

Introduction

Intelligence.... What does it mean to be truly intelligent? Is it possible to awaken and develop intelligence in ourselves and in our children?

Hello, I'm Kitty Hilton and in the next few minutes we are going to take an amazing journey, not to some far off land, but a journey into ourselves—into the most subtle and perhaps least understood areas of human development. We are going to explore the Awakening of our own intelligence.

Our guide will be Joseph Chilton Pearce, the author of six books including *Crack in the Cosmic Egg*, his national best seller *The Magical Child* and most recently, *Evolution's End*.

For more than thirty years Joe has challenged audiences around the world by questioning why we, as human beings, haven't developed to our full potential. He is convinced that nature has a plan for the unfoldment of intelligence—it is a plan woven into every cell of our body and one which we are just beginning to understand.

Let's join Joseph Chilton Pearce, and a group of parents, educators and health care providers, as they explore the Awakening of Intelligence.

Joe Pearce

The basic intelligence on which life rests—the ability to avoid that which is harmful and move for that, which is beneficial to the continuity of life—is possessed by all creatures, from the first mitochondria right on down. The more complex a creature the more complex that intelligence becomes. It's always that which moves for appropriateness to our well-being and continuity. Our intelligence can be said to be "heart-centered." Intelligence is connected with the deepest intuitive roots of life, the matrix of our being. It's the dark, mysterious interior of life. And intelligence is essentially feminine in its nature, if I may use that kind of polarity. It's subjective; interior.

On the other hand, intellect is objective. It's exterior. It's outwardly driven. Intellect is "brain-centered." Intellect is analytical: logical, linear, analytical. It's constantly questioning. It takes things apart and loves to put them together in new ways. It's inventive. This brain-centered, objective intellect is a highly specific form of intelligence that is evolution's latest achievement and has been brought about by the latest additions to our brain structure.

We can say—this is very risky, and I realize that—that intelligence is essentially heart-centered and feminine, asking for appropriateness to life, while intellect is essentially brain-centered, objective and masculine and asks only about life's possibilities. Is it possible? If so, intellect goes for it without regard to its appropriateness.

For instance, today the United States alone annually produces about nine thousand chemicals that have never existed in earth's history. This is an intellectual process. Unfortunately, 90 percent of these chemicals prove to be violently carcinogenic and our playing with them dumps 100 million tons of virulent toxic waste on our own nest every year. And that's just the United States—all the other countries are trying to overtake and outdo us on this.

In brief, this is the result of the historically unprecedented phenomena of a total concentration on intellect devoid of—what? Intelligence. The question, “Is it possible?” is asked, but never the one “Is it appropriate?”

The word intelligence has many, many different meanings. Because we are developmental creatures, our intelligence is developmental. As our intelligence develops it diverges to encompass more and more fields and forms, even though its basis is always in that underlying appropriateness: Is it appropriate to our well-being?

Some of you might know the work of Howard Gardner at Harvard and Tufts. A brilliant man who wears a number of hats, he's come up with the *theory of multiple intelligence*, which states in effect that there is no general intelligence that allows a human to learn different subjects and disciplines, but that different subjects are independent intelligences in themselves.

Gardner lists such things as musical intelligence, linguistic intelligence—from which language comes—mathematical intelligence, spatial intelligence and so on. Recently he is rumored to have added the intelligence of the spirit. When I heard this I said there's hope for us yet.

And so we have all these different independent intelligences, which we find are what physicists would call *non-localized*. Now this will drive you up a wall. In fact, the whole problem of non-localized energy is driving physicists up the wall.

Imagine our brain structure. Let's say it's got all these *neuro fields* operating brain sensory maps and so forth. Now what they're doing is translating from fields of intelligence. Well, where are the fields of intelligence? They're not anywhere.

But our brain translates from these hypothetical fields. It translates them as our direct experience, or our localization of that which is un-localized. The brain is the translating medium between them. Karl Pribram, a great researcher at Stanford University spoke years ago of the brain translating from a frequency realm. What are frequencies? Wave fields.

A frequency realm is not in time/space, but as the brain translates from it, it creates our *impression* of time/space and the marvelous world in which we move. In the same way, Gardener's multiple intelligences or Montessori's multiple intelligences are fields of non-localized energy. The brain localizes them as experience and we all share the same world because we're drawing on the same fields.

The first chapter of *Evolution's End* begins with a phenomenon we call the *idio-savant*. Darold Treffert—a medical doctor who has been working with the idio-savant for 30 years or so—recently turned out the first real study of the subject. Scientists have ignored and even avoided the idio-savant because they challenge our every scientific notion.

The idio-savant are both *idiots*—their IQ's average about 25—and *savant*, which is French for *learning person*. In spite of being un-educable to the point of being walking vegetables and needing to be institutionalized—fed, clothed, and led around by the hand—they have direct, unmediated access to one of the major fields of intelligence. But they have to be questioned about their particular field of activity; they can't access the field themselves. When they are asked, the answer will come from them instantly and infallibly. They never make errors.

How can this be accounted for? These people can't read or write and they can't be taught. Their vocabulary can be almost nonexistent, until you push their button and they come forward with hours and hours of information concerning their field of activity. The British employed two mathematical savants in World War II; they were infallible. They worked just like a computer.

The sum 2 squared to the 64th power is a number greater than the number of atoms we estimate to be in the sun—the number is actually 18 quintillion, all the quadrillions, all the trillions, all the billions, millions, hundred thousands, et cetera. It's the only number I know of greater than the national debt, and when I asked a savant the amount it took 45 seconds to read the answer out.

When asked, "How do you know?" he couldn't even comprehend the question. It was beyond him, too abstract, though he was pleased to be exceptional. So where did the answer come from? Well, savants don't give the answer. We furnish the stimulus. Their brain system responds automatically.

It must be understood that the savant generally has only a single field. There are calendar savants who can name any calendar date 40,000 years in the future or 40,000 years in the past. Ask them when Easter is going to fall 20,000 years from now: instantly the answer comes, along with the tides and any other information that might be on the calendar for that day. How do they know? They don't know how they know. But if you furnish the stimulus here comes the answer.

Consider the Columbia University Medical Hospital automobile savant. A veritable vegetable, he could, if led to a window and given a single glance at the streets of New York city, list the automobiles he had just seen in order of production year, model and type—even if they were factory fresh from Detroit or Tokyo. And this would be hundreds of cars, stretching as far as the eye could see. Why? Because any human intellectual activity kicked up in this localized sphere of our living world kicks up a corresponding field of related non-localized energy. And this particular savant just simply happened to have one neural field accessing the potential field of "automobile." That is, the whole human history with and experience of automobiles.

Now to deal now with nature's agenda. Nature has a scheme in mind for the awakening and development of this incredible intelligence. Nature's agenda is very simple. Take for example the physical unfolding at birth. A baby is born without teeth—or so the nursing mother hopes. Around the first year of life the baby teeth appear, followed by the six year molars, 12 year molars, and at around age 18, the misnamed "wisdom teeth." This periodic unfolding of physical development is paralleled exactly by the periodic unfolding of intelligences or abilities directly connected with specific areas of the brain.

Piaget (and before him Maria Montessori and Rudolf Steiner) visualized this development as stages beginning birth, age one, four, seven, 11, and 15, at which point he and most of the developmentists say the show is over, development stops and we're stuck with what we've got for the rest of our life.

In 1974, Herman Epstein at Brandeis claimed evidence that there are brain growth spurts at each of these periods. Now we know this is true. These growth spurts are not necessarily the growth of new *neurons*. The power of the brain system doesn't lie just in the number of neurons, but in the number of connecting links between them. Though they make up the brain and used to be known as the "thinking cells," single neurons are useless; neurons can only operate in connection with other neurons. It's the *axons* and *dendrites* that branch out and connect with other dendrites, creating *synaptic thresholds*. This is basic anatomy.

Every time we move into a new block of intelligences or abilities there's a brain growth spurt that creates billions and billions of new neural connections. This allows us to make a new block of learning and intelligences and form adaptations as we translate from fields of potential into actualized experience. This is critically important to understand.

We find a very large growth spurt at age one. By 18 months of age the toddler has as many neural fields available as have adults. The second growth spurt at age four forms even more neural connections. Then there is a huge growth spurt one somewhere between 6 and seven. By this time the infant has five to seven times as many neural fields available as we have as adults or as they had at 18 months of age.

Why? Because at age seven the entire possibilities of the great new brain are opening up. It's the biggest structure in our system, and its abilities are totally infinite; to get ready for this there is this huge brain growth spurt.

So that's nature's agenda: to open up these blocks of intelligences one at a time, as appropriate to the system. If we provide a nurturing environment and models appropriate to each of these stages, it isn't necessary to teach a child anything. They immediately absorb from their environment everything they need according to appropriateness: this is the natural action of intelligence.

Through further study we find that there is a topology of the brain, certain areas devoted to or predisposed to handling certain types of intelligences, abilities, instincts and so on. And that these must be opened, one at a time, to be appropriate, according to the needs of the whole system. An understanding of the brain's topology must begin with a look at its *triune* nature.

This was the work of research doctor Paul MacLean at the National Institute of Mental Health's center for study of the brain in Washington, D.C.. MacLean, working over a period of many decades, put together both the massive research of the institute and research from all over the world and came up with this triune structure of the brain, which is now universally recognized. It's inevitable, there in the very physical makeup of the brain, but MacLean made a huge leap by assuming tremendous, profound meaning in these structures: science never deals with meaning. That's metaphysical. But MacLean did, finding profound meaning in the fact that each of the levels of the brain contains a distinct block of behaviors. This was his main contribution.

To examine these quickly, there is first what MacLean calls the *reptilian brain*. Karl Pribram didn't like that name and calls it the *first brain*. At any rate, it was the first brain system, developed in nature during the hundreds of millions of years of the great reptilian period. This is the brain—as Karl Pribram said—that presents us with our physical world, knowledge of the body, and ability to interact as a body with the body of the whole world. That's what this most primitive, ancient and primary brain and the behaviors inherent to it are all about.

This specific bunch of intelligences are designed for maintenance of our physical system: maintenance of the body and species continuity, awareness of the external world and our ability to interact with it. This brain system is responsible for the drives for food, territory—nesting, you might say—and species perpetuation. This translates in higher systems to the marvelous world of sexuality. In the reptile, sexuality is a cut and dry, rather unemotional thing. In us it's just the opposite. This is our wake-state brain. Unless this brain is active we go to sleep and dream. When it is active, the rest of the brain alerts to what the world presents and responds to it.

Surrounding this is the second or *limbic* brain, which is emotional or relational in character. This is the most mysterious brain structure, awesome and complex beyond anything we know in the whole universe. The limbic structure or *emotional cognitive* brain is the one that handles all relationship.

From here our ego center looks back on or objectifies what is being presented as physical world experience and makes qualitative evaluations: I love this and I hate that and I go for this and I get away from that and so on. All human emotions are expressed through the good offices of this brain structure—all of our bondings, all of our relationships are expressed through this second brain system. And all mammals share these first two brain structures, with little variation.

The emotional brain is the one that handles all immunities. How are you relating to the bugs in your interior today? That's its job. The body's capacity to heal itself and so on. All memory and learning is controlled by this emotional cognitive brain. What else? Well, it controls all of the body's hormonal systems.

The profound relationship that this brain has with our heart system is very new in research and an almost psychic shock to the academic world. The emotional cognitive brain is what establishes value: it's our reward system and contains all of the behaviors associated with relationships. Love, hate, rage—all of these things are essentially controlled and determined by the hormonal activity and dictated by this second brain.

Then there are learning and memory, also the province of the second brain. But once that's completed, nature throws in the third brain, the *neocortex* or "new brain." While all mammals have a little bit of a third brain, the more advanced the animal the more third brain they have. Ours is huge, much bigger than the first two put together. And this is the source of intellect and creativity.

The purpose of the great frontal lobes of this new brain is unknown. We call them the *silent areas*. Apparently we have not yet developed them; they're simply waiting for evolution to do so. Best estimates are that we develop only about 10 percent of this neocortex. By contrast, we develop all of the two primary systems.

Now the oldest, or reptilian, brain feeds directly into the new brain, which makes a pattern of everything it receives. There are many complications involved in this, but we have to ignore them and boil it down to the simple patterns of behavior: there's a brain for thought, one for feeling, and one for action.

Next I want to single out the *ego*, which simply means "I" in Latin. This holds the whole secret of evolution, what it has been about. The evolution of a child's intelligence from birth on has to do with personal awareness, of being me, different from you. How does that which makes each of us unique and precious—our psychic system—come from this triune brain?

This sense of ego or personal awareness represents no more than about 5 percent of the total energy of the brain-mind. This is an established fact. What's the other 95 percent of this energy involved in? Giving us our world experience and the ability to respond to it. It's like an innocent bystander, this little 5 percent ego structure, but it has the capacity to range the whole field and punch buttons the way it wants and through development come into dominion over the whole creative process going on in our head.

Ego must of necessity imbed in the developmental structure that is in process. We find in the developmental stages recognized by Piaget and everyone else that what we're doing is activating a corresponding level of the brain. The first year of life is purely sensory-motor. Infants have no real emotions yet; they're all motor-centered. They're all sensation.

It takes about seven years imbedded in the sensory motor system for the child to complete this R-system or world system and get completely locked in for life. But during the very early time—the first year—the ego is completely enmeshed; there is no separate ego. This means that for the first year the child doesn't have a sensation. They *are* that sensation.

This is a fine but important distinction, very hard for an adult to understand. The child doesn't experience a pain. They simply *are* that pain at that moment. So long as there's a complete imbeddedment of the psychic system in that particular neural structure there is the complete entrainment of the brain. All of the brain is operating—there's never just part of it functioning—but in the first year of life the whole structure operates to establish physical awareness. Once the visual, auditory, and other processes are stabilized enough to function without such a total entrainment and concentration of energy, only then can we have the awakening of the next block of intelligence. And this resides where? In the great emotional cognitive second brain system, the one that makes the qualitative evaluation of the experience coming in as physical life.

We used to speak of the changeling: our sweet little infant disappears and is replaced by a roaring, terrible, willful child caught up in wild emotions. This is the opening of the emotional brain system by the will, or drive to power. Its reward system. The second brain is the emotional brain and contains a reward system. It drives us to achieve rewarding experiences from our physical body and its interaction with the world and later will drive us to experience rewards from our great intellectual emotional and spiritual systems.

Now, this second block of intelligences contains those intelligences translated as our emotional life. And don't think they're not awesome. Now the child begins to experience not just an exploration of his physical world but of his emotional experience of that world. And the way he or she relates to that world. Along with this will come language; that's the key to developing this world structure. This process will continue until about age seven, though both systems will be about 80 percent complete by age four.

Burton White made this perfectly clear: 80 percent by four and essentially complete by age seven. The emotional system does go on developing until about age 11, but then is completely through. Now, when 80 percent is functioning, what do we have? The physical and emotional systems and the language system that goes with them are so well established by age four that nature can afford to spare the energy to keep them running while opening the development of the great neocortex, the huge new addition of evolutionary process.

Does this mean the neocortex has been inactive the entire time? Of course not. The brain is always functioning as an integral unit. Nature simply shines the spotlight of developmental *focus* on each structure until its completion before opening the next.

If furnished an appropriate nurturing environment, each of these systems will unfold automatically, absorbing everything appropriate to the system. But if a system is forced to deal with the higher evolutionary stuff—intellect, great thinking, reading, writing, all these kind of things—too early, the picture of what is supposed to be happening in these earliest stages can be clouded. The models of the blocks of intelligence appropriate to that period must be followed by the child at all costs. We're their life line; they need to keep in touch with us. They'll try to do what we want, but if they lose out on what should be developing at that point, later when it's the proper time for movement into great intellectual pursuits they won't have the foundation for it. And then there's trouble, and that's one of the things happening to our children today.

Gazzaniga and Edelman—the Nobel laureate—and the rest of the great brain research people recognize that the brain must be developed in the correct topological order. You've got to develop the first one to make it appropriate to develop the second. There has to be a foundation for each succeeding development.

The next important question is what is it that triggers a neural structure of the brain to translate from a field of potential? Without exception this requires a model or an event or a thing in the environment. This is nature's *model imperative*, the experience, ability, or possibility in its expressed form, which is this ancient system's way of creating the physical world.

As an example, Howard Gardner lists linguistics intelligence, from which all languages spring, as Number One, first on his list. When does language development start? It starts during the seventh month in the mother's womb. Kellog and Sontag found back in the 40's that the infant moved in the womb every time there was sound from the fifth month on. Every environmental sound immediately adjacent to the mother would cause movement; every time the mother spoke they would move.

This is a generic movement or response in the brain, a sensory motor response to an incoming sensation: a sound wave comes in and the response of the brain system is to make a motor movement. That's what we call *sensory motor learning*. From the seventh month on, the reaction becomes highly specific—that which is general always becomes specific after a certain period. From the seventh month until the child is born, each *phoneme* of the mother's language elicits a precise muscular response from the infant. And what's a phoneme? A phoneme is the smallest part of a word that can be combined with others to make up words. For instance, we'll say ma and da, da, two phonemes. Im—per—a—tive, so on it goes.

All human languages spring from about 50 phonemes. Tens of thousands of languages on earth and they're all drawing on the same 50 phonemes. Some use more phonemes than others, but the phoneme pool is constant, a field of non-localized potential. But that field of non-localized potential has all conceivable languages inherent in it; an infinite number of languages can be built out of 50 phonemes. And from the seventh month on, when the mama uses a word, each phoneme of that word is a specific stimulus responded to by the infant with a specific muscle. If her language uses 50 phonemes there will be 50 responding muscles, the same muscle for the same phoneme in every case. Each child has a completely different repertoire of muscular movements. Right now, every muscle of your body that responded *in utero* is going to be responding even when you are reading words, thinking words or anything else dealing with words. The whole body responds to language.

Language starts *in utero*. What does that prove? It proves that language is innate. It's an innate intelligence. When Noam Chomski at MIT claimed years ago that language was far too complex to ever be learned, that it had to be innate he was right (although a lot of his reasoning was wrong). Now we know the reason is that it's built in. In fact, we have structures in the brain pre-wired to respond to language. If the mama is a speaking mama and those signals come in, the child will have the sensory motor foundation for all language established by the time it is born.

Now what happens if mama is a deaf mute? Then there is no environment, because the mother is the child's environment for the first long time. Without an environment there is no model, no stimulus of waveform bringing about the response of the brain. The child is born with no muscular response to language at all. As a result, it's impossible for it to learn to speak language until there is direct contact. And if there isn't a close enough environment of language within the first seven or eight years, it never will.

Under normal conditions children will learn to speak language, but not without going through a certain set of procedures. First there is the building up of the muscular response to the phoneme, then the emotional period in which they learn to perceive the emotions behind language, and finally the understanding of specific words, as their structures begin to appear.

From this two conclusions can be drawn. First, in the absence of nature's model imperative, learning and development cannot unfold, regardless of intelligence capacity. The system cannot spontaneously create its own model; no model, no development. Secondly, French mama, French-speaking child: the character and nature of the model profoundly influences and even totally determines, in certain cases, the character and nature of the language that unfolds. And it's the same with all the other intelligences. The character and nature of the model in a system will determine the character and nature of that particular kind of system.

It comes down to this: children cannot become who we tell them to be. Unfortunately, they can only become some expression of who we *are*. Which means that we must be who we want our children to become, and as the father of five and grandfather of 12, I don't like that at all.

When my children could first use language I began to prescribe proper behavior for them. I did this in good fatherly fashion, with a lot of reflecting on my own improper behavior. From the minute they could speak, I used very abstract language to explain how they could avoid making the same errors I had—a profound error. The language of children is concrete, not abstract.

By the time my they were two years old I began to see them reflecting back to me every nasty little habit I had and had tried to cover up. They were simply a mirror. And nothing enrages a parent so much as to see their own faults reflected in their children. It sends us up the wall. We've beat many of our children to death over just that. No, we can't become who we are told to be. We can only become what our models are, to some extent.

Children can't rise above the level of their models. Many people can't accept this and say it's flat out wrong. They point to children from the most hopeless, impoverished backgrounds who have overcome their circumstances and risen to great heights. Why? Analysis of the profiles of great people from humble origins invariably turns up at least one significant person encountered in their growing up who completely turned them around and opened up a new world. This is true in the case of the abused, the underprivileged, the victimized: one model, one encounter, can change a child's life. The redeeming power of the model imperative is that we can rise above our early models given better ones later on.

In summary, we find in our three different brain structures three distinct blocks of capacities, behaviors, and intelligences which are designed to open at their respective times in the natural hierarchy of system development. In addition, we see the real necessity of providing the child with an appropriate environment and appropriate models for each of these periods in order to honor nature's agenda. Our knowledge of these three brain systems and their unfolding for development at respective periods shows us how the proper awakening and unfolding of the later stages can profoundly change the lower structures.

As long as the emotional cognitive system we share with all mammals is in sync with the reptilian brain, reward systems are purely reptilian, i.e. within the physical system: if I can't eat it, drink it or make love with it, what use is it? And that's perfectly reasonable for an emotional reward system locked into its identity and serving the physical system as it does.

As the great neocortex develops, it incorporates and profoundly changes the reward system; as nature adds each of these systems, the higher system transforms the nature of the lower system into its own nature. Meister Eckhart first discussed this about 6 centuries ago. He said that when the higher incorporates the lower into its service it changes the nature of the lower into that of the higher. This is evolution. This is what the whole game is all about, to incorporate the lower structure into higher structure and change the nature of the lower to reflect the higher, it being level of civilization, quality of life, capacity, whatever: to open up whole new universes and so forth.

Tragedy occurs when the psychic structure remains embedded in the lower structure and that shift or transformation of the lower into the higher does not take place. Then we get into the trouble exhibited in Ken Magid's book *High Risk*: children without conscience, a group of children who display absolutely no compassion or ability to understand the feelings of others. This has been happening throughout history, but never on a scale approaching that of the present. A series of events and phenomena without historical precedent in the genetic system has locked the psyches of more and more of our children into total identity with the reptilian system each year.

This is a biological break down, not a moral failure. The maintenance system with its drive for food, territory, and sexuality has little modification by the higher structure, which makes a qualitative evaluation of those drives. The ability to look at their behaviors from any reasonable standpoint and modify them accordingly is not available to them.

That being the case, the first thing we have to do in looking at our current crisis of childhood is to get rid of the words "morality" or "ethics" and look coldly and non-judgmentally at what is happening to the biological system. Keeping children locked into an identity pattern that simply moves for immediate gratification of the lowest maintenance system drives without emotion or intellectual reflection makes no sense.

The child is locked into a defense system because our defense system is this lower maintenance system, the one that worries about a hostile world out there and tries to close into a defensible position. This is opposed to a system that looks at the universe as something to be embraced, brought in and absorbed, which allows the moving up into the higher neural structures. And what is the difference? The difference is in the model imperative, the nature of the physical environment given the child.

Consider the work of Miles Storpher and his fellow geneticists in New York City. Miles points out that heredity accounts for about 65 percent of a young person's capacity, intellect, intelligence, and abilities, but that the remaining 35 percent furnished by the environment determines whether or not the 65 percent gets a chance to unfold. So we find that if a child is given both a genetic inheritance that's productive in opening up and an environment and a model that helps it or allows it to do so, there is a hundred percent success. If the child is born with a tremendous predisposition towards intelligence and capacity and ability, but is faced with an environment that is detrimental, he can overcome it, but with much work and at great price. And the child with both a poor genetic inheritance and a poor environment stands little chance of success.

The past 50 years—World War II is the watershed— have seen a severe polarization and split of what should be complimentary forces.

In physics they speak of complementary energies, different and yet each necessary to the other—wave fields that give rise to the particles of energy that go together to make up molecules and atoms and all that kind of thing. These wave fields and the particles they give rise to are in totally different states. The wave fields are non-localized, the particles are localized and yet each is absolutely necessary to the other. Without a wave field can be no particle. Without a particle the wave field has no expression; we don't even know it's there. And so they are complementary forces: totally different, absolutely interdependent.

The same applies to the intelligence of the heart and the intellect of the brain. They're totally different processes designed by evolution for different things. The one maintains wholeness, completeness and unity, and integrates and protects the continuity of life and earth and species, moving only for that which is beneficial. The other—intellect-driven and compelled—has no sense of appropriateness or control. Why take everything apart and move into the unknown that exists beyond the perfect balance of the two of these? Just to move into what is “possible?”

We must also ask what is appropriate. If we did, it would be impossible for us to dump a hundred million tons of toxic waste on our own nest every year. It would be impossible and yet we would still be opening up to new worlds all the time and completing what evolution has designed for us.

The polarity between male intellect and female intelligence that we all have within us is a big subject in this day and time. Where did this polarity come from; how did it come about that we have male and female literally at war with each other? What intellectually created phenomena unprecedented in evolutionary history has so profoundly broken the complementary bond between them? The situation has to be seen in light of the open-ended potential of the human being— it is estimated that the average adult mind consists of a hundred billion neurons.

A hundred billion of them, each able to connect with at least ten thousand others to form fields of activity. Some neurons are able to connect with a hundred thousand others, sending out long axons that connect a field of activity that has a specialty—for an example that makes of simplifying cartoon of a highly complex thing, imagine a field of neurons that handles the phoneme A. Now this neural field is connected with every other neural field of the brain. How many other words can this lend itself to? An infinite number. There is no end of number of words that it could lend itself to.

The same situation exists with all neural fields, what we call the sensory maps of the brain. Our senses of smell, taste, touch, feel, all these are translated into experience through precise neural fields. Destroy a neural field the size of a pin head and a hole is created in our physical world, a hole in our vision, perhaps, or speech. This is all quite well-known, not hypothetical.

These specialized neural fields are connected links of anywhere from a hundred thousand to a million of these neurons. They do a certain job. But they can lend that specialty to all the other neural fields and change continually, as the overall context requires, at the same time producing their own specialty. They can operate on many levels at the same time. That's the awesome quality of these neural fields of the brain—they present an infinitely open capacity for structures of knowledge, building patterns for translating possibility into our own immediate awareness.

Mozart did all his work in his head; he never worked anything out on paper. He would perceive an entire musical idea in a single flash but then spend weeks working it out in his head. And when finally he started to put it down on paper he would have his wife read stories to him to occupy that ego intellect and all of its interests while his great musical intelligence—developed from age four—could take over freely, unhindered by his personality or anything else. And it would then do it. This doesn't mean he was simply taking musical dictation—he would remark on how no one knew how hard he had to work to figure it all out, to translate that single instant of recognition into a 45-minute experience.

To recap, we have independent intelligences and we access them through long discipline. We learn to allow the intelligences to in a way “breed” us until there is a perfect dynamic. And they unfold according to nature's agenda and the brain growth spurts that unfold at the same time, with the critical necessity that we honor the agenda and provide the appropriate model imperative for each field of intelligence at each time. The ego structure is embedded in each state until it's completed and we can move the ego structure into the next state. And we must beware the tragedy of ego getting stuck in the structure; it can never be completed if we try to do too many other things at once or fail to provide the appropriate model imperative.

END