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Opening speech

Risk management: from the mission of hope to the obligation of a miracle

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The river taught me how to listen, and you will learn that from it, too. It knows everything, the river, a person can learn everything from it, too. Look, you have already learned this, too, from the water: that it is good to make your way downward, to move lower, to seek the depths.

Hermann Hesse, "Siddharta"

March 31st, 1983 at 8:15 in the morning, just over 25 years ago, an earthquake destroyed Popayan, my home city in Colombia. The 18 seconds that the first tremor lasted marked my first contact with that field of human activity that today we call *risk* or *disaster risk management*. Back then this was limited exclusively to strengthening the capacity of a society, especially of their authorities and search and rescue organizations, to respond to a "sudden" or "unexpected" emergency.

The Popayán earthquake placed the topic of disasters on the national agenda for the first time. Not long before, on December 12, 1979, a tidal wave and tsunami had hit the Colombian Pacific coast city of Tumaco; before that in 1906 one of the strongest earthquakes in history was registered off the coasts of Tumaco, leading to one of the largest tsunamis ever experienced in the area. But for reasons too long to be detailed at this time, that event and its consequences did not cause the same commotion among the inhabitants of Colombia as did the 1979 event, nor did it generate the same national and international mobilization that the Popayan earthquake did.

There were three kinds of professionals that exerted exclusive "ownership" over the topic of disasters, called then (and now) "natural": the geologist or seismologist, the structural engineer, and the member of search and rescue organizations. Those of us that moved in other areas of the social sphere were relegated to the conditions of spectators.

I, personally, had the good fortune of being the Regional Director of SENA since 1978, a Colombian government institution responsible for community and professional training. Because of the characteristics of the Department of Cauca (the Department whose capital is Popayan) we dealt mainly with urban and rural communities, many of which were directly affected by the earthquake.

It was not many hours after the earthquake that many people - with their scarce knowledge and resources - started to rebuild their own homes. In SENA, where we had no previous experience with topics related to

disasters, but more than 25 years of experience training workers and assisting grassroots communities, we quickly realized our immediate role should be to provide support to people such that if they were to rebuild their homes with their own hands, they could do this in an adequate manner.

In SENA, we also knew little about “anti seismic” construction methods, or more appropriately: seismic resistant construction. But, someone provided us with a technical document produced in Nicaragua after the 1972 earthquake, and we also received support from SENA instructors from other regions of the country and from an international institution hired by USAID. The first version of the Colombian Seismic resistant Construction Code was published in 1984 as a result of the Popayan earthquake.

For many people present here today, the names of INTERTECT and Fred Cuny will be familiar. I want to take this opportunity to pay respects to his memory. The timely but relatively brief visit of Cuny and his team to Popayan not only taught us to build houses capable of withstanding earthquakes, but also left us unforgettable lessons as to the value and efficiency of the quiet and subtle companionship of local populations and the low profile an external consultant should assume when circumstances place him in the midst of communities in crisis. Among these lessons, the importance (not obvious) of strengthening the “coping mechanisms” or “healing mechanics” that communities may possess, instead of replacing them with stifling intervention from outside, stands out.

When Cuny was in Popayan he had not yet published his book “Disasters and Development” (that I later had the good fortune to translate, even though it was never published in Spanish), and we did not even know he had written it, even though it was at the printing press at the time. But its contents could already be sensed when, after his departure, we realized how much his quiet support had influenced us.

Meanwhile in the regional office of SENA in Cauca, with the support of the General Direction, it is worth pointing out¹ that ***we were completely redefining ourselves*** as persons, as employees and as an institution, with the objective of responding to the challenges that the disaster had generated. We began asking ourselves – and asking others- a question that at that moment seemed ridiculous, given the characteristics of the earthquake that triggered the disaster.

The question was: **Why was Popayan destroyed?**

Behind the intellectual audacity unveiled in the formulation of this question, was the perverse influence of Ian Davis, whose book “Shelter after Disaster” fell into our hands days after the earthquake, and in which we found for the first time, the affirmation (I do not remember now if it was implicit or explicit) that disasters are not “natural”.

They say that from a stupid question you should not expect anything but a stupid answer, and in fact, when we formulated this question, the common response was: “Didn’t you feel the strength of the earthquake?”

However, with inputs from many people, from many disciplines and different origins, who where asking themselves the very same question, we began to understand that the earthquake needed a number of what criminals attorneys call “necessary accomplices” in order to produce such enormous destruction. We also realized that although the absence of seismic-resistant technology in modern structures and the many modifications that colonial edifices had suffered over the years diminished their capacity to resist the quake, these where not the only factors that contributed along with the earthquake to produce the disaster. There where many more reasons of an economic (some related to poverty but others to inadequate investments), organizational, political, institutional, ecological, cultural and ideological nature, that helped explain why, at that moment, we where living such a disaster.

It was then that I started to develop the concept of “global vulnerability” which emerged forcefully in Latin America particularly after hurricane Mitch in Central America. Thanks in part to the generous enthusiasm and diffusion of the notion by Allan Lavell; this concept came to form part of the social imagery of those of us who move in the world of risk management.

In one of those intuitive exercises that my fellow countryman Orlando Fals Borda calls “participatory action research”, and as we accompanied ordinary men and women in their efforts to build or rebuild their homes and discover new occupational niches, we started to unveil some clues that would afterwards allow us to contribute to the drafting of a “disaster philosophy”.

¹ A special mention should be highlighted here to the names of Alberto Galeano and Jaime Ramírez, respectively Director General and Social Policy Sub director of SENA at that time.

For example, although at the very beginning, we, the public institutions involved and the affected communities realized that the physical reconstruction of houses constituted the main end product of the entire process; in the end we also realized that those reconstructed houses were exclusively a **useful sub product of the process**. The most significant result was the individual and collective human transformation of those of us that where of part of this process. The mother, head of a family that had never before laid a brick was realizing that she was capable of building her own house and helping her neighbors to build theirs; the community discovered a potential within itself that maybe it had never suspected; the government institution and its employees finally began to realize the meaning of "community involvement". And, we enjoyed the exceptional opportunity to deconstruct and completely rebuild a public institution, to place it at the service of a bold and up to that moment unprecedented process.

We understood, then, that auto-construction was a form of **alchemy**, that art by which the alchemist manipulates metals such as lead and mercury in the melting pot, and where in the end the gold becomes just a sub product of the process (that may help him to pay off some of the debts contracted during the process), but "**the Great Work**" is really the human spiritual transformation achieved. The mutations that the metals experimented in the melting pot were thus metaphors that transformed the alchemist into a "superior" human as compared to the one he was at the beginning of the process.

In that experience we also learned the capacity and efficiency that **metaphors** have to transform reality, maybe not in a direct manner, but in the measure in which we are transformed by them, or that they transform our way of understanding and interacting with the world. Any work is "magical" in the measure that, directly or indirectly, it is capable of changing reality, or enables us to transform it.

I extend these lessons today to the set of conceptual, methodological, political, scientific, economic and technical tools that make up risk management, and that, in my view, are (or should be) the same ones with which humans face, or prepare to face, the challenges of climate change, or better yet, global change.

As we well know, disasters (triggered by phenomena of natural, socio-natural or technological origin) existed long before we where talking about climate change. They have existed ever since human beings have been on planet Earth, but effectively they have increased in number, complexity and severity, over the last decades. They are a consequence of, and provide evidence that the road to what we call "development" is making us less and less capable of coexisting harmoniously with the planet's natural dynamics.

We now live on a planet that is increasingly less a "neutral scenario" of human adventures, and more an "active actor" that expresses its inconformity with absolute and explicit clarity.

Alchemy was based on the prevailing Middle Age concept according to which the individual was not totally independent of their environment, but rather, an extension or, better yet, a "condensation" of this in space and time. The Individual and the environment form an indissoluble unity, in the same way that there are no marked differences between a baby and its mother in that stage of the baby's development that psychologists call "primary narcissism". At that stage they each feel and act as part of the other. Following this concept, the manipulation of metals in the melting pot could exert a parallel **quantum effect** on the "operator".

This is beautifully expressed by Fritjof Capra in his book "The Tao of Physics" when he talks about "*the feeling of oneness with the surrounding environment*", and he reaffirms this, precisely as he penetrates into the mysteries of quantum physics and explains that the properties of a particle can only be understood in terms of its activity, of its interaction with its surroundings. As a consequence of this, the particle should not be seen as an isolated entity, but rather as an inseparable part of a single whole.

A practical application of this principle, when dealing with human processes, is that in the same way that any alteration of the whole means a transformation of its constituent parts, the action of, or on the parts (in this case individuals or communities or, for example, an ecosystem or river basin), also have the capacity to influence the whole. To those who interpret – or misinterpret - these affirmations as purely "poetic", we need to remind them that one of the main risk management tools we have, as we understand this here, is the poetic capacity of human beings.

Ever since life appeared on Earth, approximately 4,000 million years ago, humans have not only transformed the environment from which we emerged, but have also faced the need to adapt to the effects of those transformations. Some of these, like the large-scale ejection of gaseous oxygen into the atmosphere 2,000 million years ago, a sub product of the development of photosynthesis, meant the extinction of millions of species that where not able to adapt. Gaseous oxygen had always been there, in the primitive atmosphere, as the result of photochemical processes, but it was Life itself, through the direct predecessor of green

plants, that took charge of increasing it to levels that were deadly for anaerobic organisms. Life, then, took several million years to co-evolve until it was able to adapt to the new conditions and for which it paid the very high price of extinction of innumerable species.

Two thousand million years on, human society is facing a new but similar challenge. Our development models, which depend on the intensive extraction of energy contained in fossil fuels, like coal and petroleum, is increasing the percentage of carbonic gas in an atmosphere whose “ideal” composition during a determined stage of evolution of the planet was (and still is) the result of several million years of **implicit arrangements** between the life forms that make up the biosphere, and the rest of the Earth’s interdependent systems (lithosphere, hydrosphere, etc), and where the objective is the capture, distribution and utilization of the energy that comes from the sun.

The enormous effects of climate change, and of other planetary processes, such as the deterioration of the ozone layer (that represents the erosion of another of the achievements of life over approximately 2,000 million years) confirm several decades of warnings that environmentalists have been expressing; warnings that until not too long ago were labeled “ecological terrorism”. Those that dared to question 30 or 40 years ago the existing development model because they considered it was putting our very existence on the planet at risk, were beaten physically or metaphorically. Today they get Noble Peace prizes. Not in vain did someone affirm that experience is that fine toothed comb that life gives us when we no longer have any hair on our head.

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We were saying that faced with the crisis that generated the change in the concentration of gaseous oxygen in the atmosphere, Life took several hundred million years to adapt to the new planetary conditions. During this time it could afford the luxury of the extinction of many species that did not evolve (as did our ascendants that learned how to breath oxygen), or that passed into obscurity like those that took refuge in places lacking oxygen.

If the increase of CO₂ and other so called greenhouse gases continues as it is, conditions will become very difficult for human beings and other species. The Earth and Life on Earth, can afford the luxury of continuing without us (new species would eventually evolve to occupy the niche left by humans), but, as a species, humans do not have millions of years to adapt. We can neither, nor do we want to accept our own disappearance, nor the extinction of other species that don’t only share Earth with us, but on whose existence, stability and diversity we are dependent in order to survive on this planet.

Fortunately we have a tool that our ancestors did not count on 2,000 million years ago: **Culture** (understood as the foot prints of our passage through the Earth and all the lessons we have acquired along the way). The same Culture that has produced the very development model that is drastically altering conditions of this planet, faces the challenge of rapidly providing us with **new formulas for achieving agreements between each other and with other living beings –this time explicit and with determined ethical objectives**. It is possible to conceive of an intentional “contract” between human species and the rest of the components of the Earth.

About “heavy rains” and “leaks in the roof”

I would like to discuss here two terms I have been working with during the last few months, mainly since I started to explore the common ground between disaster risk management and climate change adaptation, realizing that we are really working in the same territory of human knowledge and action. The use of specialized terms or the same words with different meanings generates confusion. This can strengthen the “territorialism” perceived by individual disciplines and affect the cooperative accomplishment of social responsibility that those of us that belong to one field or the other have in relation to all humans and living things. Sometimes we get involved in great idiomatic (idiotic and manic) debates over definitions, and we postpone an understanding of the processes that really matter.

Let us remember here that one of our duties is to enable common people to recognize, value, and apply what they already know --- to enable people to know that they know.

The expressions “heavy rains” and “leaks in the roof” not only allow us to identify more easily the essence of the problem, but also facilitate access and understanding by communities that may not relate to terms such as “hazard” or “vulnerability”, “mitigation” or “adaptation”. They feel calmer and more confident with these other two concepts with which they are very familiar (especially during the rainy season).

By “heavy rains” we are referring to all of those processes or events that represent a danger for a territory. That is to say, to the communities and the ecosystems that interact in a determined space and time that make up what we call a territory.

And, by “leaks in the roof” we are referring to the set of factors that reduce the territory’s capacity to absorb the effects of “heavy rains” without serious functional disruption, loss, or injury (resistance), or the capacity to recover in an opportune and adequate manner from the effects of these (resilience).

We know that as a consequence of climate change, “heavy rains” will not only occur in the future, but that heavier and heavier rains are already occurring, and will place our “roofs” under new and ever more demanding conditions and challenges.

But we also know that even today, the “leaks” that affect us are so big that even normal rainfall, part of existing climate variability, and which used to be considered a blessing, can cause great disasters today.

It is necessary, of course, to dedicate all of our attention to reducing human induced “heavy rains”, but without forgetting that for those of us that have been baptized as “developing countries”, and that contribute to the worsening of “heavy rains” to a relatively smaller extent than developed countries, emphasis must be placed on fixing the “leaks in the roof” (and on stopping deforestation that simultaneously contributes to making larger “leaks” and “heavier rains”).

Many of the disasters that affect our countries and which we commonly attribute today to climate change, (but that yesterday we attributed –or we will attribute tomorrow- to El Niño or La Niña), would have occurred with or without these hydro meteorological processes of global character, simply because little by little our territories have been losing their capacity to coexist with the dynamics of nature...with the normal “heavy rains” and with, of course, the exceptional ones.

They have also lost – or we have lost - the capacity to coexist with the dynamics of an humanity ever more abundant and complex. Remember that when we talk about “heavy rains” we are not only talking about the rain, but about all of the processes or events that can represent a danger to the territories. A war, a free trade agreement made with inequitable conditions, a recession in the dominant economy, can constitute for our territories a deluge more dangerous than a hurricane, an earthquake or a tsunami.

Without giving up on our responsibilities to reduce the “heavy rains” we must focus our attention on fixing the “leaks”. That is, in strengthening the capacity of resistance and resilience of our territories (ecosystems + communities) not only to the dynamics of nature, but also to those originated by human action. We need to do this because, among other reasons, even if all the countries of the world, and in particular the big producers of greenhouse gases, agreed and comply with their agreement to reduce emissions, the effect of those greenhouse gases already in the atmosphere will last at least for two more human generations.

We cannot fix the “leaks” that expose us to “heavy rains” only by thinking about the interests of humans, and particularly about the interest of some sectors of human society.

Nor can we fix them with the same dominant logic that created them and made them bigger over several decades. The logic of the neo-liberal market economy and of much that calls itself “science” only accept linear reasoning and discard other forms of action, thought and knowledge. If Culture is the tool that we count on now (of which risk management and climate change are a part), necessarily the door to other ways of thinking must be re-opened, doors that have been ignored for many years by so called “Western thinking” and its apparent success.

What I am saying today is not new at all, and it has been said at least since the 1960’s. What we need to recognize is that until now, that non linear way of thinking and acting, has not been successful in addressing the most urgent problems of today’s humanity; maybe someone will say that it is because it has not had opportunities to demonstrate its validity.

If this is so, we must express the need to create these opportunities. We must ensure that all the territories in crisis - today the entire planet - are taken into account. Let us acknowledge that many times those that from the margin preached the need of a new way of thinking, when circumstances allow them to take power, continue doing things exactly the same as those that preceded them in office. Sometimes the newly powerful maintain a discourse of “change” that is denied by their decisions in practice; acting exclusively according to anthropocentric and linear logics that verbally reedit the “defeated” models, yet still ignore planetary dynamics.

When we analyze the magnitude and complexity of the problems of a planet with over 6,600 million human inhabitants, we think that the only possibility to free us from an apocalyptic future would be a real Miracle. Our conviction becomes even stronger when we consider that among these billions there are enormous inequities that maintain a very large percentage of people under the thresholds of poverty and homelessness. The Miracle is required because on top of this climate change processes are irreversible in the short and mid term and will necessarily force us to redefine the essence of our human condition and our relationship with the Earth. Yet, alas, we find a human species today that by and large understands “development” as the need for compulsive, uncontrolled and parasitic growth, even at the expense of destroying the conditions that allow us to live on the planet.

For this reason, when in the 1960s and 70s the writer Barbara Ward affirmed that “we have the mission of hope” (a phrase that has been complemented by others that assertively affirm that we “have the duty of action”), we are going to say here that we have **the duty to make that Miracle**.

There cannot be real risk management – or radical risk management, as we have called it in other parts, to address the root causes of the risks - if we are not capable of pointing to those deep transformations, not only quantitative but especially qualitative, that from the linear view would be labeled as impossible, and the occurrence of which would receive the name of “Miracle”.

What are examples of those transformations? All of those that have constituted and constitute, from its origins, the essence of Life, starting from the evolution of unicellular creatures than less than 4,000 million years ago learned to exchange material, energy and information with the environment, until the human brain was created and, in general, the human organism - recognized (as far as we know) as the most complex structure in the Universe- composed of trillions of cells interconnected between each other and capable of thinking about themselves and about the essence of the Cosmos. But at the same time, capable of the worst and most unspeakable atrocities, such as torture, kidnapping and war.

That Miracle, which is embodied in every human being, is repeated several million times a day, every time a new human being transits in the maternal womb, in a fast forward view, in an average time of nine months, all the processes that led a unicellular being to become us.

It is the Miracle of life that allows the existence of beings on this planet, that are related to us biochemically, capable of existing in such extreme conditions of temperature, acidity, pressure or salinity that they receive the name of “extremophiles”.

In 1998, in an attempt to define the meaning of being from South America, I wrote the following:

We are the failed attempt to enclose life in an imported order. We are life emerging at force from the seams of history. We are life thousands of times turned into thousands of species and in thousands of times turned into thousands of tricks to oppose adversity. We are life that wins the game in impossible waters saturated by sulfur and in difficult slums in the big cities.

We are the possibility of life against all of the annihilating evidences and the obligation to make this possibility known. We are the unavoidable challenge of knowing ourselves and recognizing ourselves; of reconstructing our forgotten paths from the dispersed fragments of geography and time. We are the imperative needed to coexist among ourselves and with the other species that share with us this piece of the planet. We are the obligation to understand and assume that we are less American, less worthy and less viable as human beings, every time a dialect, a culture, a legend or an animal or vegetable species or a patch of forest, or a creek disappears.

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Let us return to what we were affirming a few paragraphs ago, that Life had before -- in its origins 2,000 million years ago -- an enormous amount of time to achieve that which we here call “the Miracle”, and that it could afford the luxury of extinction of those species for which the Miracle did not operate. As we also said, we human beings neither have the time, nor can we afford that luxury.

What to do, then, to generate the conditions, in *real time*, that will enable the Miracle to occur?

I personally do not pretend to have an answer, but some clues to find it. The main ingredient in the Miracle is what Albert Schweitzer called “**will to live**”.

*All real knowledge is converted in experience- writes Schweitzer. I do not know the essence of the phenomenon, but I come to understand them through the analogy of the **will-to-live** that exists in me. It is so that the knowledge of the world is transformed in me, in experience of the world. The knowledge necessary for this experience fills me with respect for the mysterious desire of life that feeds me in every way, leading me to think, filling me with amusement; it rises me ever higher towards respect for life.*

Real philosophy must emerge from the concrete data of the consciousness of existing, the most direct and comprehensive of the consciousness of existing. This consciousness tells us:

*I am life which wills to live, in the midst of life which wills to live. As in my own **will-to-live** there is a longing for wider life and pleasure, with dread of annihilation and pain; so is it also in the **will-to-live** all around me, whether it can express itself before me or remains dumb. The **will-to-live** is everywhere present, even as in me. If I am a thinking being, I must regard life other than my own with equal reverence, for I shall know that it longs for fullness and development as deeply as I do myself. Ethics consist in my experiencing the compulsion to show to all **will-to-live** the same reverence as I do my own.*

Before the present and future challenges that today's humanity must face, when risk management is definitely no longer a set of activities, of resources and techniques to face "the exceptional", but has become an unavoidable way of "managing the everyday", where the normal is what is abnormal and the abnormal is normal, those of us that move with this flag need to learn to discover, activate, move and unite forces ourselves with the **will-to-live**. That is the only way to operate the Miracle.

Of course since many centuries ago, there are precedents in this respect; maybe one of the most concrete is in acupuncture, and in general, in so called alternative medicine. I will explain this metaphor below. First, here is another example from my experience in Colombia.

After the 1994 earthquake in the Paez river valley, we were tasked with defining the strategy for the recovery process. This earthquake occurred in the indigenous region of Tierradentro, in the South West of Colombia. 40,000 hectares of land were destroyed; 3,002 landslides produced an avalanche that in some places reached 70 meters high and took 1,000 human lives; more than 30,000 people lost their homes or were affected in some way; and some 8,000 people needed to be reallocated out of the area. Recovery of the ecosystem and affected communities would have to take place in an area that was also, even before the disaster and for a long time, the scenario of multiple conflicts of all kinds, including inter-ethnic and religious conflicts. In that situation, at least in microcosm, the only possible bet was a Miracle.

When we defined the "Guiding Principles" of the institution created by the Government of Colombia to accompany this process, we included the following:

All living beings, including human communities and their ecosystems, have "coping mechanisms" that allow them to creatively transform themselves as a result of crisis. The NASA KIWE Corporation understands its own function and that of the different external actors that intervene or will intervene in the disaster zone, as acting like biological medicine in organisms affected by an illness. Such medicine does not substitute the immune system that allows the sick organism to assume a leading role in its healing process, but strengthen it through stimuli of energy that the damaged organism processes according to its own shortages and needs. Those energy stimuli in the case of disaster take the form of economic, methodological and technical support that external actors provide. Support needs to recognize different expressions of the culture of local communities as the bone marrow that is the source of their immune system and their creative possibilities².

I cited the preceding that many people surely already know, simply to support with real experiences the affirmations made in this speech, and to reaffirm the conviction that neither risk management nor climate change management can effectively intervene in the territories of the world in a conventional manner.

Those of us who are dedicated to these activities must learn to place our *acupuncture needles* and to identify the proper places to put them, so that, effectively, they may be capable to activate and to help to open the road for the WILL TO LIVE in territories, communities and ecosystems with which we interact.

In scenarios of ever more uncertainty, as the ones that seem to dominate the future today, only Life itself, and by itself, can indicate, step by step, which path is right. It is useless to insist on a linear or mechanical

² From the "Guiding Principles" of NASA KIWE Corporation (Popayán, 1994).

plan, when we are really a part of chaotic processes. Here applies what in another area we mentioned for environmental education: risk management and climate change cannot only be interdisciplinary, but above all, **interdisciplinary** because life is interdisciplinary...and here the intent is to resound with Life.

We need to provide real **dialogue of knowledge** and real **dialogue of ignorance**, that will allow us to better use satellite technology, and better use, for example **bioindicators**, with which *amautas* from the Andean plateau maintain a permanent communication with the surrounding nature. Or those who manage the *tiemperos* to dialog with the Popocatepetl volcano. Or the *chamanes, yatiris, quiamperos, the'walas, jaibanás, machis, tachinabes* and other chosen people in the communities, that don't only know in depth specific dimensions of the territory of which they are a part, but also possess the capacity to interact with those dimensions and with the forces that predominate within them, many times in manners and with results unimaginable or unmanageable from the point of view of "Western" science.

We need all of this without giving up on the contributions of modern science and technology. Otherwise we would be led into a new and no less limited and limiting form of **knowledge arrogance**, in the opposite end of the course of the pendulum.

To learn to place acupuncture needles in risk management and in the management of climate change, and to identify the meridians and the precise points of the territories where they are to be applied, demands us to recover a series of **human gifts** set aside or forgotten. These include **intuition** (a form of interaction with highly complex systems, before which conventional analysis is overwhelmed and paralyzed) and **compassion**, or capacity to share passion. To feel in ourselves what others are feeling, not only human beings, but also, for example, a river or a mountain: beings or sets of beings strongly gifted with the WILL OF LIFE that we intend to activate with risk management.

Let us not forget to mention the identity that we can also define as "the sense of territory". We talked before about "primary narcissism" in virtue of which the mother and the baby recognize each other and feel as one indissoluble unit, and of the equivalent feeling through which the Medieval inhabitant was identified organically with the surrounding environment.

We will only achieve **those new agreements or modus vivendi with the dynamics of nature** mentioned before to the extent that we are capable of building and rebuilding our identity with the territory, be it the rural lane, the urban neighborhood, the city, or the entire planet. Or all those scales simultaneously. Any economic, social, political or cultural process that leads to the loss of identity will be the cause of new "leaks" and, thus greater risk and disasters.

I was forgetting to mention **memory**, another essential ingredient of identity. Loss of identity and loss of memory, that come to be almost synonyms, constitute two of the most critical factors for the generation of risk and disasters, and for the inability to recover and to learn useful lessons.

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Today it is clear -- and if not, we need to make it clear -- that the most traumatic consequences of global change will not be expressed only in more intense and complex hydro meteorological and oceanographic phenomenon, but in social dynamics, like massive migrations (a deepening and generalization of the phenomenon of environmental and economic refugees that is already today a reality), or as the fight for control over the new and old strategic resources (among which we will find silence and shade), and for territories that really or apparently offer better conditions to be inhabited.

These dynamics will necessarily generate new conflicts and worsen existing ones. Risk management and climate change management must be recognized from now on as tools for the peaceful resolution of conflicts, which will not be able to be solved in conventional ways.

The attempt to apply these concepts mechanically-- in a false manner attributed to Charles Darwin- the "survival of the fittest" and even less the "survival of the strongest" will not be suitable here. Because the new general challenges not only oblige us to think as a species and not as individuals, but also as members of that network of life called the biosphere. The vulnerability of those that result less apt, are transmitted and shared throughout the entire network of life, weakening the entire system.

More than any challenge that proceeds from natural phenomena-- worsened or not by human dynamics-- the greatest danger that continues to threaten humanity is that WILL OF DEATH that is war. I am speaking at a general level, but also, and very specifically, in the region in which we are.

A few years ago I was a finalist in a contest of absurd theories organized by OMNI magazine (today no longer in existence, which does not surprise me at all). My entry affirmed that the end of the cold war was a consequence of global warming.

The affirmation was really absurd, not due to its “pseudo-scientific explanation” but more due to the fact that the cold war has not ended; but rather has been redefined and has diversified its expressions and actors.

And as in the past, the cold war continues to seek local or regional scenarios to warm up, trying not to affect those who profit from it. I will not go deeper into this matter for reasons of time, and because recently we promoted from LA RED a “Declaration Against War by Risk Management Professionals” in which we affirmed that it is absolutely senseless that some of us are dedicated to reducing risk and avoiding disasters, while others are dedicated to programmed death. That document, which was signed by dozens of people of America, specifically Colombia, Ecuador and Venezuela, stated that “if States have the obligation to avoid disasters and to protect life, integrity, property and opportunities of communities, they are also obligated to avoid war.”

The phantom of war will not retreat before the threat of climate change, but will see in it new opportunities to clone itself and benefit, obligating us to remain alert.

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Near the end of my remarks, I will venture to leave on the drawing board the following approximation of risk management, so that we can reflect on it, make it richer and breathe life into it. I feel that somehow it sums up the content of the previous reflections:

Risk management is the set of knowledge, wills, capacities and physical, economic, technological, ethical, spiritual and other resources that Culture counts on – as the set of activities deployed by a society- with the purpose of strengthening the capacities of communities and ecosystems that make up a territory to coexist without destructive trauma with internal or external dynamics, and also to avoid or control the generation of processes that can affect their own quality of their life or that of other ecosystems and communities.

Risk management, thus, must be recognized, demanded and exercised as a human right in itself, but also, as a pre-requisite so other rights can be exercised– starting with the right to Life.

This is my attempt to summarize in a paragraph what I believe risk management is (which I believe is equally valid for the management of global change and/or climate change).

One of those resources, maybe the main one, to achieve the Miracle, is love.

I use this word with complete conviction. As a student of Giordano Bruno affirms, “love is the name that we give to the force that ensures the uninterrupted continuity of beings”, which takes us back to the key topics of identity, compassion and memory.

It was very well said by Silvio Rodríguez:

*You must love
The clay that is in your hands*

*You must love
Its sand until madness*

*If not, don't undertake it,
It will be in vain*

*Only love
Brightens what lasts...*

*Only love
Converts clay into a miracle...*

* * *

I leave you with a graffiti that I read in a wall in Popayán:

"Love is effective, or it is not love"

We do not only owe ourselves the Miracle, but we must impose upon ourselves the obligation of its effectiveness.

A hug, thank you very much.