation of the emotional nature, and the restraint of the mind. When this has been accomplished, the Yogi knows himself as he is in reality.

—Patanjali Sutra

It is known that every experience we have ever had can be recalled, in all its details and with all senses involved, if the right stimulation is applied. Were the brain to store all this data in its neural cells on a one-to-one basis, at even the impossibly low rate of one bit of information per second for a lifetime, it would require an incomprehensible 3×10^{10} elementary binary nerves — too many impressions for the existing storage capacity. Consider the number of impressions we can take in per second, and you will see how absurdly conservative this is: each second contains thousands of sensory impressions, as well as those from the body, the tug of the moon, the unconscious but current judgments coming from social and familial issues, interpenetration and interdependence of all the available fields, *ad infinitum*.

All our senses are sensitive to the vibrations received by the others. Eyes are sensitive to sound, memory is stimulated by smell, and smell itself is affected by other frequencies. The picture that emerges is that no one sense acts alone, but needs others for the fulfillment of its own role. The brain needs not only to store this unimaginable mass of mixed data, but also needs to be able to shuffle and make sense out of its mixed sources and messages. In addition we need vast areas for the computations, assessments, and judgments without which we could not have survived.



Fig. 23—The close relationship between the earth and the moon has established the intimate rhythms between them.

Karl Pribram has argued that the brain's deep structure has to be a holographic domain,¹⁸⁵ as only a holographic model of consciousness could explain such an encompassing talent.¹⁸⁶ The argument is that in holograms every part is contained in the whole, so the whole as an entity, not as a set of individual cells or neurons, are responsible for all actions and recalls, even though each one has a unique flavor. As Michael Talbot described it, "if you have a hologram of an apple you can tilt the plate a little to one side and actually see behind the apple...if you cut it in half you will have two complete images — each containing the entire apple. If the cutting is repeated you will get four apples, eight, etc., because each portion of a holographic transparency contains the entire image."¹⁸⁷ Though the image loses detail as the slices get smaller, the principal function is unaffected. In other words, the whole image remains embedded in any arbitrary segment of the original, even if some of the detail is lost as each piece gets smaller.

Roger Penrose and John Eccles have made the bold claim that "some cerebral processes are irreducibly quantum-mechanical in nature" and could be described as holistic, nonlocal, timeless, and nonlinear — indeed all those qualities we would associate with fields of energy.¹⁸⁸ This supports David Bohm's conclusion from his analysis of quantum mechanics that "mental and physical sides

participate in each other. Intellect, emotion, and the whole state of the body are in a similar flux of fundamental participation. Thus there is no real distinction between mind and matter, psyche and soma, (and) each human being participates in an inseparable way in society and in the planet as a whole,"¹⁸⁹ all of which is the theme of this book.

The organization of consciousness is, like the hologram, indivisibly whole. There is no sense that some part of you is your consciousness, but you are all together as one in being yourself. This means it has some qualities of the implicate realm, in which sense "every cell of our body enfolds the entire cosmos,"¹⁹⁰ which is where the hologram blends in with the interconnectedness of the Field. The inescapable conclusion is that the holographic principle is found in the behavior of fundamental units of matter, the creation of life, the unfoldment of particles out of the Field, and to the operation of the brain.

This view is not universally popular. It is more usual to compare the brain to a giant computer, with nerve cells that work like transistors or chips, and ganglia of hard-wired electronic circuitry. The brain certainly cannot be hardwired, for Walter Freeman found that the patterns of electrical activity that indicate where this wiring ought to be actually changes location with altered feelings or circumstances. "Patterns are constantly dissolving, reforming, and changing in relation to one another."¹⁹¹ When there is a new input or meaning there is a new pattern, so that "There are no computers, only meanings...[telling us] that brains are drenched" in endless data flow.

Karl Pribram has shown that "universal events [like telekinesis and telepathy] emerge from frequencies that transcend time and space — they don't have to be transmitted. They are simultaneous and everywhere."¹⁹² This is a statement that fills me with wonder — "they don't have to be transmitted." It is the essence of the most ancient spiritual views of perennial philosophy: that we are all in contact, throughout every domain, but just don't *know* it, as it is across the veil. A couple of well-known examples of new ideas being transmitted without contact are the invention of photography by Louis Daguerre and Joseph Niépce at the same time at opposite

ends of France, and of calculus by Newton and Leibniz on either side of the English channel.

It is from this understanding that Jerry Fodor could write, "The brain is a hologram enfolded in a holographic universe."¹⁹³ He compared the inability of engineers to create robots capable of the simplest domestic tasks designed to carry out only linear functions with the capacity of the brain to draw complex inferences from the simplest signals by integrating all the senses plus experience plus intuition plus instincts plus any complexes into one instantly-formed conclusion, and to be able to act on it straightaway. The complexity of this sentence is itself an analogy for the holistic qualities of the brain. We can only doubt its holographic implicate nature if we do not wish to face the consequences.

In the field of therapy one consequence is that this holistic approach ends the behaviorist view that all human responses can be examined as outcomes of stimulus and response. If all our thoughts are instantaneously cross-referenced with all other thoughts, then fields of association and symbolical structures are better metaphors for whatever goes on inside. This means that we will be as powerfully directed by an inner constellation of associations and prior energetic fields as by any external event. In the more general sense that includes biology and physics, it means that as we all partake of fields and as our fields are in constant vibration with each other then the subtler fields of nonmaterial reality would have the greater impact than the solid — not only on personality but on all existence.

Our other brain: the heart

See this heart of mine, it weeps for itself and pleads for mercy.

—The Egyptian Book of the Dead

As for the meaning of life, I do not believe it has any — and this is a source of great comfort to me. We make of it what we can, and that is all there is to it.

—Isaiah Berlin

It is becoming apparent that the brain works in concert with the heart to maintain all our human functions. Nevertheless there remains the conventional view that the brain is just a computational

device and the heart a pump. Only recently has it become known that there are severe limitations to comparing the brain to a Cray computer or the heart to a Lister diesel.¹⁹⁴ Were the heart just a pump it would need to be the size of a tug to move so much blood along these many kilometers of small piping. In fact, the whole body moves the blood. The vessels themselves join in the rhythmic contractions of the heart, some veins are riffled to smooth the way for the blood, while blood cells themselves get smaller as the vessels reduce in size. In one sense the whole body vibrates and shimmies with each pulsation. The heart is not a separate mechanism, but an integral part of our entire system, continuously communicating with the brain and the other organs of the body.

As with all cells and organs, the heart is part of a signal feedback system that not only affects physiology, but also our perceptions, our emotions and behaviors, performance, and total health. The heart works with the brain as a dynamic component of the emotional system.¹⁹⁵ Current estimates are that two-thirds of the cells in the heart are neurons in clusters of ganglia with exactly the same axon-dendrites as found in the brain.¹⁹⁶ It is, in short, a management center, that has now acquired its own science called Neurocardiology.

Candace Pert showed that physically the brain *extends throughout the body* via short chains of amino acids called peptides.¹⁹⁷ All the neurotransmitters and peptides found in the brain exist in the heart so that it is able to operate in a similar way. Further, the same molecules in the heart are found in every cell in the body, with particular concentrations in the organs. Now, twenty years later, it has been discovered that there are also direct neural connections between the heart's 'brain' and the limbic brain and all the other major organs.¹⁹⁸ It is through these family-like connections that the balance between the organs is maintained so they are able to work in harmony. It is the heart that ensures that the liver and the pancreas and all the secretions and digestions and so on have the same coordinated aim: our health and our pleasure. And throughout these physical manifestations flow the energetic connections that partner the cellular in what is increasingly being understood as a totality that is as holographic as the brain.

It would seem that the heart has priority over all other organs. In the development of the fetus the heart is formed before the brain. Hence it is the heart that has to deal with signals from the growing organs in the gut — liver, pancreas, stomach, and so on — and to maintain harmony between their differing needs long before there is anything to ‘think’ with.

Priority also applies energetically, for the magnitude of the fields emanating from the heart outweighs those of the brain by huge amounts. Its electrical field is about sixty times greater than the electrical activity of the brain so that all the cells of the body are continuously bathed in an all-encompassing energy field that binds our whole system together.

Also, the heart produces a powerful rhythmic electromagnetic field that is an incredible 5,000 times stronger than that produced by the brain. Evidence has accumulated that the heart’s fields affect water and DNA,¹⁹⁹ as well as having a measurable physiological impact on people at a considerable distance.²⁰⁰ This is why connections with fields beyond ours is, in the universal sense, the job of the heart. This has produced a growing interest in *emotional intelligence*.²⁰¹ As no feeling or desire in us can remain just a local event, but has to have some impact on all of us, the energetic fields of the heart share themselves with everyone and everything, everywhere.

These intimate connections give the heart priority when receiving and responding to key messages from inside or outside. Where priority is given to the heart it means that, in a manner of speaking, the brain is *an instrument of the heart*. In addition, the brain and the body are both fashioned to vibrate from the heart’s frequency, “and then respond to the resulting experience and interpret its quality. This qualitative analysis, or emotion, is relayed back to the heart’s own neural field...changing those fields.”²⁰² The heart’s intelligence is not cerebral, but holistic, relaying data to the brain’s emotional system on the bodies’ needs and taking feedback intuitively as well as directly.

Though mind is essential to the heart, which has no structure for analysis or logic or contextual details, the brain, and especially the left brain, can streak off on its own if it wishes to, and ignore the subtler messages from the heart. Biologists have confirmed that

emotions of love, care, and compassion are linked to physiological changes everywhere in the body, in the heart as well as the brain and the nervous and immune systems. Their positive signals are relayed through particular hormones that specialize in encouraging peaceful emotional states. No wonder we believe intuitively that the heart is the center for love and compassion.

When there is an alignment between the frequencies of the heart and the head there arises a deep sense of inner peace. Chilton Pearce calls the process ‘entrainment.’²⁰³ It is a key tool in transpersonal therapy that we call attunement. The term *physiological coherence* has been used to describe this inner peace.²⁰⁴ It is not dissimilar to the stillness found in certain meditative states and by those who have integrated peak religious insights, or had near-death experiences. From it comes increased efficiency and harmony in all aspects of life, with greater emotional stability and intellectual performance.²⁰⁵ Such physical coherence seems to underlie the connection between positive emotions, health, and longevity.



Fig. 24—The brain from above showing both hemispheres.

Limiting the heart-brain

When someone loves you, the way they say your name is different. You just know that your name is safe in their mouth.

—A four-year-old

As the first organ in the fetus, the strength of the energetic system emanating from the heart maintains a strong connection with the Field and with everything round about. The sense of the oneness of all things rests in the very first moments of our lives, so that the newborn baby is totally merged with and open to all the fields around him. Such connectedness and openness tells us that a baby is all love. He smiles and we naturally soften in response. No matter how silly or embarrassing the baby talk of the adult, his smile and outpouring of love remains.

This is a most remarkable time in a newborn's life. Not only is the baby in heartfelt bliss as he smiles on the world, but he is simultaneously aware of the auras and vibrations around him. Whenever people access their earliest memories, especially before the age of four, what scenes do we remember!

I have asked my grandchildren, while still young, what did the fairies look like, and they would tell me with great certitude and detail. One said, "When you see people in love, their eyelashes go up and down and little stars come out of them." I have met youngsters of six who would embarrass their teacher by knowing they were ill when they were trying to hide it, or seeing the gender of the calf while still in the cow's womb. I personally recall the thrill of seeing my godfather's luminous aura surrounding him in incredible colors while he stood at the foot of my cot, and at the same time being aware of a deep inner sadness. In later years I knew him as a very kind man who carried a terrible sense of personal worthlessness.

This capacity to see into the Field is bred out of us, through disdain for what children experience, through schooling, and in the scientific and materialistic assumptions of our society. The Christian churches, particularly the Catholic and Anglican, have minimized the value of the mystic experience and ecstatic inspiration — mainly, I suppose, as it has cut across church authority. One

result is that, at a rough guess, fewer than 15 percent of Westerners have regular mystic experiences. On the island of Bali, on the other hand, probably only 15 percent have *never* had a mystic experience.²⁰⁶ This is expressed in the dancer's self-mutilation by the kris in the Rangda-Barong dance that leaves no scar. The dance expresses their mystical attitudes publicly. It is no accident that Balinese babies are recognized as 'gifts from the gods' and constantly held near their carer's heart until they are old enough to walk.

Karl Pribram has argued that the brain has a mechanism that limits the mass of information coming from the Field.²⁰⁷ As few of us are advanced enough to integrate the full complexity of information in the Field, we need to be 'slowed down' so we won't be overwhelmed. Yet enlightened people have shown by their example that there is a way the fullness of the Field can be handled without blowing all our circuitry. The realm of matter is, in a sense, the kindergarten level in which lower level information gets processed. The capacity to have peak experiences, and for the left brain to be able to deal with the enormous rush of numinous information, lies in the fourth brain, which has developed to its present size and significance only over the past two or three thousand generations.²⁰⁸

The fourth brain of transcendence

Understanding of mind-consciousness comes from one-pointed meditation upon the heart center.

—Patanjali Sutra

The prefrontal lobes of the fourth brain grow in two stages. One comes with birth, and has a governing role not dissimilar to that of the heart. It ensures that the older-style brains form according to the needs of the prefrontals, facilitating the older systems to rise up the evolutionary scale and consolidate themselves into one civilized mind that can be socialized. This is the monastery of the brain, the only part that is free from the constant labor of responding to sense impressions. Its purpose is to be free to ponder. "The prefrontal cortex springs into life and we are jettisoned into full consciousness as though from a tunnel into blazing sunshine."²⁰⁹

The process happens during the first twenty months after conception. Thick synaptic connections are made between the prefrontals and the limbic system and, through it, with the heart. Then around the eleventh month an abundance of links grow between the prefrontals and the foremost part of the emotional brain followed by a rapid growth in the whole brain. But then, most surprisingly, in all the cases studied these links stop growing, and there is a pause.

At eleven years of age all parts of the brain (except the prefrontal) myelinate.²¹⁰ This locks into place all development up to that time and increases speed and efficiency. But it also locks in all habits, both good and bad, and any traumatized responses. This imposes a tremendous shock to the system. Suddenly the feeling that we once had that we could adapt to anything and play raucously with the world has slipped away, almost unnoticed. When over the next few years this is combined with the body's sexual transformation, it is no wonder that adolescents often find life difficult and are much harder for the therapist to work with than children or adults.

The second and larger development of the prefrontal occurs around fifteen years of age, in mid-adolescence. It forms dynamic connections to every part of the older brain. Strange as it may seem, this later development was discovered only in the mid-1980s. Its neural structure completes its growth around age twenty-one, and then, as before, the superfluity of these connections is seriously reduced. And for most people that's it.

During these six to eight years the growth in the prefrontals of young people seems to generate that idealism and tremulous expectation that something fantastic is about to happen, that an enormous future lies hidden within them. As long as the prefrontals can overcome the negative input from the limbic system the body is suffused with joy and cohesiveness that stem from the heightened activity in this area. We all know the incredible feeling of invincibility and passion, of an unstoppable rush of energy that is usually put down to hormones, especially testosterone. It seems significant that a large number of people with the capacity to cross the veil had major transcendent experiences around their twenties: Satya Sai

Baba, Bhagwan Rajneesh, Robert Johnson, Chilton Pearce and Krishnamurti, to name a few.

Yet the expectations of the late teens nearly always remain unfulfilled, and by twenty-five we find life has imperceptibly dulled. It is a radical change. We have 'settled down' both socially and in our physical brain structure. The enormous excitement of the nineteen-year-old has ameliorated into having a family, paying the mortgage, and starting that repetitive regularity that will last most of us until we die.

Along with Robert Johnson, I have been excited by evidence for the growth in human capacities in recent times. The ability to distinguish the color blue, for example, has developed only over the past few thousand years. "The word *blue* does not appear in the Old Testament nor in Homer nor in any classical writings."¹¹ This capacity has emerged slowly, and is the most quickly lost in color blindness. In sound too, the pleasure we receive from musical harmony, as opposed to melody, may be even more recent for it appears with Du Pré only in the beginning of the twelfth century. Perhaps sensory consciousness of human energy systems is only now appearing in human evolution, not just for those rare individuals who have guided us in the past, but for all humankind.

So the uncertainty is, what has all this coming and going meant to do for us? Clearly it is meant to be more than growth and decay for its own sake. Our capacities and our potential to experience the whole universe are enormous, perhaps limitless. If everything is, in its foundation, fields of information intersecting within a Great Field of quantum information, and if we with our egoic personalities are granted access facilities that we throw away, what is the Field's next move? Or, is it up to us as co-creators with the Field?

My personal understanding is that the greater fields are remote, with a lack of what we, in our human attitudes, would call *humanity*. Yet here on earth we shower caring and grateful projections on gods and spirits in rituals and prayers and meditations that show how deeply we desire to bathe in their energy. My sense is that the Field may be responding positively to this loving, and is thereby 'instigating' the formation (without intent or design) of just those

neurons and synapses that would allow us to manifest those connections in a fuller way.

Our ancestor's god-consciousness may have goaded the Field to make our job easier. The prefrontal lobes of the brain may be the Field's way of installing a higher level transmitter so that our highly developed brain and heart might be known on the implicate level, and exchange the timeless Beingness of 'out there' with the human capacity for conscious love and moral virtues.

Is this new part of us primarily responsible for the extraordinary brilliance of the human species? Is it through the neocortex that we are able to access more memory storage and computing power than is available to any other animal? Building on the work of Pribram and Schepp, Ervin Laszlo has argued that the brain is currently able to read the Field and download vast quantities of memory and other data stored there.²¹² The upper echelons of our memories and creativity are just another sense, like sight or smell: a sixth sense designed to gather more information than the other five. Is genius, be it Rembrandt's or Einstein's, just a reflection of a person's capacity to access the Field? As the Field may be likened to a warehouse for all that is or ever was, it has the ability to offer us, as a species, the most awe-inspiring potential. To do this consciously would provide us with the compassion of the Field in which everything is, by its very nature, in right order. What then would happen to greed and fear and hopelessness?

The potential is ours only when coherence is undamaged

Only in conflict with itself can the human heart or the human soul attain what is best in life.

—Bruno Bettelheim

On both occasions, at eleven months and at twenty-one years, the elimination of most of the cortical connections between the prefrontal brain and the rest seem to happen from the same cause — because in most cases the child has not, during his earliest years, been receiving the extensive and loving nurturing he needed for his fullest development.²¹³ Full elimination is not always inevitable, and

we should not beat ourselves up about this because it is a very complex issue that is not well understood. Mozart and Einstein, who had greater use of their forebrains than the rest of us, did not necessarily have a better childhood than others. The size of the forebrain may be limited by many factors; for example, in the womb by the emotional state of the mother, or by the depth of nurturing between mother and infant in the first eighteen months or so.

The care of the infant not only has an impact on the effectiveness of the first brain spurt, but on the second as well. Allan Schore has found that the way we discipline our children and use our greater power to inject shame are the major causes of “the degeneration...and rewiring of the orbito-frontal columns,” and that this minimizes its rich potential in later years.²¹⁴ Effective development of the prefrontal lobes that is critical to all higher intelligence as well as transcendence seems to depend on this nurturing, not the genes. Pearce has argued that at midadolescence the prefrontal cortex transforms the limbic system into a potentially transcendent power able to renew its connection to the Field.²¹⁵ This may be the most significant evolutionary trait of *homo sapiens sapiens*, yet is still only in potential.

The amount of emotional encouragement determines the degree of development. In our society discipline is usually imposed at the most critical time when the toddler is beginning to explore the world.²¹⁶ Schore states that the linkages between both developments of the prefrontals to the rest of the brain depend on the care the toddler receives.²¹⁷ It will determine the “lifelong shape and character of the child’s worldview, mind-set, sense of self, impulse control, and ability to relate to others.”²¹⁸ Chilton Pearce comments that “It might be assumed that the genetic blueprints will suffice as the stimuli for neural development. Those genes, however, would need to be stimulated by the child’s interaction with the capacities they imply when those capacities are ready for development. That is why one infant cannot model for another. Someone who is fully able to do something in a certain way must perform the role of model if a similar ability is to be awakened in the child.”²¹⁹ It is why the child with a natural gift for mathematics would not fully develop that gift if he lived in the jungle.

With Anthony Storr, both Chilton Pearce and Schore are concerned with the effect of discipline that blocks a child's natural curiosity.²²⁰ The infant's eager, fearless exploration of the world is filled with joy and humor. This curiosity represents every function the prefrontal lobes are designed for. It is an expression of a child's total coherence.

A newborn baby resonates with the mother, so that all mother's feelings and energies are felt and digested by the baby. The mother's heart energetically mentors her child and "furnishes the model frequencies that the infant's heart must have for its own development in the critical first months after birth."²²¹ The more in tune they are, the greater the resonance between them and the greater the coherence in the baby's growth and learning, and the more likely the forebrain will develop so that it is able to act as intended.

However, when a child is socialized and educated and subjected to the traumas of other family members the most pervasive loss can be in the child's coherence. Overall wholeness is seriously depleted in childhood as essence and soul and naturalness are undermined. The pressures of adapting to a household seriously affect a child's inner centeredness and belief in herself. As coherence crumbles she feels uncertain and quite accurately senses that something is missing.

Sandplay requires only a tray with a blue-colored bottom filled with sand and hundreds of little figurines, objects of every variety and size, some good and some bad, male and female, gods and mythic creatures, body parts, and soldiers.

Sandplay is the unconscious on view. It specifically directs itself toward the needs of the psyche, and so it sets out problems and will indicate their solution in the most lucid manner. Symbolic meaning is important, but most needed is the energetic field that develops between the client and the facilitator.

Through it we can explore the fullness of the body and the emotions, and more importantly, the soul and the vibrational formations that make us who we are.

Sandplay is a loving and unobtrusive way to work with children. Before the neurons in the brain myelinate at eleven years they can unearth their own meaning and transform them themselves. The play in the sand unravels their uncertainties without having to use words that can be misunderstood.

We use a powerful process called sandplay that is the best diagnostic tool we possess, described in the box. In these four photographs of one sandplay session, we can follow the process of early disciplining and how it was taken by the infant. Some children are not as susceptible to shame and guilt as others, and need not be as deeply affected. Nevertheless the exercise of pressure on the infant can easily create huge distortions in that child's views of life, and through the inner contradictions that arise as coherence disintegrates.



Fig. 25—Sandplay 1, the child in the center background is in grief from the dominant power of mother, on the front right.



Fig. 26—Sandplay 2, she dies inside, or part of her does, and becomes the black skeleton hidden under the tears.



Fig. 27—Sandplay 3, she decides to limit her potential, shooting herself in the head, under cover of a gigantic scream.



Fig. 28—Sandplay 4, yet she needs and loves her mother, and attaches herself with the necklace.

The first figure shows the infant on the left, fearsome mother on the right, and my grief-filled client at the back. The large key points at her, the handle is in mother's mouth. Her mother's demands are emphasized by a tiny framed picture of the child as the mother wants her to be (you cannot see the picture in the photo), and to make sure you have got it, a yellow sign saying 'Messages' points at the picture. Mother's demand is that "This is what I want you to be" rather than letting her stay the irascible, noisy urchin she was by nature. It was terrifying for the little girl.

In the next figure we see the first consequence — she has thrust a black skeleton under the mask of grief. Without more ado she shoots herself in the head, then covers all this up with a gigantic scream, in the third figure. This is not a scream at mother, but into the sky, at God for bringing her into such a family. Her loss of

herself and her despair is absolute. She is torn between her need for her mother and her passion to be herself. In her growing emptiness need wins, and in the fourth figure she shows her need for her mother, and her love, by linking them with a necklace of beads.

Her coherence had been shattered. She has now accepted she is a prisoner within the family's demands for appropriate behavior and places herself behind bars on the upper right, looking at 'Messages.' There has been no physical abuse here, just the demand that she be 'civilized' to fit in with mother's expectations.

Once coherence disintegrates, for most of us the potential in the forebrain remains dormant for the rest of our lives. It leaves nearly everyone with a sense of unrequited longing. To rectify this and to get the mind-and-heart system to return to the infant's time of wonder and connection a host of meditative and experiential techniques have been developed in all cultures, whether discipline-oriented or ecstatic, along with drugs and mortification — but too often to little avail for the effort expended. Once the connection is lost it may be hard to reform it, though therapy that addresses the energetic body, as I will discuss in Chapter 7, has proved to be as effective as years in an ashram.

When the forebrain connects with the heart we are granted intuition

The intellect has little to do on the road to discovery. There comes a leap in consciousness, call it intuition or what you will, and the solution comes to you, and you don't know how or why.

— Albert Einstein

We find in therapy that intuition comes when there is a palpable energetic connection between the heart and the brain. This can be distinctly felt in the stillness of meditation. Ancient Eastern beliefs are that the 'third eye' in the center of the forehead — right in the middle of the prefrontals — brings down a higher intelligence when, and only when, it is connected to the heart.

In medieval texts we read of the descent of Holy Spirit, drawn as a white dove descending onto the crown of the head. As the *sanc-tus spiritus* the dove represents holy wisdom descending from the

outstretched hands above. The same theme was stated thousands of years ago in the Patanjali Sutra: “understanding comes from one-pointed meditation upon the heart center. As a result, the higher hearing, touch, sight, taste, and smell are developed, whence all things can be known in the vivid light of intuition. This intuitive knowledge is omnipresent and omniscient and includes the past, the present and the future in the Eternal Now.”²²²

As an example, when Hilary and I began our search for the valley where we now live and made a home for the Crucible Center, I went into meditation on what we were seeking, and drew a picture of it. The search took a year, and after we built the house and moved in I compared the two. The picture and the reality were identical, even to the stream, the chickens, the peaked mountain in the background and the open grassy area in front of the house and the dense bush behind. The vision had taken over a year to manifest.

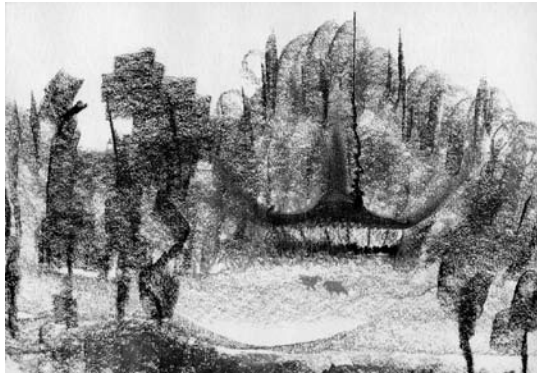


Fig. 29—Drawing of the vision we had for our land made in April 1996.



Fig. 30—The setting as it is today.

When building the house and on the day after placing the heavy hot water tank on timber beams in the roof, my ex-partner in architecture turned up unexpectedly. I had not seen him for some years and our new house was a two-hour drive from Sydney where he lived. It was a pleasure to see him and we chatted about this and that. As an aside he suggested a steel joist to strengthen the beams under the hot water tank, something I had not thought of. I realize that but for his fortuitous visit the platform under the tank would have sagged. He has never been back since then, so how did he know this was the day I unconsciously needed him?

Just as the Field manifests images and dreams in us that we bring to consciousness, we manifest our 'images' in the Field that are then projected back as something tangible in our world. In this manner, albeit unconsciously, I 'created' the arrival of my partner so that my unrecognized and professionally incorrect understanding of the weakness in the structure could be shown to me. This reads like double-think, but in the quantum world of fields this sort of occurrence is as real as it gets.²²³

All of us should have highly developed intuition. "It is present in everyone because it is a survival skill, not a spiritual intention."²²⁴ Yet through training, our society denies its validity as unprovable, and we have to rely on mental properties to keep us going. Intuition often looks like synchronicity, which is "the mind operating, for a moment, in its true order, extending throughout society and nature, moving through orders of increasing subtlety."²²⁵ Yet it is immensely more.

At first, intuition arrives as an image, a sense, or a word that is extremely faint. The more we pay attention to these delicate promptings the stronger they become. Then we notice that our sense of time fades, and we can hold our attentiveness and do our work at the same time. We are able to perceive more widely and fully than usual, able to hold many different aspects or processes within the same intuitive band and tire less easily. We are then spanning the two realms, the material and the Field, and partaking of both. With it comes the quality that Gurdjieff called 'youthing' in which the body and mind retain a younger subtlety, no matter what the age. Intuition and increased coherence develop together.

Intuition operates directly and immediately, from a personal space inside. There are neither judgments nor concepts to stand in the way, and there is no thinking nor emotional content. If an emotional impression creeps in then the intuition is likely to be contaminated. Like the Field it comes from, intuition has an impartial dispassionate quality that is unlike intellect, which is invariably slanted to some viewpoint. In the presence of intuition the mind becomes more like a commentator or a foreman ready to act on command.

The way each of us pick up our 'messages' is very personal. The senses involved may be hearing or vision, or just a feeling that transmutes into a phrase or a word from which comes a knowing. Personally, my intuition comes as a 'density' in the body, a sensible impression, a sensed form or image that may be followed by a mental picture and then a phrase. On the other hand, my partner Marg receives clear sentences and, with contact through the hand, a vision in the mind of energy shape and movement that is projected onto the 'real' vision.

As intuition emerges from the Field, we can at times sense occasional aspects of the future as well as the present. We seem to be able, at the subtlest level, to access fields of information that exist in a domain far removed from linear time. Compelling evidence shows that both the brain and the heart process information about the emotionality of a stimulus before this stimulus is presented. There can be a 'knowing' that comes before the event, as if the body is continuously scanning the future.²²⁶

There is a similar scanning that influences others. We might think that we have the strongest influence on ourselves, yet recent work by William Baude has shown that other people can have almost the same impact on our mind and body as we can when we try to change ourselves. Letting someone else have some intention for you, either good or bad, seems to be as powerful as using meditation techniques on yourself.²²⁷ This may be how bone-pointing and healing by prayer works.

In addition, it has been found that if you believe you can connect at a distance you will outperform those who do not. Here is an excellent test of feedback with the Field, for if we influence the

Field through our awareness of it, the quantum connections that the Field make possible become more accessible. If the analytic left brain is overactive, the Field is less accessible as connections to the frontal cortex are diverted, whereas if the right brain is dominant and the left is relatively quiescent, then connections are much stronger.²²⁸ This just shows the huge influence our thinking apparatus has on our level of intuition. By stilling the left brain a little through meditation the doors of perception open a little wider, and the receptors in the brain become more available to a larger number of wavelengths in the Field.²²⁹

When we are consciously connected to the Field everything appears much brighter, the colors more intense and everything is more deliciously real. To achieve this we have to dampen all those left-brain thoughts that take up so much of our inner space. Their attachment to survival distracts us from the most intimate aspects of living. The moment the left brain becomes involved, as when input is interpreted, or mental analysis slides into the middle of a process, the connection between the frontal lobes and the heart, running through the right brain into the limbic, becomes disturbed. Activity in the left brain distorts the transmission. Without the left we seem to have potential access to all the information in the universe, every sight and sound and smell. The left brain works primarily outside the quantum fields, and being an analytic filter actually reduces the primary impact from all the senses.

It has been experimentally shown, as with the Russian rabbits mentioned earlier, that every death is registered in the Field, and can be picked up by anything that can resonate with that vibration.²³⁰ There is empathy between all organisms so that a plant will respond to the death of another, even if it is some other species. Humans are the same, if not more so. How many of us have experienced something of a distant event, such as an accident or sudden death of a close friend, even on the other side of the world?

If actualized in enough people, the conjunction of heart and brain could totally alter the consciousness of this planet, and turn an irresponsible species that fouls its own nest and turns a blind eye to its own suffering into a noble and compassionate race. Together the heart and the brain form the roots of compassion. When these

are working together all the finest minds have agreed that a natural sense of ethics and personal morality arises. This blessed state comes when we are so connected to the Field that we know, intuitively, where everything ought to be in the world around us. It does not come from thought, but from a heartfelt sense of knowing that within the totality of all vibrations “all is right with the world.”

In fact, we exist in a totally interactive and ecological environment in which every level of matter and life lies within a singular ground. There is nothing that is not a part. All is therefore One in the Field. The body, head, and heart “form an intricate web of coherent frequencies organized to translate other frequencies and nestled within a nested hierarchy of universal frequencies, all functioning in coherent resonance, endlessly unfolding moment to moment through the rich dynamics between possibility and actualization.”²³¹