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Psychotherapeutic Time-Machine

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Psychotherapy can be assimilated to a kind of time travel. This idea is clearly present in many pioneer works of transpersonal psychologists, especially those of Stanislav Grof. Psychotherapy also can be considered as informational-energetic interactions in expanded states of consciousness. Both psychological and healing time-machines have the same nature: their main engine is the holistic state of consciousness, entering into which we can travel in time, genuinely connect to traumatic events, and integrate them into the present. The metaphor of the psychotherapeutic time-machine allows us to understand better many elements of the psychotherapeutic experience.

In his mature works, Carl Gustav Jung assimilated the process of psychotherapy to the "great work" of medieval alchemists, who managed to explore secret mental transmutation under the mask of transforming base metals into noble ones.

Borrowing a metaphor from Marcel Proust, it is possible to characterize psychotherapy as "a search for lost time," absorbed in the world of our experiences, but not incorporated into our daily presence. What, if not this search, is represented at times almost as a detective story, as in the movie "The Silence of the Lambs," at times passionate and hazardous (your life at risk), as in Julio Cortazar's story "Persecutor," a great alchemical work of the recollection of your other, complete self, from the separated mosaic of the elements of an average "normally unsuccessful life." The language of this alchemical work is still dark, holds much back, and is mostly unspoken. It is a lived language of experience, not just the language of speaking and naming. Here the following rule entirely works: We must have an experience first, understanding will come later and can never substitute for an experience.

So, from a handful of psychotherapeutic metaphors, let's take one that assimilates

psychotherapy to a sort of time travel. This idea is clearly present in many pioneer works of transpersonal psychologists, especially works by Stanislav Grof (1985, 1998). As a useful background for the exposition of this theme, we shall outline a science fiction story by Ray Bradbury, "A Sound of Thunder" (1966), which surprisingly, in many exact details, corresponds to our psychotherapeutic metaphor in its semantic space and language.

Tangles of Times

In Bradbury's story, in the far distant future, a time-machine is invented and used for hunting expeditions to the remote past. A group of hunters has set off on a voyage to the epoch of dinosaurs, 60 billion years ago. Through the ancient forest, a track of antigravitational metal is laid down above the ground so as not to disturb a single blade of grass, flower, etc., and not alter anything in that world order. For as the hunters are warned, even the smallest change they induce can result in future catastrophic consequences. Therefore, for example, the hunters shoot only at those dinosaurs which will be dying soon anyhow of natural causes.

In the process of time travel:

Out of chars and ashes, out of dust and coals, like golden salamanders, the old years, the green years, might leap; roses sweeten the air, white hair turn Irish-black, wrinkles vanish; all, everything fly back to seed, flee death, rush down to their beginnings, suns rise in western skies and set in glorious easts, moons eat themselves opposite to the custom, all and everything cupping one in another like Chinese boxes, rabbits into hats, all and everything returning to the fresh death, the seed death, the green death, to the time before the beginning. (Bradbury, 1966, p. 111)

The hero of the story, in a panic, goes off the prescribed safari path, during which a small, beautiful, primitive butterfly gets embedded in slime on his boots—an insignificant part in a circuit of billions of other beings—but it did not die a natural death, was not caught by a bird or any animal, did not become food for others. Something was not born, something died before its time, and eventually, accruing as a rolling snowball, in a heavenly thunder, has burst forth into the present and a completely different life—which for the hero spells death. Hence the name of the story—"A Sound of Thunder." Thunder here is a metaphor for a casual, insignificant influence having enormous and fatal consequences.

This literary metaphor appears to be not so different from what is proposed by synergetics in the theory of dissipative systems. (Dissipative refers to those systems which consume energy to increase internal order.) According to synergetics, all living organisms from a unicellular organism up to a human being differ radically from lifeless systems in that living organisms are open, self-reproductive systems. Exchanging energy and information with the external world, they support a constancy of internal milieu, relative stability, called homeostasis.

Consciousness and Ritual

Even rocks eventually are erased; climate ceaselessly varies. Living systems, while they are alive, maintain relative stability due to an openness to the world instead of monadic isolation. Human beings support a relative constancy of consciousness, and the continuity of

"I," exchanging information, eating food, establishing identifiable personality structures, "habits," and finally, creating diverse social orders and institutions. A human being is alive while she "breathes" in flows of dialogue/energy with the world, herself, and other beings.

A feature of living systems is that they develop by leaps when rather uniform, more or less predictable movement, reaches a point of bifurcation (a choice point of a further trajectory). What way the system will develop depends both on itself and on surrounding energy and information flows. If a cell is affected in the moment of bifurcation, then instead of remaining healthy it can develop along a cancerous pathway. The chemical reaction will proceed in other ways if—at a certain moment—a catalyst is added. The universe will develop differently if in some critical situation a handful of electrons is lacking. In the physics experiment with two slits, an electron will pass through one or the other slit depending on some unpredictable conditions, perhaps depending on the state of the whole universe. Also, a thunder will burst, if while traveling in a psychological time-machine, the past is thoughtlessly reshuffled, casually having crushed seeds of the viable future and thereby crystallizing an adverse or fatal script of development. Truly, for those who are blind—a tangle of times is like a tangle of snakes: trying to untangle it—one will be bitten.

Psychotherapy and other practices of healing, self-knowledge, and transformation also can be considered as informational-energetic interactions in expanded states of consciousness; our tacit, wounded experiences, can break through psychological defenses, through barriers of space and time, tunneling in through the past to reunite with us in the present moment. And at times, through mere touching, we can restore a lost connection with a caress, which did not suffice in childhood, or we can heal a drama of love, recollecting the broken "fabric of consciousness."

We shall note one more feature of living systems, which, according to modern science, is that they are specific "amplifiers" of primary chaos. At a quantum-mechanical level, individual events are casual; at the level of the usual world, determinism appears to reign. The thrown stone falls downwards, rivers flow to the sea, the

polarity of the magnetic field of the earth remains relatively stable. Changing weather situations have their beginning, development, conclusion, and mechanisms.

"Mechanisms" of a similar sort work in our mental life. The machines of desire "work" in us, forcing us to do something again and again, to keep searching for something or obsessively to scroll by stuck ideas. And these cycles are supported at a level of the body, at a level of muscle knots, at a level of self-perpetrating emotional and mental circles, at a level of repetitive images. Machines of emotions, machines of perception, corporeal machines, characteristic gestures and reactions...

So there is a connection between the degree of freedom of living systems and primary quantum spontaneity at a fundamental level of the world. As Terence McKenna (1988) says, living systems, in the process of their evolution, generate more and more freedom. The plant is more free than a single cell; an animal already moves on dry land. A human being is even more free and, having consciousness, can not only change the external environment but also move in the world of imagination, travel in psychological space and time.

On such travels, consciousness also passes critical points and rites of passage that are reflected in structures of myths and processes of initiation. The pioneer of this theme in European ethnology, A. van Gennep, in his book *Rites of Passage* (1961), remarks that in traditional societies the initiation into the new order and steady rhythms of life was always carried out through rituals of death, painful experiences, and personal and social chaos.

When society is plunged into chaos, history becomes a nightmare, interfering with everyone's life. The world of neurotics or psychotics, too, is a nightmare, in which feelings, ideas, and acts which are inadequate for the present and are connected by a spatial-temporal tunnel with past traumatic events are obsessively repeated. The force of chaos becomes a nightmare, protective mechanisms are destroyed; but inside, it is possible to find salvation if one can find hope and overcome fear and open oneself to change and freedom.

In expanded states of consciousness we are able to enter into resonance with all events of life. Here, it's as though our rigid structure "melts" and we have an opportunity for much wider choice. It is possible to not choose something concrete, but to leave open the opportunity of choice; it does not make sense to program experiences; it is better to leave off all expectations and prescriptions, allowing everything to be as it is and to support it as such. Such support corresponds to a new type of ritual—an evolutionary one, and replaces an old type of ritual saving human beings from chaos by means of the law and repetitions. In this respect, rituals are simply situational forms and ways of assembly, support, and the rest of developing consciousness assists people not to be lost in groundless freedom.

Language of Experience

D EFORE INTRODUCING the concept of a B psychotherapeutic time-machine as a key metaphor of the process of soul-healing, it is necessary to present one more theme. Since the time of C. G. Jung and M. Merleau-Ponty, modern psychology has made a distinction between the languages of diverse psychotherapeutic schools and the languages of experience. The languages of experience are more primordial, in the sense of being fresh, not edited perceptions of the world. Examples of such languages could be the: (a) "language of dharmas" of Buddhist psychology; (b) languages of the Tao, Way, in Taoism; (c) languages of mytho-drama, where the levels of cosmological, historical, and personal mythology are woven together; (d) languages of holons or gestalts of experiences; and (e) languages of psycho-semantical topology. These languages have many dimensions, from the corporeal to the spiritual. So the corporeal dimensions, for example, consist of our corporeal reactions, stereotypes of behavior, corporeal knots, illnesses, and ecstasies which are manifested in the time of psychotherapeutic sessions and daily situations. There are also emotional dimensions, with their topology of emotions, topology of psychosemantical landscapes, and so on.

But each of the dimensions of the body, emotions, languages, thoughts, and visions is not torn off from the others. These dimensions are interconnected. And the corporeal dimension, the corporeal block, having reached its peak and having resolved into a new landscape, can pass through the specific sorts of conditions, through the tunnel, say, even to completely different visionary or emotional landscapes. And having dived into a well, having climbed up a mountain, having performed some physical feat, we can experience a condition of flight or birth revealed in multidimensional landscapes of experiences.

The topology of experience, or the topology of a Path, has a history in the sense that within each of us is manifested a Path that is relentlessly and progressively enfolding and unfolding. Everything that is a part of our Path enters into us and forms various nuclei, layers, landscapes, an interlacing of our body and soul. Our gift of language is advanced during these interactions. Our ability to govern situations and to supervise them is a consequence of the Path through which we have passed, a consequence of whether or not we were conscious in critical situations of trauma, ecstasy, choice.

"Path" is a key metaphor of who we are. It is an unfolding of who we are in interaction with other people and with circumstances.

There is an old story about this: A mother and her small son lived in a valley. The mother told the son about a wonderful man, his father, whom by all means he would meet someday when the son would grow up. Once, when the right constellations were formed and the signs appeared, the mother and son set off on a trip to meet the father. They departed early in the morning, crossed a valley, climbed mountains, wandered on paths, rested in caves, passed groves, and, at last, by the end of the day, close to sunset, came into a valley...to their own house, entering it through the opposite side. The boy saw an unusual being, tall, shining, smiling, coming towards him. He realized it was his father, who now embraced him. The search was over. The meaning of this story is that there are no children without adults, and that an adult wants to be a child again, and the child, an adult; and so this is their way to freedom, which they achieve simultaneously.

One can ask isn't it easier simply to open the door on the other side of the house and to show the boy his father? Our life is arranged in such a way that we understand and esteem something only after passing through a journey, only after

having overcome some barrier. Only then can we comprehend something, having pieced it together along the way, having formed new landscapes of experience and "bodies of consciousness," with the help of which we can now apprehend and esteem this world in a new fashion.

These laws of consciousness are fixed in the structures of myths, in the structures of processes of initiations in all human cultures. The journey contains critical points of transition. In Rites of Passage (1961), A. van Gennep writes that in ancient communities there were always rituals of initiation, situations of painful experiences, confrontations with death. For example, when teenagers were initiated into adulthood they spent some days in darkness, which symbolized a cosmic womb of space, mother darkness. They experienced the process of death themselves as teenagers and heard from elders the story about the creation of the world, about the origin of the tribe. Here again the language of landscapes of experience is close to the language of myths.

There are two basic mythological cycles. One is the cosmological cycle of myths which relates the origin of the First Man and how the universe, gods, and the tribe were created. This experience is in some sense present in our mentality and according to modern research surfaces in consciousness during re-experiencing one's own conception and birth.

The other cycle is one of heroic (historical) myths; here the hero's journey is related: his birth, youth, and calling. Each hero hears the call and journeys in its pursuit. He finds the teacher, gains magic abilities, confronts death, passes tests and temptations. The hero must win out over creatures and passions which symbolize ignorance and fears rooted in the unconscious and overcome unwholeness, unconnectivity from other people, one's self, and from the world as a whole. Only after passing all these tests, each of which can be fatally dangerous, does the hero become king, find integrity, and return home, establishing a new order.

These two cycles are experienced by people in concrete forms, individually, for which the term "personal mythology" has been coined (Feinstein & Krippner, 1988) to account for the uniqueness of each individual case.

According to modern linguistics, knowledge is constrained by the particularities of languages.

The language of experience, in its development, continues to gain more and more freedom from verbal forms. There are also languages of visual thinking and languages of virtual realities. And, finally, languages of direct communication seem to be possible. For example, in a number of avahuasca shamanic rituals in the Amazon River region, language becomes a three-dimensional dynamic formation: What the participants of a ritual speak of becomes visible for all other participants. It is true telepathy—not the reading of ideas but vision of all levels of landscapes of experiences. In this direct communication with others there is no distance between the people involved. The fatal duality between me and others, between me and torn-off, alienated parts of myself, is overcome. But this clarity and directness describing such experience is nothing other than the expression of the fundamental ontological property of holistic consciousness—the effects of all-connectivity.

In all the deepest philosophical and religious-mystical systems and schools there is no distance in consciousness between one point and another. Consciousness is unitary and devoid of qualifications. And consequently, all-connectivity means that there is no difference between me now and me somewhere in another period of life. There is no difference in speed and completeness of communications between face-to-face dialogue of people and dialogue over distances of tens of thousand of kilometers. This means that what occurs in psychotherapy as time-travel is in some sense also a realization of this fundamental quality of consciousness.

All-Connectivity and Communication

Let's think more about how this property of all-connectivity is realized in modern psychotherapy and communicative technologies. Some tens of thousands of years ago, language arose from primal cries and primal gestures as a means of direct influence of one human being upon another. According to Julian Jaynes (1976), even during the time of the ancient Greeks, human beings had the so-called "divided brain." That is, the left and right hemispheres were connected to one another rather poorly. The voice of another

person and one's own voice both were perceived equally as one's own voice. And the voice of another person had the same demanding action as one's own voice. When language, as the external organ of consciousness, began to come back into consciousness, to be enfolded in it, then there appeared the first distinction between me and another. Somewhere around 5,000 B.C., writing arose. With the help of writing it became possible to fix events and to transfer them into another epoch. When this experience came into consciousness, there appeared the distinction between a symbol and reality, map and territory. There was an expansion of horizon, knowledge of other tribes and epochs. Writing became the first prototype of the time-machine. Reading became a certain kind of travel in space and time.

The next stage of the communicative revolution is connected to the rise of the polis—city-state. The ancient Greeks thus invented a unique "organ of consciousness"—agora. Agora was the marketplace in the ancient Greek city and it was also an assembly of the free citizens where all questions could be publicly discussed. Everybody's voice was audible to everyone else. It was the experience of collective discussion, when everything could be clarified in the presence of every citizen. When this experience came into consciousness, it became the experience of democracy and law. And that which we have now as examples of democracy differs very little from Greek-Roman law.

Thus, democracy is characterized by freedom of public manifestation. There are public laws which guarantee freedom of public manifestations, and legal guaranties are created to ensure that I shall not be killed for those manifestations; that I have an opportunity to discuss all problems; that I have autonomy and freedom; that I can complete ideas without the fear of being interfered with by others. Civilization, democracy, creates some guaranties that make it possible to think. Greek philosophy appeared only then—with these opportunities of freedom.

And, in thinking, we can travel into deeper layers of dynamic landscapes of consciousness in other worlds and times. We can collect and condense them into certain compact formations which we refer to as concepts. That is how we are given the opportunity to reflect about the world.

The next level of the communicative revolution was the invention of bookprinting which took place in the epoch of Magellan's discoveries. Unique, handwritten books became accessible to a wide circle of people. And, suddenly, after this revolution, came the epoch of the Renaissance an unprecedented blooming of culture, freedom, and the arts. Bookprinting—as the experience of the development of new flows of information gave human beings an experience of connectivity of a new order. Spatial-temporal borders became even more extended. The Renaissance, which had come through the Arabian world, was a revival of Greek-Roman civilization in Europe. With the help of such a "cultural time-machine" it became possible to expand the horizons of the world even further and to establish communication with more remote epochs.

The present stage of the informationalcommunicative revolution is an epoch of mass communications—telephone, radio, TV, computer. Thus, my friend in New Zealand and I are no longer kept apart by a period of days or weeks for the delivery of a letter. There is no distance—allconnectivity of consciousness. The informationalcommunicative revolution is embodied to the greatest degree in computers, as they already can transfer huge flows of information. What will happen when the huge computing abilities of the computer enter into consciousness? It is possible that with the help of new informationalcommunicative technology, which peaks now in multimedia and virtual reality, that humankind can open to new speeds of communication, real telepathy-direct dialogue between minds, to three-dimensional visual language, to inclusion in the communication of all landscapes of consciousness.

The remarkable movie "The Lawnmower Man," quite simple from a psychological point of view, is ingenious from the point of view of what the further direction of human evolution is likely to be when key insights about psychological experience, the development of computer technology, and psychopharmacology are put together. According to the story line of this movie, with the help of a virtual reality, a mentally retarded person capable only of mowing lawns becomes a genius within several weeks. He gets many abilities from the spectrum of extrasensory perception, such as telepathy, telekinesis,

clairvoyance, prediction, time-travel. Another important moment is his supertraining in virtual reality, travel not only in the imagined world of new objects in new landscapes of consciousness (we can recall here the legend of the boy and path), but also the use of modern technologies of consciousness, the use of certain properties of the psyche to go into a holistic state of consciousness after synchronization between the biorhythms of each hemisphere.

Alpha, beta, and theta rhythms of the hemispheres of the brain usually have a little different frequency for each human. After noticing that in the meditation of Zen monks there is a synchronization of alpha rhythms, scientists have made simple devices which catch the individual frequency of alpha rhythms of the subject and trained synchronization of the hemispheres (Hutchison, 1994). Thus, communication between the two hemispheres became better. The mechanism of a resonance began to work when both hemispheres entered into one rhythm, and what earlier did not cooperate, became connected, the distance disappeared: all-connectivity of unconsciousness.

Irrespective of the concrete brain mechanisms of all-connectivity of consciousness at the moment of realization, problems arise. The body, in which traumas are sealed and wounds of previous life are stored, cannot maintain such experience. All conflicts are soaked up, as though by a huge vacuum cleaner, into madness. To be able to maintain such a condition of consciousness it is necessary to pass through steps of radical psychospiritual transformation. And then the transformed body itself will support a holistic state of consciousness.

Some Mechanism of Healing

In PSYCHOTHERAPY we deal with achieving wholeness—both psychosomatic and psychological. A series of important experiments that could be applied in this area was made recently by Braud and Schlitz (1991).

The first of them demonstrated the possibility of making a fine differentiated influence on various functions of our organism, using visualization. At the end of the 1970s in the USA, experiments by Carl Simonton on the treatment

of cancer became widely known; his patients imagined their illness as something dark and visualized how red blood cells increased their activity, bringing food, and white blood leukocytes were activated and began devouring the darkness. Many cases of spontaneous remission were observed (Simonton & Simonton, 1980). In further experiments, it appeared that it is possible to get a very fine adjustment to various functions, selectively increasing the amount of white blood cells or red blood cells, to strengthen or to suppress these or other somatic functions.

The following series of experiments was devoted to the registration of subliminal, not conscious, influence of one person on another. Many people have a belief that it is possible to sense when they are looked at from behind. A somewhat advanced experiment along these lines was performed under the following conditions: a subject was located in a room, shielded from radiowaves, and monitored by a videocamera. With the help of a multichannel amplifier, many psychophysiological parameters of the subject were measured. In another room, an experimenter at a monitor, from time to time looked at the screen guided by a random signal. It turned out that the correlation between bursts of psychophysiological parameters of the subject under observation and moments when the observer looked at the monitor was extremely high, that is, the probability that the correlation was due to random factors was extremely low, 1 in 10 million (Braud & Schlitz, 1991; Braud, personal communication). Somehow, the subject, seated in an armchair, sensed the moments when the attention of the operator was directed to the subject via the monitor. This phenomenon was named "remote feedback," by analogy to biological feedback, when the subject is connected to a set of different gauges, and, looking at the monitor screen, can change the pulse, pressure, skin-galvanic and so on, influencing the curves displaced on the monitor (Braud & Schlitz, 1991; Braud, personal communication). So, in this experiment it was found that there is a remote communication between people, communication through space. (One person here is the operator and the second person serves as a gauge to establish remote feedback.)

Another series of experiments was carried out with feedback through time (Braud & Schlitz,

1991; Braud, personal communication). The data of a random number generator were recorded by a computer, and were shown to various subjects later. According to probability theory, in the case of the random number generator, we should expect half zeroes and half ones. But when this device was influenced by the subject—not a psychic—it was often found, say, that the number of zeroes exceeded by far the number of ones: the probability of that event being random is very low. In a more complex series of experiments there was no prior influence on a computer. Here, skeptics, who do not believe in such outcomes, served as subjects. In this situation an identical number of zeroes and ones was obtained, that is, the probability was no different than the case of no influence. In still other experiments, the device was shown to people who had differing degrees of expectation about whether the displacement of probability is possible or not. For the people who believed that the influence of probability is possible, the influence of probability really occurred. For the people who were the skeptics, the influence of probability did not occur. What phenomenon do we have here? It is feedback in time: somehow the flow of events registered by the random numbers generator already "knew" about the future event that will take place at the moment of registration. In other words, there was some influence from the future, backward causality.

If we connect this idea of feedback through another person as spatial-temporal communication which occurs at the moment of healing with the idea of time-travel, the following conclusion can be reached: in the process of healing there are not only current events always present but also causes of these events located in the remote past. Healing occurs not only at the moment of encounter between doctor and patient, healer and healed one, but also in some sense it occurs before.

The image of these temporal resonances leads to one of the ideas of the psychotherapeutic time-machine. Seemingly trivial events—the encounter of doctor and patient—appear to be by mutual travels. And to correct something in the present, it is necessary to travel mutually in time to the sources of illness. Perhaps, we are not so far from the practice of shamanism and folk healing: a medicine man speaks, "A spell was put on you,

someone jinxed you, and so it is necessary to remove the spell"—which happened somewhere else in time.

According to Tibetan medicine, each illness has a karmic reason, that is, something went awry in the realm of all-connectivity of consciousness. For example, if a person has acted egoistically or has offended someone or has killed someone—since consciousness is all-connected—in killing another, you kill a part of yourself and thereby sever communication with your own death. And by breaking off this communication you lose the opportunity to pass through the ritual of death and rebirth, that is, opening yourself to new freedom through this ritual. Such is the course of illnesses according to the ancient view of Tibetan medicine.

In this respect, both psychological and healing time-machines have the same nature: their main engine is the holistic state of consciousness; entering into this state we can travel in time, genuinely connect to traumatic events, and integrate them in the present. From this angle, it is possible to understand C. G. Jung's concept of synchronicity—psychological events related to psychological trauma are not connected as reason and consequence but arise simultaneously from a deeper level.

Psychological Time

O we introduced some key themes which are Selements, aspects of the psychotherapeutic time-machine. We recall the theme of a heavenly thunder which occurs during time-travel, and the theme of critical points of transition and informational-energetic surges. We also recall the theme of a direction of evolution of humankind towards realization of a fundamental property of consciousness—all-connectivity, that is, recollections of all landscapes of consciousness, all landscapes of experience, establishment of communication between them both within the individual psyche as well as between people, and transition to new languages of communication. The various stages of evolution of such languages were in some sense steps in the development of the ability of time-travel, breaking through spatial and temporal distances with the help of new language and new faculties. And we can recall the theme of virtual reality and mechanisms of healing, including spatial-temporal feedback connections. We can recall, as well, that the function of a psychotherapeutic time-machine is aided by various technologies, both communicative and psychological ones. And now we can proceed to understand what time is and how the psychotherapeutic time-machine functions.

Those who have read *Ulysses* by James Joyce will recall that all the action of this novel occurs within one day. In the hero's stream of consciousness, events of his usual daily life occur which alternate with events of the distant past: his pursuit of the Golden Fleece, battles, and return home to Ithaca. In this novel Joyce ingeniously embodied the construction of psychological or experiential time. In this time, we always remain in some mysterious connection with our personal history, and with a history beyond the limits of our personal experience, with the experience of our own people, with the experience of other cultures. We constantly encounter such space and time in sessions of psychotherapy.

One of the heroes of the novel, Daedalus, says that history is a nightmare from which he is trying to wake up. History is a nightmare, a recurring nightmare which enters our experiences. The world of neurotics or psychotics is also a nightmare. Such people obsessively repeat acts, behave inadequately, do not live in the present moment, because a part of history is knocking on the door to the present and tries to be embodied in it—as thirsting for some actions, as destructive tendencies, or as inadequate reactions to a situation. The spatial-temporal tunnel towards certain traumatic past events was established. The psychological defenses have collapsed and some part of life is persistently knocking at the door of the present as nightmares and phantoms of the past. The person tries to wake up, to be healed, but we call him or her mad and ill. But it can all be an expression of a primary drive to integrity and health which hasn't found any other ways to be manifested.

From the psychological literature it is known that time can be stretched or compressed, that in a moment we can go through events in life normally taking hours, weeks, years; or, sometimes, one might feel that hours, years, or

all of one's life has passed by in a flash. Some researchers define psychological time as the number of events registered per unit of time. To be in communication, in contact with these events, to be able to register more of these events, means that we are in a state of consciousness characterized as more pronounced all-connectivity. And as we noted, the realization of this opportunity forms one of the main vectors of development of humankind.

Philosophy provides many answers to a fundamental question on the structure of time. "Time is a child playing with multicolored balls on a coast of Eternity," says Heraclitus. In his Confessions, Augustine says that perhaps I know what time is, but "simply do not know how to express what I know." Physics describes time as some coordinate in a fourth-dimensional spatialtemporal continuum, as a special geometrical frame of reference of events occurring in the world. According to Terence McKenna (1992), perhaps the deepest insights into the nature of time were provided by Chinese mystics, who, meditating in lonely caves, recognized that the flow of time has some pulsating nature: time consists of elements like the periodic table by Mendeleev. The world consists of elements, and similarly time consists of elements. And what we perceive as time is really an unfolding of these temporal elements in our world and in our experience. At a formal level, the ancient Chinese described these elements as the 64 hexagrams in the Book of Changes. And we know that in conformity with divination practice, the Book of Changes has several levels of interpretation and is one of the most interesting predicting tools of ancient times. The practice of throwing reed sticks down for obtaining hexagrams and having a question constantly in mind—being receptive to a flow of events and tuned to a level of experience (which Jung named psychoid, where mind and matter are an inseparable unity), allows one to have an opportunity from mechanically arriving at the hexagrams to receive information about some historical, psychological events, because one was at a deeper level of the common origin of events, and thus the seemingly random manifestation of certain hexagrams would really be a display of pulsations of the cosmic flow of time.

Jung, reflecting upon the nature of the psyche and the essence of psychotherapy, introduced the concept of synchronicity. This is one of the key concepts of his depth psychology. He discovered that the major events connected with healing happen simultaneously. Synchronism implies noncausal connection. One separate event is not the reason for another; both events arise simultaneously from a more fundamental level. But the fact of their simultaneity and semantic correspondence speaks of some interaction on a most basic level of experience; on the level of primordial language, time, and causality; and that leads us to a level of quantum spontaneity, leaving behind the framework of mechanical causality. Here we are really capable of becoming amplifiers of quantum instability, which is modulated, in turn, by this flow of time, and expresses this flow.

The visual interpretation of such elements of time was discovered by the modern visionary and philosopher Terence McKenna. This interpretation has been developed in his theory of time and of the time-machine—Time Wave Zero, based on the ancient arrangement of hexagrams in the *Book of Changes* and in the corresponding computer program. Thus, he based his conclusions on the assumption that time consists of elements and that these elements can be represented as a fractal curve. Fractals in modern mathematics denote objects which are endless: that is, zooming into them we see the same patterns again and again.

With the help of the computer, time, as such, can be stretched to any interval, and the curve exhibits more and more details. We can see on the screen a range of some billions of years in ten minutes or so, due to the power of McKenna-like computer programs. The specifics of this curve are that it corresponds with the level of organization or level of entropy or with a level of novelty: the higher it is on the axis, the more entropy, the less novelty and creativity in the world.

A characteristic of this curve is that at a certain moment it reaches zero, at which point all disorder disappears. Disorder, as we know, is a lack of connectivity of all the elements. And the order—all-connectivity—is a fundamental ontological quality of consciousness.

Experimenting with this curve, McKenna found that if we position the curve crossing zero (maximum creativity, zero entropy, zero disorder) at the moment of December 21, 2012, all major

events of human history coincide with the kinks of the curve, that is, with those places where the tendency for increasing novelty and order changes to the tendency for the increasing of chaos, and vice versa.

Due to fractal properties, this curve has a surprising feature: it shows that similar trains of events take place during very different intervals of time. The events taking place say, within 40,000 years, in a range from 47,000 B.C. up to 7,000 B.C., have exactly the same form of a curve of time as the events in the range of 625 from 1181 A.D. until 1806. There is some kind of a temporal resonance. The elements of time have the same dynamics and if we were to look in the future the next resonance will appear after a certain number of years, and this interval will occupy not 40,000 years, not 625 years, but, say, 9 years, 9 months and 5 days, from 1999 until 2009, with the same temporal dynamics. And the same temporal dynamics in times close to 2012 will occupy an interval of some minutes, and in times even closer to 2012 the curve of the same temporary dynamics will occupy several seconds, and then-fractions of a second.

Such is the nature of time according to McKenna. Time is composed of enclosed cycles that are in resonance with all other cycles. If we were to use this curve for forecasting, it would be necessary to take that interval of time which interests us in the present or future and to determine what temporary resonances and time periods corresponded to it in the past, what kind of historical events took place during these past times. This means that time is not linear, as it is described by modern physics, nor cyclic, as described in many ancient doctrines and philosophies. These models, it is fair to say, hold only partially.

Another comment by McKenna is that it is not just a simple spiral of time consisting of cycles having identical periods. Time is cyclic, but its cycles have different periods from the standpoint of physical time. This understanding corresponds better to our intuition of psychological time, when one moment can be an eternity. The presence of a temporal resonance is essential for understanding how time is involved in a psychotherapeutic timemachine. In holistic states of consciousness we get into a temporal resonance with various events

of our life. That is why it is not meaningful to preprogram a psychotherapeutic session; it is better simply to release all sets and to allow anything to happen, just supporting it. Like therapeutic time-travel, being in a holistic state of consciousness soaks up, like a huge vacuum cleaner, all problems which resonate with our present condition.

Steps From a Psychotherapeutic Time-Space Machine to a Metaphysical One

E HAVE discussed all the major components of a psychotherapeutic time-machine. And now, let's put forth a question about what must the world be like to make possible such phenomena as the holistic state of consciousness. time-travel, the phenomenon of healing, backward causality, and finally, the end of time according to the theory of McKenna? Take, for example, the last issue of what is the end of time? We know that the end of time means the end of entropy, maximum creativity, complete all-connectivity. And the realization of these qualities leads to the unity of all-consciousness, the full command of all organs of consciousness created in the course of computer evolution; direct perception, real telepathy.

We can follow the explanation offered by McKenna. Let's imagine that, at the very moment when time comes to an end, a time-machine is finally created. One can suppose that the timemachine cannot travel to the past before it was invented, since then we would have another order of things. But it can travel to the future. And since it can travel to the future, the very moment when it is created and the first travels to the future have begun, in this very moment of 2012, travelers in time from all future times appear, bringing with them all knowledge and technologies of their civilizations. That is, it's as if linear time, as we know it, becomes transparent, replaced by the "absence of time," or eternity. All the world, which was submissive in an earlier era to time and could be developed only as a sequence of temporal events, now can arise, to be present, to be experienced simultaneously. This is the state of "all-oneness," technological "all-mightiness," allconnectivity, which can be described as the

ultimate aim of mystical searches and the evolution of humankind. In other words, the state can be described as complete exteriorization of psyche and interiorization of body and external world. We can imagine still more. If everything that was created by the informationalcommunicative revolution comes back into consciousness, telepathy arises. Furthermore, if what is corporeal really comes back to consciousness, that is, if our body becomes conscious, we receive complete power over our body. Our body becomes truly spiritualized. These possibilities are discussed in modern transpersonal research, for example, in Michael Murphy's book The Future of the Body (1992), which is a modern encyclopedia of unusual, extreme, or supernatural manifestations of corporeal abilities.

Furthermore, we can imagine that not only the body will return to consciousness, but also all the material world. What in this case will take place? We shall approach a level of "laws of nature" or, it would be better to say, "habits of nature" (Sheldrake, 1988). Because what we call the laws of nature are just means of maintaining relative stability. Modern science states that the laws of nature and constants of the world evolve, and moreover, laws are just "habits of nature"—that is, once a mechanism starts to work, it will keep a certain rhythm, but it does not mean that this rhythm and this order are absolute.

Thus, the world, corresponding to experience revealed by some psychotherapies, is the world where spirit and matter are not subordinated to each other but are two aspects of a dynamic unity. It is a world where all landscapes of experience at all levels—corporeal, emotional, verbal, cognitive, visionary—are infinitely-dimensional virtual realities.

The muddle connected with the time-machine in modern science fiction and in works analyzing paradoxes of time-travel is that the time-machine is supposed to move in time—whereas the time-machine really changes time so drastically that the machine itself becomes time. The time-machine is created during usual time, but once in existence, it becomes time itself. Time-travel changes time, and that change removes all paradoxes—which are derived from our attachment to the usual understanding of time

and are only expressions of our attachment to certain sorts of characteristics, laws, and habits of nature. A time-machine is not a kind of mechanism one can drive like a car, allowing one to travel from one landscape to another. The essence of the concept developed here is that the engine of the time-machine is the cumulative consciousness of humankind; it is basic freedom, which is actualized through modern technology. And, at the same time, the metaphor we introduced of the psychotherapeutic time-machine allows us to understand better many elements of the psychotherapeutic experience.

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