MAN MUST EXPERIMENT

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Newsletter

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The very distinctive attribute of Man, of being concerned with the unknown when he is unable to count on instincts to carry him through, makes him aware that he must develop as a questioner of what might happen to him. Over a long evolution to this day, he has endeavored to become less and less dependent on good luck and more and more on how he can best face his fate of having to live facing the unknown all the time. One of his findings has been that, as a characteristic of his human condition, he cannot escape having to pay a price for each awareness of a descending indeterminate future.

In this issue of our Newsletter, we shall air some of the ways it appears that this price paying has been done by a number of humans articulate enough to speak on everybody's behalf.

Within this overall concern, of understanding ourselves in our world, a task easy enough to be expounded, can be found in the imperative of the title. Although only collectively conscious in recent times, this imperative can be traced to the emergence of a consciousness which creates a feel of certainty that accompanies true answers to fundamental questions. It can be found in the moves of early childhood which belong to all of us humans, born without instincts but with a need to know. It can be found in those seekers of truth of all levels and of all brands, among whom we must count the scientists of all times. It can be found in the proper proposals of human education that men like Socrates and the Buddha are recorded to have made. Today it may be found in the general acceptance of dangerous living close to a possible universal extinction.

If our discussions deepen these awarenesses they may justify this issue in mid 1984.

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1 On The Absence of Instincts

Since our definition of the fourth realm—the human or prehuman realm—has been that in the overall evolution of our universe, man made his appearance when in a distinctive leap, he has chosen not to pursue the way of working of the third realm—the animal kingdom, where new instincts seek their forms and create new species—but to explore being without instincts, we have been confronted with the task of understanding the meaning of this absence of instincts.

Evolution is conditioned, from the start, by the existence of individuals, starting with particles and ending with humans. It is through individual changes that the new appears, whether new atoms or molecules in the cosmos, or plants and animals on earth, or humans with different self-awarenesses in the whole universe lumping together as the environment both the cosmic (or natural) and the social.

So, we cannot see evolution taking place except in individuals, and the choice of one “creature” to leave the third realm and explore the absence of instincts, puts us in front of a thickness of durations following each other and clearly successful, since I am here to write this paper and you, to read it whoever and wherever you are. The public time since that fateful day when that creature moved out of “animaldom, ” has been given to the objectivation of the fourth realm. Whether it happened a few million years ago or not, is not essential here. What is essential is that “moving out, ” as a way of being, has remained the mark of humanness.

In some cases moving out may have been costly and perhaps led to the extinction of those who tried it out as they saw fit. In other cases, not moving out may have led to the same fate. In a number of cases it has both been possible and durable, as can be vouched by the presence on earth today of multitudes of communities living in different ways and within which individuals are attempting to test their brand of variation on the general evolution of the group.

We already know that a species' instinct can be represented by a "quantum" of energy whose function is to direct the behaviors of an individual. The way of working of the quantum is to mobilize existing cosmic and vital energies in the form, and, therefore, does not need to be larger than the directing of these energies requires. (An analogy with touching a button in an elevator to make it go from a certain floor to another, can illustrate this function of relationships between a little energy with larger ones.) If an individual animal

1. encounters a behavior among all those possible between its quantum directing its form—but one which is not one of those which already identify the species, and

2. considers specially that that behavior led it to recognizing that it should be integrated—as a "natural" behavior compatible with the spectrum of behaviors associated to that instinct—we can say that a "new instinct" has been generated; and if an What is essential is that "moving out, " as a way of being, has remained the mark of humanness.offspring of that individual, educated in that behavior, transmits it to its own offspring, we can say that a "new species" has come into existence.

Hence, "moving out" of an instinct has been shown to be possible, and, when from the production of a new instinct followed, a new species, an evolutionary device has been found which makes the third realm be the objectivation of a definite set of energy transactions: the hereditary ones—which organize the forms within definite instincts—and the variation ones—which allow new instincts to appear.

The awareness of the mechanism of "moving out"—from one instinct which characterizes what a humanoid did, in agreement with what is

possible with instincts but did not produce another instinct—made "moving out" the characteristic of humans when it was stayed with. To know that one had "moved out" required both staying with the new form and with what was possible with it, in terms of new behaviors. Humans found that rather than act on the anatomy of the form, they could act on the physiology which used that form and energized it differently. To know for sure that this process was a working process, the new behavior had to be investigated and the time of testing the variation, its viability, its demands per se and its frontiers, became the domain of one's life. The capacity of one individual to perceive in another this working—through the perceived behavior and the finding of its specific energizing so that one could display that same behavior—permitted more than one individual to reach the "moving out" and to couple this with a "moving in." The latter being an energizing. When done properly, it allowed the saving of time taken by the first to secure it and to make it functional, thus freeing time and energy in the second to generate new uses for the same form. The contribution of the successive generations to the evolution of a group could now be contemplated. Education became the deliberate instrument of collective evolution. New-comers had to be shown what could be done with the form, and to master, in their own case, the behaviors found possible. Part of one's life was a succession of "moving out, " followed by "moving in;" confirming that that characteristic was human (in this group) and collecting sets of behaviors which became characteristic of that group. The spectrum of possibilities grew constantly and the successive generations created "cultures" characterized by the sets of behaviors, visibly acceptable and accepted, which, once integrated, made one a member of that culture.

But this process of education did not infringe upon the essential characteristic of Man which allowed the exploration of new behaviors and their energizing. Individual findings ended up in the creation of new cultures which, in the fourth realm, are the analogues of species in the third realm. Each culture represents what was found possible and viable by the processes of "moving out" and "moving in, " more particularly in the "moving in's" which were selected to be maintained over stretches of time by the individuals of that group.

Ethnography teaches us how numerous the behaviors of individuals in various groups are and if we conceive of the time taken to discover each and to test it before passing it on to others, long periods of time are generated upon which we can project collective evolutions. In those times, old behaviors lost their sense of the novelty which was there when they were created, and they appear as eternal or having been there forever. Traditions lose sight of their origins and are perceived as non-created, not resulting from dynamics resembling the present attempts at variation. Those who adhere essentially to tradition only and those who do not yet identify with them, find between them the generation gaps which may lead to expulsions from the groups or to revolutions.

Groups gain a reality comparable to that granted individuals. In some of them the sanctity of the individual is denied, maybe even to subgroups of individuals who are considered as incapable of participating to variation, subgroups are only stable as pariahs which we have to place in limbo between the third and fourth realm.

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However sketchy this grasp of evolution is, it says clearly that the present human reality on earth could not come about unless Man lived without instincts and spent some of his time objectifying his awareness of the possible.

Taking from the third realm the functioning which lets an individual not identify completely with an instinct and extending it to generate behaviors—behaviors nonexistent in the constellations representing the ways instincts directed forms, in that or those species—proved workable and viable. Man only temporarily stopped to examine the dynamics of the behavior he newly created and to find the ulterior possibilities beyond these objectivations in those dynamics.

Man knew (i.e. became aware and remained aware) that his characteristic was his constant contact with dynamics and that change (large or small) is the mark of his humanity. Change acted on objectified dynamics which were the effect of his energy on other pre-

existing energies such as were found in the other three realms. All the arts were generated in this way and art objects, music, dances, rituals, institutions became the new human forms involving, at present or at an earlier time, the effects of individual quanta working on pre-existing energy objectifications.

For a while, it was possible to ignore the dynamics and to see cultures and their products as substantial and permanent as forms of the second realm, or species of the third realm. But Man's introspection led him to see that a multitude of changes are constantly taking place in him and around him. He realized that he had the power to statify in his mind what was really dynamic, precisely by ignoring dynamics—ignoring which itself is a dynamic movement. Man as a creator of fleeting forms could sometimes lose awareness of that power and believe there were human forms which had the substantiality of what he perceived in static matter. Every time he did this he learned that he had created a non-real, an illusory universe within the real universes he had access to.

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To develop the language of instincts we had to wait for the work done by biologists in the Western world about three hundred years ago. During this twentieth century, the demands of a more rigorous science brought forward the intellectual certainty that to endow man with any of the instincts that could be defined, would lead to unacceptable contradictions and that it was safer and wiser to assume that man had no instincts.

At that stage it became necessary to develop alternatives for the biological handling of Man if it was desired.

The difficulties were great and it has not been possible to reach a valid theory of Man's evolution from below, i.e. from the so-called lower animals. Man remained a problem for both theorists and empiricists, irreducible to what he was obviously related to: the worlds of matter, of cells and of behaviors.

Perhaps one of the break-throughs in this field has been the discovery that energy is one of the two basic components of reality and that time is the other. When energy is blended with time, evolution and relativity result. A general theory of evolution leads inescapably to the realms, in which energy works in specific ways to transform itself:

1 into matter (particles, nuclei, atoms and molecules),

2 then into forms integrating matter,

3 then into forms made dynamic by specific residual energies which utilize these forms to produce animals, and

4 then into a realm which integrated all the preceding ones by subordinating instinct, form and matter, to permit Man to play variations on its components

Specific constellations of behaviors define animals; indeterminate constellations define men. But more than with such appearances, is what we have to remain with, the uniqueness of the energy which determines, for split seconds, snapshots of the indeterminate constellations. We call that energy “the human quantum” and there are as many different and specific quanta as there are humans.

Once a quantum can objectify its energized matter into an energized form, which can be energized into behaviors, we have one human individual directed from within to do what is possible, whether it is compatible or not with the rest of creation. The laws of survival which have been tested over billions of years for matter, for about one to two billion years for form and behaviors, give each of the first three realms the possibility, at least on earth, of lasting in the obtaining and changing conditions.

The fourth realm uses energy sometimes differently, although it can also do it as in the previous realms: it transforms matter, it transforms organizations of matter by creating new plants and domesticating animals, so that the energy of Man becomes available per se to be given its possibilities as they become known to Man through awareness.

So, the absence of instincts is equivalent to creativity coming on its own. If Man has awareness of his awareness he can do away with what instincts do: maintaining the behaviors of species and creating new realms corresponding to his perception of himself and how energy can be objectified. By reaching his creativity per se he is in a position to do what his understanding of how the energy transforms itself, permits him to do and, in the time it takes to do it.

2 Experimenting as Creativity

When a bear pushes a large stone to see if there is something worth considering under it, he is certainly questioning the situation in which he finds himself about something which exists in its “mind.”

There is no difficulty in seeing that much of what goes on in the first three realms is being made of attempts to let energy do what it can while adding a little here and a little there in order to extend the realm. For example, the numerous remarkable ways in which plants themselves scatter their seeds—beyond the mere fall of fruit at the foot of a tree and the exposure of the seeds to the earth beneath—seem to suggest that each plant has given itself the job of testing a way of solving the problem of survival of the species in given circumstances.

Such a stand endows vital energy with a sense of adaptation that goes beyond the simple generation of new forms. A number of species are clearly telling us that they meet the unknown in the environment by trying one or two things which seem to be answers to challenges they come across and which will increase their chances of survival. And this is not done against other species competing for the same amount of substance needed to survive or thrive. As if each plant had residual energy to try out something new which is connected with survival but can be original, unique and proper for the realization of a specific project.

We shall accept here that our universe of energy is not set on a predetermined path and unrolling its possibilities linearly, one after

the other, one on top of the other, so that in the existing conditions that which comes after it does so univocally. Instead we shall surround each energy transactions with some margin of uncertainty so that what *is* appears as being able to have been something else. How much different, will remain unsaid until we concern ourselves with specific challenges. As if our need to know never succeeds in reaching a final knowledge, but one that is transient, revisable, recastable in other terms.

Temporarily, things may look different. We can live for a while in the illusion that we have reached the final stage in something, in particular, of some knowledge.

If everything is questionable, asking questions is the state of being which allows us to be the most ready to meet what is. We are asking questions not of others, not to get answers but to feel that we remain in reality; we are letting our self be one with the mystery of being which reveals itself only because of our questions and to the extent our questions are dictated by the mystery we are in contact with.

Man as a questioner, as essentially a questioner, will generate a new realm integrating the four earlier ones and subordinating them so that what happens in it is recognized as strictly human, i.e. new all the time, as if Man was constantly seeing everything anew.

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In particular, the past will lose its prehuman appearance of being permanent. Permanence will appear as appearance, as an illusion.

In the prehuman way of knowing which included questioning, Man carried the belief that there was, there, something to uncover which had always been there and was hidden from Man's sight. Through probes, specially produced to make him able to find answers to his questions, he found answers. The uses of those probes he called experiments as distinct from his work of knowing which used only his senses and which he called observations. Probes were trusted more so

when they revealed what observation did not bring out. But since probes were produced for specific purposes and specific questions, they in turn could become objects of examination and their revelations become subject to doubt.

A question like the one Copernicus put to himself: “How would the sky look if I stationed myself on the sun and no longer on the earth as had been done until now, ” was used as a probe, leading to a mental model which was confirmed by Galileo when he turned the telescope he had just made, towards, Jupiter. The telescope being material is more easily accepted as a probe capable of revealing the reality of the universe than a hypothesis—which can only be considered a probe, a temporary, rejectable one.

Copernicus experimented with an idea as a probe and produced his well-known system. The telescope could not have produced his system, only examples that such a system has some validity because, for example, Jupiter's moons go 'round Jupiter as Copernicus said the planets known from earth (including the earth) went 'round the sun. When the probe was belief in the statements of the Scriptures, there was no way of even asking the question. When the probes were the naked eyes they yielded what the writers of Genesis had concluded about the sun and the earth. Ptolemaus could only confirm this, adding some observations about the other visible planets.

Special probes became the instruments of physics, revealing for example the weight of the atmosphere (the barometer), the composition of the sunlight (the prism); later the electroscope revealed electric charges and the magnetic compass, magnetism, and so on.

All modern science has adopted this stand: “if you really want to know, organize your questions so that they become probes or help to produce probes which look like asking the questions and reveal the answers.” A Geiger counter reveals the presence of radioactive radiation; an X-ray diffraction machine reveals the structure of crystals ; a litmus paper an acid or a base, and so on. The public is satisfied that the instruments of pathology render the conditions of sickness objective and are capable

of helping in establishing diagnoses, treatments and perhaps even cures.

Public polls are probes of what large groups think and they influence politics and policies. Scholastic tests are produced to help reveal the efficacy of educational systems , curricula and other proposals.

Still doubts persist and knowledge is always dated. The many probes which are focused on the weather and on the inner movements of the earth, while making forecasts easier, do not allow much more accurate forecasts of local conditions and of earthquakes. Each step taken instead of ending a search seems to start a new search, often several and not easier to grasp than the original one. It seems that probing, instead of being the direct way to answers, is a method Man's creativity has found to accommodate its existence, to force awareness of its existence, to force awareness that Man the knower, is doomed to knowing indefinitely.

Of course, because of the finiteness of life, no one can do more than probe what comes his way and take his search beyond what has been reached before his last breath. Also, because of the restriction which focusing imposes upon a field, and upon the sharpness of one's analytic tools, each knower only manages so much for his life's labors. There is always need for others to take an investigation ahead and each individual only makes his or her contribution. The unveiling of a mystery, the revelation of any part of reality look like inventions profoundly marked by the individual attributes of the proposers. Not only in the design of the probes and of the whole experiment, do we see the markers of particular knowers, but also in the gathering of the crops. Experimenting becomes displaying creativity and is singularly stamped by the individual's idiosyncrasies and gifts. Still, all experimenters are convinced that what they know, they know on behalf of man-kind and they put forward their findings as universal and as expressions of truth. Indeed, since we have a history of science, a history of art, chronological displays of cultures, we seem to accept collectively that such is the case. Some among us find, on behalf of all of us what we do not have the opportunity or taste to find ourselves. We accommodate the narrowness of our lives by expanding these to

include what others do with theirs. We establish an equilibrium between knowing directly and knowing by proxy.

Knowing directly is clearly enmeshed with our experimentation, our quests and our own probes, of which our senses are the most obvious. Knowing by proxy does not seem to be similarly enmeshed, but reflection will reveal that it is. Our own contact with our experimenting presents us with the criteria we extend to whatever others tell us their own findings have been. It is these criteria we extend to whatever others tell us their own findings have been. It is these criteria which act as guardrails and help us not to be fooled by anyone who distorts the perception of his findings so as to meet a priori conclusions created not by one's search for truth but by the satisfaction of one's desires or one's vested interests. We can have collective research because we can individually shift from the confidence of our own search for truth to trusting other people's intentions and motives in theirs.

Still, there are no examples of any search, at all meaningful , which has been terminated forever. We only stop to seek when the matter is trivial. We notice triviality because we stop being challenged beyond the first glance and we know we are not pursuing some futile matter because we keep being challenged and mobilized by what we are looking at. Our lives are full of examples of both the meaningful and the trivial and we do not generally need to be told which is which.

The people we call creative know that every time they try to involve themselves wholeheartedly in some activity, they are experimenting. In their case it is clear, at least to themselves, that they cannot but experiment in order to know and that to create is essentially to experiment in order to know. Outsiders may speak of such works as masterpieces or as works of art, but to the creators they are just one more experiment.

In this sense, when working, artists and scientists never experience success or failure. Other criteria, perhaps extraneous ones are needed to judge the products of one's activity in those terms. If all efforts can be looked at as experiments in order to know, no expectation besides the evidence elicited is part of the work. Once the experiment is judged

as completed, one can relax and assess its contribution to one's education, one's growth, and perhaps to those of others.

3 Everywhere We Can See Experiments

Once we endow our sight with the perception that Man is always in contact with the unknown, we can no longer see human thoughts or actions as anything but experiments.

We saw this in the case of artists and scientists. Is it still true of others?

Historians have accumulated evidence about how decisions are made at different echelons of government; by commanders of forces at sea, on land and now in the air; by industrial barons; by chief executives of large corporations or by adventurers (i.e. ordinary people who managed to become noticeable). There is no doubt that whether actions or decisions succeed or not, they are taken in all cases with a margin of risk, that is, with insufficient knowledge, on hunches, for reasons often not compelling, on data not always reliable.

Even when strict regulations are invoked to justify one's actions (as civil servants often do) there remains a doubt on whether it was proper or not to apply the regulation, thus transforming that application into an experiment. By definition, experiments do not guarantee success. To increase the chances of success, efforts are made to reduce the place of the unknown and this is the idea behind regulations. That regulations are circumvented, and when there are too many of them, that they may conflict with each other, or require special skills to be found, only prove that even this (the proposal of some regulations) is an experiment.

That regulation can become too much and invites deregulation, goes in the same direction.

Today, in the mess of too much information, it becomes possible to the ordinary people to sense that not only the ruled but the rulers too act blindly, part of the time.

We are all told that each challenge evokes different responses and that there is almost no chance for unanimity on any matter. We witness this in all public debates in democratic societies. Still, we do not learn that to live wisely is to be prepared for anything and, not all of it pleasant and to our advantage.

Collectivities, being more abstract than individuals, learn that with even greater difficulty, it seems.

The French say that the battle of Waterloo was lost when instead of the reinforcements Napoleon expected, the British got theirs first.

The condemned legislators in the Abscam stories found that the secret payments which they received and were to generate pleasant moments, led them instead to jail and social disgrace.

Politicians are elected on promises, and have more debts to private interests which conflict with each other. The overall course of a legislature is then no longer dictated by the national good—whatever that may be—but they try to make the appearances be that (the) representatives (of their constituencies) work for the future of all. This cannot be in the circumstances obtaining, and when the public notices that, politicians experience a drop in its trust. So, everyone knows that lawmakers experiment every time a law is passed by the legislature. The public, after that, expects confusion in those areas and to have to face some new unknown made of the interpretations of the confusing laws by lawyers, juries and judges. In democracies, the public often decides to circumvent those laws, feeling justified in breaking them, since only a small minority ever gets caught. Since there are not

enough provisions for enforcing so many laws—a new unknown makes its appearance: can one get away with breaking that law?

Drivers of cars, parking at meters, leave them longer than the rented time; taxis ignore the laws about where to stop to take on or drop passengers, even if they create traffic problems; drivers interpret personally the changes of lights at intersections, always in their favor; taxes on cash payments are either not paid or partially paid; declarations are of the amounts which can easily be traced by the treasury, since, to many, tax laws seem unjust, if not incomprehensible; how the inland revenue officers will treat one's case is one of the unknowns many believe they can ignore, particularly if chance favors them. Every year millions risk such chances.

Although requiring a much more sophisticated handling, the experiments performed by the highest executive authorities in government appear as the work of knowledgeable experts when in fact they may be acts of gambling, as so many wars have been shown to be. So have, unilateral oppositions to wars or to military policies. Before the events, all are equally right or wrong. After the events, sometimes, facts speak in favor of so and so's views. The list is co-extensive with what historians have cared to document. For example, Napoleon's conquest of Russia; Clemenceau's treatment of Germany at Versailles; Hindenburg handing to Hitler the premiership of the German Republic; the choice of Dien Bien Fu by the French colonialists to prepare against Ho Chi Min; the withdrawal of the Belgians before their Congo colony could handle independence, the dropping of atom bombs on Hiroshima and Nagasaki; the occupation of the Falkland Islands by the Argentine, ordering the Western forces not to occupy Berlin and Prague at the end of the second World War; encouraging Stalin to declare war on Japan when Japan was contemplating surrender, etc. etc.

Only a minute fraction of the people of the world reach eminence, however short-lived; their actions are exalted and scrutinized; their errors magnified as are some of their achievements. They too face the unknown like all the other humans and are experimenting all the time on this or on that. Until the observers know that it can't be otherwise,

the actions of the powerful will draw more attention than those of the humble person around. True those actions may affect masses of people and generate massive unhappiness, but their happening results merely from the fact that only experiments are permitted Man. Plato's philosopher king would have faced that lot however wise we think him. For, the greatest wisdom is found in the correct appraisal of the human condition, which puts Man constantly face to face with the unknown, simply because his condition is to have become aware of his awareness.

4 The Sanity of Experimenting

Once it is understood that Man's need to know can only be met by experimenting, not only can we understand the mistakes men make but we can conceive that there is also “a need to experiment” which will span the whole of our lives. Not all of us will have equal needs, and most of us will experiment with different intentions and reach different conclusions. We shall then give a new meaning to Goethe's often repeated statement: “In order to know the whole man we need the whole of humanity.”

There are three kinds of experiments (to know). First, those which from a certain distance, look alike and seem to have to be repeated by all humans, or when described by one human, are recognized by others as also being what they too had needed to do or go through. Second, there are the experiments of those who, although they are the first and only ones to have performed them, open up areas of experience which attract others who adopt them. Third, there are those which once known by others bring to them the warning that they should not enter into them lest they are prepared to destroy or harm themselves.

Of course, this crude subdivision will stand modifications and improvements. In particular, that there are experiments which bridge those three categories and those which allow bridges between them too.

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The appearance of the first category is needed by the students of human behavior to be able to state, for example, how people learn. Even if all babies learn differently to stand, walk, run, it is convenient to say that, from a certain distance, all babies must experiment with their muscle tones to know them and to affect them in order to display those behaviors.

They must likewise experiment with sound, light, color, taste, etc. to be able to know the nature, content and connections in the world around them.

They must examine, through subtle and numerous experiments, the universe of sound which will yield language to them. Only through such experiments would anyone manage to enter, practice and master the extremely complicated languages humanity has evolved so differently over so many generations. Even if babies do not go through the same sequence of experiences, from a distance it appears as if there were milestones which belong to the acquisitions of L_1 by all babies.

The list of the experiments classifiable under this first category will contain all those behaviors which relate to the growth of the learner in each of us, growth which requires our participation. As soon as we know that a behavior cannot result from a direct transfer to us of a biological integration of functionings coming to us from the other three realms, we must invoke learning and, although each may be individually marked, see it as collective; at least, from a distance. The individual variations will be visible as soon as we look closer. Science starts with the universal but makes room for the particular. The first category is therefore the one which scientists preconize, which has been the source of the so-called “scientific method, ” assuring repeatability. In that category experiments are considered legitimate even if the connections between these experiments and the need to know are not always perceived or perceived properly.

Because this first category is assumed to exist, we have gained knowledge which is transmitted by word of mouth or the printed word. It is “dignified” knowledge because it is easier to gain it than the one requiring close and sensitive investigation. As a price for this ease we

pay by our loss of sight which makes us blind to so much that is essential in learning. The vested interests of the vast majority trained in the so-called “scientific method” in this field, make them blind to their blindness and make them still more unable to be touched by some essential truths in the field of human learning.

To the second category, have always belonged and still belong, the work of pioneers. The work of those experimenters unconcerned with their personal acceptance and only committed to stating the truth even in the face of collective opposition and sometimes rejection. When Galileo Galilei stated: “E pur si muove!” about the rotation of the earth around the sun—a truth obvious to him which the Holy Office asked him to recant—he indicated that, although at first he was the only one to see this truth, it had an existence of its own independent of the person who first perceived it.

Every day, there is someone, somewhere, who becomes aware of something for the first time and finds himself to be the first among mankind to have had that awareness. If it is worth sharing and can be brought to other people's awareness, then the singular can become collective and perhaps universal.

Not all awarenesses are of equal collective significance. This one, for example.

If we have it, we may develop a sensitivity to others and not to think too much of ourselves and not to throw ourselves on them with what has come our way. But we may also develop a sensitivity to the ways which would make others receptive to our findings and work on our expressions so that they do not put others off and present what we have found in an non-offensive form. But we must remain uncompromising about the truth which came our way.

Like me, thousands have in their lifetime worked on what struck them to be important. Some, more than others, on narrow bands of knowing, going in depth rather than in width, while others let themselves be guided to embrace all that which seemed needed to make sense of what came their way. Pioneers are guided from within, individually, and

often they only listen to themselves. They may hope to see their suggestions heeded but certainly have no right to that. Heeded or not, these people belong to the second category.

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But they could also belong to the third category.

In this category we can place all the daredevils who attempt to exceed what has been considered unattainable. Climbing Mt. Everest from the north side, or without the help of additional oxygen; canoeing in torrents or in waterfalls; sailing solo round the world and other feats which made news. In such involvements what is unknown is whether something can be done and whether those who try will manage to achieve meeting the challenges.

This is pure experiment. Some time at the cost of one's life. Hence, the model par excellence of the pressure upon Man's spirit of the need to know is what Man can attempt. Beating some recorded achievement can be an afterthought, recorded for future reference only.

As generations follow generations, this third category gains stature. The need to know is so widely spread, the challenges unearthed and formulated so diverse and numerous, that a wider chance is given to mankind to acknowledge that experimenting is human, exclusively human and characteristically human.

Once we come to such a realization we find ourselves prepared to look for less visible moves towards more hidden unknowns . Hidden in the deepest corners of the human mind; hidden behind familiarity which blunts curiosity; hidden behind the difficulty of reaching the lost tracks in space and time of the origins of anything or everything, hidden, because mankind is so young in terms of cosmic or geological durations; hidden, because Man is so small on the cosmic scales, but attempts to embrace it all.

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To view experimenting as the human way of being might prepare us to rejoin the flow of change which over a score of billions of years has shaped our habitat and ourselves to the point that change has come on its own within Man's consciousness. Now it is possible to be oneself beyond any permanence, beyond the illusion of a non-temporal, static ideal state of being offered to all as a proper realization of one's humanity. The truth is that Man is a temporal being mainly aware of himself in change. Growing and aging are inescapable awarenesses. Being in time—which includes growing and aging—though a subtler awareness, is the truer one.

To be in time is equivalent to being sane. Hence the sanity of experimenting as an ordinary thought for Mankind.

5 The Insanity of Experimenting

Let us not forget that Man can let himself be carried away by what he perceives as his right to know. Our history, personal and collective, is full of examples of experiments which contradict evolution and lead to what seem “horrors” to most. Anyone can produce his own list: the daily news adds more every day.

The need to know is legitimate because it serves evolution.

The need to know this or that must be subjected to other criteria and these may not be present in the mind of the experimenter trying to find an answer to his question, illegitimate in terms of evolution if others will have to pay for that search.

Mankind harbors what has become known as sadists, torturers, terrorists, petty autocrats, etc. both in the large and in small communities (as small as families or even couples). We all know personally some of them and certainly heard of many more. By reaching in ourselves the awareness of why we do not stand their existence, or what makes us prefer a world without them we can come to some criteria of what makes us be humans in evolution.

Is it Man's capacity to return to the third realm—part of his evolution and find there more rudimentary forms of being which do not yet acknowledge the universal existence of others, of love for someone else than oneself, and instead acknowledge the sovereign right of one's

survival upon all others—which triggers the right to submit and use others for one's own perception of one's interest?

By saying that Man becomes an animal and is driven to actions which only serve a projection of oneself as cut off from others and letting "low instincts" take the upperhand, we may have an explanation of what we witness but we may still miss -

1. doing justice to the third realm in us and in itself, and
2. understanding the chal lenge of the existence, in us or among us, of the full spectrum of relating to the need to know and its connection with our affectivity.

Modern man seriously tries not to look at things in sharp black and white contrasts and has developed many distinct and not necessarily compelling ways of handling crime and insanity. Much more experience is collectively needed and many more enlightened collective experiments are required to be able to treat the challenge of sanity and insanity within the field of knowing and its manifestations. Some collectivities still use unsophisticated approaches to what is described as crime in their midst and thus complicate the quest for a human handling of human manifestations however bestial they appear.

The incidence of ethics and morality in human affairs remains a challenge we must entertain to be able to be less one-sided and dogmatic about how we judge experiments of humans on earth.

1. On a number of occasions, the *Infused Reading* computer disks (for Spanish and French so far) have proved to have a power which had not been put in them when they were conceived as a remedy to the illiteracy of native speakers. This, they can do all right but they can also ensure that people who do not know yet French or Spanish can acquire in about half an hour or three quarters of an hour, the ability to read a text they do *not* understand as if they did, and with a flow of words very close to that of native speakers.

It has been tried out so many times and always with that same unexpected total success, that it should make us think afresh on these matters until now poorly grasped.

Recently, a Frenchman, with considerable intellectual gifts, a wide knowledge in a number of fields, involved in the improvement of language teaching and proving to himself that it is possible to learn to read and write a language well without attempting to speak it, came to see us in New York City. He thought it was too costly in time, to speak a new language to a level comparable to what could be reached in reading and writing and, whenever possible, *to* learn to speak a foreign language should be left out of teaching.

When told that he could acquire the spoken language in no time, he agreed to test the statement himself on Spanish which he had been learning for two months in his own manner, i.e. leaving the spoken language out. In half an hour he convinced himself that the *Infused Reading* approach did give him the know-how to produce a decent flow of words where-ever he knew the vocabulary and the grammar of what he wanted to say.

Visitors who were Chinese, Japanese, European, American... provided the same kind of evidence: from 30 to 45 minutes were sufficient to provide adults with a very decent pronunciation. Often immediately afterwards we handed the subject(s) a printed text and the transfer to print from the screen was total, immediate and satisfactory. All this always seems unbelievable but only because of our preconceptions and prejudices.

Classes of students benefit as much as single individuals, thus giving these disks a place in the arsenal of teaching foreign languages at the beginning of any course.

2 At a weekend course on the *Silent Way* in early-March, a woman in her mid-fifties—Spanish-speaking from Santo Domingo, who had spent many years continuously in New York City and never managed to speak English which she wished to learn—served those attending the workshop as a subject displaying the work of overcoming obstacles which had seemed so great for so long. When presented with French she did as well as the teachers who were learning that language for the first time. No one

could think her handicapped then. As to English—in spite of the terribly bad habits generated over the years, and which prevented her from being as free as she had been in French—the techniques of the *Silent Way*. the colors, the rods, the pointings, opened her mind and she began to allow a flow of words to come out of her mouth without their going through an intellectual censor which generated doubts in her. Some of her productions amazed her (and the others) and created in her for the first time the feeling that she can learn that language which had escaped her so far.

Once more, the *subordination of teaching to learning* proved its power both at the remedial and the beginner levels. The techniques of the *Silent Way* become so much more attractive when people witness sections of this kind and thus recognize that we can now face challenges head on and meet problems with solutions which are akin to them.

3 The Board of Education of the City of Chicago decided to test the value of our Math *Mini Tests* in all its district areas but on a group of elementary school students working with tutors who are still in high school. About 100 city teachers and 20 parapro-fessionals are engaged in this TRANS-AGE PROJECT, supervising the tutors. Each group (teachers and paras) was to be exposed for two hours to Dr. Gattegno's teaching (i.e. the Basic starters of the Mini Tests) so as to appreciate the benefits of working on these sheets of the Mini Tests.

It is difficult to describe the enthusiasm of the two groups, otherwise, than by saying, that the Director of Math at the Board of Education could not leave the room after her introduction to the second group (in spite of her appointments) because she found the total involvements of the paras in this treatment of classical topics (which they themselves requested to be examined in view of their own doubts on the subject matter) so intriguing. Some of the paras admitted that for the first time they understood what had been selected during this demonstration out of the syllabus they are supposed to supervise.

The readiness of the top administrators to look into what Dr. Gattegno brought to mathematics teaching almost forty years ago, seems to indicate a new consciousness in

this field. At all levels, there begins to be an acceptance that there is no need to make students pay more than can be proved to be necessary to acquire the contents of the curriculum in math. In particular, that it is possible to begin with algebra in many chapters of arithmetic, yields now acquiescence where so often it generated opposition and refusal to even consider the proposal.

The Math Mini Tests are opening the ranks of teachers to Dr. Gattegno's work in a manner excluded before their publication.

4 Ideas come when they come. Problems may remain without a solution because a very easy shift in one's perspective (a new idea) does not present itself. Recently, we had one more chance of testing this fact. The Apple II computer only offers 16 colors including black and white. Since in the *Sound/Color Fidels* we need many more colors, all we could do is wait for a hardware development which would make more colors available. For three years, this attitude served as a valve which did not allow new ideas to impinge upon the problem so as to let new solutions appear.

Working on an urgent challenge caused the valve to disappear and something which could have been seen as a working solution ages ago presented itself. The limitations of the existence of only 16 colors also disappeared and it became possible to envisage a new generation of products “taking advantage” of the color component in the computer as is helpful in the Silent Way.

This is indeed a News Item.

The next issue will be the last for Volume XIII.

Would you let us know if you intend to subscribe to Volume XIV? Since we are still subsidizing this publication, it would be helpful to know in advance if there is a demand for it.

We shall keep the same rates as for Volume XIII, i.e.

USA, Canada	$15.00	U.S.
Europe	$19.00	″

Other Countries	$22.00	″