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Effort and comfort

*towards a reconciliation
between nature and humanity*

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An essay in seven volumes

Each volume can be read separately. The same short introduction explains in each volume the orientation.

- 0) Community and self-limitation:
starting a move towards change.**
- 1) Effort and comfort:
towards a reconciliation between nature and humanity.**
- 2) Vocation and subsistence:
towards a reconciliation between simplicity and wealth.**
- 3) Recessive and dominant:
towards a reconciliation between feminine and masculine.**
- 4) Circular and linear:
towards a reconciliation between South and North.**
- 5) Knowledge and learning:
towards a reconciliation between subtle faculties and intellect.**
- 6) Spirit and matter:
towards a reconciliation between Reality and appearances.**

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CHANGE AS A SEARCH FOR TRUTH

This is the story of our own destruction and of how we can come back to life.

While the Universe since billions of years evolves towards more complexity and deeper awareness, our western society seeks for homogenisation and oblivion; while the Universe tends towards more subjectivity and stronger communion, we escape into illusion, dry materialism, individualism and competition. We need urgently to recognise that our society is truly regressive: we walk against the laws of nature and, instead of opening ourselves to the deep mystery of life, we escape into many ways of artificial self-destruction.

This essay tries simultaneously to describe in a simple way the complex desegregation of our modern western society and to propose simple practical ways of transformation of our patterns of development, through our attitudes and behaviours in our everyday life. On one hand, it will describe the many deep imbalances which are causing the deterioration of our living conditions and generating more and more injustice and suffering. On the other hand, it tries to propose another vision for a possible future, through very practical ways of changing our behaviours as citizens and consumers.

A necessity for change

Everyone sees the world in their own way. What is common between the Indian coolie, the Kalahari hunter, the New York lawyer and the old Inuit woman? They have such a different experience of life that they adopt very different perceptions and representations of what are the essential priorities in their own life, beyond a common necessity for surviving. Each one acts according to their own interests.

Privileges completely change our understanding of our situation and urge us to act in a certain way which in general tends to reinforce these same privileges.

Our world suffers terribly: exploitation, destruction of nature, hunger and precariousness for the poor, depression and boredom for the rich, dominance of market upon human values, repression of femininity, rejection of older people, loneliness for individuals, dissolution of community links, heavy materialism in rich societies, extreme rationalism, domination by technology, devaluation of intuition, reification of the body, lack of spiritual guidance. The list never finishes.

There is an urgent need for change. There is no more time for talk; it is time for action. Our survival itself is at stake. Our main problem is not how to know what to change and how to change it. We know already the solutions. They have only to be tested, implemented and improved. The main problem is in fact how to break resignation, how to start a move towards change. We seem to be trapped on the track of our own destruction. We seem to be incapable of reaction, as if we were paralysed. This is why this essay will attempt to provoke a change of mind in showing this terrible trend for self-destruction which inhabits us. This is certainly an ambitious aim, and it is clear that the reader can only absorb what he or she is ready to accept. It is hard to be convincing. Nevertheless the blunt description of our attitudes and values will show how our civilisation has become poorer and poorer and will describe another way of coming back to life. This essay will not talk so much to the head but to the heart, not only to frighten us but mainly to give us hope in so many possibilities for our future, if we accept the need for change.

This essay is a psychotherapy of our western society. I will try to describe our values, our attitudes and our behaviours by linking them with their original roots. It is certainly a work of interpretation which everybody will not necessarily agree with but it is yet a way to challenge our reflection and to urge us to see the causes of our behaviours. It is unavoidable that any therapy is always painful. These descriptions are not very flattering, but they should help everybody to see the truth about our common behaviours. It is certainly not an explanation which will suit everybody; it will be only an incentive to see the truth which will differ for each of us.

Truth is often hard to say and hard to hear. It certainly hurts, but it is also liberating. We must learn to be tender with people and ourselves, but hard with facts and attitudes. There cannot be any change without this effort to see things as they are, even if it is painful to recognise what is and how sick we are. Change can only happen when we change ourselves, when we look clearly at ourselves and at the consequences of our values, attitudes and acts. This is a spiritual path in the way it touches our deep nature, our vocation, our aspiration for happiness and for a better life, for ourselves and for others. Change cannot be lead by material considerations. It has to be guided by spiritual values like justice, peace, compassion. It is more rooted in our being than in our acting. It concerns more the nature of our personal or collective attitude than the question of the technical means we can implement. It is a philosophical choice.

I will show how self-limitation is the necessary path for change; on one hand because self-limitation helps to limit the negative impact we have on our natural and social milieu, but essentially on the other hand because it opens us and makes room for human values and for a personal and collective deepening. Most of the philosophical or spiritual traditions teach that self-limitation is the way to happiness.

Six imbalances

As a way to structure this essay, I have identified six main imbalances which threaten our world. I intend to describe each of these imbalances, one after the other, but I want to do this in a positive way, in order to demonstrate that these imbalances are not only a threatening problem for our survival but that they are also the key for the solution; each one of these six imbalances can be described as a special polarity between two terms, where one term (usually mentioned as the first) dominates the other term and prevents its expression: 1) humanity and nature, 2) wealth and simplicity, 3) masculine and feminine, 4) North and South, 5) intellect and subtle faculties, 6) appearances and Reality; it means that the domination of the first term over the second prevents the second to be fully expressed; thus the polarity also represents the key to the neglected potential of unexpressed faculties which challenge us to become more creative in order to express what has been lost; it is why these same polarities offer also the means for a deep transformation of our society; they will be described in the reverse order, where the second term (the weakest) will be mentioned first, as the guiding and changing force, and the other term will be mentioned in second, as the energy which has to adapt, in a form of reconciliation between the two concerned poles. According to this new order, these imbalances or polarities are the following:

- 1) Effort and comfort: towards a reconciliation between nature and humanity
- 2) Vocation and subsistence: towards a reconciliation between simplicity and wealth
- 3) Recessive and dominant: towards a reconciliation between feminine and masculine

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- 4) Circular and linear: towards a reconciliation between South and North
- 5) Knowledge and learning: towards a reconciliation between subtle faculties and intellect
- 6) Spirit and matter: towards a reconciliation between Reality and appearances.

Each of these parts will be presented as a separate book which can be read independently of the five others, in any order which suits the reader, according to his or her centres of interest.

A first volume as general introduction precedes these six parts and exposes the generalities concerning the orientation for change, especially in what concerns the dynamic of community and the necessity for self-limitation. This general part is called: *0) Community and self-limitation, starting a move towards change.*

The first pages of this first general volume are repeated in each volume in order to summarise the approach and to make it understandable irrespective of which volumes the reader will have read. The seven volumes form nevertheless a whole where references are made to what has already been written in more detail in the precedent parts, but in a way which does not necessitate having read it.

The risk of generalisations

In order to make things more evident, I will use generalisations. Any generalisation is never true, because there are always exceptions or even regular situations which can contradict it; it is only a finger pointing on a main characteristic which is hard to grasp because it is a dominant factor which is not always true. Generalisation is a good way to emphasise a dominating trend which can only be recognised

beyond complexity and diversity. It is why the reader should make the effort to accept this sometimes surprising form of simplification, in order to understand what is meant by the statement. The first reflex is generally to adopt a defensive attitude and to refute what is being described; this tendency is especially clear in psychotherapy as each insight about our own values and attitudes is a kind of menace for our personal stability and for our trend to reinforce wrong, but strongly integrated, behaviours or privileges.

I will try to describe our modern western society, which in fact does not exist as such anywhere, but I will nevertheless describe characteristics which we can identify in most of our western countries. As western society, I understand the rich nations which consume most of the world's wealth and dominate the world economically since the time when they have taken advantage of the industrial revolution and colonised the other continents. These nations are mainly the ones of North America and Europe, including Australia, New Zealand and Japan. Yet there is no clear boundary as there are many traditional - non western - societies within these nations and also many western aspects in poor countries, especially among the dominating elite.

In the same way of generalisation, I will talk about traditional societies. These are the societies which developed in the southern countries as well as the ones which were established in western countries before the development of market economy and before the industrial revolution. These societies are still at least partly alive nowadays in many more protected parts of western countries. We could define traditional societies as the ones which consume mainly what they are producing and which are guided by other values than by trends of mere materialistic accumulation. These societies, because they are fragile and acting mainly locally, are probably more

transparent. They should not be idealised, but they nevertheless represent a more human scale of development which can inspire us.

A testimony

This essay does not pretend to put forward an universal truth nor to describe the full range of most important aspects of our society. It is not an encyclopaedia of alternative living; who could have the knowledge to write such an essay? It is far more a testimony and a challenge. The tone may seem highly and heavily moralistic, but it is only a way to explain a personal truth. While taking a clear stand about the interpretation of what I observe in front of me and proposing precise ways to react to the terrible destruction of our environment and of our local communities, I will try to break the resignation and to provoke a move towards change.

In this way, each statement is more a point of view, a testimony and a challenge than the expression of an objective and absolute truth. Who could say what truth is? There are many expressions of truth (small t). Each one of us has his or her own truth (small t). These different truths can be even contradictory; they remain nevertheless valid. They compose, all together, a kind of gigantic mosaic which may try to represent the perennial Truth (capital T). In fact, although there are many personal truths (small t), there is only one perennial Truth (capital T), but there are many expressions of it which, despite their diversity and imperfections, have yet to conform to the perennial Truth (capital T). It means that our diversity is the key for everybody to bring their own special contribution to the expression of a complex picture which can only take shape because our personal or collective inputs of understanding and creativity are complementary, sometimes even antagonistic, but yet necessary to the whole picture.

Truth cannot be described with words, unless it is reduced to a mere simplified representation which our rational mind reconstructs artificially in its own limited way in order to describe the world with words, while letting unexpressed all the aspects it has not perceived. This representation is usually made possible by the simple addition of partial elements of understanding; it is thus necessarily ignoring what has not been perceived and it also lacks of a broader global understanding; as this representation becomes our map for acting in our daily life, it is evident that a map with so many holes and distortions can only lead us astray. This impossibility to describe the Truth is the reason why the oriental tradition has adopted the apophatic way as another way of expressing our perception of the world in avoiding to try to describe what reality consists of. It has done so in two different ways: first by saying what reality is not and second by indicating more the direction in which to search, using metaphors or poetical images, than trying to describe reality itself. I will adopt this double process in my essay.

First as the negative way - saying what reality is not - I will describe our daily practices and I will show how much they are flawed. This will be essentially a description of the negative impact of these practices (our use of energy, technology, money, power, knowledge, etc) and how much they are based on false premises. It is important to emphasise that these means are not bad as such and that the flaw consists mainly not in the tool itself but in the use we make of it; the criticism of our practices addresses more our purposes and needs than the means themselves. This first part of the way will seem very pessimistic as it will essentially insist on the negative aspects of our development. The apophatic (negative) way of saying what life is not is not an easy exercise because we are attached to our practices and to the privileges they allow us to consolidate. Our first reflex, when one dares to criticise our use of technology, of money or of power,

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consists in resistance; we refuse to see how much the flaw is real, how much our representations, our ways of thinking and living are destructive for one another and for ourselves, for our environment and for our social life. Yet the ecological cataclysm and the economic collapse we can observe around us tell us more than it is necessary about the urgency of changing these ways which are in heavy conflict with the laws of life and nature. This exercise of questioning our ways of life is made more difficult by the fact that our representation of the world and the justification of our ways of life are firmly consolidated in a rational construct which accepts no crack. It is like a fortress which prevents the unknown to enter, although, as I just described it, the major part of this representation keeps ignoring most aspects of life, as it is an artificial rational construction made by the addition of a limited number of simple parts. It is a left brain representation (i.e. a cerebral construction), while the right brain true presentation (i.e. direct perception) remains more in touch with the mysterious dimension of life we cannot grab but only experience¹. This struggle consists in the resistance of our left brain, which constructs a false image of the world and defends its rational simplified representation, against the freshness, openness and sensitivity of our right brain, whose lively experience of life comes to challenge the dead re-presentation created by our mind. This is an attempt by our fragile faculties of intuition and perception to force open our rational mind to more than just reason. We need this opening for our survival, especially for the survival of our intuitive and creative faculties, because we need urgently to recognise the collapse of our attempts to dominate the world, and we can only do so if we escape from our imprisonment in the fortress of our false representations and privileges by our rational mind. My purpose in describing our ways of life in a negative way, which will sometimes

be perceived as extreme and exaggerated, is to shaken the walls of the fortress and to create cracks and holes which can allow light to enter and widen our poor representations of life. We have first to question our rational picture and to get it shaken so much that it becomes then free to accept to review its radical and narrow stand; only under this condition it can become more open to new insights. Hindu and Buddhist traditions have never stopped teaching how we have to stop our mind in order to see the light.

Then, as second step on the apophatic way, once our mind is more open to new perceptions, I will try to describe in which direction we have to search for a new way of being. This will be made in an indirect way. When the finger shows the moon, we have to look at the moon, which remains mysterious, and not at the finger, which does not say much; each description of this path will seem therefore lacking consistence or being too idealist; the finger is not able to say what the moon is. We have to let resonate what our intuition and experience of the world tell us with what we have deep in us that we still ignore. Here again it is more a function of our right brain with its intuition, inspiration, creativity, love of globality that will allow us to see more widely. It is all about evoking what the true nature of life is (who knows what it is?) and showing how a better perception of its deep nature would change us completely as well as our ways of life.

I hope the reader will follow me on this steep double path, in accepting first to radically question very well established values and principles that ground our western ways of life and in accepting secondly to imagine another world that we intuitively know in ourselves but whose picture we are not very aware of. This can only be done if the reader accepts to let go of his or her own attachments to present comfort and to let surface in him or her these deep intuitions we all have about the true meaning of life. Life is not

¹ See the remarkable book by Iain McGilchrist: *The Master and his Emissary; The divided Brain and the Making of the Modern World*. Yale University Press, 2009.

something we produce, we create or we control; it exists beyond us and independently from us as a flow which nourishes us all; it is our true source of being. We can resist it and remain imprisoned in the fortress of our poor representations or we can open ourselves to it and let it irrigate our inner life. Opening to it does not require anything special from us; we have only to remove the obstacles to its flow, i.e. the walls of the fortress. As life is much beyond us, we can only choose either to resist it (a negation of life) or not to resist it (a negation of the negation of life). To access life we need “only” to remove the obstacles, i.e. the negation. It is why the cracks in the fortress of our rational representations are so essential: they break our resistance to life and let enter light into our lives. Freedom can only be experienced if we accept to open the fortress of our rational mind to the liveliness of our experience.

Because life cannot be explained, my contribution can only be limited to a personal expression of my perception, rooted in my own experience, with its many blind spots and its few insights. It is why, in this essay, I prefer to express my own point of view in a form of testimony and commitment. I hope the reader will accept to follow me and feel shaken. It is his or her own responsibility to adopt the stand he or she wants to: to resist or not to resist. Although it will make clear practical proposals, this essay will not propose recipes. The pragmatic aspect of these proposals is more a challenge in order to show that change is possible and within reach for anybody who wants to act. There are no universal solutions. Each person, each community, each culture has to reinterpret these challenges by integrating, transforming and adapting them, as well as implementing them in their own way. These proposals are therefore incentives in order to help people to find their own way.

Since my wife and I are living in Numbugga, near nature, on the far South Coast of New South Wales in Australia, we are trying to practise what is said in this essay. We do what is within our ability to implement the many options which constitute the core of this essay. The reflection which is proposed here is therefore not mere theory but real practice. Of course we are far from having solved all the problems we meet in everyday life and far also from practising an ideal way of life. One of the main unsolved problems remains, for instance, the question of a form of transport which would integrate into the natural cycles; although we begin to see roughly how it could be solved, it is still not a practical reality. And many other questions remain unsolved.

Statements, patterns and options

Instead of exposing each point as an argumentation that would start with a generality and would then develop the content until it reaches a conclusion that would content the main idea, I have preferred to formulate this main idea immediately at the start and then explain it. This kind of reversed structure seems more challenging as it starts at each new step with the main point - or a kind of conclusion - expressed in two short lines. Through this other way of proceeding this book proposes a whole range of successive main statements that work as so many patterns² of behaviours. Many of these patterns or statements are the expression of another understanding of our society; as such they provide a powerful incentive for change. They can be understood as so many options that emphasise the fact that the implementation of these proposals, after it has been adapted to the local culture and conditions, consists of a personal or collective choice which depends on us only and on the way we want to interact

² This approach has been inspired by the American architect Christopher Alexander: *A Pattern Language* (1977) and *The Timeless Way of Building* (1979), both at Oxford University Press, New York.

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with the world. As citizens and consumers, we are in fact the real actors of our world.

The description of these patterns starts with a title and a statement on two lines that summarise the concept or the option. Then each statement (or pattern) is explained in one or two paragraphs that explain the main concept. The further part of the text develops the idea in more detail. At the end of the book the reader can find a list of these statements with their titles and their two-line summary.

The proposed patterns or statements will be often described as lists of characteristics or of sub-options. Where I see 5 characteristics, someone else might see 4 or 6. It is not important. What is more central is the attempt to make reality more understandable and our respective influence more evident. These lists are inspired by the numerous lists in Buddhist teaching which describes for instance the 3 Jewels, the 4 Noble Truths, the 5 Aggregates. It can seem very presumptuous, but it is in fact more a humorous wink; reality is much more complex than the description we make of it. The simplification of our road map makes our action easier, but it does not make reality simpler so far. We are encouraged to act, but this should not be an illusion of mastery; it is only a way to break our resignation.

At the end of the volume the reader will find a summary of the main options under the form of a list of possible commitments that any individual or local community can follow in order to practice a way of life which conforms to the spirit of this essay. This sort of rule can help in a very practical way a community to start to implement change. It is not the solution but it can help as a first base for discussion. The necessity for change is understood as the precious opportunity to reorganise our life for more happiness and deeper meaning.

Before I describe further on, in more detail, the different options which this essay will propose, we can summarise the main orientation of the proposed change in mentioning the principal options which constitute the spine of this way of life based on self-limitation:

- Spiritual orientation: change cannot happen for material reasons only, but it has to be guided by spiritual values such as justice, peace, harmony, compassion.
- Self-limitation: we have to learn how to reduce the impact of our way of life by choosing simplicity, by giving priority to human values over material ones. This form of intentional self-restriction is a form of liberation which brings real happiness: *small is beautiful*.
- Local community: we are all parts of a wider common social and natural body and we are all interdependent. Cooperation is the base for a harmonious development. Although competition can be considered as healthy when it remains limited, it is only an illusion, a bet in which each one hopes to be quicker and smarter than the other, but in which there are many more losers than winners. The local community is the place where change can take shape, according to a common project which grows in consensus with time and with the maturity of its members. This project slowly takes shape, even in a kind of marginal way, through the personal action of a few members.
- Cumulative effect: the world is what it is because of the cumulative effect of our respective personal impacts (for each of us negligible) or of our personal renunciations (for each of us a high cost). There are no other actors than people, although certainly some people have more impact than others.
- Whitewashing and corruption: the goods we consume are generally produced in conditions based on the exploitation of the

poorest or of poorer countries and on the destruction of the environment. When these goods are repacked and presented on the shelves of our local supermarket, they have lost all traces of this form of corruption which has generated them. They have been whitewashed as so many disruptive aspects of our modern society have become hidden: this form of virtuality makes truth difficult to grasp.

- A choice is a vote: each choice we make is a vote which encourages the production or the behaviour or the belief which is validated by this choice. We are therefore responsible for each choice because it shapes the world as it is.
- A new anthropology: all these main options constitute the practice of a new anthropology, i.e. a new understanding of the meaning of life, based on the preeminence of human values over material goods. This new anthropology is necessary not because its values are morally superior but because it is a necessary condition for opening us to the experience of the real essence of life instead of keeping us imprisoned in an illusion of material comfort and security which cuts us off from others and from our natural environment.

The power of truth

Gandhi practised his own truth with a very high rigor and freedom. He showed us the way of integrity (the way to remain whole) and how much our own testimony is important to foster the change we want to see in the world. In being faithful to our understanding of life and to our own spiritual path, which is more a search than a ready-made answer, we become really creative and capable of following our own vocation. We have the opportunity of being recognised and appreciated by our own community for what we are. Is that not a more positive way to happiness than conformity with the kind of success which our materialistic society proposes and which is in fact

only a frustrating and disturbing illusion? The practice of the power of truth is certainly the most powerful non-violent way to convince and to change our world for a more human one, as well as to change ourselves in order to discover the depth of life and to find real happiness.

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A) The scene

1) THE TWIST OF LANDSCAPE

The imbalance between nature and humanity is certainly the main imbalance among the six ones I mentioned, because it seems to be also the key for the five other imbalances, which are also mainly due to excessive domination and exploitation. No need to demonstrate how this imbalance is real: lack of basic resources for an important part of the world's population (water, food, shelter, dignity), exhaustion of natural resources, disruption of main natural cycles, climatic change, debasement of conditions of life for so many people, and the list continues for ever. Nature is suffering from the impact of man and humanity is suffering from breaking off in its relationship with the surrounding harmonising cosmos.

An indifferent Mother between might and fragility

The Garden of Eden

As we have isolated ourselves from it, nature has been reduced to a tamed leisure place which we can enjoy during our Sunday walks.

In our view, nature is no more the context in which we live and without which we could not survive. It has lost, for us, its independent life as a living body and has been reduced to a nice and beautiful Garden of Eden we like to admire from an external point of view when it suits us: lively birds, colourful flowers, stunning landscapes. True wilderness has disappeared or is preserved in the marginal frame of national parks which have been defined with clear boundaries, outside our daily life. Since we are no more confronted

with its power, nature has become a synonym for leisure: walking, climbing, surfing, skiing, swimming, sailing, playing.

This will be our starting point: nature in our understanding is no more the Earth feeding us with air, water, food and everything we need, as it has always been the case for the major part of mankind in the past millennia. Our western culture has created a new artificial concept of nature: nature has become a huge and marginal playground which is external to our daily life and where we can simply enjoy leisure and recreation. This new image of nature we have created is generating our new relationship with nature. The virtual image, and not the real experience, becomes our new reality.

The turnaround of landscape

Traditional societies have generally considered nature as the nourishing Mother, but romanticism has reduced it to a landscape.

It is only very recent, since the romantic era, that nature has become this beautiful picture we look at, while we believe we are not part of it; truly we can only look at it in this way because we believe it remains external and we consider it as the other, which we can dominate and exploit. Mankind and nature seem to live in opposition, since mankind has developed culture which is understood as an antagonistic force to nature. As we consider ourselves as so called cultivated beings, we believe we are able to dominate nature, to control it, to use it and to adapt it to our needs.

Before the 18th century, villages and towns were oriented towards their inner space (market place, community) and turned their back to nature because they had to protect inhabitants from natural harsh influences (wild beasts, wind, cold or heat, flood or drought).

Although or precisely because country people depended on nature for their surviving, they had a deep fear of it. Nature was respected and even venerated as the nourishing Mother but was feared at the same time because of its tremendous power. Humanity was still part of nature.

In the 18th century, the structure of towns (more than villages) reversed and houses started to turn towards the outer side, i.e. towards the view, when the surrounding nature could be admired for its beauty; the culture of romanticism had turned nature into a simple picture called landscape; this turnaround was possible because the urban civilisation seemed to be strong enough for providing the necessary goods and for offering security and protection; therefore people believed that they did not need nature anymore. Nature was no more a threat but only a nice picture or a pleasant garden. Tourism became the way of coming in touch with different landscapes or of interacting with landscapes in an active and playful way through alpinism, skiing, bushwalking. It was a new era for mountain regions, especially in the Alps: they became the place where tourists (i.e. city people) spent their holidays playing with the challenges of nature, climbing rock walls, walking into snowy fields above tree limits. From the living being it is in reality, nature was turned into a mere landscape to look at and to play with.

This form of turnaround of the significance of nature into landscape has taken place only because of an increasing distance of mankind from nature which has led even to a break down of relationship, especially for people living in cities.

Nevertheless this turnaround did not change the true essence of nature: our attitude is only a belief, an illusion. Nature remains what

it is, while we live in illusion. It remains the source of all what satisfies our essential needs and much beyond.

Feeding but threatening us

Nature is not a landscape but the powerful context to which we belong and which nourishes us as much as it threatens us.

Nature is not only this idealised Garden of Eden we like to visit on Sundays or to play with, while climbing or surfing, but it is the broader context which not only surrounds us but which we are integral and indissociable parts of. Nature is made out of the whole universe: the stars, the planets, the sun and the moon rule on the cyclic rhythms which foster our seasons and any natural phenomenon. Natural forces create the tremendous contrasts which go much beyond what we can bear physically and psychologically. Nature, as beautiful as it remains, can be also terribly powerful and violent when it generates processes which go far beyond what we can face or resist. Despite this form of power which we interpret as violence, nature nourishes us, because it provides us with all the resources we need for surviving and with the energy that drives us.

Nature is not only made out of nice singing birds and colourful flowers, out of peaceful rivers and forests, but it consists mainly in rough oceans, deserts, ice, sand, rock, mountains, deep forests and wild places where men can hardly survive. Volcanoes, avalanches, storms, floods, earthquakes, tsunamis, hurricanes remind us of the tremendous power of nature which we perceive as violence because we feel very fragile.

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On the other hand, despite its harshness and violence, nature provides us with all the heat, air, water, food we need. Without it we could not survive.

Our relationship with nature is thus manifold, ambiguous and complex. This complexity, between power and fragility which both characterise nature as well as ourselves, can be expressed by two antinomies:

- the indifference of nature towards us, although nature is also our Mother,
- and the fragility of natural balances and cycles, although tremendous forces are at play since the origin of time.

So far I will only describe these two antinomies; beyond these rather physical interactions with our environment, there are many other important aspects of our relationship with nature, as the harmonising dimension or as the teaching we receive from it, which I will examine later in this pages.

1) Indifferent towards us although our Mother

Because nature is our Mother, we resent its threat, due to our very narrow comfort zone, as a shocking indifference towards us.

Nature does not care about us. Everything in nature happens as if we were not here. We are too small to confront it. We can only hide away or protect ourselves as well as we can. Yet nature is our Mother; despite its violence we need to maintain our link with nature because it provides us with everything we need. Anything we need is linked directly or indirectly with it. Everything we have or use is a gift from nature.

This is the first antinomy: Nature is our Mother, without which we could not survive, yet it remains indifferent to us and to what may happen to us. We suffer from the indifference of a Mother who does not behave towards us as we represent ourselves a Mother should do. We have to live in the tension of this antinomy, because there is no survival outside this tension.

2) Power but fragility

Nature is powerful yet fragile; natural forces are tremendous but balances, established through millenniums, remain very fragile.

While ever changing, nature remains stable thanks to balances which have established through thousands of millenniums as the resultants of complex systems of antagonistic forces. Evolution happens, as proof that the laws of nature are not frozen but are evolving constantly. Yet stability occurs. Nevertheless a small “external” influence can perturb greatly this state of balance and bring changes which can disturb seriously, or even threaten, the equilibrium of the whole.

This is the second antinomy: nature is at the same time mighty and fragile. Nature and climate have fostered the world in which we live: geography is given as the balance which results from a very long evolution since the origin of time; deserts are hostile places for people; mountains stand between valleys and define the degree of relationship we can develop with our further neighbours; oceans draw the limits of the solid ground we live on in a way which seems impossible to influence; climatic conditions determine the necessary means for our survival. Yet mankind has tried to reshape partly its surroundings. Through its many activities and influences, it has

modified slightly the topography of the Earth or has created artificial oasis; by drilling tunnels and by building dams, it has changed the aspect and the use of land; cities have become a place where natural climatic conditions seem to be ignored, as long as they are not extreme.

Every time mankind interferes with its surroundings, it modifies the game of the playing forces and changes slightly the general balance; it provokes imperceptibly perturbations which cumulate and bring deep changes: deforestation, erosion, changes in the water regime, over-exploitation, destruction of biodiversity, climate change. It means that even small insignificant changes have a strong cumulative effect and provoke finally deep imbalances if not cataclysms. Although it seems so mighty, nature reveals itself as very fragile.

Change is characterised by quality and quantity, but also by rhythm (speed) and location of our actions; if I cut a tree in a dense forest, it does not influence the general balance; if everybody cuts a tree - which they are entitled to if I am - it is a cataclysm. If I cut the few trees in front of my house, the climate of my place will change drastically.

Of course the impact of our life on Earth is inevitable; yet it is a question of measure and especially a question of awareness: how do I (do we) impact on the general equilibrium through our individual or cumulative actions?

The orientation of the cosmos

Nature is the visible expression of the cosmos; if we observe it, we see that its evolution is guided by a conscious and deep meaning.

Nature is not only a heap of stones, plants, animals, set in a complex system; its evolution is not the haphazard consequence of chance and necessity, because it is not only material but it is also immaterial, i.e. spiritual. Nature is more than what we see; it includes also the forces which shape it and which endow it with a conscious spiritual orientation. The cosmos is the frame of this spiritual and material evolution which includes us also and which we need in order to find our true essence.

This statement states that nature as cosmos - it means the whole universe - is guided by spiritual forces. It is why it cannot be reduced to a mere heap of raw materials we could exploit as it suits us. It emphasises the fact that we are integral parts of nature, because we not only depend on it for our physical survival but we also receive from it the energy that nourishes us spiritually and recharges even the subtle content of our beings. It is important to understand that nature itself is not the source of this energy but only the expression of it. Nature is not the god but one of the main channels through which we receive our vital energy. Air, food, water and other basic gifts reveal their deep content which is more than simple materials as minerals, vitamins, glucides or proteins. This sacred dimension of nature, of food, of life, is also perceived sometimes as a menace, because we fear this mysterious power; we feel awe when we become aware of the depth of the mystery of life and of the subjectivity of Creation, i.e. of the hidden conscious orientation of its evolution.

The 4 escapes from the threat by nature

Illusion, destruction, accumulation and uprooting are the four movements we practise to escape indifference and awe of nature.

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In order to escape our fear of nature, because of what we perceive as threat or as indifference and because of our fear to engage on a harmonising path which would give us access to more spiritual depth, we take refuge in attitudes of escape which deny the positive influence of nature on us as well as our belonging to it:

- 1) Illusion: we create an illusory and artificial place of refuge through the use of force (energy) and of virtuality (technology),
- 2) Destruction: we transform and adapt our surroundings to our wishes and representations - and we finish by destroying it - in order to give ourselves the illusion that we are able to dominate and to control our environment and nature,
- 3) Accumulation: we exploit and plunder nature because we want to find refuge in egocentric greed and accumulation that seems to give a meaning to our lives,
- 4) Uprooting: we disconnect ourselves from nature and lose track of our true evolution, because we do not allow nature to harmonise us, in ourselves and in our relationship with our natural and social context.

I will later describe in more detail these four movements, because they illustrate clearly our main trends in our twisted relationship with nature, as forms of escape from life. This quadruple description will provide a good half of the material of this book, especially in what concerns the negative path I have described earlier (description of our negative impacts). Before I do so, it is essential to better show how much and in which way we are integral parts of nature. Our choice how we want to behave in our relationship with nature remains nevertheless a fundamental choice, although our technological civilisation tries to deny it.

Harmonisation or self-destruction

If we want to survive, we have only the possible choice to integrate (harmonise) into nature. If not we will be destroyed. Urgent choice!

When we destroy our environment, we are destroying in fact our present and future conditions for survival and we will be therefore the principal victims of our ignorance, stupidity, greed and arrogance. Given the extremely narrow range of our capacity for physical and psychological adaptation to extreme conditions, we have no chance of surviving if conditions deteriorate further: a few degrees more in average temperature and we will not be able to nourish ourselves any more nor to protect ourselves from the harshness of climate; severe conflicts for food and for water are about to arise and we will destroy ourselves in terrible fights for natural resources.

The indifference of nature towards us is also in fact the expression of its infinite strength; it will survive us even if we have already destroyed many of its fundamental balances. Certainly it has been changed deeply by our impact and it will never be the same because the original balance has been broken, many species have disappeared and what has been destroyed cannot be restored, but long term evolution is the fundamental form for survival which nature practises and it will always come back, soon or later, to an other state of equilibrium, whether it has to go through a stage of turning into desert or through ice age, whether it has to take a few millions of years for healing. Certainly at a very high cost for many species, mankind in first priority.

Our humanity is much more fragile than we think. Our interdependence as human beings and our dependence on our surroundings are the true signs of our belonging but also of our fragility. Technology does not provide any means to compensate the

degradation we caused; so far technology has mainly increased degradation more than it has contribute to harmonise with natural laws, and it is an illusion to think it could save us, although technology has certainly a role to play in our rediscovery of a true relationship with nature. From the point of view of nature, it would be certainly the best possible solution if mankind could disappear, although it would be, once again, a terrible loss in term of biodiversity and consciousness for the whole universe.

However true harmonisation into nature will mean for mankind a way of living to be found in tension between the two mentioned antinomies: between belonging to nature and yet resenting threat and indifference from it, between might of nature and yet fragility. The best way for this harmonisation consists in the integration of our activities and of our ways of life into the natural existing cycles defined by the cosmos, as I will explain it further on. Self-limitation is the rule for our future, not as a regression but as an invaluable opportunity for change and for an evolution towards more harmony, towards truth and real happiness.

But, so far, we generally refuse to see this urgency for change and adaptation and we do not perceive this incredible opportunity to improve our quality of life if we would evolve from a conflicting relationship towards more adaptability and compatibility. We use all possible ways in order to escape the indifference and threat by nature, the might and yet fragility of our surroundings. Yet this attitude is linked with our western culture. Traditional societies, especially the ones that have adopted ways of life which remain integrated with nature, are very challenging for us, if we accept to see the depth of their practices beyond their simple material appearances.

The traditional choice for harmony

Our western culture has chosen to escape nature into an artificial bubble of material comfort. But other cultures like most of the traditional ones, especially the Amerindian or the Aboriginal cultures, have chosen on the contrary to remain deeply rooted in the harmonising rhythms of nature, whether it should be at the price of more physical effort. This untold link between comfort and effort is in fact essential for choosing and fostering our future evolution.

The choice for minimal comfort

Amerindian or Aboriginal cultures have consciously reduced the impact of materialism in order to remain connected with nature.

This is a conscious choice these traditional peoples have made not to develop the material aspects of their lives in order not to isolate themselves from their surroundings but to remain deeply connected with what they consider as the source of life. The surroundings are not considered as a physical or psychological threat but as an expression of the spiritual world. It is therefore essential to remain open to their message. More comfort would create isolation from this expression and would therefore be a hindrance on the spiritual path.

This conscious choice for self-limitation creates an opening to the mysteries of life because it refuses to find an artificial form of protection which would go beyond what we need. In reducing our comfort we become more involved into the natural move of life.

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Comfort as an insulating bubble

Comfort creates an artificial bubble which prevents us from being in touch with the natural rhythms and forces acting in the cosmos.

At first sight comfort seems to be a positive thing but it is in fact a form of prison, inasmuch as it creates an artificial bubble which reduces our possibilities to perceive what happens outside this bubble. In becoming dependent on our usual physical and psychological comfort, we become less and less flexible and less open to life. Physical discomfort, as much as it is disturbing, has yet the positive effect of stimulating in fact our vitality and of preventing us from “falling asleep”.

In our western society, physical comfort plays a very important and even central role in our choices; it governs most aspects of our everyday life: heating, air conditioning, cars, lifts, machines exempt us from many forms of effort, especially from being in touch with matter, weight, distance, difference of heights. We are accustomed that the temperature of our dwelling does not vary and, whether it is hot or cold outside, we wear the same clothes. Artificial lighting also creates a form of independence from natural light and allows us to be awake at any time of the day. It certainly offers a form of freedom but it reduces yet our connection with the natural rhythms of days and nights, of seasons.

Who knows, in a big city, when the moon sets or rises, whether it is high or low, whether it waxes or wanes, when it is full or new? Time, in an urban setting, is linear, according to the digital measure of the watch, and no more cyclical, according to the variations due to the different positions and declinations of the sun above the horizon.

In our contemporary western way of life, we become more and more dependent on this form of protection of our physical body as well as of our mind and spirit, and therefore we are reducing progressively our capacities for adaptation, for opening to an unknown world and for discovering what would be new for us. It is striking to see how our far ancestors could resist very harsh conditions of life which we would not be able to survive in our present state. It does not mean that comfort is only negative; it means that comfort must remain minimum in order not to imprison us in an artificial bubble.

The body as a captor

Comfort aims mainly at delivering us from effort, i.e. from using our bodies, which become therefore almost like dead weights.

As comfort is understood mainly as a physical concept, it acts principally in relationship with the needs of the body. Physical comfort has to replace the functions of our body which becomes thus deprived of any action and meaning, except for the basic functions which cannot be replaced artificially: sleeping, eating, digesting. Or we go into intensive exercise of sport to learn how to control our bodies and use them as tools of excellence and competition. In both cases, whether our body is neglected or controlled, it loses its faculty to become a receptor of what our environment tells us; it is no more a captor of subtle energy.

This strong atrophy of our body means the death of an important dimension of our being in its relationship with incarnation, which has to be understood as our confrontation with the material world as expression of a deeper invisible reality. Comfort also acts in a similarly reducing way on the psychological and mental level, by

depriving us from using our full faculties. Our spiritual search is also very often prevented or hindered by too much comfort.

A minimum of comfort is certainly necessary to allow us not to spend the whole of our energy in fighting an hostile environment. Comfort is therefore a subtle balance between outer conditions and personal effort.

It is well known that physical effort is an excellent remedy against depression; it allows tensions to be dissolved and especially it situates us in a real relationship with matter, weight, height, speed, distance. It makes the environment real and therefore helps us to know more clearly where we stand.

Many people have escaped so much effort that they need to take their car to drive to the fitness centre where they will have the opportunity to run on the rubber band of a machine. Is that not the most extreme contradiction, when it is so evident that running is possible anywhere?

Effort is what moves a bike: we have to start in order to find balance and we need the dynamic energy of movement to allow ourselves to go forwards and to be able to steer our bike. Effort creates a stimulation which allows us to adapt balance to the ever changing movement. As for riding a bike, we should practise, in our daily life, a degree of effort which should always be just a little bit more than what we would like it to be. This tiny supplement is generally enough to maintain a healthy dynamic and openness to the unknown dimensions of life. The same can be said in what concerns our psychological, mental or spiritual efforts.

Our body works as a captor inasmuch as it is our link with the material surroundings and their deeper meaning. Without our five senses we would not have any knowledge of the world nor of the nature of life. It is why the captor's function of our body is central and needs to be activated. The hand has a fascinating capacity to inform us what has to be adapted in our action. When we work with our hands it almost leads us without us taking decisions. This function of the body as a captor is deeply engraved in us.

In the same way our body is a form of book which allows us to read and understand our inner psychological or spiritual state, because it expresses physically and makes visible what is happening in ourselves. Sensations, emotions, feelings and other inner states express themselves mainly through our body and become therefore visible and understandable before we notice them and become aware of them. Physical pains and illnesses are also the deep signs of what happens in us on an immaterial level. They have to remain visible because they make us aware of many unconscious aspects of our present experience; yet comfort too often hides them or covers them with a veil of illusory well-being.

Who is primitive?

Amerindian people have always been considered primitive, but they reveal more maturity by their capacity for self-limitation.

Our western world assesses other civilisations by the measure of material comfort and of the technological stage of development they have reached. In this simplified logic, Aboriginal or Amerindian people are perceived as primitive cultures, because their level of technology, as we measure it, remains low, but this self-limitation is intentional and has allowed them to develop other faculties than the

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one of implementing mere material comfort. They have chosen a wider spectrum of experiences to be developed and they are on a more spiritual way which requires therefore a simplification of material standard; this is a conscious choice. On the other hand, our western world seems very primitive in comparison when it neglects some very fundamental dimensions of our life such as our spiritual path or our body sensitivity and expression or moral requirements like the need for equity and justice. When materialism locks us up, it is a terrible reduction of our being and of opportunities to go a deeper and more meaningful path.

In comparison to our entrapment in our bubble of comfort, traditional societies seem much more complete with access to a broader range of experiences; they seem more mature, because they remain wider in their options and touch the more hidden dimensions of life.

The broken links of individualism

Comfort and search for pleasure develop our egocentric tendencies and our egoism; mainly it breaks social links and links with nature.

Search for comfort and pleasure is mainly self-centred and prevents us to open to our neighbours. Such an egocentric search imprisons us in our own world and in our own preconceived egocentric representations; it deprives us from a way of looking freely at the world without our glance being deeply deformed by the filter of our own individual needs, or by an emphasis on individual frustration and dissatisfaction. As we learn to see better the rich gifts of our surroundings, we can become more generous and therefore more creative.

Detachment from our individual comfort and pleasure allows us to concentrate on our personal or collective vocation, as persons and as a whole community, and reveals more potential which we can identify in our surroundings. It links us with our neighbours and even helps us to be more generous in a way that we do not need to care so much for ourselves but are also open to the needs of others. This form of freedom allows us to become more complete and more creative. We are no more the centre of the world but we are in interaction with our environment and we recreate natural links of interdependency with other beings. We integrate therefore in the system of life, in our natural and in our social surroundings.

The concentric circles of Ojibway tradition

The Ojibways describe our integration into nature as concentric circles, where humanity stands at the most dependant periphery.

The Ojibway (Amerindian) tradition sees the network of life as successive concentric circles of dependency³: in the most central circle are the Sun, the Earth, air and water; in the next surrounding circle are the plants which depend on the existence of the nourishing elements contained in the first circle; in the next circle are the animals which depend on the two previous ones (minerals and plants); and in the most external circle is mankind because it depends on all other elements contained in the more inner circles. This tradition observes nature as it is, while our civilisation has developed the other extreme attitude in putting mankind in the centre!

³ See *Interculture*, Intercultural Institute of Montreal, 4730 av. Papineau, Montreal, CANADA H2H 1V3 (now closed). Website www.iim.qc.ca

Mankind is in fact a kind of parasite in nature. Nature can live without it but mankind needs nature for its survival. Technology, as powerful as it can be, does not change anything in this matter of fact.

A Copernican revolution

The recognition of the truth of the Ojibway perception means a complete change of mind (metanoia): a deep transformation.

If we accept this truth as a fundamental way of understanding reality, our anthropocentric representation is no more possible and we have to see ourselves in interaction with, and dependency on, one another, in an intense network of complex relationships with nature and with our brothers and sisters: the rocks, plants, animals and human beings. The fact that mankind is standing at the periphery of the Ojibway representation, as a parasite, does not diminish our value in any way; we remain as useful as we are, because we are a necessary part of the composite network. Our value does not depend on our power; it relates more to our ability to open to the diversity of the relationships which we can develop with our context. The richness of this other way of being depends more on our attention to the surrounding context, on our faculty to listen, on our ability to understand what is going on and to respect the different actors, whether they are big or small, strong or weak; it depends more on our capacity for adaptation than on our ability or will to impose onto the others (nature or society) our preconceived views, desires and representations.

It is strange to notice that our modern society, which assumes to be very scientific and objective, can ground the conditions of its survival and of its relationships with the world on such an emotional anthropocentric perception, which is rooted mainly in the fear of the indifference and of the might of nature, as it has been described

before. The Ojibway observation relies evidently much more on facts, while our modern western so-called rational perception is based on illusion, projection and emotion: it is why our fear to recognise what is can only prevent us from living fully.

The small child remains confused because he cannot establish any distinction between his desires, his experiences and the unaffected surroundings. As long as he has not learned that the world exists independently of himself, he cannot interact in a mature way with what is distinct and different from him. He must still experience that many actors have often irreconcilable points of view. He has still to integrate this complex reality in his world's view and he has still to learn to be able to see the world as others do, while yet remaining himself.

The development of concepts and of language should help us to establish a distinction between our own perceptions on one hand and the external reality or the perceptions of others on the other hand. But very often, instead of being the fruits of our objective observation, concepts help us on the contrary to reinforce our preconceived patterns and they encourage us even to create an illusory world based on these concepts which we have carefully elaborated in order to reshape the world according to our desires. Many people never grow beyond the stage of development of children where they should learn to recognise how much the world has its own logic which does not obey their power; and they never become therefore capable of understanding another perception without seeing it from their own point of view nor perceiving it as an aggression or a threat. The other becomes in this way the enemy or the primitive one. Our attitude towards nature is a powerful illustration of this deep distortion of our understanding of life which is based more on our projections than on

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an attentive and loving observation of the true nature of what surrounds us.

The Copernican revolution of the Ojibway perception of life brings a deep change in our way of looking at the world. This other understanding generates also a deep change in attitude: a conversion of our way of thinking, which one calls a metanoia, i.e. a radical change of world view. In consequence this metanoia transforms also deeply our relationship with the world. It re-harmonises us with nature and its existing cycles as well as with our brothers and sisters, the other living and human beings. It opens a new future; it offers a new quality of life deeply rooted in our environment and in our interaction with the world, nature and people.

Land connection and belonging

We have lost the awareness of being rooted in, or belonging to, the land and living community that have fostered us or are shaping us.

Mobility today has broken our roots. We have lost the feeling of belonging to the place that has given birth to us. Traditional societies and especially Aboriginal or Amerindian cultures have always considered their belonging to the land as a dominant feature of their life and of the culture that sustains it. Each place has its special energy and power. Each place has its own type of energy. Some places even have a powerful energy that people cannot submit to for too long. These special places become usually sacred sites: power places in nature, megalithic stone arrangements, Romanesque churches or Gothic cathedrals, all these special sites become places where people return to and get their energy reloaded.

Yet any place where we live has also its own features and, if we observe the nature of our link to it, we discover how much we belong to the land more than the land belongs to us. A place is also a network of relationships that gives shape to a living community that provides us with the main resources and gifts we receive in our living time. By the expression “living community” I mean all the sentient beings that live in a place, whether they are human beings or animals or plants or even rocks. All together they form the surroundings and feed the place with their energy, the influence of their presence and action, by their way of being, by the quality of their behaviour and the maturity of their perception of what happens or is offered by others.

For Aboriginal people the land has its shape given by their ancestors. The myths explain the form of the topography and the content of the landscape. The land becomes the visualisation of the spiritual entities that shaped it and us at the same time. Rational Westerners have the tendency to consider these traditions with contempt, yet it is a huge mistake, because these myths explain what is visible and give it a meaning. They describe the landscape, not as a picture but as a content of meanings and energies that influence us endlessly, even if we are not aware of them. I know places where (for instance in a swamp that is the source of a slow meandering river) one feels drained of one's own vitality and where one would almost fall asleep and remain for ever if one has not the reflex to escape; or where on the contrary (for instance in the dry bed of a river full of big stones and deep cavities) one feels reenergised as if the energy of the rarely flowing river would be stored in the stones of the bed. The energy of places is something very powerful and mysterious we completely under-evaluate in our rational and materialistic culture. Traditional cultures have usually remained very aware of this kind of power and know how to live with it.

The mobility we know today, although it is also a factor that opens us to the diversity of the world we live in, has probably killed the attachment to the place we belong to. Rediscovering this form of invisible link is certainly a rich learning opportunity we need to undergo; we can do that for our own place and living community even without necessarily losing our mobility; when we are enriched by this new awaken sensitiveness to the energy of places we become able to discover and get to know other places in a much richer way.

This deeper understanding of our true relation with the land is a very important aspect of our relationship with the many traditional cultures of the world. Through the general trend of globalisation we are on the way to destroy them as well as all the precious teachings they could deliver to us. It is urgent to protect them and to listen to them. But this deeper listening and understanding of their rich heritage can only happen if we change our mind about how to relate to the land. As long as we do not understand how much we belong to the place that has given life to us, whether at birth or during our life time, we will not be able to relate to these ancient cultures. The importance of our belonging to the land is certainly one of the principal key for a true reconciliation with traditional cultures, especially with Aboriginal or Amerindian cultures. One could even say that this reconciliation can only happen if we show ourselves ready to listen and accept to be taught; then, if we are ready to be taught, the teaching can naturally only happen if, as principal condition, these Aboriginal cultures accept to teach us and guide us on the way of discovery of what is our true link with the land. Reconciliation will be then the opportunity for us to change deeply the way we look at the world. Are we ready to risk this deep enrichment?

Traditional societies as our teachers

Traditional societies that developed a harmonious integrated relationship with nature should become our teachers and guides.

Traditional societies that live in harmony with nature are the visible signs of our failure because they show us that it is possible to live without destroying the Earth. Their traditional approach is fundamentally different from our scientific approach inasmuch as they do not consider their relationship with nature as a purely scientific or technical field (ecology) but they integrate this dimension of their surviving into the most global picture they have of life as a totality and of their relationship with the divine (theology).

It is essential to recognise the many links between on one hand the fact that these traditional societies are capable of living in harmony with the cosmos and on the other hand many typical characteristics of these societies that we can describe as follow:

- 1) Traditional societies do not make any distinction between culture and nature. Culture has in fact to provide the means to interpret the way we should and the way we do relate to the world in its whole complexity (i.e. in its visible as well as in its invisible dimensions). Culture thus defines the way we relate with nature and with other human beings. Culture is nothing else than a link with nature and our whole environment. It can evolve into two different directions: either in a form of acceptance (adaptation) or in a form of refusal (creation of illusion).
- 2) Traditional societies do not make any distinction between spirituality and the more practical aspects of daily survival. For them the mystery and the sacred dimensions of life penetrate all aspects of social life and of everyday living. There is no such

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concept as spirituality because the dimension of the divine is an integrated aspect of their way of relating to others and to the whole, of which they are only a part and whose source of energy (the divine) is as well in them as in others.

- 3) The approach of life by traditional societies ensues more from a feminine or yin attitude (listening, welcoming, preserving) than from a masculine or yang attitude (imposing, controlling, dominating). By being more receptive, as they generally are, women develop a better faculty to understand, to adapt and therefore to respect and preserve, whilst our technological and more materialistic (more masculine) approach, in a more dominating and patriarchal way, tries to impose its own will or projects and to transform our surroundings, in order to adapt our milieu to our wishes and representations, despite the richness it contains which we ignore.
- 4) Biological and cultural diversity is better preserved by traditional people than by our modern western approach of life⁴. Biodiversity is the best preserved where cultural diversity is still well maintained. For instance it has been noticed that the biodiversity has been best protected where the language diversity has also been best preserved. Countries with only one language (US, UK) have generally a poorer biodiversity than countries with many languages (Africa, Asia). There is fundamentally a narrow link of causes and consequences between cultural diversity and natural biodiversity. It is obvious that a more unilateral approach (exclusion of diversity) will destroy what does not fit in its picture. The way we exploit natural resources is a clear illustration of this statement.

By contrast with the traditional approach, the approach of the western world to what concerns nature, climate change and all environmental problems is typically scientific and technological. We ask the question: what is the problem and how can technology fix it? The debate mostly concentrates on the means, more than on the aims or on the way we perceive life. We believe that technology should be able to bring the solutions without us having to consider how much our destructive impact on nature ensues from the way we see ourselves as the masters of the universe and how much this destruction happens because we deny the sacred dimension of life.

Because of their deep understanding of their relationship with nature, traditional societies that still live in harmony with nature have to become our teachers and guides in order to help us rediscover a more mature understanding of our insertion into our natural surroundings, according to the Ojibway tradition.

This question goes far beyond the strictly technical problem of natural resources management. It is narrowly linked with the meaning of life itself and with the way we relate to the invisible aspects of our existence. In order to rediscover these other unknown dimensions, we need wise guides and therefore we need to recognise on one hand our failure in protecting the Earth as the living body to which we belong, and on the other hand we need the infinite wisdom of the ones who should become our teachers and whom we have always despised because we were considering them as primitive peoples according to their lower level of technological development. Because of their choice for a lesser material development as a conscious option which ensues from their wider understanding of nature and from their practice of self-limitation, they are the only ones who can teach us how to reconnect with this old way of perception of Reality. If we follow their teaching, we will see how culture and nature will be able

⁴ See *Resurgence* Nr 250, *Indigenous Intelligence*. Resurgence, Ford House, Hartland, Bideford, Devon EX39 6EE, U.K.. Website www.resurgence.org.

to merge again, and how the spiritual dimension of life will also be again unified with its material dimensions. Diversity will be better preserved and will be recognised truly as a real source of richness.

Reconciliation with Aboriginal cultures

Reconciliation can only happen when Aborigines are given the possibility to contribute freely to transform Australian society.

Aboriginal people in Australia or Amerindian people in North and South America should be trusted to lead us on the path of another understanding of life and of a truer relationship with our natural and social surroundings. Our capacity to listen to what they have to teach us would be the path for the recognition of these despised cultures and it would show the way for their integration into our modern society and for our integration into their traditional way of perceiving life, in a way which would be their way and not our western one. They would not have to leave behind what makes their identity in order to adapt to our western values but they would be able to bring their own contribution, their own specificity, their own difference. Their integration would therefore mean another way of being which would inspire us and even certainly invite us to change. We would have to adapt to their new insight inasmuch as we would be able to recognise the wisdom of their perception. In giving them this opportunity it would rehabilitate them in their dignity and rehabilitate us in our dignity too, and in a richer understanding and openness to diversity as a source of unlimited richness, diversity as a fundamental condition for a more complete life.

It is evident that the traditional cultures which still live in harmony with nature are the best keepers and teachers of this other form of an integrated relationship with the universe. It is also evident that

traditional cultures, like the Amerindian and Aboriginal ones, have suffered a lot and have been disfigured to a degree which makes their survival difficult because they have almost disappeared in their lively form. They are certainly not perfect and cannot deliver to us a ready made truth; it is a path of recovery for them as for us; nevertheless they can be the guides on a search and on a path they know much better than we do. Let's be wise enough to recognise this evidence which will open us to new ways of being. This recognition will be the first step of the necessary metanoia (change of mind and new world vision) we have to undergo.

The first step on this path consists in reintroducing local languages in their full diversity. In Australia, local aboriginal languages should be taught at school in the regions where they were practised inasmuch as they can be brought back to full liveliness. And similarly in North and South America for Amerindian, in Africa for African and in Asia for Asian languages. These traditional languages should become again the normal ways for expression and communication for aboriginal and traditional people as well as for white people who have settled in these same regions. Diversity of languages is a natural expression of biodiversity and a form of immunity against globalisation as well as a resistance against destruction of what is necessary for life to flourish. Diversified societies are much stronger to resist crises and difficult times. We have to remember how much colonial languages, and especially English, have been tools for domination, acculturation and homogenisation. The wide extension of the influence of English is partly responsible for the destruction of diversity and it is why it is important to recognise how much our approach of the diversity of languages is also linked with our approach of nature and of the way we tackle the problem of its destruction by our modern way of life.

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Although the reintroduction of the teaching of traditional languages at school seems at first glance not to have anything to do with the destruction of nature, it will certainly establish the deep root for a new approach of our social and natural surroundings in respect for a more creative form of diversity which will allow each species and culture to find their respected and valued place in a richer complementarity which is the reason of their being. For traditional people, it will be the recognition of their value as well as the opportunity to rediscover and reconquer their own culture. For white people it will be a deep change of mind in recognising that their culture is only one among the many, which are all necessary.

Another rich field of discovery for our materially rich but spiritually poor western societies would be the study of vernacular architecture, i.e. of the traditional local so varied forms of architecture as they have formed through millennia of traditional living. The diversity of traditional architecture is absolutely mind blowing, when one thinks of the differences between an igloo, a nomadic tent, rammed earth desert houses, light bamboo tropical constructions, underground housing, Aboriginal constructions; and the same is also true about the technical instruments and artefacts of so diverse cultures. This great diversity offers to us the opportunity to become aware of how much each traditional culture has developed a proper deep know-how of its own living conditions and a proper solution how to respond to them. Moreover the technical or cultural solutions it proposes are usually provided with very simple means that are generally completely sustainable and in harmony with the environment. Each way of answering the external conditions creates a fabulous system of interaction with the land, the climate, the availability of materials, the complementarity of people's skills through trade and crafts, the cultural options and preferences. The perfect sustainability, the high suitability and extreme diversity of so many contrasted solutions

show us the amount of wealth that hides behind the diversity of cultures. From each of them we can receive an unfathomable breadth of knowledge and depth of true understanding of the meaning of life; this whole complex system of perceptions and interpretations is what we call anthropology. These many variations of anthropology according to different regions and continents can in this way become the inexhaustible well of inspiration for the necessary mutation that our too wealthy societies have to undergo. This is another opportunity for traditional societies, to become our teachers. In fact there can be no reconciliation with Aboriginal cultures as long as the perception of cultural diversity is not accepted as a source of incredible richness and essential contribution to the transformation of our western society.

This way to cooperate with tradition cultures and to recognise how much they can contribute to the transformation of our modern society is probably the key to many problems of our time. In Australia, it will be impossible to offer a descent place to Aboriginal people as long as the western paradigm wants to integrate them - it means force them - into its own way of functioning. Aboriginal cultures will be able to find a true expression and an authentic role in Australian society only when they will be seen for the extreme rich understanding of life they are truly and when they will be given the free opportunity to contribute to transform the Euro-Australian white model.

Reconciliation can only happen when the white society will recognise the importance of our relation with the land. And this will be only the first step to treat all other issues that cannot be opened as long as Aboriginal people cannot contribute freely to the transformation of society. Many issues, that seem to have nothing to do with the "re-integration" of the first inhabitants of this continent, will be only able to be solved when Aboriginal people are full participants to the

imagination of new forms of life. These important issues are for instance such as: the recognition of the fact that the land has been stolen from the traditional indigenous carers, the honest study of history concerning the time of early white settlement and the recognition of the killing of indigenous people by the settlers, the western understanding of life as domination and control, the violence made to the land, the destruction of the fundamental equilibriums of nature, the present destructive and excessive mining of natural resources (from minerals to agriculture and fishing), the denial of climate change, the heavy materialism and consumerism, the excessive pragmatism, the dominating masculine pattern of action at the cost of a more feminine peaceful and caring attitude, the lack of political long term creative vision, the dominant link to the Anglo-Saxon world, the resistance to welcoming refugees from Southern countries; these very different issues, and many others, seem to have nothing to do with aboriginal issues; nevertheless they do at their core and it will not be possible to find a solution to these many diverse issues as long as the white society does not perceive the aboriginal heritage and contribution as a deep creative potential for the country. All these issues are indeed linked by the same fear of opening the eyes at what really has been and now still is. In this way a true reconciliation with the indigenous culture will break for all, black and white, the dam that prevents the normal flow of life.

Indigenous land rights

Indigenous people have the right to use their land in the traditional way that excludes all interfering polluting activities such as mining.

As Naomi Klein describes it in her book *This Changes Everything*⁵, the British conquerors in North America had recognised the rights of

indigenous people to continue to live according to their traditional way of life that consisted mainly in hunting, fishing and also cultivating the ground. Although indigenous people were forced by the invaders to make their land accessible to white people, their own rights for using the land were officially recognised, remained protected and are still legally protected, despite the evidence that these rights are today rarely respected in practice. These fundamental rights for the management of traditional land has been often referred to – and sometimes successfully - by indigenous North American people in their many attempts to prevent mining or other extraction activities, as these activities are tremendous polluters that endanger the traditional way of life based on the limited use of pristine resources of an untouched nature. The recognition of these powerful rights is an essential aspect of the re-conquest of basic rights that would allow protecting the environment from aggressive exploitation. It is fascinating to imagine how these same rights could be extended to all inhabitants of a given territory – i.e. even people who are not indigenous -, if the claim for clean water, clean soil, clean air may be recognised as a basic human right. This means that a new strategy could be implemented that would be based on elementary human rights that could empower us – if we want to - to prevent the destruction of our environment and to promote another form of development based on the fundamental principles of equity, sustainability and harmony.

The book by Naomi Klein is a powerful description of the destruction of the environment by extraction activities for fossil fuels (coal, oil, gas, tar sands). It shows how these special rights that were originally recognised in North America by the British invaders can become the base of a new movement for a balanced development in harmony with nature. It would be interesting to investigate how far these rights are also recognised in Australia or in other ex-colonial countries and

⁵ Naomi Klein: *This changes Everything*, 2014.

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how much they can become the new fundament for extensive social struggles that aim at justice, sustainability and harmony. This possibility is evidently vital for indigenous people. It would be also a revolution if white people could join them and support them radically in this project.

The next step after getting recognition of these fundamental human rights would be the implementation of a form of development based on renewable energies, as Naomi Klein describes it at a small scale. Indigenous people could become the new actors of this development as it would be based on the same values they have practised, maintained and protected for so many millenniums through their own way of life. In becoming the promoters of this old form of harmonious development adapted to new renewable technologies and processes they would become the leaders of a new future, not in adapting to the rigid pattern of western white societies obsessed by profit, but in generating a new practice of justice and equity, of a different relationship with nature and the cosmos based on harmony, such as they have venerated it in their own culture since the origin. On this level our western civilisation has completely failed and it would be a fabulous and honest recognition of our failure to pass over the hand to more competent people for leading us onto this new path.

On a short term it would provide skilled jobs for many indigenous people who live now in misery because of their marginalisation, neglect and rejection by white actors and governments. The transition should not be a problem as it is only the restitution of a lost status; people would be very glad to recover their rights and the acquisition of new technical skills (the how) should not be a problem. But, more than this learning process, it would allow the recognition of the role they have always played, in the particular case of Australia, in

protecting this continent for the time (more than 60'000 years) since they became its carers. Here again it would restore dignified relationships between black and white people; it would give shape to a new forms of solidarity and true community. Of course a long learning process is therefore necessary for all, whether Aboriginal or Euro-Australian.

This project is described here with woulds and shoulds, but it depends only on us to make it the reality of tomorrow. The only obstacle is so far the lack of present will.

Eco-theo-logy

When ecology - integration into our surroundings - merges with theology - contemplation of the sacred - harmony and peace arise.

Ecology is not only the science for the right management of resources and wastes, but it should become, before all, the art of the right understanding of our belonging to a wider system which we are only parts of (as according to the Ojibway perception). Similarly, theology is not the intellectual discipline it has become, which describes God like any other topic for knowledge, but it is the practice of contemplation of the mysterious and invisible dimensions of life which we cannot say anything about but which we can try to evoke only in order to make more accessible to ourselves and to others the way how to search for the unknown dimension of what is sacred in life. When ecology merges with theology, spirituality is no more distinct from everyday life but it becomes an integrated part of our way to relate with our surroundings in the awareness of the divine as the source of everything. Traditional people who live in harmony with nature could remain the only true guardians of biodiversity and sustainability because they have this wisdom which opens them to a

true understanding of the cosmos where ecology is not distinct from theology; as a proof, they ignore what is ecology and what is theology because these two disciplines cannot be dissociated and become life when they merge. This understanding of traditional wisdom as a unified approach of life does not turn traditional people into idolised wild and wise savages but it emphasises how their practice remains our inspiration and teaching for rediscovering this narrow interdependency between our practical, scientific and technical knowledge of our surroundings and our intimate relationship with sacredness in our everyday life.

Ecology has developed a scientific and technical approach of our surroundings. It has developed tools in order to manage the natural balance of the production of resources and absorption of wastes. As such, it remains still an expression of our domination and exploitation of nature, because it remains grounded on the perception that mankind is the master of the universe. Quantum physics has certainly introduced in science an awareness of the impact of mental influences on material phenomena. It has even recognised the existence of the divine. But nevertheless, it tries to understand the influence of the divine on our world as if it were another form of physical force. It tries to integrate its new awareness of this presence into the traditional pattern of scientific description. It tries to write the mathematical formula which would express how God influences our world. Therefore it tries to master what God is and does, it means it refuses to surrender to the sacredness of life.

Theology has become in many ways very similar to other scientific disciplines. It is no more the art of contemplation of the unspeakable truth and nature of God as it was for the Desert Fathers. Theology has become too often an intellectual discipline which one can study at university, although it should have a very different approach from

other academic fields because, in difference with other scientific disciplines, nothing can be said about God that could reveal his true nature. The finger shows the way but does not describe the aim, which remains hidden and impossible to describe. This has always been the apophatic way of the Eastern tradition. Therefore, when theology becomes again an everyday practice for contemplation of the unfathomable sacredness of life, it returns to its real source and to its true vocation.

When ecology and theology return to their true vocation and when they merge, a new awareness arises which sees the unity and harmony of the universe beyond the apparent incoherence of our human perceptions which are powerfully deformed by our subjective and very partial understanding. The new unified approach, which arises through the merging of ecology and theology, becomes very powerful by emphasising the narrow interdependency between matter and spirit. In this way, our scientific understanding of the cycles of nature can integrate into a wider understanding of how the evolution of our universe is guided by an invisible force which is love. Every part of the universe indeed, whether mineral, vegetal, animal or human, can be thus recognised as sacred because of its deep meaning and of its integration in an evolution which is, in its last end, spiritual.

A new anthropology

We need a new anthropology (understanding of life) which will guide us in our choices on the path towards truth and happiness.

The many contemporary problems we are confronted to, such as violence, injustice, poverty, climate change, financial crisis, depression, are not the main issues; at the image of the false divide

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between ecology and theology I just described, they are only the expressions of the deep ethical, humanist and spiritual crisis we are going through and of our inadequate understanding of what life is about. We need to (re)discover the deep meaning of our existence and of our living together. We need to develop a new anthropology, a new humanism which is not based on material contingencies but which explains life and formulates the major priorities in our choices. We need to discover an anthropology which focuses on human values, on the deepest dimensions of life itself and not on its maintenance conditions only. This anthropology can only be anchored in a wider understanding of the meaning of life, much beyond a purely ethical frame. It has to be a large fresco of the invisible sources of our life energy and of its purposes, more a questioning than an answering. Naturally each culture will develop their own understanding and representations, yet it is to believe that a basic perennial universal philosophy constitutes the base of this new (or old) understanding of life as being sacred and mysterious. All our faculties (physical, technical, scientific, intellectual, artistic, philosophical, psychological, emotive, spiritual) will contribute to make this existing background more perceptible and conscious for all, yet in a diversified way that would rely mainly on a diversity of approaches and understandings.

This search for a new anthropology illustrates very well what is meant by eco-theo-logy as a new way to perceive life and its integration into a wider frame: the whole universe with its invisible Reality.

Life is more than mere technical problem of quantities. Only a new anthropology can offer the necessary frame for a true debate and re-equilibration. New: it does not mean we have to reinvent everything; it only means we have to re-appropriate ourselves the roots of our

being and of our culture, in a spirit that could integrate the more recent knowledge and awareness we acquired in our modern time. We have to go back to the source of our beliefs, it means to our cultural, social and spiritual heritage, which we will re-examine under the light of our new knowledge, modern scientific discoveries and human experience, in an authentic spirit of search for truth which has to reveal to ourselves our true place in the cosmos.

This has to be our choice. The new paradigm says: the world becomes what we see in it, whether it is a fearful field for struggle and survival or on the contrary a fascinating place for implementing love and creativity. In both cases life remains a risky challenge, yet in the latter it promises a most rewarding content.

B) Four ways to escape the power of nature

2) ESCAPE THROUGH DENIAL

At the exception of some marginal and alternative tendencies, our western pattern of development does not lead us to recognise the importance of bringing together our daily practice of contemplation with our understanding of our true integration into the wider universe. It does exactly the contrary. Instead of helping us to integrate into our wider context, it invites us to escape most of the time. As I mentioned it before, illusion, destruction, accumulation and uprooting are the four movements we practise in order to escape the indifference and awe of nature. I will try now to explain these four movements more concretely. Let's start with the first one: denial and illusion.

Refuge in illusion

Force and virtuality

We create an artificial place of illusory refuge through the use of force (energy) and virtuality (technology); both deny true life.

The negation of effort and the creation of an artificial bubble of illusory comfort constitute the two main ways we use for escaping our discomfort in being confronted with the material reality of life and with the unfathomable meanings it exposes us to. By ignorance and by fear, we refuse the universe as it is and we try to create an artificial world which we want to meet our representations and to satisfy the expectations which ensue out of these representations. Force and virtuality become therefore our two main tools for escaping reality.

- 1) Force (energy) allows us to avoid effort and to escape the harsh contact with the heaviness of matter; it provides us each time with the fruits of effort without us having to cope with the necessary effort itself, nor with the laws of nature. In doing so, we are never confronted with the test of consequence: the fruits do not need any more to be related to the effort of producing them nor to their own source; we avoid the process and get directly the result (the product).
- 2) Virtuality in this way characterises the world we have created artificially, because the artificial bubble we create becomes what we want the world to be, instead of being an expression of reality. We live in a virtual or illusory world, which we have created ourselves in order not to be ever confronted with the test of truth. Because we are cut off from it, the reality outside our bubble cannot tell us anymore how much the virtual world we live in is a pure product of our imagination and how far the laws which rule it are in contradiction with life.

Force and virtuality are linked, because we could not create an artificial bubble of illusory comfort without the power of our technology, which relies mainly on our use of external sources of energy (electricity, oil, gas). Out of our insulation from the external world arises virtuality because the world we have created is cut off from the real universe and we remain like in a dream, without being in touch with life.

Let's see in more detail how force and virtuality work.

1) Force allows denial

Our use of force (energy) changes our relationship with our surroundings which lose their heaviness and meaningful reality.

Nature imposes rhythms upon us like the rhythms of day and night, of seasons, of moon shine, or, more personally, of different ages through our lifetime. The topography of our surroundings imposes obstacles upon us like rivers, oceans, mountains, passes, deserts. Therefore distance generates differences: differences between climatic conditions, between cultures and languages, between people. But with the use of technology we are now capable to deny these natural rhythms, distances, contrasts and differences. Distance is reduced proportionally to the speed of our means of transport. It is no more an effort to cross a pass with our heavy luggage, or to cross the ocean and the desert, because our vehicle (car, boat, plane) provides the necessary effort while we are sitting comfortably in a seat which does not seem to move. We lose thus the experience of effort and of distance, of our confrontation with matter and we take refuge in a more mental space.

Certainly technology, if it is implemented in good conditions and with the right measure, allows us to be enriched with many aspects of life we would not discover without it. Nevertheless, inasmuch as it provides us with unreachable experiences, it transforms also our reality and twists therefore our perceptions of what reality is. We lose the right measure of our true relationship with nature as such, because the use of force makes us more distant and isolates us from nature. It breaks inevitably our true bond with nature as our nourishing Mother.

Our too powerful means have destroyed our capacity to listen and to adapt: we do not know anymore how to use the forces of the wind and of the stream in order to go where we wish to. Or wind and

stream have become elements of a game we play when we go sailing. This assessment does not mean that we should not use any artificial means or tools; it only emphasises the consequences of the use of artificial means on our perceptions and shows how difficult it is to find the right measure which allows life to develop and to be enriched but yet without breaking so far our life giving relationship with nature and our surroundings.

2) Virtuality allows illusion

Virtuality allows us to live in an illusory world, whose laws we create ourselves, without any possibility of confrontation with truth.

Our daily confrontation with the laws of nature (cycles, rhythms, materiality) forces us usually to re-evaluate constantly the adequacy of what we are doing and of our behaviours. The law of causes and consequences remains clearly visible and understandable. But, as soon we live in a more artificial world, we lose this possibility of confrontation with truth, because the laws of our artificial world predominate and very often we are the creators of these laws or at least our society has created this artificial world in order to escape the harsh reality of nature. Hence by distancing ourselves from our natural surroundings we destroy and lose our reference to a normal world. Virtuality becomes the source of all illusions and of any form of degeneracy. Imagination is certainly a creative power but, when it joins illusion, it can reveal a very destructive power.

In creating our own artificial world, we inevitably create a new order which can well be in contradiction with life in many ways. This negative aspect of virtuality is even used by our new means of communication, of information and of publicity in order to create a world which becomes more and more virtual and has less and less in

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common with reality. Fiction becomes more and more the basic law of our life: we do not know what we consume, in which conditions it has been produced; we generate more and more our income through speculation (stock exchange, investment) and less and less through our own creativity or capacity for work. The more our relationships are based on virtual links, the more we can cheat and play. Lie becomes the fundamental law in publicity, in sale business, in politics, in communication, especially through means which do not allow direct contact with the other like internet or the media. And the more relationships are virtual, the more it becomes difficult to evaluate their truthfulness. Publicity and information have learned how to use this power - or more exactly handicap - of virtuality in their own interest.

On the opposite, local development makes everything more tangible and therefore more understandable, while the increasing complexity of our wider world makes it easier to cheat, especially for people in power (economical, social or political), or to be cheated too.

Virtuality is a major illness of our modern society. The use of computers and of the internet creates new addictions that lead people to spend most of their life in front of a screen where nothing real happens but what they want to project into it. Computers, because they propose a simplified perception of life, become the refuge for so many people who do not find anymore the way to relate to other human beings without feeling frightened, especially if they are very sensitive and if they see the craziness of our world in which they cannot find their place.

De-materialisation

The power of force and virtuality makes the world unreal and therefore frightening because we never know where we truly stand.

Our use of force and virtuality changes our relationship with the world because it fosters it according to our will and no more according to what it is. We have imposed ourselves as the masters of nature; this form of dominance suits us well in order to exploit natural resources and to satisfy our greed; but this domination destroys in fact the balance of nature and it prevents us from seeing nature as it is; we live in illusion and are no more capable of establishing a true relationship with our nourishing surroundings. The world which we belong to loses its true face and is reduced to the caricature which we have made of it. Subconsciously we know that very well and therefore we are frightened by the inability we have created to relate to the true nature of our surroundings. In fact, in painting our simplified version on top of the true image of nature, we have deleted this true image and have lost it, condemning ourselves to find refuge in the false world we have created and cutting us off from the true source of our harmonisation. The real world becomes in this way more and more frightening, because it turns into something inaccessible and unknown; the world de-materialises.

Matter expresses what the world is and allows us through its expression to perceive the true nature of the hidden dimensions of life. Matter is mainly the expression of spiritual energies which foster the world. Without matter we would not be able to know what life is. Our five senses and our mind rely on the material aspects of life. They are the means for our experience of the world. Experience is first a confrontation with matter and nothing else, and practical experience can give us the opportunity to notice that matter is no more than the external appearance of our world; matter is not the core

reality but it is the physical reality which makes the wider spiritual reality visible. This spiritual energy is what drives the evolution of the universe, what inspires us in our consciousness, what provides us with emotions, with experiences of justice and love. And we recognise the influence of these invisible spiritual energies in their impact on matter in the same way as we notice the invisible wind, although it is invisible, in its effects on trees and clouds.

We become more or less aware that illusion impregnates everything, especially because we have falsified the way we get in touch with the world. The world becomes frightening because it does not appear anymore for what it is, but only for what we have made it artificially. We have lost the guidelines; only the shadow remains. The world dematerialises. The fact that the real world is so strange to us makes it more difficult to relate to and more difficult to understand. We feel estranged and scared. Because we destroyed our means for a right perception of the true nature of the world, we have deprived ourselves from our real senses and therefore from the basic means for a true interaction with the world. This negative experience of our imprisonment in our false bubble of security makes us more insecure and reinforces still more our need for protection, illusion and virtuality.

De-mobilisation

Such a caricatured world rejects people who find it depressing or who do not find the means to adapt because of their differences.

More and more people are no longer capable of finding their way because they are or feel rejected by the main stream; they are discouraged by the complexity of a world where true values have no more impact and where relationships are fostered by force and

virtuality; as each of us they are longing for authentic human warmth but, in the public sphere, they are finding only greed and violence in an anonymous frame; they are or feel often rejected because they are not considered as useful. This negative perception and fear of the world does not encourage them to be involved in what happens in their local community but incites them - when it does not force them - to find refuge in more marginal settings where they can more easily create the kind of relationships they wish, giving up the hope of transforming and of resisting the destructive effect of the dominating violent and virtual trends which impoverish our society.

As such, marginality is not a negative state, because it can for instance offer the privileged conditions for the creation of real alternative means. But when it is the consequence of rejection, marginality becomes the prison of the ones who are excluded out of the main stream because of their differences. The handicap of marginality grows proportionally inasmuch as social and biocultural diversity decreases. As the consequence of virtuality and destruction of diversity, marginality becomes the expression of denied creativity and generates therefore de-mobilisation. In fact society itself, in marginalising the ones who do not fit into the dominant pattern, deprives itself from a huge potential of creativity and life that cannot become active.

Speed as denial

We can illustrate these themes of force and virtuality by the example of the car. The car is one of the most fascinating technical applications of our time. It provides us with mobility; it allows to transport goods on short and long distances; it is meant to generate true relationships between people and places; it creates a bubble of

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comfort. Yet it is nevertheless the cause or more exactly the expression of many major problems of our time, precisely because its use illustrates to perfection our modern tendency to escape, from our confrontation with our material reality, into denial, by means of force and virtuality. It shows how much a tool, which is so rich in potential, can be turned into a destructive phenomenon.

1) The car - violence and virtuality

Our use of cars is mainly based on violence (denial of distance and effort) and on virtuality (illusion of power, false identity).

Although it is a fantastic invention, the way we use cars has generated many major problems because of the violence cars carry and because of the illusions they create. We can mention 12 main characteristics:

- 1) By its capacity to reach far places in a short time (speed), it abolishes distances and therefore flattens differences between places and between people (colonisation).
- 2) By the increasing range of reach it allows, it creates polarities, between places of power and their periphery, and generates an everyday pendular traffic which makes people more and more dependent on centres (waste of time, stress, centralisation).
- 3) By its violent invasion of public space (streets, squares), it destroys social life and dissolves the value of commons as meeting places, although this public space and common good should belong to all and remain accessible for anyone; motorised traffic transforms the town into a gigantic highway.
- 4) By its weight and speed, it creates accidents which kill people or traumatise them for life. Although we despise cultures that used to practise human sacrifices, we find right to sacrifice every year

many human lives to our god Car because we believe he is more important than our own children.

- 5) By its use of fuel and combustion, it exhausts natural resources, pollutes our atmosphere and our environment (pollution, noise, climate change), and creates so much disturbances that the surroundings become inhabitable.
- 6) By the dependency it creates on fuel, it generates wars in order to ensure supplies and it generates pollution of sea and earth when tankers ships or trains have an accident or when pipelines leak or break.
- 7) By the importance it plays in the economy, it becomes an aim as such which guides human activity according to profit more than to real needs or ideals.
- 8) By the possibility of speculation which it offers, through transport on long distance, by playing on the differences of prices of goods and workforce, it encourages greed and exploitation, which profit the rich and powerful and destroy the poor, although this potential could be also a tool for fair exchange and cultural openness.
- 9) As a bubble of comfort, it creates the illusion of an artificial cocoon which isolates us from our surroundings (effort for covering distance or height, air conditioning, mobile home).
- 10) As a tool driven by external energy, it creates an illusion of, and fascination for, false power which often reveals itself very destructive, because beyond our control (more speed and power just by a light pressure of the foot).
- 11) By its design and all the little gadgets it proposes, it becomes an illusory representation of the social ego, based simply on the power of money.
- 12) By the small space it offers inside and by the high mobility it provides, it participates in developing our tendencies for individualism and our false representations of what freedom is; it

reinforces social gaps between classes, especially between poor and rich.

It is essential to insist on a very important factor: the car as such is not the cause of the problem, but it is the use we make of it that generates the many forms of destruction I mentioned above.

We can consider these different critical aspects in another way and see how we could transform these negative characteristics of the car into so many positive qualities for a tool that would then acquire a completely different meaning. It is worth reading again the description above, but this time in turning it around into the negative form of what has been mentioned as a long list of disruptions. For instance: “1) By its capacity to reach far places in a short time (speed), it (...) flattens differences...” becomes “1) By its deliberate incapacity (or limited ability) to reach far places in a short time (slowness), it (...) does not flatten (or it enhances the quality of) differences...”. The negation of these original disruptions will then appear as qualities; this negative approach of the negative aspects of the use we make of cars will give an ideal description of what the car could and should be. Each reader can find their own adequate form in this creative reflection and game, because it is the opportunity to wonder what are, as positive qualities, the opposite meanings of speed, of high reach, of power, of mobility, which could become the new qualities of cars tomorrow, and especially of our new ways of life.

2) The car as a piggy bank for time

Our use of cars is based on the wrong belief that it saves time. In fact the average speed of a car is slower than the one of a bike.

If we divide the total distance we drive by the total amount of time we spend in concerns regarding our car, e.g. the time we spend driving, maintaining, repairing or cleaning it, as well as the time we spend working to earn the income we spend on it (fuel, services, accidents) or for costs related to it (acquisition, maintenance, insurance, taxes, health), the average speed of a car appears to be between 4 and 14 km/h, depending on the type of car and on the income of the owner. The same calculation for the bike gives an average speed of 12 to 14 km/h⁶.

Cars are indeed only piggy banks for time because of their high range of reach in a short time which must soon or later be paid back for. It means that we have to spend a lot of time before we drive it, making our car ready to be used. We forget too often that the piggy bank needs to be slowly filled up by our regular and steady efforts of maintenance and earning in order to be used in one go, allowing in this way a long reach at high speed.

This calculation of the true average speed of a car is very challenging because it invites us to change our way of looking at cars as means to save time. In fact bikes are more efficient. Despite an extremely low average speed, cars allow to reach a much longer range of distances in a short time than a bike does; and it is the main difference between these two modes of transport. The high range of reach, and not the fact that they save time, is properly the real advantage of cars. They are like a piggy bank in which we invest slowly, day after day, time which we will be able to spend in one go when we will drive long distances. But the average speed remains yet very low. It is why it is often more advantageous to use slower means of transport like bikes or even to walk, and avoid therefore to invest so much time and

⁶ See Ivan Illich, *Energy and Equity*, 1973. Calculation of the average speeds of cars and bikes by Jean-Pierre Dupuy, as addenda to the French edition, *Energie et équité*, Seuil, 1975.

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qualitative sacrifices in our own car. In most of the cases where public transport systems are well planned, they offer an efficiency that cars do not have. It is indeed the basic principle of the development of public transports to make buses and trains time effective and to condemn cars to be bogged in endless traffic jams. I will show further how even the long reach is not adapted to this individual mode of transport, for ecological reasons connected with energy supply, because renewable energy is rarely available in big quantities in one go.

3) Car and environment (cycles)

The use of cars should be compatible with the cyclic laws of nature, as the use of carts pulled by horses has been in the past.

The requirement to integrate our activities and use of tools into natural cycles for resources and wastes seems to be anachronistic, but it is in fact the only possible way to go if we want our way of life to be sustainable. It does not mean a return to Middle Age; on the contrary it implies the progress of learning how to discern what is adapted and what is not. It is the art of intelligence and self-limitation. Although it involves technical aspects, the requirement of integration into natural cycles is not a technological problem, but it requires a social maturity and awareness in our way to choose our rules of behaviour. Cars are probably the most symbolic tools of our time for which the integration of its use into natural cycles will mean the greatest change of mind and adaptation, i.e. the greatest progress on our way towards real sustainability.

The near exhaustion of natural resources (fossil fuels) and the urgency of preventing a more acute acceleration of climate change

put high pressure on us in order to really find other ways of using cars and other sources of energy.

- It is easy to convert cars to electricity with an autonomy of some fifty to hundred kilometres. But the question remains how this electricity will be provided. If electricity is produced by fossil fuel plants, it does not solve the problem. It is essential to notice that the energy which is used directly by cars is in fact only a means to store energy and to make it available on the way. What is important is how this energy is produced before it is stored into the tank, the batteries or any container. Is the source renewable or not? Are there any wastes and, if yes, are these wastes reabsorbed by the environment in a short time span? Many technologies have been developed to set cars in motion (steam, compressed air, water, hydrogen, electricity), but they all come back to this fundamental question: how is this stored energy produced? Truly renewable energies are only available when natural conditions of production are favourable, it means, for instance, for solar energy when the sun is shining or for wind energy when the wind is blowing. This dependency on availability of favourable natural conditions indicates that the compatibility with the cyclical laws of nature is only possible if we are capable of reducing considerably our use of cars and especially to adapt it to the availability of the resources which are needed; it is a fact that these laws do not allow in general high concentrations of energy at the same time and at the same place; their main characteristic is to be cyclical and to spread over a longer period of time.
- Cars must become very light and be reduced to the necessary minimum, becoming more similar to bikes or rickshaws than to the powerful 4x4 they are now. In this way it becomes possible to use weaker sources of energy such as solar energy or wind power to reload them. The experience has proved that a few square

meters of solar cells can provide enough power for an autonomy of some fifty to hundred kilometres, if the vehicle is really light, its use very moderate (slow speed, little power) and enough time of recharging is given between times of use. Cars can have solar captors on the roof or just be reloaded at home by a solar electric system which remains fixed. Of course the first solution offers more flexibility because the car does not need to return home, unless renewable electricity is proposed along the road.

- It is evident that the use of cars must remain very local. Their true potential is the flexibility and mobility they offer for people who live far from urban concentrations. The use of cars is adapted mainly on a very short distance for bringing people and goods to or from places where other means of public transport are provided, like trains and boats that are more energy efficient.
- The integration of the use of cars into natural cycles resolves the question of the quantity of supply for energy. The question nevertheless remains to discern which sources of energy are renewable and recyclable. I will comment this aspect further on, in relationship with climate change.

4) Car and space (the commons)

We must learn to protect the commons (goods which nobody can appropriate themselves) from invasion and destruction by vehicles.

Mobility is certainly a positive thing as such, but cars, through the use of speed and the violence of a non organic source of energy, become tools for destruction, because they restructure space according to their own laws of accessibility. Their use generates an ever stronger polarity between centre and periphery. And especially they destroy the spatial and social quality of streets and squares, which constitute usually and traditionally the places where people

meet and where social life can take shape. When streets and squares are invaded by vehicles (it means by physical danger, noise, pollution), people have to find refuge inside buildings or into protected public spaces. How many streets have become inaccessible to people and children because traffic has transformed them into hell? Only social awareness is capable to limit the use and intrusion of cars and their destructive influence when they dominate. Quality of life according to human values and criteria must become the measure that defines these limits.

In a city like Los Angeles, 40% of the surface has been concreted for roads or parking areas and became therefore of no use for human beings. This extensive priority given to cars over other dimensions of life, because of an illusory idea of individual freedom, has destroyed the role of public space in our community life. Traditionally, streets and squares have always been the places where people can meet. They have always been part of the commons that are accessible to all and constitute the core of social life and exchanges. Since cars have invaded these essential components of our life, people have been expelled from community space and are prevented to access commons, by regulations, or just by danger, noise and pollution. It is a significant stage of evolution where commons reveal to be so vulnerable.

Mobility, and especially mobility by cars, is the key for the extension of cities. Cities drain an ever wider space in their search for resources, in their attempt to get rid of their wastes, in their greed for goods, for consumers and for workers. This extension of the urban space creates an ever growing pendular traffic which drains the whole region to the limits of possible daily travel. The cost people pay for transport, in terms of time, health, emotions, human relationships and money, is incredibly high.

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A more balanced development is possible which could better support the potentials of local communities, but this more controlled form of development can only take shape when a social and politic will and awareness intends to control market forces. The local community is the ideal place for this kind of control because it makes the means and effects of control more visible. Social pressure has a powerful influence; like fashion or publicity, it can force us to do what we do not want to do, even when we know it is destructive; yet social pressure as a constructive awareness and creative force can also incite us or even force us to do what we are too lazy or too scared to do, although we know it is the way we should go.

For example, modern social pressure wants us to be very mobile and to offer recreation and divertissement to our friends and visits, even if we have no interest in this kind of activities and if we are aware how too much mobility does not make us happier nor wiser and how much it is destructive for the environment. Hence when friends visit us, we are under pressure to drive them around despite the negative effect it has; and our difficult attempt to live in harmony with natural cycles will be discouraged.

On the other hand, the local community has the power to set some clear references to encourage a behaviour which is respectful of our impact on the environment. People who behave in this wiser way can thus be recognised and valued, and their attitude becomes the general reference for good practice. Commons are in this way certainly the fruits of what the local community is capable to cherish and protect, in order to develop them and make them accessible for all; they consist in public space, silence, ability to connect with neighbours, shared knowledge, etc.

5) Car and social network (difference)

Mobility, although it opens to contact with differences, should not imply a form of domination of the powerful over the weak.

Distance is the condition for differences. Without distance, differences vanish. Effort and time and distance are necessary components of what grounds diversity, especially cultural and biological diversity. Therefore the abolition of distance through the use of speed and force is not always positive, despite the opening onto diversity that it makes possible. The new mobility which appeared with the development of cars becomes often the tool for cultural assimilation and flattening of differences, for centralisation and exploitation. The cultural link between the use of car, or other means of transport like planes, and globalisation or colonisation is very potent.

The abolition of distances and differences through the force and speed of cars and other means of transport generates the integration of traditional neighbouring societies into a common and central urban economic and social space. This forced integration negates the respective cultures and identities of these different societies as well as it destroys their social network. This forced integration generates social stratification and differentiation, as well externally between centre and periphery as internally in the weave of the local community itself. The increasing hierarchy between cities and their surrounding regions leads to a form of domination and of complexity which makes exploitation and wealth transfer more efficient and less visible. It participates therefore to the concentration of wealth and power.

Cities grow inexorably and choke in their own concentration. Anything which can slow down their growth will be a help for creating more sustainable ways of life.

An emphasis on local development allows a better transparency and a better understanding of what is happening. Therefore it offers a better control by the local community on what influences its conditions of living. Weaker communities should be protected from the impact of more powerful forces (market, publicity, economic monopoly, concentration of power).

Social awareness is certainly the key for this form of self-protection. Local communities have a relative power to choose for a more convivial development which would improve their capacity to control their own evolution. The tendency of liberalism (in the sense of free market economy) consists in centralisation while the protection of weaker communities consists in making them as self-sufficient as possible. The requirement of relative autonomy and self-sufficiency means the development of as many sub-centres as possible, instead of high centralisation. Each local social group should be able to access the main necessary goods and this direct access can only be provided by local production that means decentralisation. This option for regional sub-centres is also true for cities. Everything should be produced at the most possible local level. It would avoid the transport of goods but it would, before all, mainly reduce the exhausting pendular traffic of workers. On the other hand, work in small local units adopts a more lively, creative and personal character.

6) Car and market laws (control)

In order to escape the control of major economic interests and to become social tools, cars have to become simple products.

The design of a product that involves so many different sectors and so many major economical interests (industrial production, road building, fuel distribution, repair workshops, sales of accessories, health sector) has, according to the logic of market laws, to be planned according to market imperatives: consumers, publicity, fashion, competition, profit, shareholder politics. The technical complexity itself increases therefore in order to remain under control of the producer and to answer requirements that have less and less to do with the function. On the opposite a product that is designed in considering the real needs of people, with the awareness of avoiding negative effects on the environment and on the social network, would be a very simple tool, very solid and basic, that almost everybody could repair.

It is an evident fact that the form of production as well as its integration into the market circuit have a very strong influence on the design and form of any product. Socially oriented imperatives would lead to very different products from what we know in our free market economy. If cars were understood as social tools and no more as instruments of prestige and power, they would be designed in a very different way. Let's be free of our preconceived understanding and let's imagine what it should be.

Cars should be produced locally in small workshops where people can see clearly the result of their effort in a product that is understood as their own creation. Small businesses create better conditions for work. Especially if this form of production can maintain good conditions of living in the nearby area, such a quality of work is

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much more important than the final price of the product - which would even not necessarily be higher. The design of cars would be certainly influenced by this decentralised form of production and it could adapt to local needs or personal desires. A form of decentralised production would suit well an ecological type of cars which rely on renewable energy⁷. It avoids also costs of centralisation and of transport. It shares the benefit among workers, as normal income, instead of transferring it to managers or to shareholders.

7) Car and individualism (links)

Instead of individualism, the use of cars should help us to develop social links; the practice of car-sharing becomes imperative.

As cocoon or bubble of comfort, cars represent our social persona. In the psychology of dreams they are even interpreted as the symbols of our egos. Cars are often not tools for simple transport but prestigious objects for impressing our neighbours. If we change our understanding of cars, we can share them and this form of sharing will help us to develop social links and a better practice of solidarity.

Most of the time, we consider our car as an extension of our own being. It is a representation of our social persona and of our ego. Therefore we do not let whomever sit in our car as if it were the most private space we have. In fact cars are only means for transport and they remain private only because we refuse to share this space inasmuch as we attach to it an incredible emotional value. Practically it is not different from a public coach; it is only smaller and we have therefore an individual control on the use we make of it; as soon we

change our understanding of what it is really, we can open it to other uses and share it without identifying with it anymore.

As it is urgent to readapt the chain of industrial production of cars in order to adapt their design to new social standards and functions, similarly it is essential to change our understanding of what cars represent, in order to change the use we make of them. From objects of private property which represent our prestige, our social status, our intimate sphere of well-being, our tools for social competition, cars have to become simple practical tools for transport, based on social and ecological imperatives, if possible in common or even public property.

8) The car as a god keen on human sacrifice

Although the principle of human sacrifice disgusts us deeply, we sacrifice a high number of victims to our god of mobility and greed.

Every year so many road accidents kill around 1'200 people in Australia (around 1 person each year for 20'000 inhabitants). This is nothing else than the practice of human sacrifice to the god of mobility, speed and illusion. Accidents are not a fatality. Each death is a tragedy, especially when it touches our own children. Yet nothing seems to be able to encourage us to reduce the destructive use we make of cars, because they are the symbols of our own personal representation, of all we want to grab that seems out of reach. Greed and illusion are the great killers.

This statement is powerful enough and does not need any development. Yet many people will say it is extreme. Isn't the death of our own child a tragedy? How can we not see that this is linked with the illusion we carefully nourish when we have to put limitation

⁷ Air compressed cars as invented by Guy Nègre, Nice, France, are meant to be produced locally in small workshops.

to the destructive effect of the way we perceive the role of this nevertheless magic tool? Security is not a technical problem only; it relies mainly on a cultural choice how to use tools, especially when these tools become a threat to ourselves.

9) The ideal car

Both requirements of self-limitation and of the respect of natural cycles help us to draw the perfect description of the ideal car.

The potential of cars is completely transformed as soon as it is considered in a frame of mind that integrates the requirements of self-limitation and of integration of our activities into natural cycles as major priorities. Cars become in this new frame of understanding a rich and useful tool of which the negative impacts can be suppressed when we accept the laws that guide their use.

- 1) Slowness allows implementation of transport without abolishing distances or differences.
- 2) By reducing the speed and the range of reach of cars to very local distances, strong polarities and trends of dominance of the periphery by a centre of power do not arise so easily.
- 3) By restriction of the use of cars in public spaces (access limited to a short period of time, at a very low speed and only in case of recognised necessity), the protected use of commons (streets, squares, gardens, space, silence, time) allows social life to develop more freely in public spaces and favours the development of social diversity and complementarity, without marginalizing weaker categories of society.
- 4) When cars are light and their speed is limited, less fatal accidents happen and people are better preserved in their

physical and psychological integrity. Limitation allows the toll to become really effective and no more destructive.

- 5) When cars use only renewable energy in a way that is regulated on availability and equity, no destruction of the environment and no destructuring of social harmony happen.
- 6) Independence from fossil fuel will be a factor for peace, especially for countries that provide these resources, and for avoidance of ecological risks connected with transport of dangerous substances.
- 7) When, in a spirit of self-limitation and an awareness of public service, the economical sector of car production and of all its accessory branches offers possibilities for creative and human work conditions and does not provide possibilities for high profits and speculation, production becomes better oriented on the satisfaction of real needs and on durability.
- 8) If transport is limited to local distances, it encourages less greed and exploitation, because transparency of local relationships provides a strong restriction for whitewashing and speculation.
- 9) When cars are no more private cocoons but only practical and simple tools for transport, like bikes, they do not create an illusion of comfort but invite us to remain connected with our surroundings.
- 10) The use of weak renewable and often irregular sources of energy does not create an illusion of power, because one feels more fragile when one has to adapt constantly to what does not last and to what is only temporarily available.
- 11) When cars are reduced to their simplest possible material expression, they are no more images of our egos or instruments for social representation.
- 12) Simple cars which are owned in common do not become support for individualism but encourage on the contrary our ability and joy for sharing.

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The twelve points I just described above constitute a possible translation of the exercise I proposed earlier about the negative approach of the negative aspects of cars as positive description of their potential. Many other similar descriptions are yet also possible. There is no unique solution. This is the role of the local community to develop a positive but restrictive approach of cars, if possible in a consensus of its members.

The crime of flying

Planes are highly destructive tools: they produce a terrible pollution (CO₂ and noise) and destroy the authenticity of people.

We became used to flying only very recently. Flying becomes ever cheaper and makes farther places accessible for a very short time: holidays in Bangkok for 5 days, Paris or Rome for the week end, business trip to China in a week. It developed so much because of our desires to have more and more. Yet planes are the most polluting means of transport that releases huge quantities of CO₂ (141g/km and passenger⁸) in the most sensitive part of the atmosphere (above 10'000 metre) where nothing (no tree) can absorb it. People who have the privilege of flying are rich, they belong to the 5% richest population on the Earth, but mainly poor people pay for climate change, in Bangladesh or in Kiribati because of floods, in Alaska or Siberia because of the destruction of the permafrost.

Planes are also the main instruments for globalisation: they allow the development of trade on long distance, they generalise our attraction

⁸ According to the statistics of the European Union, travelling by plane produces, for each km and passenger, 141g of CO₂ and travelling by car produces 125g, while public transport by train or ship only 44g and by coach 34g.

for materialism and destroy the originality of many different sustainable ways of living. They kill distance, it means difference.

Of course flying allows also discovery of new countries or of new people. Yet it has such a high price; flying is not only a privilege for rich people; it destroys our surroundings and exhausts our resources. It is interesting to compare the impact of this use of resources, by privileged people who can afford it, with the average available resources in the world for each of the world's inhabitants, according to the calculation of ecological footprint⁹ i.e. to the surface of land which each of us needs for sustaining our respective way of life. The calculation gives the following result: each time one flies on a distance of 6'100 km and return, one consumes the resources which are necessary or available in average in the world for one person for surviving, because this surface is needed for trees in order to absorb the CO₂ that has been produce by one's transport¹⁰.

To absorb the CO₂ produced by a daily return flight, one should plant with trees a strip in the sky which is a half kilometre wide¹¹, at a

⁹ The ecological footprint is the total surface of land each one needs for maintaining their respective standard of living. It includes surfaces for providing food, for extracting and transforming natural resources, for providing goods and services, for dwelling, for transport, for energy, for consumption and leisure. This footprint is in world average 2.65 ha per person although the average availability is only 1.72 ha; it varies from 0.4 for Timor Leste or 0.6 for Afghanistan to 0.9 for India and 2.9 for Brazil, and it rises to 4.2 ha for Great Britain or France, to even 6.8 for the USA and 8.3 ha for Australia. Data Global Footprint Network, 2011.

¹⁰ According to the calculation of ecological footprint (see precedent footnote), the average available surface of earth per person in order to cover our yearly needs is 1.72 ha. On the other hand, 6'100 km at 141g/km x 2 (including return) = 1.72 tonne of CO₂. In average 1 ha of average forest is necessary to absorb 1 tonne of CO₂ per year. Thus 1.72 ha are necessary for absorbing the impact of a 6'100 km long flight and return for one person only. The total "earth capital" that is in average providing the means of subsistence for one person will be used exclusively to absorb the CO₂ generated by this one trip, at the exclusion of all other normal human needs (food, shelter, mobility, heat, etc.)

¹¹ For a daily return flight during the whole year, for each kilometre: 141g/person x 500 passengers x 2 (including return) x 365 days = 5.15 tonne of CO₂. 5.15 ha of forest are necessary yearly to absorb this quantity of CO₂, i.e. a 515m wide strip on each kilometre length.

height of 10'000 m. This strip should be used only by this one plane for a daily return flight with 500 passengers.

Of course these calculations are purely theoretical but they show how much one deprives poor people from their subsistence, each time one flies.

Flying is never a necessity. We like it because it is a negation of time and distance: force and virtuality again! Marco Polo or the monks in the Middle Age or St Paul in the early time of Christianity travelled huge distances with very simple means. Insecurity was then higher than it is now. It is stunning to see how much people have been mobile in the past despite very simple means for travelling that involved no external source of energy (except maybe wind) but only human or at least organic energy (horses or similar). Without going back to this state of technology, it shows us how far we can dare to reinvent our means of transport, especially if we are willing to subject their use to the strict laws of natural cycles.

Travelling by land or sea

Trains and boats are very effective means of transport in tune with our human experience and perception of distance and time.

There is no necessity to hurry. As our ancestors, we are able to cope with distances and with the time span it requires to cross them. There is no need to destroy our surroundings or the conditions for subsistence of others when we need to transport ourselves. Terrestrial transport releases CO₂ where it can be absorbed and it spends 3 or even 4 times less energy¹² than a plane does, while a plane has a much reduced efficiency because it has to lift its own weight (10

times the useful load) at a height of 10'000 m without producing anything through this effort. Slower means of transport like trains or ships allow us to experience distances and diversity as living and invigorating realities. It enriches us with new experiences and it facilitates adaptation to the change of climate and time zones¹³.

For instance it is easy to go by train from Berlin to Hanoi or Hong Kong over the Transsiberian railways (Moscow, Beijing), or over the silk road (Istanbul, Teheran, Samarkand, Alma Aty). It takes about two weeks. It does not cost much more than flying if one considers that it provides, on top of transport, simple accommodation (sleepers and protection against rain, snow, heat or cold) for more than a dozen of days and nights and allows much deeper experiences in seeing so many landscapes and in meeting so many different cultures and people than sitting in an armchair in the sky. The main difficulty remains certainly the one of getting the necessary visas (cost and how to get them on time).

From Hanoi and Hong Kong, the trip can even be extended to Australia. If, from Asia, one wants to cross over, it becomes more complicated because regular shipping does not seem to exist across the Malacca Strait and the Timor Sea except between Malaysia (Pinang - George Town) and Sumatra (Medan). Its is easy to travel by bus in Indonesia and to cross by ferry from an island to the next, at least to Bali.

This way of travelling is the only sustainable one. For comparison, if I fly from Australia to Europe and back, I produce about 5.1 tonnes¹⁴

¹³ A travel agency and website in the U.K. gives excellent information on travelling by land and sea: www.seat61.com by Mark Smith.

¹⁴ 18'000 km x 141 g x 2 (including return) = 5.1 to.

¹² See note above, about CO₂ production of the different means of transport.

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of CO₂; it means that I need to plant 5.1 ha of forest¹⁵ to absorb in a year this quantity of glasshouse effect gas that has been emitted by the plane for me alone. According to the calculations of ecological footprint, this surface is in fact what is available for 3 persons on Earth for their subsistence. It is certainly impossible to establish a straight and simple relation between the effect of my flight and the deprivations of the poorest, but the calculations of ecological footprint show that I can only maintain the forest which could absorb the gas I produced by flying if I deprive 3 people from their necessary resources, ignoring in this statement that I, as westerner, already deprive poor people of their subsistence by consuming more than three times what should be available for all of mankind. By comparison, my travel by land transport will produce only a quarter of that quantity. The effort it means and the time it takes will also reduce considerably my needs for transport. In this way we can hope to reach a new better balance. Effort and comfort are again linked in a new more balanced and real way.

Transport necessity managed by profit

Nowadays profit - and not necessity - decides what has to be transported - or not - despite environmental and social destruction.

Although they are not renewable and will soon be completely exhausted, fossil fuels are sold at a very cheap price; hence transport of goods does not cost much and constitutes thus a very small part of production costs. Materials and goods are transported through continents only in order to undergo the different stages of production where these stages are the cheapest. A small difference in prices will then justify the effort of transport without any consideration for the

consequences it has for the environment and the social network. Delocalisation happens with its terrible consequences for the smallest communities. Work, know-how, creativity, meaning and wealth escape peripheral societies in order to concentrate in centres of power, unless local communities react and organise their own form of self-protection, before they get destroyed or weakened to such a stage that they are made powerless. Standardisation happens that kills diversity as well as equilibrium, which are the fruits of interdependency and complementarity.

It is interesting to follow an item in its travel through production: jeans for instance can travel thousands of miles as raw material, and then in the process of their making, only to be cut or stained or assembled or to have a zipper added or pockets sewn. This form of transport is implemented only because the process of production can be decomposed in short stages which are considered each one separately, essentially under the aspect of price. Any cheaper price, because it means profit, justifies transport, as long the cost of transport does not exceed what can be saved on production expenses. This way of thinking has evidently a powerful impact on our natural and social environment, as it is incapable to consider any other aspect than what can be measured in dollars or yuans. When it is regulated by the laws of market, transport has a terrible noxious impact that can be described in many different fields of activities. The following description will be intentionally extreme in its negativity, in order to emphasise the huge destructive potential transport has when subject to economy; especially since we accept these secondary effects as being natural and unavoidable.

- It affects our landscapes which suffer from the impact of gigantic roads, bridges and tunnels construction.

¹⁵ According to Global Footprint Network, the capacity of absorption of carbon by a normal average forest is 1 tonne a year per ha.

- It takes natural resources where they are and exhaust these resources without taking in consideration the impact it has on local population and natural equilibrium.
- It exports to poorer regions the imbalances of cities or rich countries as well as their diverse forms of penury, pollution, exploitation and wastes.
- It exploits cheap labour, bad social protection, poor health system, slack ecological constraints, poor law systems in other countries or regions and does not have to bear the consequences of these forms of social and ecological destruction.
- It creates polarities between poorer and richer regions and generates pendular traffic as it has been described about cars.
- It deprives local communities from their autonomy and wealth and concentrates means of production into the hands of a minority.
- It considers mainly quantitative aspects like prices, availability of resources or of easy conditions, and neglect human, cultural and spiritual factors.
- It delocalises work possibilities and destroys artistic, artisan's know-how and traditional knowledge.
- It generates the dependence of working people from capital investment and powerful decision makers.
- It deprives traditional societies from their own subsistence production while they convert to monoculture (exotic fruits, vegetables for export, coffee, tea) and submit to the pressure of international price variations and exchange rates.
- It participates in fostering dictatorship and repressing political unrest in poor countries because of the interests of rich nations which try to ensure their own access to natural resources and provide corrupt support to these totalitarian regimes.
- It generates wars because of the necessity to ensure secure access to fuel and other natural resources.

- It causes pollution by accidents of means of transport: leak of toxic products, sinking fuel tankers.

Like for the car this very negative description of the impact of transport originated by interests resulting from the laws of market can told at the negative form. It provides then a very positive perception of an ideal form of transport which appears to be completely incompatible with the laws of our market economy.

Relocalisation, slowness and human diversity

We must completely rethink our transport system and its purpose, in a spirit of strict self-limitation which will make it more human.

Before it is too late, before the exhaustion of fossil fuels creates strong social disorders and tensions, we have to reinvent new ways to understand the necessity and the potential of transport, according to three priorities:

- 1) The necessity to relocate activities in order for every local community to have its own form of production and consumption which answers the basic physical and social needs,
- 2) The priority for human diversity, it means the priority for meeting people who live elsewhere where they live, over the consumption at home of their products that are transported for us.
- 3) The praise of slowness which gives time to live and to perceive the richness of the present moment, and excludes profit as a major criteria in our choices,

Subsidiary centres of activities or centres of attraction must be created or maintained at the scale of the village, or of the town quarter. Centralisation must be avoided at any price. Gandhi

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promoted the autonomy of villages for this precise reason. It is a main factor of human dignity to be empowered and to sustain livelihood for the family and near neighbourhood in recognition of the contribution it means. Wealth is not only material.

Transport tends to make every product, whatever it is, available anywhere in the world. It participates thus to flatten our perception of the world, because it abolishes distances and differences by transporting the same goods everywhere. On the contrary, if we tend to preserve diversity, we can help to maintain the existing contrasts and complementarity. I prefer to travel and to discover new foods and new fruits than the ones I eat at home. I prefer to discover the ways of life of other cultures than to practice what I know already so well: live for a while like Eskimos in the North, like the Bushmen in the Kalahari. I prefer to meet the producer of bananas than to consume his bananas at home without meeting him. As paradoxical as it seems, it can be richer to be deprived from bananas at home because it makes their discovery much richer. It gives a sense to meeting the people who produce them, and not only because of the bananas.

And now the praise of slowness in the next paragraph.

Praise of slowness

Speed is the negation of space and time which are the basic components of life. Life and speed are therefore often antagonistic.

As already described we live in a society that lauds speed as a positive quality, as if the fact of saving time were an important priority. But life is nothing else than time. What do we do with the time we save? And what is the price for saving it? Isn't it a negation of what life should be?

The praise of slowness can transform our life which evolves now under the constraint of speed. Slowness is the recognition of the value of the process itself, in preference to the result. Travel is the process and arriving at destination is the result. If travel has a value as such, everyone can travel by boat or by train and enjoy the richness of seeing what lies between the point of departure and the aim at destination. With this new attitude speed, especially in its daily use, will lose its significance and pressure.

The example of Seoul where the mayor decided to destroy the main highway which was permanently inefficient because of the excessive number of vehicles (about 160'000 a day) which used it, showed an exemplary courage in his ability to view problems differently. These important public works - which cost more than 380 mio US\$ - re-established the original river and a long public park along it, creating in the heart of the city a space of fresh air and relaxation. The "insoluble" problems of traffic were solved at the same time while people prefer to use public transport instead of their private car, as access for cars has been made so much more difficult. The clear option for slowness has been in this case the key for the solution.

In our local community we should praise slowness as a special faculty. Slowness allows also awareness of effort, of weight and slope, of topographic obstacles, of distances and of differences. In fact our human constitution does not allow us to cope in full awareness with a speed which is higher than the one of our walk or of bikes. If we travel at a higher speed we omit to notice what we should. Speed means therefore impoverishment. The poor who can only go slowly becomes in fact the rich.

3) ESCAPE THROUGH DESTRUCTION

Beside the refuge in denial and illusion through force and virtuality, we practise other forms of escape from the indifference and power of nature, especially in trying to dominate, to remodel and, too often also, in destroying our surroundings which we want to transform and to adapt to our own desires.

Refuge in domination

Harmony versus mastery

Traditional cultures search for harmony in adapting to the sacred order of the universe; but modernity aims at dominating the world.

Different civilisations have basically two different ways of relating to their surroundings:

- 1) For traditional cultures, harmony already exists and is given in the universe; this is the central law which we have to adapt to, because it is the sacred order which has ruled the evolution of the whole universe since its creation.
- 2) By contrast, our western civilisation believes that man is the master of the universe and that he has, as a demigod, to dominate and to transform the world in order to complete the creation and to make it more habitable.

I have already described how traditional societies believe in the sacredness of the universe and how they feel called to respect the existing order and to adapt to it. This is the meaning of life; harmony

can only be experienced when we conform to the laws of nature, the laws of Life and the laws of the Universe.

Our western civilisation has developed a fundamentally different approach of life; man is seen as the master of creation; he is believed to have received the gift of his mental capacities in order to transform the world and to make it more habitable. Especially since the Renaissance mankind has developed a technical capacity to transform matter. Out of this mastery of mind over matter arises an exhilaration for power in the form of a right to dominate and to transform the surroundings and to make them supposedly more suitable.

Domination and transformation

We believe man should transform the world in order to answer his needs / desires and to adapt the world to his own representations.

As we believe as Westerners to be the masters of the universe, we believe also that the world is not what it should be because it does not fulfil our needs and desires; as creators we should not only transform it but we should even make it more conform to our representations of what life should be and of what our surroundings should provide.

In our eyes the world as such is imperfect and it seems to us to be our mission to transform it and to adapt it to our wishes and desires. We become therefore the creators of its future perfection. We are the masters of the world and it is at our disposal in order to satisfy our wishes and our needs whether these needs are true basic ones or completely irrelevant. This is at least what the myth of our culture is telling us.

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In our eyes harmony does not exist as such but is meant to arise out of man's action in transforming the world. Harmony is not a fundamental given pre-existing law but it is reduced to the simple measure of man's satisfaction in his action of adapting the world to his subjective needs; the existing order will be hence based on man's judgement only how to make the world more liveable. There is no more any external reference. Man has become both judge and judged. In this new state of mind it becomes evident how things can only go wrong: the different degrees of power and of frustration provide the only measurements.

What we call our needs becomes the principal reference and their satisfaction or frustration becomes the measure for our judgement. As Maurice Bellet¹⁶, a French writer, puts it, we have developed two main principles of action which, combined, generate a third one:

- 1) First the technological principle: everything which is possible, we will do it.
- 2) Secondly the economic principle: everything which we desire, we will have it (buy it).
- 3) Out of these two principles flows a third one, the principle of expansion: we need to produce more and more in an increasing excitement of our desires.

As we see, there are no more checks and balances. This is the domination of the law of the 4 Ps: Profit, Power, Prestige, Pleasure. Needs identify with desires; they are just what we make them and are no more considered from a critical point of view.

As we have seen earlier the loss of our relationship with nature, as a living organism which we are integral parts of, deprives us from true references; our essential link as creatures, because it has been lost, cannot inspire us anymore a loving care for our fundamental

belonging to nature, nor a healthy adaptation to nature's main rhythms (days, seasons, moon, natural cycles) which reharmonise us; it cannot anymore inspire us a capacity for self-limitation which would be dictated by our growing awareness of the limits by which nature is able to satisfy our demands and the demands of other species; we have lost therefore a form of solidarity with other natural species, i.e. animals, plants, minerals - and as such we have lost this solidarity which could bring us back to our real place.

Domination, exception and competition

Domination relies on the belief that mankind is exempted from submitting to natural laws; hence competition and destruction.

Mankind believes not to be part of nature; they think they are superior and they have to dominate the universe, using it for their own purpose and reshaping it according to their own wishes. They believe that this form of superiority and domination exempts them from submitting to the laws of nature; they believe to be the exception; all species would be subjected by nature except them. Yet this illusion does not make the laws ineffective; these laws continue to be valid although they are denied. Thus each time human action provokes imbalances the laws of nature generate natural consequences that express signs of destruction. Yet mankind does not want to recognise these signs for what they are, i.e. the expression of their mistakes; they refuse to adapt and act with more determination to dominate more violently what becomes rebel to their power. Domination generates in this way an ever more aggressive human attitude towards the environment which is ever more understood as hostile and as having to be mastered. Nature and the other living species become the enemies that have to be controlled or destroyed. A form of aggressive competition arises which will be exacerbated by

¹⁶ Maurice Bellet, *Invitation. Plaidoyer pour la gratuité et l'abstinence*. Bayard, 2003.

the increasing destruction that arises from not recognising the limits imposed by nature.

The illusion of exception and the will to dominate the Earth are the true causes of competition with the environment perceived as hostile. This is mainly because mankind wants to dominate and refuses to respect the laws of nature that such a destruction of our environment happens. This is because of this destruction that other species are perceived in a hostile way, generating therefore more aggressiveness towards the surroundings and more destruction of natural and social settings. This is because of this increasing destruction that competition becomes one of the main trends of our human society.

This external competition towards nature generates also an inner form of competition between human beings; not only the other species are perceived as hostile, but the other human beings are also identified as a menace because they compete for the same resources that have to be conquered and accumulated and that become rare because of the greed that covets them.

Domination and competition generate in this way two forms of competition, one internal between members of the same community, and a second external between mankind and other species. They break thus two forms of interdependency, one as solidarity between similar beings who share the same surroundings and one as reliability on a mothering nature that provides everything mankind needs. Exception and domination contribute to isolate mankind and to turn them into destructive beings.

This form of human stimulated competition is very different from the natural competition between different species for their own survival in the wilderness. Human competition is aggressive and destructive

because it is based on false premises, while natural competition is only a form of self-protection for subsistence that respects the laws of nature.

In nature competition is nevertheless the rule; each one has to survive, i.e. to find food, to escape predators, to provide a minimum of security for its own species to grow normally. This form of competition is natural; it is a necessity that is not based on illusion, greed and aggressiveness but on adaptation, self-restraint and self-protection; it is not destructive but, on the contrary, it adapts fully to the laws of nature and it submits to their checks and balances. Natural competition relies in fact on what human competition denies, i.e. on the role of the acting diversity, complementarity and interdependence to provide stability and security; in this sense it never considers the other species as the enemy to be destroyed; it seems that there is in nature no killing of a whole species by another for the only reason that they are the enemies; there is only the killing of the individual that stands in the way; the predator is only the fatal danger which has to be avoided, especially when it is hungry and the competitor is only the one which has to be overtaken in order to catch the necessary food for today. It is fascinating to notice that this form of self-protective competition provides the minimum conditions for subsistence without harming the milieu; natural competition cannot therefore be confused with the exacerbated competition for domination and power that is the practice of mankind.

Integration into natural laws and cycles seems in this sense to be the best warranty for stability, security and abundance. On the other hand this form of integration is based on interdependency, adaptation, cooperation and solidarity, and not on isolation, domination, aggressiveness and violence.

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Free market economy as domination and destruction

Liberalism exploits resources to the core of destruction; destruction of social and natural resources becomes means for domination.

Liberalism (in the sense of free market economy) as principle has no capacity for self-limitation because it is driven by exactly the opposite tendency: it consists in exploiting any possibility unto its radical end. By exploiting it destroys and by destroying it reinforces even its domination and power for control on people, making them still more dependent because their natural and social surroundings have been strongly degraded. When a place after extraction of natural resources has been destroyed to its core, it is abandoned and the exploiting agent moves on to a new fresh place where the cycle of destruction starts again.

This attitude and practice illustrates very well what I mean here by domination and destruction. Domination leads to destruction; and destruction is the easiest mean for domination. Social history makes it evident: economic power uses often destruction as a way to consolidate its power. This is a law of power. It is why self-limitation is the right attitude because it controls and restrains our tendency to domination and exploitation. When the process of production (or more exactly of transformation) is not controlled by other forces, it can only degenerate.

The biblical heritage

The Judaeo-Christian tradition teaches that man has to dominate the Creation. Yet this has a symbolic self-restraining meaning.

According to the teaching of the book of Genesis in the Bible mankind should dominate the Creation. The false understanding of this injunction has strongly justified our trend for exploitation instead of inspiring us a self-limiting attitude that would have cared for a harmonious relationship with the universe as something sacred and precious, given since the origin. In fact the call of Genesis to dominate the Earth should be rather understood as a command to dominate our symbolic inner Earth, i.e. the field of our inner personal nature which we have to master in order not to let erupt our violent and primitive tendencies. Self-mastery is the true domination of our inner Earth and this domination is based on a deep knowledge of ourselves; this deeper understanding is exactly the opposite of what has been done in the name of this command.

It is true that the Judaeo-Christian tradition is very anthropocentric and has reinterpreted the teaching in the advantage of mankind as a super-species. Yet it is full of symbolic meanings and it would be certainly delusive to implement its teaching in a literal sense. Love is the dominant aspect of this teaching because love is also the dominating force in our evolution and love can only respect and care. The kind of domination to which we are called by Genesis concerns more our spiritual world than the material one. Spirit governs over matter. The true spiritual path consists in self-control and not in greedy exploitation. It is why the injunction for the domination of the Earth concerns here more our spiritual path and our spiritual inner life. This is in fact the key of our behaviour: how are we capable to dominate our passions and emotions in order to channel them onto a positive and creative path? If our civilisation had integrated this truth from the beginning of time, it would look very different today.

As it has been said, the true question in our personal evolution and in our relationship with nature is the one of our desires and needs. It is

the question of the authenticity of these needs, of our right to use what is available in our surroundings, and of our duty to look for the upkeep of our physical and social environment, in order to ensure that this wealth will always be available for ourselves, for others, for our neighbours as well as for the coming generations. In this assessment of our rights and duties, there has to be an important part of wisdom, which depends on our state of spiritual evolution which plays a predominant role.

Therefore in the environmental crisis today guilt is often predominant, whether openly or in a hidden way. On one extreme we plunder the Earth and on the other extreme we feel ridden by guilt of doing so. Our Judaeo-Christian heritage does not help us to find a clear way between guilt and domination because it remains too often on a very moralistic level (you should / you should not) instead of showing how much the path of our personal evolution and growth consists in an authentic and a true way of dominating our inner Earth and of relating to the universe in a mature self-limitating and responsible way.

Another understanding of guilt

The path of our personal inner maturation helps us to relate to our world, better than the path of grabbing the fruit of knowledge.

The traditional story of the fall of man (the story of Adam, Eve, the snake and the apple in Genesis) has too often been interpreted as a moral tale about the dualistic distinction of good (obedience to the law) and evil (disobedience) as two equivalent forces (God and Satan as being equal). This is the simplified popular version.

In contrast with this popular version the true meaning of this deep teaching proposes indeed a path of liberation which consists of a process of personal or collective accomplishment where we learn to explore our inner world and to marry our feminine and masculine faculties. Let's examine these two versions in more detail.

According to the popular version the tale of Genesis is understood in a moralistic way: as human beings, we are bad and we have all the time the tendency to disobey because Satan (the snake) seduces us. Nevertheless God comes and saves us by wiping off the blackboard where our sins are registered. This fate never changes and we are condemned to the ever lasting repetition of this scenario. God and Satan seem to be two equivalent forces which oppose each other. This sad understanding can only generate a deep sense of destructive guilt.

But another understanding¹⁷ is possible, which brings life and hope; according to this second interpretation this tale does not oppose a woman and a man as two distinct people but it describes our personal evolution or more exactly an inner path from an non accomplished to an accomplished state, from a yin to a yang state:

- Yin: it is the feminine principle (the woman in the tale) which is not the evil as the popular explanation describes it, but which is the symbol of water, of inertia; the darkness means the non accomplished, not as evil but as what still did not become light. This is the womb of our origin, the interiority, the source which has not yet been revealed and has to be expressed.
- Yang: it is the masculine principle (the man in the tale) which is not the good but which is the symbol of dryness, of expression; the

¹⁷ See the work (mainly in French) of Annick de Souzaenelle: *La parole au coeur du corps*, Albin Michel, 1993. Or *Le symbolisme du corps humain*, Dangles, 1984.

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light means the accomplished, as what has found its own expression. This is the mature state of our own accomplishment in the expression of our vocation.

Of course, we have all, men and women, both aspects in us, independently of our gender; we are at the same time yin or feminine - i.e. the womb, the origin, the non-accomplished - and yang or masculine - i.e. the arrow, the expression, on the way to be accomplished. We are all called, men as well as women, to search for our darkness in ourselves in order to bring it to light and then, after maturation, to expression. From an immature non-accomplished being, in our own womb, we have to grow and come to expression in accomplishing our vocation. In a poetic and symbolic way Genesis describes how, in the beginning before the Creation, there is only the indistinct world of water and darkness which has to come to expression. "Let there be light, and there was light" writes Genesis. This coming into light is the process of creation and of revelation. Light reveals what was not yet manifested. Life is in this way our natural move towards light and expression.

According to this second interpretation the snake of the tale can be understood as our life energy (our kundalini) which helps the non-accomplished to become accomplished. It is neither good nor bad as such. It is simply our energy of growth and its quality depends on what it concentrates upon and how it is used and implemented. The tale tells us that there is in fact only one path: the path of our descent into our interiority, in order to embrace our own darkness and to bring it into light as a form of healing of our depth and as a marriage of our feminine and masculine principles. This path is a long path of maturation and of inner transformation; this process is certainly not easy but it is necessary to access life.

Yet an illusory shortcut exists, as the tale of Genesis describes it, which consists in avoiding the slow and painful path of inner growth: under the influence of our inner energy, which urges us to reach quickly the end of the path, - i.e. under the influence of our own snake whose energy has been side-tracked - we choose a shortcut which consists in stealing the fruit of knowledge (the result) before we have endured the path of growth (the process); it means that we try to get the fruit without undergoing the process of growth. In doing so, we prevent knowledge to grow in us by slow assimilation through the process of life and inner transformation; only an illusory form of knowledge will be reached by a violent act of false appropriation.

This second interpretation of the tale shows redemption as the normal progression on the path of life. It reveals to us how our own growth gives us access to life when we undergo the normal process of inner transformation. According to this new understanding we are saved from the illusion of the shortcut. Redemption happens once for ever and is not subjected to the infernal circle of repetition as according to the first interpretation.

In summary the tale of Genesis tells us that there are two paths for accessing knowledge:

- 1) The first path accepts the laws of the universe which help us to grow through a long maturation process in unity with the whole Creation, knowing that the sacred force of life is the only energy which can help us to become ourselves in the expression of our vocation when we remain open to it.
- 2) The second path breaks its links with the Creation and chooses a risky individual illusory shortcut while it tries by force to appropriate oneself the fruit of knowledge which will for ever

remain exterior because it cannot be assimilated through the process of self-transformation that is the only way of integration.

A humorous story by Tony de Mello tells the same: A lady goes into a shop and asks: “what do you sell?”. God, who stands behind the counter, answers: “we sell everything you could desire!” The lady then orders: “I would like justice, peace and love in unlimited quantities, please!” But God replies: “Oh my Dear, there is a terrible misunderstanding! We do not sell fruits, we sell only seeds!”

The tale of Genesis opposes similarly the way of the seed which grows through a long process of self-transformation and the way of the stolen fruit. The description of the path of the growing seed is a powerful teaching in what concerns our relationship with nature and the whole universe. It opens us to a new form of integration into the cosmos; the growing of the seed invites us to this inner transformation which brings us in harmony with the universe, according to the wisdom of traditional cultures, instead of leading us into an illusory domination which needs absolutely to transform the external surroundings to the limit of destruction according to the folly of our western civilisation.

Technology as dominance

After describing the trend for domination and destruction we can illustrate it by an example. Technology is the perfect illustration of our tendency to escape into domination and destruction. In our western civilisation, the use of a powerful technology generates a lot of destruction, despite the positive potential of our tools. Destruction happens mainly because of the nature of our intentions that, as cause of this use, have given birth to this form of technology and because

also of the illusions that, as consequence of this use, have arisen and that this use has allowed us to believe in. Technology has become the symbol of our mastery of the world because we have chosen domination instead of adaptation to the existing harmony. It is our new god that lets us believe that we are the only masters. Life in this way loses most of its sacredness and is almost reduced to the management of matter and of our tools in order to reshape our surroundings.

It is important to be aware that technology, as such, remains neutral, as long as it is not loaded with our way of looking at the world and with our intention of dominating nature. The destruction that technology has brought about in our physical surroundings and in our social network is due more to the use we make of technology than to its own power. I can use a hammer to knock in a nail as I can use it to brake the head of my neighbour. The importance of the influence of our intentions on the impact of our actions makes it worth examining the nature of our tools and machines in order to better understand what makes them so dangerous when they encourage our worst tendencies.

Tools increase our own energy

Tools are using our own organic energy in intensifying its impact while protecting our body from the effect of this increased force.

Tools are distinct from machines in the way they draw their energy out of our own organic force or the one of animals; it means they do not rely on any external source of power like wind, combustion or electricity. They remain therefore more in our control because we keep in touch with the effort that the work requires from us and we can better adapt this effort to the measure of the awaited effect.

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The only source of energy for the hammer is the force of the arm, whose impact it intensifies while protecting the hand from the increased impact on the nail. The effect of the hammer remains therefore in proportion with the own force, or effort, of the user and with the individual human scale. One has permanently the possibility to adapt the effort and the move as one goes along because one remains directly in touch with all aspects of the process and no other force intervenes. The consequences, it means the positive effects of our action as well as the negative impacts of our mistakes, are therefore reduced also to a more human scale. This form of natural limitation defines the better quality of control we have on our tools as well as the limit of their use.

Working with tools happens according to the rhythm of the user. The tool does not impose any rhythm as the machine does. Work can even become a meditation, like raking gravel in the Buddhist tradition, as well as a creative activity.

Tools are silent, because they do not have motors. They do not pollute either. Basic tools have a modest look yet they are the result of a long experience and of mature tradition. They even incorporate the spirit of the trade. They are the expression of a certain wisdom, because they are linked with the craftsman's know-how. Trades are much more than the mastery of matter; they are means for creativity and diversity; they include also a perspective of life, a form of philosophy. Baking bread, building a vault, making wine, designing furniture, cooking a meal, shaping a violin are activities that are loaded with a lot of social, cultural and artistic significance, when they are practised by people who love their trade and who are experienced craftsmen.

Machines rely on external sources of energy

Because they use an external source of power (wind, combustion, electricity) machines can carry out jobs beyond our human scale.

An artificial and external source of power provides the machine with a power that man does not have. It allows therefore carrying out jobs which could not be envisaged without this external help: transformation of matter, efficiency, resistance to extreme conditions, transport of material, completion of harmful or dangerous activities, automation. The more powerful machines are, the more the effects of mistakes of perception, intention and execution are also multiplied.

Machines are more powerful than tools. Their use is more effective but their mastery is qualitatively more difficult. They impose their rhythm and often also the method to use them. Everywhere when it is possible, especially in a spirit of self-limitation, it is better to use simple tools for a better control of the process because machines provide us with an illusion of power; they generate domination.

The efficiency of machines has been the motor for our western development and the support for our cultural evolution, already since the Middle Age and the Renaissance, but especially since the industrial Revolution. The emphasis on, and fascination for, technology in our western civilisation has deeply transformed our understanding of the world and our connection with nature; this newly acquired power has completely reshaped our human relationships between individuals as well as inside our community or between social groups.

Controversially I will make here the apology of tools, in opposition to machines, as a way to better show the positive potential of self-

limitation. This deliberate approach will be also a way to question our way of thinking and our options for development that are too often accepted as necessary and inevitable, without being critically examined.

I will describe 7 negative factors which are generated by machines:

- 1) constraint,
- 2) excessiveness,
- 3) illusion of power,
- 4) degradation of the surroundings,
- 5) social domination,
- 6) cultural colonisation.
- 7) exhaustion of energy resources.

Certainly there is no clear distinction between tools and machines; according to the distinction above that affirms that machine rely on a non-organic source of energy, a bike is a tool because it relies on human energy and a motorbike is a machine because it is propelled by a motor. A windsurf, although pushed by an external source of energy (wind), is nevertheless more like a bike, it means like a tool than like a machine, probably because this source of energy remains very natural and on human scale. A drill, although it has an electric motor, is considered as a tool, because the impact of the external energy on its use is minor.

The following considerations will therefore more apply to technology in general than to a strict opposition between tools and machines, although they are formulated as simple oppositions.

1) Machines generate constraint

Tools multiply the faculties of the user in a creative way while machines impose their own rhythm and method through power.

As they participate in multiplying the power of users, tools allow them to express fully their faculties. Because tools are very flexible in their use, they do not impose their own power or any given rhythm. They leave users free of using them as they want, according to their own sensitiveness, force and creativity. Because tools are usually very polyvalent, they allow many ways to use them and stimulate creativity and freedom. On the contrary machines impose a special and narrow way to use them; on one hand, because of their external source of energy, they impose often their own power and rhythm; on the other hand, there are normally not many ways to use them because of very strict instructions for use and constraints for security; therefore users have to adapt to machines more than they can adapt the use of machines to their own desires and inspirations.

Machines are certainly more efficient than tools in terms of speed and of quantity. Because of our greed for efficiency we have the tendency to prefer machines to tools, also because their use requires less effort and know-how. They probably contribute to simplify our way of acting and of thinking.

Products of any industrial process are all identical. That is the evident reason why they can be produced at a bigger scale and therefore made available for many people at a cheaper price. Nevertheless the price to pay for quantity is a lack of individuality and differentiation. Quantity too often opposes quality. Mass production is lead by profit more than by a desire to satisfy the needs of the buyer. Quantity makes relationships more impersonal. While the craftsman knows his

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clients and their wishes, industrial production does not adapt to the personality of the users.

Industrial products are very functional but have less character than craft products. In our modern society craft products have lost their daily use and meaning; they become special distinct works that acquire a specific artistic value while they lose more or less their normal daily function. Art is no more part of everyday life but is something apart, very distinct, that is only accessible for people who can afford it. An ever bigger contrast separates art from work in everyday life because of the uniformity that prevails in an industrial society, and therefore work as form of expression loses its power for creation and for identification. Art is for museum or for the shelves or the wall; industrial products are for everyday life.

An awareness of this inimitable quality that results from a more personified production process and a capacity to keep things small, at human scale, will privilege the use of tools over the one of machines, every time it is possible.

2) Machines generate excessiveness

As tools require more effort they allow a better evaluation of needs while machines, because of their power, encourage excess.

The slower pace of tools and their flexibility as well as the effort they require from us invite us to re-evaluate, at each step, what our real needs are. They encourage therefore restraint, adaptation, moderation and discretion, i.e. self-limitation. On the contrary machines, because they make it so easy, encourage excessiveness; they incite us to do things on a bigger scale than what we need; they invite us to produce

more and to accumulate the surplus in order to keep it as security or to speculate on its value.

The work process with tools is in general slower than with machines. This slowness allows to feel, to think and to better evaluate what is needed. On the opposite, the power of machines encourages users to go beyond their needs and prevents the fine control that is necessary for a finer tuning.

Tools naturally work on a smaller and more human scale while machines call for bigger size and quantity. In using intensively machines, we not only lose a lot of our capacity for control and creativity but we also make our work conditions and our products more anonymous and more monotonous. Bigger industrial workshops are very different from the more modest workshops for craft industry, precisely because of the size of infrastructures and of the organisation of work that machines have generated. In contrast, manufactures are more lively and more personal. They allow certainly the workers to better identify with their work and with the result of their effort.

Despite the modern tendency for limitless expansion, it is possible to imagine small workshops where technology can be implemented with all the advantages provided by the flexibility and adaptability of tools without rejecting the power of machines; but only self-limitation can lead us to this more human and more subtle form of production. On the opposite industrial production is geared by profit, which has nothing to do with human options for a quality of life. Profit calls for excess; excess makes profit easier.

3) Machines generate illusion of power

Tools set us in a true relationship with our environment (heavy, hard, distant) while machines create an illusion of ease and power.

Tools rely on our own strength and energy; their use requires effort and will and does not transform our perception of the matter we handle that remains in our eyes as heavy and resistant as it really is. On the contrary machines give us the illusion that we are very powerful because we do not feel anymore our limits as small human beings. The power of machines makes us ambitious as if we were the masters of the universe.

Tools make us very aware of the hardness of wood when we have to saw it, of the weight of soil when we have to shovel it and of the effort that we need to provide in order to overcome distances or topography when we have to carry loads. Tools help us to cut wood, to lift soil and to transport loads, but they do not create the illusion of an easy job. It is why tools are not only means for transformation of matter, they are also means for perception. In a similar way the hand has the absolutely fascinating faculty to detect and guide our perceptions and choices.

On the opposite machines provide us with a power that is not originally ours and we start thinking we are more powerful and more capable to dominate our environment than we truly are. We lose the measure of our limits and the understanding of the true impact of our acts on our natural and social surroundings. We drill tunnels through mountains, we dam rivers, we cross deep valleys with high bridges; we adapt our environment to our needs and desires, and we lose the awareness of the complexity of the forces we are playing with, until an earthquake, an avalanche or a flood reminds us how we remain fragile and vulnerable. When accidents or catastrophes occur, we

have the tendency to blame nature or destiny or God, as if the risks we had taken by using machines and playing with the forces of matter were insignificant in what happened; our children die in car accidents, but we refuse to recognise how much we take risks each time we drive a car and how much we challenge continuously the laws of nature. Machines, because we did not learn how to use them properly, became the support of our megalomania.

4) Machines generate degradation of our surroundings

Tools have little incidence on the environment while machines perturb our quality of life as well as the natural cycles or balances.

Tools remain usually silent and not polluting. Because their impact is limited their incidence on our surroundings is also reduced; they do not perturb the laws of nature unless used with excess. On the opposite machines are noisy and often polluting; despite the clear advantages they provide they participate to degrade our conditions of life. By the power of their impact they also perturb deeply the natural balances and cycles.

In our cities we do not notice anymore the noise of cars although they create a noisy background that never stops. This background humming is the cause of many illnesses and depressions. Pollution in many cities has reached the limits of what our physiology can bear. By contrast, in cities where people walk or use animals (horses, donkeys, camels, elephants) for the transport of loads, one can hear mainly human or animal noises (voices, calls, barking) and the air remains clear. In desert areas one can hear the next car coming some five minutes before it passes by. These simple comparisons show how much the machine has a negative impact on our conditions of life and how we do not perceive this degradation anymore. Our

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awareness is still even significantly reduced, proportionally to the advantages that we get from our use of machines and that we do not want to be deprived of. The degradation of our environment seems even in this way to become an unavoidable necessity.

Our human species is probably the unique one that participates so actively in the degradation of its own life conditions; this degradation even happens when, without any use of technology, the surroundings provide all the normal resources that are necessary for maintaining simple life conditions; it shows how little aware we are of what we do.

5) Machines generate social domination

Tools do not have a significant impact on social relationships, while machines have completely transformed our social structure.

Tools do not generate specialisation and division in the organisation of the production process as much as machines do. Especially since the industrial Revolution, machines have transformed our social landscape, mainly for two reasons:

- 1) The work process becomes more complex and requires a form of division of jobs and of specialisation of trades that generates social stratification.
- 2) The efficiency of machines allows to produce more and to accumulate a surplus that becomes the source for profit and for the concentration of wealth and power in the hands of those who become a privileged social class.

Tools are very polyvalent and can be used by anybody. Their use provides a special know-how that can become a source of wealth and

power but they do not, as such, generate specialisation or social stratification. Craftsmen form certainly a social category that can play an important role in society but they do not owe their influential power to the strict use they make of tools. Indeed they owe it more to their accumulated knowledge and much needed role they play.

By contrast machines are directly linked with wealth, not only because their acquisition requires some financial means but especially because they are in themselves a source of wealth through their efficiency. Efficiency means quantity and quantity means surplus. Surplus means sale and sale means profit. Profit means accumulation of wealth and wealth means power for investment and social influence. This form of speculation on such values as work, creativity, resources, efficiency, production and power of money, is mainly possible in this extent with the help of machines. It is clear that technology has always been one of the major tools of western societies in its attempt to dominate the world. The same remains also true inside the western society itself: social power is mostly based on economic power that is made principally possible by accumulation of wealth; wealth can only be accumulated by private appropriation of parts of the commons or of the social good: natural resources, personal creativity of others, collective effort into work; it is made out of this common wealth that in fact does not belong to anybody and thus should not be made private by any means; this common wealth consists for instance of air, water, earth, sun, natural cycles and resources, space, time, community, knowledge, justice, peace, creativity, effort, generosity, etc.

Any value that ensues out of a common process (production, community, cooperation) should remain in circulation and be made accessible to all, instead of being grabbed by a minority as a private

advantage. Only goods that remain accessible to all people constitute the real collective wealth, while private property deprives.

6) Machines generate cultural colonisation

Tools remain very polyvalent while machines impose a unique way of using them, becoming thus supports of a mentality / culture.

Tools do not impose special modes of using them. They are basic and evident. It is very different with machines. Because users have to conform to precise instructions in order to have machines working properly, machines impose their own rules, not only for their use and maintenance, but also for the values they carry. Their correct use implies the practice of rules of security and of coordination. They require some skills of perspective and planning which are inherent to a rather linear than circular way of thinking, to a rather rational approach of life. Their use also implies a form of integration into the global economic exchanges in order to buy them and to get the necessary supplies for parts and fuel. Therefore they impose many constraints of mentality and behaviour. They open the way to many external constraints and influences that are not always positive.

Weapons and ships, which are both machines, - and not wisdom - have provided the main means for the domination of our western civilisation onto the different continents. In this conquest, machines have played a dominant role. Apart from the power of weapons and from the violent repression that has established the power of western countries over colonies, the powerful attraction that material well-being exerts on any people of any tradition and culture has been one of the most powerful reasons for the seduction of traditional peoples by technology and for their better acceptance of domination by western invaders. This fact shows very clearly how powerful

machines can be and how much they are linked with a cultural way to use them.

We believe in general that the use of machines is neutral and value-free, but it is an illusion. It is evident that the efficiency of machines constitutes their reason of being and that this power represents a very positive potential for creativity that cannot be denied as such; but the value of efficiency, and especially the deep transformations it implies in social networks, in term of constraints on behaviours as well as on expressions of cultural or spiritual world views, cannot be dissociated from the use of machines; any involvement of machines is not possible without deep social and cultural transformations.

Machines cannot be dissociated either from the technological culture which has designed them because they are the produces of a certain mentality and of a precise way of thinking; they encourage the development of values that are the characteristics of technological cultures, like for instance efficiency, control, power, domination, profit as well as predominance of rationalist behaviours over intuitive ones or of material values over spiritual ones; it is why they become the means for a stronger cultural colonisation and participate to change and even to destroy social values which traditional cultures have established for centuries, such as solidarity, restraint, awe, equity.

This statement does not mean that it is impossible to use machines in an harmonious way; it only means that their use must remain under an aware social control if we do not want to be dominated by technocracy; it means also that this form of awareness must be trained because it does not arise naturally.

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It is evident that everybody has an equal right for material well-being but this access to material well-being must be controlled by social awareness. As I will show it later, this is in fact the role of technology to manage the use we make of technique, in general, and of machines, in particular. In this much broader understanding, technology becomes deeper than simple engineering; it reveals to be a form of philosophy that includes cultural and spiritual values and becomes the expression of the social maturity of the community which practises it.

7) Machines exhaust natural resources

Tools rely on organic energy while machines use an external source of energy that is taken in nature and is rarely renewable.

Because they use an organic form of energy, tools do not exhaust nature; the energy is only available if it is renewed, i.e. produced at new by the living being that provides the source of energy, man or animal. On the opposite machines use an external source of energy which is rarely renewable; they have a very strong hidden impact on nature which the user is not aware of.

Fossil fuels, or derived forms like electricity produced by coal plants, are generally the sources of energy that machines use. They have therefore a hidden impact upstream i.e. before one uses them: they exhaust a natural resource which is not renewable. The user, without being aware of it, lives out of the capital of nature. This capital diminishes and it provokes the present crisis of peak oil when it comes to exhaustion. It is urgent to reconvert machines into sustainable ones.

On the other hand, this external source of energy consists often in combustion: it creates wastes which are not absorbed by the natural environment because nature cannot treat so much wastes. It has thus also a hidden impact downstream, i.e. after use.

Tools integrate much more into natural cycles than machines do, because of their organic source of energy.

The 2 myths of technology

Technology relies on 2 myths: 1) to any problem, there is a technical solution, and 2) problems, whatever, call for more technology.

Technology is a powerful instrument that participates in the creativity of mankind. Yet many dimensions of life have nothing to do with technology or cannot be influenced by it; technology has thus become more often the cause of our destruction than the cause of our positive evolution. It relies today on two myths:

- 1) On the belief that there is always a technical solution to any problem, whatever its nature is - in fact it is an eternal and illusory escape forwards in a more powerful use of technology which never solves anything.
- 2) On the fascination that technology creates virtuality, and virtuality stimulates more excesses, and, because of (1), excesses generate more technology, which provokes other excesses, which require more technology - in fact problems are only moved to another field, or more simply denied and postponed.

Technique acts visibly on matter and on matter only. Therefore we like it because it seems to have a clear and clean impact, and we can in this way better ignore the more invisible dimensions of what

happens around us. But this false and simplified use goes in fact far beyond any material impact: it generates an attitude to life that on one hand impregnates our understanding of the potential and of the role of techniques and that on the other hand fosters our way of understanding our interaction with our surroundings, in terms of mastery and domination, instead of in terms of adaptation to a given order that pre-exists us. This understanding is indeed the core of what we call technology.

In a more mature approach technology should in fact be recognised as the subtle art to understand and to manage our technical means and the material dimensions of life in our relationship with the cosmos; technology according to this other perception concerns then not only our material acts but also integrates our philosophy of life and becomes an expression of it, whether we are aware of it or whether we want to ignore this more subtle dimensions.

It is fascinating to observe in our western society how, in any difficult and problematic situation, we have a tendency to look for simple material and technical solutions. We are afraid of perceiving the social, cultural or spiritual dimensions of our acts as well as of recognising the very powerful social potential of our awareness - it means of the power of our social consciousness to propose ethical and social solutions where technology remains insignificant or ineffective; to avoid this complexity we try to reduce our action to the material dimension which we think we can easily perceive and master. It is why technology attracts us so much: it makes our action so simple! Yet this approach excludes the most important aspects of our evolution and of what is really at stake.

The first myth of technology (every problem strives for a technical solution) is therefore an expression of our materialistic view of the

world and of our narrow understanding of the real meaning of life. The fact we are looking only for technical solutions avoids us the trouble of, or prevents us from, questioning our way of life and the values it is rooted in and to look for the real causes of problems. In the case of climate change, we are looking for new technologies, for new forms of energy, for new resources and we refuse to see that our standard of life, as relatively rich people (the richest 10% of the world population), is much above what the Earth can afford.

The second myth (more technology in order to solve the excesses generated by technology) is an expression of the fact that we are locked up in a way of thinking that gives priority to technical issues and is incapable of questioning the nature of processes when they demonstrate the inadequacy of our scientific and technical approaches; our belief in technology is like our belief in institutions; when it does not work, we think we should provide more means to it, instead of questioning the whole process and of looking for solutions that are rooted in human values and that mobilise the personal and social awareness and maturity of people, instead of being based only on technical means.

Technological solutions seem too often to deny any power to social maturity and to the capacity of local communities to propose adapted solutions which trust more the human than the material dimensions of processes.

The 3 roles of technology

For a balanced use of techniques technology should become the art of restraint: right purpose, right means and self-limitation.

In fact, technology should play three roles:

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- 1) It should evaluate the needs and the purposes of any action, in a critical way, in order to check if they are not inadequate or exaggerated and to redefine them in a more appropriate way.
- 2) It should examine the different possible means for the defined purpose (1), and choose the most simple and reduced available ones, according to the principle of precaution that says that means can never be fully mastered.
- 3) It should observe and consider the consequences of the chosen means and readapt constantly the process in regard to the new awareness that arises as it goes. In this way, it participates to redefine needs and goals (1) as well as means (2).

These three roles of technology are of course incompatible with the two myths I just described, because they are the negation of too much technique. Self-limitation, as a way to a better and deeper way of life, is the key of the process. Technology loses in this way its power to dominate and becomes really a tool in the hands of the community. Technocracy turns into empowerment.

The measure of effort

Technology provides power and saves us effort. Yet the total amount of effort remains the same, even increased. How to judge?

Technology has mainly two functions: first it can achieve what we cannot with our own limited physiological strength, such as carrying heavy weights, perform a high number of calculations or select a big amount of data in a short time, drill tunnels through mountains, etc. but secondly technology also avoids us to have to make big (or small) efforts. A lift can bring heavy weights from the ground floor to upper storeys, but it can also simply avoid us to make the effort of climbing

the stairs. The second aspect is certainly more pernicious than the first in what it means for our experience of life.

Effort is our direct means to evaluate what is involved. It makes us aware of distances, weight, topography, climate, etc. When technology comes to our help, it alleviates our effort but, as it has been described earlier, it creates also a kind of fiction because it prevents us from interacting directly with our environment. It creates in this way illusion or at least a twist of our perceptions.

In our awareness of the way the use of technology modifies our perceptions we can adopt two different attitudes:

- 1) Either we believe that our environment constitutes a menace for us because of its heaviness, of its harsh slopes or long distances, or of so many aspects that are not pleasing to us, in one word because of its shocking indifference towards us. In this case we live in conflict with our material world and we feel we have to change our relationship into something more harmonious. We try then to adapt the world to our wishes and technology becomes a great but costly ally in doing so. We want to become masters of the universe.
- 2) Or, on the opposite, we believe that our environment expresses the basic law of harmony. Its harsh aspects (weight, distance, slope, cold, desolation, etc.) become challenges for us to adapt and to overcome our feeling of fragility. It does not mean that our fragility is less significant, it means that our awareness of an inbuilt harmony that is hidden in the universe leads us to be more flexible and to search for the true way to adapt. Instead of becoming masters we become then disciples.

These two different attitudes will generate two very different stands about how to use properly technology. In the first case technology becomes the essential tool for straightening the world and our relation to it. In the second case we learn to use technology sparsely because we have to find the right balance between our fragility and the law of harmony that prevails in the universe.

For both attitudes the true measure of the quantity of effort that needs to be provided remains an important question, of course of much more importance for the latter attitude than for the former. Through our own intuitive experience it seems that our own effort is always reduced by the use of technology. In fact it is exactly the contrary that happens: there is more energy involved in the use of technology than without. If I want to move a few bags of potatoes from the cellar to the second floor, I can walk up and down the stairs and carry one bag at a time. Or I can pile them all into the lift and transport them in one go. It is evident that I will have the impression to save energy if I choose the second option, but indeed the total amount of energy spent is much higher in the second case because the whole weight (or more exactly inertia) of the lift is to be taken in account. My own physiological effort will certainly be smaller, but it will be at the expense of a much higher input of external energy and of the existence of a tool that requires also energy to be produced and installed and run.

This statement seems very basic and without significance, but I believe it to be very relevant, especially if we examine the wider picture.

First this statement shows the general twist we experience in our relationship with our natural environment. When we drive our car we make practically no effort, except the effort of concentration. We are

comfortable, we are usually warm, can listen to music or eat something pleasant at the same time. We feel very powerful to be able to fly literally through the landscape at a speed of some 100 km/h. We have this subjective feeling precisely because we ignore the basic statement I just made before. We ignore the total impact in terms of energy use. Our present environment crisis is principally due to this major hidden factor. I'm convinced that most of us would behave in a very different way if, each time they drive their car, they would see so evidently how much it harms the environment: destruction through exhaustion of natural resources, pollution, noise, change of landscape, deterioration of public space, etc. (see above the description of cars).

This negative impact of our falsely measured effort is, on top of the illusion I just described, also increased by the use of our connections to other people, especially through money. An important part of the necessary effort needed for maintaining our level of consumption and standard of life is provided by "slaves", it means people we pay to provide the services we need. It is of course all right to call the plumber or visit the dentist, because we cannot develop skills in all trades. Yet the fact we delegate tasks to others reduces nevertheless also our ability to cope with diverse situations and to develop a wider range of skills. It falsifies as well our perception of reality as I have explained. But what makes the use of money more perverse is that we ignore very often who is working for us and at which rate. We are used to get water at the tap and electricity at the power point. It means that a lot of aspects of our connection with our environment are transformed and hidden. This is evidently an important twist.

But this twist becomes still more embarrassing when the slave is really a slave, it means someone who does what he does under the pressure of exploitation. Many of the goods we are used to consume

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are produced far away from where we live, often in poor countries where people earn a sparse living. The salaries, work conditions, social protection of workers or ecological standards practised in these countries are often almost equivalent to nothing. Most of these hard workers cannot enjoy the material comfort that characterises our everyday life. This is precisely what makes these countries so attractive for the production of our goods: it costs much less; it saves us money and provides us with goods we could not afford otherwise.

These many aspects of our relation with technology and the world show how much it is difficult to estimate the total amount of effort involved in each act. And it becomes still harder to measure what should be the right quantity of effort we can choose to implement. We not only miss the visibility of the total effort that is involved, such as our own physiological or psychological effort, the energy involved in our tools, the number of slaves who work for us and the conditions under which they live, etc. We miss also – and it is probably still more important – the necessary ability to know what is right, it means the right attitude we have to adopt between the two extreme attitudes I have described above: should we live for the mastery upon the world or become true disciples of the universe? To make this choice, that needs to be made hundreds of times a day, we need a spiritual perception of what we see around us. And this is something we need years and years to develop, never coming to the exhaustion of it.

The acceptance and the practice of effort are often the way of discernment. Effort is this strange impression we have that makes us feel real as well as the world around us. It is often the price we pay not to escape into comfort and illusion. Life is like a bicycle; it requires constantly just a little bit more effort than what we feel like making. It is a bit like suffering; it opens the way to knowledge. This

does not mean we have to look for suffering. It would be insane and perverse. But it is nevertheless evident that suffering – when we accept it as an unavoidable part of our relationship with the true reality of the world – and when we can cope with it, is for us an opportunity for transformation and growth. This is the same with effort. Effort is just the dose of suffering we can cope with that does not depress us but opens to us the gates of authentic experience and deeper knowledge. When we choose it, effort becomes vigour, that is strength and energy that is open to the mystery of what we don't know. It reveals to us deeper dimensions of life, because it connects us with the world and its laws. It is why the excessive emphasis of our culture on comfort is perverse. It encourages us to escape from the true challenges of life; it seduces to be lazy and not to invest all our energy into life but to save our power for living. This is certainly the only form of power we should not save, because it is 100% renewable and it opens us to the deeper meaning of life. Laziness, often caused by a lack of ability to choose and to commit, is a form of slow death. Why does our culture encourage us to be attracted by this form of non-existence? It belongs indeed to each of us to react and defend our own power for life. Nobody can do it for us. Many have interest that we give up this fundamental and fascinating power of being to the full.

Mastery or discipleship

Mastery requires many admirable skills, yet it gives us the illusion we are able to dominate the world; we need to listen and to learn.

Technology makes very acute our choice between the two attitudes I just described: between mastery and discipleship. Either we believe we have to dominate the world or we believe we have to adapt to what is given and we can learn from it. These two attitudes are

fundamentally exclusive. Of course it does not mean that the former path is the technological way and that the latter one is the primitive way. They exclude one another in their perception of the world, not on the fact that they can both use tools. It is evident that our perception of the world will nevertheless drastically transform the way we use technology.

Mastery means domination. It is based on an attitude that pretends to know what should be done and how it should be done. This is precisely the hubris in which we are caught in our western civilisation. Because we believe we know we have reduced the world to the rational representation we have created of it. We do not live in the world but in the illusion we have built of it.

Discipleship is based on a completely different attitude. It believes that the evolution of the universe has a meaning and is led by a conscious wisdom. This perception changes fundamentally how we behave because we remain in this case aware that we have to learn everything. It does not mean we know nothing. It means we have to integrate what we know into a wider vision that is given to us progressively by our experience of the world as a mystery. The awareness not to know opens us to what the universe teaches us. We become disciples and we can be transformed by the laws we discover, like the law of gratuity or the law of love.

The law of gratuity says that everything is given gratuitously in our universe: life, air, water, food, intelligence, compassion, knowledge, love, justice, etc. Of course we have to work to make it visible and accessible to all, but the resources are given. Without this basic truth we could not do anything!

The law of love says that relationships matter more than stuff. Everything is relationship. Matter is only what makes it visible and creates the pretext that links us one with another.

Discipleship is the path that allows us to learn this other way of being and to be enriched and transformed into true human beings capable of love.

Every day we choose between these two attitudes. Out of this choice ensues how we experience the world. Is it hostile (and we need abundant technology to correct it) or is it harmonious (and we need just a minimum of well-adapted tools to keep the true image clear)? The answer to this question leads us to fundamentally different paths and experiences of life.

The 6 questions of the Tibetan monk

We need constantly to re-evaluate each process in terms of authenticity, evolution, adequacy, harmony, need, purpose.

Long ago, there was a monk in Tibet who proceeded to many inventions, but, every time, he put them back into his drawer because he was not convinced it would help towards the spiritual evolution of mankind. Inspired by this wise monk (and by Socrates) we can enumerate a few questions we have to ask ourselves in order to check the adequacy of any process:

- 1) Authenticity: is it true?
- 2) Evolution: is it good?
- 3) Adequacy: is it right?
- 4) Harmony: is it beautiful?
- 5) Need: is it necessary?

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6) Purpose: is it a help towards human and spiritual progress?

These questions allow us to escape from the narrow way of technocracy; they open us onto another world which is much wider and deeper, and which relates to true human values.

They open us also to new ways of action and of being, and even maybe to new technologies, because they liberate us from the enclosed beliefs in pure technical and material means. They allow in this way a real creativity and the development of our human interdependency. Their translation in everyday life concerns the whole community and emphasises how much we rely on each other and how much we need each other in order to access a deeper quality of life which can take shape only if we integrate the social and human dimensions as the most precious ones in our perceptions and actions.

4) ESCAPE THROUGH ACCUMULATION

After examining how we take refuge in denial and illusion through force and virtuality and in domination and destruction through false mastery and excessive use of technology, I will describe now the third form of escape from the indifference and power of nature, i.e. our need for exploitation and accumulation.

Refuge in exploitation

The paradox of the law of freely chosen poverty

While wealth seems to be the best way to a rich life, chosen poverty (simplicity) remains the best way to open us to live life to the full.

There is a deep paradox in wealth: it offers the best material, social, educational and mental possibilities to have the kind of life one wishes for oneself, but in fact it includes so many constraints, and especially privileges or other forms of attachment and dependency, that it makes often life narrower and poorer. Indeed it keeps us locked up in behaviours that aim to maintain or increase our material security; it tries also to implement the much narrower conditions that out of ignorance we have planned for our future.

On the opposite a chosen form of poverty - it means simplicity and self-limitation when they are practised for humanistic and spiritual reasons - helps us to get rid of most material, emotional and social hindrances and to open to real life, as a flow of unexpected circumstances that allow us to experience its depth and its sacredness, beyond anything we could have planned, foreseen or believed.

This is the central teaching of many forms of wisdom and spirituality through the ages; from the Desert's Fathers to St Francis of Assisi, from the Hindu sannyasi to a Gandhi or a Simone Weil, the strive for poverty as a rich form of simplicity opens us to the depth of life. Simplicity and self-limitation are much more than having a little bit less than our neighbour; it is having only the necessary minimum in order to focus on the essential. The representation of what is the minimum, and its corollary of what is absolutely necessary, are certainly central questions in our quest for truth and especially for equity.

When we are confronted with the complexity and the unpredictability of life, we tend to take refuge in material and visible actions. Signs of material success represent for us a happy life; but deep in our heart we know that it is a treachery; material well-being is only an illusion that we can enjoy certainly but that has nothing to do with the deep meaning of life. Doing and having remain more or less escapes from being, when they are not focused on, or oriented towards, the richness of the present moment.

Exploitation and accumulation

We consider nature as a huge stock of raw materials we can consume as we want; we feel accumulation gives us consistency.

Accumulation of material goods (stuff) and even of mental acquisitions (knowledge) seems to provide us with a meaning in life. Life in fact happens in ourselves wherever we are, very often independently of outside circumstances or at least in a way that is principally related to our inner perceptions and interpretations. Despite this deep anchorage of life in our own depth we are seeking all the time for external sources of excitement that we find in outer

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stimulation or in consumption of material or cultural goods. Needs for external stimulation and greed for accumulation lead to the exploitation of nature as a source of material resources and even to the exploitation of fellow creatures who can provide us with what we strive for, independently of the destruction this form of exploitation can generate too often.

Greed is certainly a human characteristic, but it nevertheless develops mainly when there is an inner void, especially by lack of guidance towards what makes sense in life. So many rich people are not happy and know very well that they have not found what is essential in life. Accumulation beyond basic needs is therefore sterile and deceptive.

The word *exploitation* when it concerns agriculture or natural resources contains already, as such, a strong meaning of excess. When we use it, we mean - unconsciously in most of the cases - destruction of the source that provides the resources because extraction as fundamental attitude does not consider how quickly these resources can be renewed. Extraction is oriented towards greed and profit and is a one-sided move; it is about taking only, without the care to give anything back. Exploitation does not integrate therefore in natural cycles; it is why it means destruction. When the resources are exhausted, we usually turn towards other sources in order to continue our destructive way of extracting.

The word *exploitation* is also used for human beings. As one can exploit resources to the stage of exhaustion, i.e. total destruction, human beings can also be exploited. Liberalism (in the sense of free market economy) has discovered that the more one exploits them, the weaker they become and the more they have to submit, unless the extreme degradation of the situation finishes by provoking rebellion.

Accumulation calls for exploitation, without which it is not possible. Any wealth has always a dubious origin, whether conscious through a willing practice of greed and exploitation, or unconscious through consumption of goods that have been produced in exploitative conditions. As rich western nations we know that our wealth, in many ways, originates in the exploitation of unjust relationships with poorer countries. As it has already been mentioned earlier wealth arises from unbalanced exchanges; any just exchange should generate equal incomes on both sides; it means that wealth can only take shape as a transfer when there is accumulation on one side and there is loss on the other.

Competition versus cooperation

Cooperation is the only path for building a harmonious collective life while competition is mainly an illusion for losers.

Competition is based on the illusion of a bet: I can be quicker and smarter than the others and I will get therefore many personal advantages for myself. In fact, if exceptionally some people can win by betting in this way, it is evident that most people are losers at this bet; there are more poor people in the world than rich people and each of us has objectively more chances to lose than to win. Winners can only win because they are taking advantages of others through power or chance. These advantages are usually never freely given but only extorted through force (exploitation). They are a theft. In fact cooperation is the only way to build a balanced community where everybody has a share in the common wealth. Cooperation is the only way to allow this common wealth to be optimal because it helps everybody to contribute to it and to access it.

Accumulation is an individual trend that can be only practised in a competitive system or at least in a competitive mentality. In a cooperative system sharing is more important and brings more justice and more wealth for all. It allows a richer way of life because wealth remains accessible for all.

Cooperation as necessity

In a poor natural environment species have to cooperate; nutrients circulate quickly; each one takes only the minimum they need.

Despite what Darwin described as struggle for survival of the fittest it is noticeable that the different species that live in a poor environments have to cooperate; their survival depends on their complementarity in an ecosystem that can complete its cycles only when everyone plays their role. Competition is then less exacerbated than in richer environments. As nutrients are in these cases poor and rare they have to circulate as quickly as possible in order to become accessible to a maximum number of individuals. Species that live in such settings have usually a slow metabolism and can rely on little; they generally take only the minimum for themselves, leaving what is left available for others. This natural law shows how it is wrong to base our economy on accumulation. The social law for economy is like in nature based on quick circulation and sharing, especially in times of poor conditions (bad yields, economic crisis). The law of cooperation and sharing is especially true for poor societies. In case of economic crisis the solution relies on true human solidarity in taking care of the weakest and ensuring that each member of the community has enough for survival. In Australia the practice of mateship or Aboriginal solidarity (obligation for sharing through the law of kinship) is certainly the expression of this basic truth.

It is fascinating to see how much we can learn from nature¹⁸ because it enacts the basic laws of life. Our social settings are evidently artificial. The more we accumulate wealth and comfort, the more we drift away from the laws of nature. With the industrial revolution and the accumulation of wealth in western societies we have got accustomed to the economic principle that the accumulation of wealth in a few privileged hands will allow the quickest development because it will favour investment and growth. Maybe this mechanism is effective when wealth prevails for all but it is evident that we have much difficulties to give up what becomes a false certitude when recession strikes; in this case the natural law of interdependency and sharing should prevail and we should come back to a basic practice of ensuring welfare for all, based on solidarity, sharing and quick circulation of the poor resources that remain available.

It is interesting to consider that communities that live in harsh conditions have generally developed this kind of practices. In the early times of white settlement in Australia pioneers have developed the practice of mateship which has culturally impregnated the spirit of Australians until very recently. Much before them the Aboriginal people have established social rules of solidarity that oblige each one to share what they have with others. The rules are even so precise as to stipulate through the law of kinship with whom one has to or with whom one cannot share. In such a poor environment each resource has to be made available for all; yet distance is necessary between some people depending on the nature of the biological or intimacy relationships which link them (especially in-laws).

¹⁸ This idea of cooperation in nature is inspired by Tim Flannery: *The Future Eaters*, Reed Books, 1994.

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Accumulation versus circulation and sharing

As long as individuals do not retain for themselves the product of common creativity it remains in circulation, accessible for all.

The laws of market are based on a fundamental inversion of the laws of life: they say wrongly that everyone should try in each exchange to keep for oneself the maximum profit in order to find happiness; it means that each one should keep and accumulate for oneself the maximum of value which it is possible to detach from circulating goods and services, by retaining it for oneself and depriving therefore others (community) of this same value. We wrongly believe that profit is natural and good, but profit is in fact pure theft because it wants to appropriate for oneself the product of common creativity. Profit is not the honest income earned by a useful and conscientious work, but it is the dishonest speculation that plays with the flexibility of value. While work should be justly recompensed, the product of common creativity should remain in circulation among members of the community, and be therefore accessible to many people as possible.

When I work in order to sell the product of my work on the market, I transform existing resources, goods and services into a new product to which I add my own creativity. I have on one hand to cover my costs for the necessary materials and tools and on the other hand to compensate for the time I spend working, as time means expenses for my own survival. For performing this work I will enjoy also the privilege of accessing common wealth; this common wealth is available to me in its material form as access to public infrastructure or to freely available air or water or sun heat, or it is available in its immaterial form as the knowledge that I received freely from my community, such as education, training, sense of beauty, or that I learned to develop thanks to the positive influence of my social

context, such as gifts of love and generosity. As I did not pay for these aspects of common wealth, I should not either be recompensed for transmitting them further, especially because the fact to transmit them does not deprive me from them. I share qualities like love and knowledge but do not part from them. I get even enriched by the fact I share them because it creates links between me and my community and it valorises me. In recognition of these different inputs I received from my community, my total income should not amount to more than the compensation I receive for the real costs that have been involved in subsistence and transformation; this compensation will cover for materials, tools, means and for the time that have been necessary for the transformation; but it should not include the value of the rich treasures I could access in the common wealth.

When I sell the product of my work on the market I can either sell it for the minimum price in order to cover my costs and my time (subsistence), and nothing more, or I can speculate and try to sell it for the highest possible price because I know that some people are ready to pay more for it than what it has cost me in total. I can thus hope to get more money for it and to make a profit, in addition to my income. If we admit that this higher price reflects the real value of the object, we can say that this supplement of money corresponds in fact to a part of value that can have two different sources: it may have been incorporated earlier into the object without costing anything, neither in time nor in material, by the workers who have contributed to the chain of its transformation before me, and without costing anything to me either; or it may have been added by me thanks to the contribution I got freely from the common wealth in terms of material support (natural resources, infrastructure) or in terms immaterial support (advice, knowledge, inspiration, wisdom). In both cases this part of supplementary value is certainly the fruit of common wealth. When I try to sell the object for a higher price than

what it has cost me, profit is the part of the value of the object that I try to detach from it and keep for myself when I get monetary compensation for it. I get paid in this case for something that I did not provide but that should remain attached to the object because this value belongs to the community.

Common wealth should remain accessible for all. Profit should not exist. Any part of the value of a good, when it is not due to real costs (materials or time), should not be detached from it nor paid separately but should remain part of the total value. Therefore it has to circulate with the good and to remain accessible for all. This is a part of common wealth that nobody can own and that nobody can evaluate the real value of, as common wealth should not be submitted to the laws of market.

Income and profit are two very different things:

- Income is the compensation for the real costs involved in subsistence or in transformation. Therefore it has to be paid for, at its real value.
- Profit is the fruit of speculation; it is a part of the value that is contained in any good or service as part of the value which has been created by community and which individuals can detach from the product - and do detach in an individualistic and competitive system - in order to keep it for themselves. Profit is theft.

The influence of market tends to increase the real income - which ensues in fact directly from precise production costs and from the duration of work - with a speculative profit because the value at which the effort of work can be sold is also influenced by the laws of market that are of speculative nature. Market laws are for instance influenced by factors of abundance or of penury, or by criteria of

fashion that have nothing to do with the work and the real costs of production. It becomes an attitude of maturity to be able to follow one's own awareness of what is just instead of submitting to the trends of market.

Whatever are the conditions for exchanges, accumulation does not only subtract an important value from common access, but it generates also an accumulated wealth that remains most of the time unused because it is stored in the hands of people who do not even have the possibilities to use this value fully. Accumulation can even be destructive when the personal price paid for it is high and when this wealth is wasted. Waste of resources and of goods is a form of self-destruction, especially when one knows which price - not only financial but also affective or social - people pay for acquiring goods they do not need so much.

On the other hand, when common wealth remains accessible, more people have access to it. The more the total value remains incorporated in the object, the more it circulates and the more its circulation provides wealth to different people and becomes accessible as it remains cheap because the price does not increase as consequence of unjustified profit. It is much more preferable for the common good to make wealth accessible than to privatise it.

Integration into cycles as transformation

We have to re-integrate natural cycles (transformation of wastes into resources) and adapt to their rhythms, variations, location.

The main cause for the destruction of our natural environment ensues out of the fact that our activities are not related to the natural cycles of transformation that are providing us with all the resources we use

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and that have to absorb the wastes we produce. Natural cycles are based on transformation of resources; no wastes exist in nature because what we call waste is used as resource for the next stage of the same cycle. Cycles vary all the time according to natural rhythms (day/night, seasons, moon), to variations of conditions (drought/flood), to location (climate, altitude, regulating influences, topography, artificial influences).

This necessity to integrate all our activities into natural cycles has already been mentioned many times, but it is necessary, at this stage, to make here a concise presentation of it, because it is a very central concept to our topic about exploitation and accumulation.

In order to be sustainable, our activities have to integrate into natural cycles. This integration has the following characteristics:

- Integration into cycles means that our activities should not consume more resources than the Earth can produce. This capacity of production is not only defined by the quantity of resources that is available now but also by the speed at which these resources will be renewed, which depends on the duration of the whole complete cycle of renewal and on the many variations of speed for reconstitution, according to seasons or to further periods of cycles. For instance we cannot consume food at a quicker rhythm than it is produced. We should not cut trees if it is not certain that they will be replaced by other trees in the same laps of time than we cut them, whether planted by our own hands or just naturally grown in forests. It is interesting to notice that the effective duration for the production of our present reserve of fossil fuel has been 500 million years. This is probably not even a renewable resource on this time span as it is not a natural cycle; it is almost sure that the process of transformation of vegetal material into fuel (oil or coal)

will not repeat itself in the same way. Extraction in this case goes against the law of integration, even if it spreads on a duration of 500 million years!

- Integration into cycles means that our activities should not produce more wastes than our surroundings can absorb. In this case also the speed for absorption is the determining factor. Cycles of production and cycles of absorption are in nature only different stages of the same cycles, because there is no distinction between absorption (for wastes) and production (for resources). There is only a constant cycle of transformation which evolves like a spiral, it means like a circle that evolves with time, not in the form of a close circle but in the form of an evolving structure.
- Integration into cycles means that our activities have to adapt to any variation in the rhythm of these cycles, influenced mainly by changes in the climate or by modifications of the local conditions, through the influence of nature or the impact of human activities that do not fit into natural cycles and provoke therefore the degradation of these cycles.
- Integration into cycles means also that our activities must be adapted to the local context. Phenomena are certainly global because of the incessant exchanges of currents (especially air and water, but also everything that can be transported by them such as seeds, animals, diseases) and because of the incessant exchanges between the different parts of our planet through migrations (animal and people), transport and telecommunications. Yet phenomena are also local because they have to fit into the local ecosystems which are different from one place to the next (forest, mountain, desert, ocean, dry, humid, tropical, boreal, continental, oceanic). Ideally transport should not be necessary because it consists only in exporting imbalances elsewhere. Density in any case remains a major factor, because it expresses the impact of the sum of the activities which can become very destructive in their

cumulative effects although the same activity in an isolate context could be very suitable with the law of cycles.

- Integration into cycles means equity which is a very important criteria for judging the quality of how our activities integrate into natural cycles because it is a way to see how the sharing of available resources proceeds among the different categories of persons in need, on a world scale. Transport can be the means for equity, although it is in fact only an artificial way of correcting effects of density. Globally transport as such does not produce anything and does not help integrating into natural cycles. Sharing the available resources is certainly the first priority today in order to correct imbalances between poor and rich. In general any discourse about the necessity to find new resources or to increase production is a way to hide or to escape this inevitable challenge of equity: how do we share what is available today? Trend for an increase of production or extraction is also the simplest way to deny that resources and wealth should be shared and it is also the easiest way, for us wealthy nations, to refuse to reduce our standard of life.
- The opposite of integration into natural cycles is mining. Mining exhausts the natural resource it is intended to extract. It just takes what has been produced over millenniums without considering how it will or can be replaced and even less questioning at which speed it will be produced by nature. Mining is our main attitude towards nature: we just take what we want without considering the consequences. Mining is even the attitude we have towards agriculture although it should be par excellence the field of renewable production. Our present agriculture in general exhausts the soil and destroys its own main source of income. It is why agricultural land produces less and less. Mining should be abandoned. Of course it asks the question: and what of our needs for mineral resources like iron, copper, bauxite, oil, coal, etc. It is

evident that there is no simple answer to this question although recycling, self-limitation and reconsideration of our needs would provide better ways of using these precious resources; it is yet also evident that our present practice cannot last longer, for the simple reason that resources are not infinite.

Demography, density and consumption

Deterioration of nature is also certainly linked with demography. Yet the ones who make most problem are the wealthiest consumers.

The birth of a rich American has more impact on our planet than the birth of 10'000 poor Bengali! When western people talk about the impact of demography on the deterioration of nature and of our surroundings, they usually mean that poor people in poor countries should practise birth control and have less numerous children. It is true that poor countries have a quicker growing population but the high level of average individual consumption makes the rich nations much more harmful, especially when they do not refrain from intervening in poor countries where they exploit natural resources or take advantage of cheap working forces and of poor social regulation that do not protect indigenous people from depletion of local resources like food, water or minerals.

The birth rate in poor countries is much higher than in rich countries, as also the age average is much lower: 51% of the population under 14 years old in Yemen or 36% in India, but 16% in Switzerland or 19% in the United Kingdom. One should also remember that in poor countries children provide a security for old age, by lack of social security.

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The impact of demography on the environment is certainly very serious, especially when poor populations are dense and, because of their poverty, look for resources in the direct surroundings, making in this way the impact of poor people more devastating on short distance. Yet it has to be compared with the impact of our western way of life on a much wider scale as our consumption is much higher and more spread out because it concerns also many resources and goods that come from far away. Our impact is therefore much more scattered.

Life is sacred and it is very difficult to impose restrictions on procreation of others, because it touches the most intimate part of culture and of personal and family life. Yet any conscious and free decision to reduce the development of one's own population has certainly a positive impact on the way we relate with the Earth. Awareness about the impact of demography on the depletion of natural resources and on the general equilibrium of our environment participates in preventing disasters. It can and should lead a community to practice a serious birth control on its own social group in order to avoid growth. Because in this case it is not imposed by external pressures but it arises out free observation of the impact of the concerned community, this form of mature awareness is much more appropriate; it is a free and responsible choice for its own destiny.

It is also essential, before thinking of imposing by force any restriction as birth control, to give priority to any means of improving the capacity of the Earth to nourish its population: equity and sharing, diminution of non-productive sterile ground (roads, parking), reduction in wasting or in speculative destruction of food, priority to intensive food production in land use (vegetables, cereals instead of cattle), conversion of non-useful productions into essential one. And,

as a first priority, we have to learn to practice a form of food production that is in harmony with the laws of nature, it means that it does not destroy nor perturb the fragile balances and processes which generate these goods.

It is also essential to be aware that the rapid growth of the world population has been only a very recent phenomenon which started around 1800 and even became very potent only in the middle of the 20th century. Only technology, combined with a violent incline for domination, has made this rapid growth possible, because new means of transport, of production and of exploitation of nature have been able to provide the necessary goods and especially the indispensable food for so many people as well as better health conditions. It is also clear that this growth has only been possible because we have allowed ourselves to exhaust many resources of nature and we have thus not respected the laws of natural cycles. In this sense depletion of nature generates demographic explosion and not the contrary.

In nature, more availability of food allows the species that feeds on it to grow in numbers, and the increasing numbers will participate quickly to deplete the resources and to reduce back the numbers of survivors by lack of food. This is true for wildlife and it should also be true for humans. But, in the case of mankind, human beings have twisted the laws of nature because they decided they did not belong to nature and they were exempted from submitting to natural laws, as we saw before. Human action has therefore prevented the normal reduction in numbers to happen naturally when the resources diminish. Artificial production has maintained an artificial level of availability that has provoked the demographic explosion we know nowadays, which is in fact due to the excessive exploitation and consequent exhaustion of natural resources. This is especially true for city population.

Transport and exploitation of natural resources from other countries have created deep imbalances and injustice in the way food is shared. It is vital for our species to go back to a healthy ratio between population and fertility of the soil, according to the self-regulating law of equilibrium which allows only the right quantity of members of a species to rely on the available food. Any other attitude can only encourage excessive increase which will inevitably provoke famine.

For this reason, we can say that the destruction of our environment is as much the cause of the demographic explosion we know today as the consequence of it. The depletion of nature, based on our spirit of domination and made possible by our technology, has suppressed any visible checks and balances for our demographic growth. It has nourished and provided us with all the goods we wanted to consume, despite the increasing numbers. And, as a consequence of this false abundance, the demographic pressure accelerates more and more the destruction of our fragile natural environment. Self-limitation becomes thus the key of our future: self-limitation in procreation but, before all, self-limitation in our pressure on the environment. The self-limitation of our pressure on the environment is certainly the key for the self-limitation in procreation, and not the opposite as it is said too often.

Another factor plays here an important role: different observation of demographic tendencies have proved that the increase of the standard of life participates in reducing considerably the rate of procreation. Poor populations have high rates of reproduction while richer ones have come to a rate that even does not ensure a constant population. It would seem logic to say: let's increase the standard of life for everybody and the population will stabilise. But this would mean a profoundly increased impact on nature, far beyond what is possible.

We would need at least five planets! This option would evidently destroy our environment in a short time and kill us at the same time. The alternative, and only possible, solution has to propose a drastic reduction of the standard of life for all people that consume more than the average of what is available for all. It means a reduction of the standard of life for all privileged people to the minimum that is really needed. This would make almost three quarter of the global wealth available for the poorest. Everybody can then have their share. Yet we still need also to reduce our rate of reproduction. This is only possible when people, especially women, get the necessary education. This necessity means, once again, to ensure equity: that everybody gets their share, in an equal way. The rigorous practice of justice, equity and sharing is hence the solution. It will save the environment and offer a good standard of life for all. Ambitious program!

The management of flows

We have to measure and manage the different productive flows of our activities: natural resources, wastes, energy, human effort.

Except in terms of financial flows (expenses or incomes), industrial companies today have a very bad knowledge of the different quantities of materials and of energy they consume. It is important to be able to measure these flows because it is the only way to manage them and to deduce appropriate rules of behaviour. Yet the measure is not enough because quantities are not the only references; the nature of exchanges with the natural and social surroundings and the consequences they have on general balances, on cycles and on equity must also be considered. These are the qualitative aspects which escape too often our attention.

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One can only manage what one can measure. It is evident, especially in a society that pretends to behave in a scientific and rational way. In our modern civilisation we never stop measuring but we measure mainly financial flows or only what we use or need, and too rarely what is really available; and we still more rarely compare the quantities of what we use with the quantities of what is available. Our measures never provide guidelines for our behaviour; we do not know self-limitation because we have lost the sense of measure, in the meaning of restriction but also in the meaning of measurement that stipulate more restrictive behaviours.

In order to know what is reasonable and equitable, we need indicators and reference points; how much water is available and how much do I have a right to consume without depriving or endangering fellow creatures? Only measures can provide this kind of references. Therefore we must learn to measure the flows of materials and energy which are involved in our production system and in our consumption and especially we must learn to translate the information contained in these measurements into indicators and rules of behaviour.

Yet measures are not enough because many aspects cannot be measured inasmuch as they concern more qualitative than quantitative aspects. In this case, other rules of behaviour can also be deduced, in a more qualitative form.

Measures allow us to know the quantity of resources that is available and at which speed it reconstitutes; it allows us also to know how our wastes can be absorbed and recycled. On the other hand, it allows us to be more aware of the fluctuations in natural rhythms, due to irregularities or external influences (normal seasons versus exceptional drought / flood, influences of exceptional conditions).

If we could learn and practise how to better measure the flows of materials and energy we use, we would be able to combine these flows in a better way by combining also different complementary activities. For instance it would be favourable to set side by side two industrial companies among which one would produce heat as waste and the other would need heat for its production, or one would produce small chips of wood as wastes and the other would need wood chips as fuel or as raw material for chipboards for instance. It is a way to recombine industrial activities according to the model of natural cycles. This way of organising complementary activities is even called industrial ecology, in reference to the fundamental importance of cycles as a condition for any ecological activity. It has been developed originally in Denmark (in Kalenborg). Yet, although industrial ecology proposes a very interesting and more elaborate approach, it provides only a very partial solution in the effort to reduce by only a few percents the impact of industrial activity on the environment, for the good reason it does not concern anything else than the reduction of what gets wasted (in our examples the loss of unused heat or the unnecessary transport of wood chips) and not the whole of resources and energy.

The price is not a measure

Accounting today is mainly financial because decisions are taken only from the financial point of view, in terms of sales and profit.

The price cannot be a right indicator because it is the resultant of the combined influences of the laws of market and of speculation which do not consider the real value of resources, goods and services nor the quality of processes. For the market, justice and biodiversity as well as human values and social welfare have no financial value as

such. Because the price of any resources or goods is the result of speculation, it never indicates their real value. It is only an amount of money which is required for the exchange of what is considered as goods, work, capital, infrastructure, land or any other necessity for production or sale. Although it does not consider and does not give a price for what has value (nature, air, sun, life, beauty), market is nevertheless able to fix a price for what can be exchanged even if it is of immeasurable value, like when selling a child as a slave. Terrible nonsense!

We never stop confusing price and value as if the price were an expression of value. This is completely wrong because, first, the value of things varies from one person to the next, according to needs, preferences, culture, options in life, and, secondly, because the price has nothing to do with the real value of things but only with the conditions of exchanges.

For instance we sell fossil fuel at a price which is much below its value when we know that it will be soon exhausted and that it has needed hundreds of millions of years to be formed. On the other hand, we destroy nature without giving any price to what we destroy which will be impossible to replace. Or other example: the price paid for some famous painting or some fashionable object is so high that in comparison human life in poor settings or the will to improve its conditions seem to be of no value. Price is more proportional to greed than to true value.

Incorporated energy

Incorporated energy is the total quantity of energy that has been necessary to produce a good, from extraction to transport.

Each good - even any agricultural product - needs some energy in order to be produced. From an ecological point of view, it is very important to be able to compare the respective quantities of energy that are necessary for producing comparative goods because it gives a criteria for choice between different possible options when one is aware that consumption of energy should be reduced.

The main problem with the products we find on the market consists in the fact that we do not know in which conditions they have been produced. We ignore, from the ecological point of view, how much their production has caused damages to nature (deforestation, pollution, excessive use of water, exhaustion of resources, quantity of energy consumed for production and transport); from the social point of view, how much they have relied on the exploitation of unjust social conditions (poorly paid jobs, danger of work conditions, deprivation of social and political rights); from the health's point of view, how much they contain dangerous substances, how much they are refined, i.e. deprived of their healthy original substances. Among these many aspects, the amount of energy used is one of the major ecological aspects.

It is important to know that for instance a photovoltaic solar panel needs to work roughly one year in order to capture the amount of energy it has needed for its own production. If one includes also the necessary part of batteries that go with it, the time necessary to repay the energy of production is equal to maybe 2 or 3 years. It gives an idea how much such a panel is efficient.

Similarly, we can compare building materials (in MJ/kg)¹⁹:

- stabilised earth 0.7

¹⁹ From: B. Lawson, *Buildings materials, energy and the environment. Towards ecologically sustainable development*. RAI, Canberra, 1996.

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• concrete blocks	1.7
• in situ concrete	1.9
• clay bricks	2.5
• glass	12.7
• galvanised steel	38.0
• aluminium	170.0

Of course, for a true comparison, one should take also into consideration the necessary quantity and the specific weight of each material. In this way it is possible to obtain really comparative data, like for instance quantities of energy in MJ/m² of wall or of roof in their composite form:

Description of the wall	MJ/m ²
• Timber frame, external timber weatherboard, plasterboard inner lining	188
• Cement stabilised rammed earth	376
• Timber frame, external aluminium, weatherboard, plasterboard inner lining	403
• Double clay brick, plasterboard lining	906

Of course the data are only a rough indicator, because it depends also on the local conditions on the building site, on the conditions of production and transport, on the quantity of machine or man work on site.

Climate change and the new quest for energy

After describing the trends for exploitation and accumulation it is good to illustrate them by an example. The energy crisis and climate

change provide the ideal illustration of these trends. It is evident that we have urgently to learn how to manage not only natural and human resources but especially energy. So far, we consume it without any consideration for any limitation imposed by nature. Facing the energy crisis, we refuse to see what it means as an urgent change in our ways of life. Specialists speak of diminishing glasshouse gas emissions, of trading even rights to pollute - which in a prudish way they call carbon trading - and of finding new sources of renewable energy. It is, once again, a form of escape into more technology. We remain blind to the real message which says that we have, as rich people, to stop taking more than five or ten times our share. We can already feel how the tension is increasing, because the need for change becomes more and more evident but we continue to live in the same way. Climate change is the visible sign that makes our deep maladjustment to natural cycles so patent.

The urgency for change

We must urgently act before the crisis becomes too sharp: it is the only way to plan peaceful solutions for a better life for all.

The ones who spend too much and provoke the devastation of climate change are not the same as the ones who pay for it by bearing the effective consequences: The formers are the rich westerners and the privileged elites of poor countries, the latter are the poor inhabitants of Bangladesh who have their land flooded, the many Pacific islanders who see the level of the sea rise, the inhabitants of Siberia and Alaska who lose their shores that collapse into the ocean after the permafrost has softened. The crisis is already at a peak but the dissociation between rich spenders and poor payers make it inefficient to force us to act. Yet the change can only bring us back to a better way of life because our present behaviour as robbers and

scavengers cannot last: it destroys ourselves morally still more than what we are destroying physically. And we have to act urgently, not only to save ourselves and the planet, but especially because change can only happen before it becomes too difficult to act. The increasing crisis will make it more and more difficult to plan our future, because social conflicts, about food, transport, land tenure and access to energy, already arise which will become sharper and sharper. And crisis, although they are the most powerful means to impose change, provide yet the worst conditions (fear and violence) for providing peaceful solutions, once they develop to their full extend. It is why we must plan our future urgently now.

Most of our energy is provided today by fossil fuel and huge cities and industries rely on this supply to be able to function. We are not only exhausting the available fossil energy by wasting it at a speed which will deprive our children from having any drop left for themselves, but the impact of this consumption on the climate will leave them in an almost inhabitable world, at least for the majority of them. Either this energy is precious and we have to save it in order for them to have the same share as we have (principle of equity) or it is not essential (because it is destructive) and, in this case, we can deprive ourselves from its consumption, avoiding in this way the terrible consequences its use has on climate (CO₂) and on social life (huge disparities for access to energy, violent domination of countries with fuel resources).

We can make our insatiable greed strikingly more expressive through a quick and very approximate calculation: if we imagine that we still would not have used any drop of the fuel which we already burnt in the past decades, something like 223 Gtep (billion of tonnes of equivalent to petrol) - or 450 Gtep for the most optimistic previsions - would still remain today available, which the whole world

population (6.3 billion inhabitants) would be able to burn during the time span of its reconstitution, i.e. of 500 millions of years²⁰ - in accepting that it would reconstitute, which is probably not correct. It means that 70g (a little less than a decilitre) would remain available each year for each 1000 inhabitants²¹. We could even double this quantity, in order to be more optimistic and to take into account that our calculation is approximate, but it would not change anything, because our actual consumption remains in comparison completely out of proportion. This basic calculation provides us with a theoretical individual available consumption which would only allow us for instance to drive on a distance of one unique metre by car each year²², excluding any other use for industrial production, cooking, heating or cooling. It means that for every 3 km, in daily average, we are used to drive today, we consume yearly the real share of 1 million people who are therefore deprived of their right to consume the same quantity. In fact, we spend all together 3.1 Gtep each year, it means 7 billion times more than what we would be allowed to, in order for our consumption to be sustainable. What a disproportion!

Peak oil = general collapse

The expression “peak oil” is an euphemism which hides the immediate threat of collapse of our civilisation (before 10 years?).

Objectively the expression “peak oil” means that the highest rate of production of oil has been reached and that this production will start now diminishing drastically in the next years while this resource becomes exhausted and the remaining quantity more difficult to

²⁰ If we admit that the process will repeat itself in the next 500 mio years exactly as it happened in the last 500 mio years. Nothing is less certain!

²¹ $223 \times 10^9 \times 10^6 \text{ g} / 6.3 \times 10^9 \text{ inhab} \times 500 \times 10^6 \text{ years} = 70\text{g}/1000 \text{ inhab year}$.

²² $70\text{g}/1000 \text{ inhab} = 0.07 \text{ g} / \text{inhab}$ at $8 \text{ l} / 100 \text{ km} = 7600 \text{ g} / 10^5 \text{ m} \rightarrow 7 \text{ g} \times 10^{-2} \times 10^5 \text{ m} / 7.6 \times 10^3 =$ less than 1 m.

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extract. The price of it will of course increase rapidly as it becomes rare and the competition for its access will be exacerbated, generating soon violent struggles (social unrest and wars). American or Australian cities, which rely mainly on individual transport, will know incredible crises and violence as they will be paralysed. As most of our way of life relies actually on oil, the lack of this resource will make most of our activities impossible and will deprive us from the goods we are not only accustomed to, without even being aware how much our standard of life depends on it, but also the goods our survival depends on. In clear words, “peak oil” means the very near collapse of our society and the absolute necessity to reconvert our system of production and our ways of life in the next ten years. This kind of situation has happened already many times in the past and has provoked the death of many so-called great civilisations; they were probably not so great if they could not face their own destruction without reacting.

We are not aware how much our way of life relies on oil: transport, and especially transport of food, heating, mobility, energy, any industrial product, any synthetic material are the results of processes that heavily involve oil as a source of energy or as a chemical component. In clear, it means that the exhaustion of oil resources will put an end to our food distribution and even production, to most of our means of transport, to any form of energy that is not renewable, to most industrial goods because they are not handmade, to any production of synthetic material like plastics or even clothes or shoes, etc... We not only won't have any car any more, which is not a major problem as long as we can still go to work and access basic goods; more problematic, we won't have access to food unless we produce it ourselves or have it available at short distance in a sufficient quantity to satisfy the needs of people who are in a similar situation of proximity; and in order to show how strong the impact will be, we

won't even have the possibility to buy a tooth brush or any synthetic clothes, as these products rely on fuel as an important component of plastic or nylon! It is also true for irrigation system, plastic tanks, solar panels, windmills, etc.

The reconversion of our entire production system is at stake; and this must be done in a very short time; before maximum ten years, social unrest and violence will make the reconversion still more difficult. There has already been a long time, probably something like 50 years, that we knew very well what will be happening; we have refused so far to adapt and we have wasted precious years which would have allowed us to adapt instead of getting deeper into destruction and extreme behaviours of consumerism.

We will see later how food has to be produced locally in order to escape the power of multinational corporations and to better be in control of local populations. Clothes have also to be produced in a more natural way; it means certainly a higher pressure on the environment for the cultivation of vegetable fibres; cotton is already a major cause of environmental destruction because it needs a lot of water. Yet fashion is an incredible accelerator of our clothes consumption. Self-limitation can participate to reduce very much our impact which must be also considered in regard of the needs of others.

This way of presenting our near future reality as a threat that requires an urgent response seems very pessimist; yet it is much healthier than the euphemism of “peak oil” which lets us believe that we have much time to adapt. Ten years is a long time if our society is motivated for the change. The main problem is not the reconversion itself, it is the social will and maturity to decide to do so, and immediately.

The 7 paths for a new energy quest

Two principal orientations: cycles and ethics; and 5 practical paths: parsimony, imagination, choices, incidences, management.

1) The 2 principal orientations say:

- Cycles: our energy consumption must integrate into natural cycles, as it has been explained in detail before.
- Ethics: the available energy, as a resource from nature, constitutes a common good and must therefore be shared between poor and rich, between people who have an easier access to it (proximity, abundance, material means) and the ones who do not (distance, penury, poverty).

2) The 5 practical paths say:

- Parsimony: by avoiding waste and sterile use, a huge amount of energy can already be saved, even without any change in our standard of life. Self-limitation remains yet an urgent necessity.
- Imagination: no choice is utopian because change must generate a deep change in mentalities and therefore we must learn to think differently, i.e. to envisage future in fundamental different terms.
- Choices: the approach should not be technological but philosophical, concerning especially the priorities in our social options; either individual competition and materialistic accumulation or community well-being and human cooperation? We need to learn to have the courage of committing ourselves to clear choices concerning our ways of life and the values we believe in. Choices for practical means ensue from these main choices.
- Incidences: we must not only measure the quantities we need but we have to learn to consider all incidences of our choices; ecological impact of big infrastructures, aspects of centralisation

and power, conditions for availability and security of supplies, consequences and risks for transport, social transformation (accumulation, exploitation, urbanisation), change of social values (greed, competition).

- Management: we need adequate tools to situate ourselves and our consumption in relation with what is available; it means measures in order to calculate indicative quotas which will provide very important indicators for the regulation of our intakes.

First the two main orientations can be described with a few more details:

- 1) Cycles: the requirement of integrating natural cycles, as it has already been explained, is certainly the toughest physical challenge but it is the only possible means to ensure a true sustainability. As long as resources are renewed and wastes are absorbed without creating imbalances, equilibrium is maintained. Solar and wind energy are only available when the sun shines or the wind blows; they cannot be consumed in excess, because it is impossible to take more than there is, and they are just wasted if they are not captured when they are available, without any consequence for the environment. On the other hand, they produce no wastes. Cycles give the key for a true measure and they provide clear criteria in order to exclude any false solution that would not integrate into cycles.
- 2) Ethics: the requirement for equity is the toughest social challenge; it can only be practised if it is recognised that energy is a natural resource and therefore a common good. This statement has tremendous consequences: basic needs have to be covered for everyone, wastes must be recycled at home and cannot not be exported to poor countries, carbon cannot be traded as a right to

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pollute or as a way of speculating and making money on destruction.

Then the five practical paths can also be described in more detail:

- 1) Parsimony: wastage of energy is today enormous and can easily be avoided by a stricter management and by simple improvements (switching off appliances when not used, no standby, insulation, repair of leaks). Wastage concerns also our standard of life because many resources are used for sterile use; many sectors of our economic system rely on this form of wastage (fashion, gadgets, luxury, poor quality of products that do not last) and an important part of profit depends on wastage.
- 2) Imagination: it is appalling to consider how little imagination or even self-censorship applies today in the debate about our future. The real present threat and the future gain we will win in choosing other solutions should encourage us to envisage anything possible and to question any aspect of our life style. We must dare to question our standards of comfort, our mobility, our consumption, our long-distance trades, our ideas of what is a good life. As Einstein said, the same mentality which has created a problem cannot be the source for its solution; a change of mentality (metanoia = another world view) is therefore the necessary condition for change. Intellectual and ethical freedom is certainly the best potential for finding new ways, when they dare to touch even to what seems to be so well established.
- 3) Choices: in our modern western society, the belief in an illusory form of freedom consists in leaving all doors open, in never committing oneself to any constraining choice. But decisive choices are the only way to make another future possible. Many courageous, and often marginal, communities have accepted to commit themselves to a more constraining choice in their

management of energy; they have often succeeded and became examples of creative solutions, while lethargic communities have seen their living condition disintegrate.

- 4) Incidences: specialists have the tendency to consider only the quantitative aspect of energy production: how much do we need and how to produce this quantity? But many qualitative aspects have to be considered; some of them are only indirectly linked with the question of quantity of energy to be supplied. For instance, the present form of production generates catastrophic ecological impacts (giant dams, high tension electricity lines, pollution, climate change). Centralisation creates dependence and provides means for profit or political pressure. Access to privileged quantities of energy provokes an accumulation of goods and a radical change of values, it fosters urbanisation which transforms deeply cultural understanding of human relationships and of life. Our dependence on fossil fuel implies powerful interventions to ensure security of supplies (invasion of Middle East or African countries), social injustice (alliances between oligarchies, exploitation of poverty or of tribal conflicts), dangerous transport (accidents with super-tankers).
- 5) Management: as we already said, we have to learn to consider the quantities which are available, and we must therefore measure the resources, the speed of their reconstitution, the fluctuations in their availability, as well as the volume of our consumption; especially we need to calculate quotas per capita, in order for everyone to know how much can be consumed. Quotas can appear to be a very totalitarian way of proceeding, but as long they are indicators they contribute to make people aware of what is right or possible. In a larger society, it is impossible to know what is the right measure if no quotas are available. How much water is flowing in this river? and how much water can be removed (pumped) out of it without generating any ecological imbalance, without endangering the

wildlife which relies on it, without depriving other people? how much water and how often therefore can I take out of this river, given the number of inhabitants who are relying on it? Quotas do not solve problems but they provide main indicators and encourage people to be more responsible for their own behaviour. Social maturity and capacity for self-limitation are the only means to respect them unless the law becomes the powerful way to have them respected. On the other hand, these same quotas must also vary according to natural fluctuations which ensue out of seasonal variations or out of alternation of abundance and penury.

The 2000W society

Some scientific institute has calculated that the average available energy per capita is 2000W per person, i.e. 17'520 kWh per year.

In order to provide people with a very concrete idea of what is the available quantity of energy per person, the Swiss Federal Institute of Technology in Zurich²³ has proposed and calculated a maximum quota of 2000W per capita for the energy to be used in developed countries. It means that our energy consumption should be considerably reduced in the next 20 years to return below this indicative threshold. In comparison the average energy use in the USA is today 12'000W, 6000W in Western Europe, 1500W in China, 1000W in India, 300W in Bangladesh. Together with this energy limit, a 1 ton of CO₂ emissions limit per person per year is also stipulated which constitutes approximately the quarter of the quota.

It is interesting to define an indicative measure of what is available and can be used. Without any similar indicator or quota, it is very

difficult to grasp what can be consumed by each of us as we individually have difficulty to get a precise overview of what is the global quantity of available energy, of what is the global consumption and consequently of how big can be our individual share of it. The proposed quota of 2000W defines an average power flow (intensity) which is of course never constant but has to vary according to needs and uses; the total available quantity of energy per capita is therefore a quantity which depends not only on the flow but also on the duration of the time when this flow is active: an average of 2000W during 24h a day and 365 days a year = 17'520 kWh per year and per capita. This is the total quantity of energy each one can use in one year. This corresponds to the quantity of energy used in Switzerland in 1960.

Yet all this power cannot be provided by fossil fuels; only a part of it which is limited to 1 ton of CO₂ per person a year. As 1 litre of oil provides in average 10 kWh of energy and produces 2.5 kg of CO₂, this limit corresponds to the consumption of 400 litres of fuel providing 4'000 kWh, i.e. less than one quarter of the individual quota.

The interest of this quota does not consist in the amount of available energy (2000W) it describes, because this calculation represents only the best possible theoretical approach and does not include variations which will inevitably arise. It is also related with the acceptance of a certain material life standard which should be questioned in order to define what is really necessary in our lives. The quota itself is therefore not proved to be true with certainty despite the extreme care and seriousness taken for calculating it. The most interesting aspect indeed of this process is to provide a tool which has to be agreed upon. The local community has to discuss it and to understand what has generated it before it can choose to make it an accepted rule for

²³ See: Herbert Girardet and Miguel Mendonça, *A Renewable World - Energy, Ecology, Equality*. Green Books, London, 2009.

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everyday life that will constantly be referred to. This quota calls for debate, discussion and consensus; it has to be constantly re-questioned and re-agreed upon. In this sense it is an integral part of the local social dynamic for cooperation and community. And the same process has also to develop on a wider regional, national and even international level. Quota are not dead laws, they are the tools for awareness and for mature and conscious behaviour.

The 20 misunderstandings about climate change

The debate about climate change avoids saying the truth; because of our privileges we are afraid to recognise the challenge it means.

Are misunderstandings arising out of our ignorance or out of our economic or emotional interests or out of the (un)conscious defence of our privileges? In any case many of the expressed statements in the debate about what to do against climate change are twisted because they only consider very partial aspects of reality and refuse to see the whole picture. They try to ignore the real problem and propose too often false and illusory solutions. Mankind has certainly a special faculty to turn uncomfortable challenging situations into new forms of more lucrative speculation.

I have identified 20 points of misunderstanding of this kind that can be described as dualistic terms for choices:

- 1) Technological means versus change of our ways of life.
- 2) Rich against poor versus no solidarity.
- 3) Governmental versus collective initiatives.
- 4) Reduction of CO₂ versus integration into natural cycles.
- 5) Renewable versus non-polluting energies.
- 6) Source of energy versus form for use or transport.

- 7) Solar or renewable versus really sustainable energy.
- 8) Carbon neutrality versus transformation process.
- 9) Carbon sequestration versus restoration of processes
- 10) Hidden dimension of time versus storage and flexibility.
- 11) New resources versus substitution and reduction.
- 12) Concentration versus decentralisation or solidarity.
- 13) Forecasts versus acceleration of imbalances.
- 14) Strategy for public awareness versus absolute urgency.
- 15) Excellence versus equity (factor 8).
- 16) Carbon trading versus a right to destroy.
- 17) Slow negotiations versus spontaneous commitment.
- 18) Free trade versus climate.
- 19) Radical fight versus adaptation.
- 20) Economic pattern versus anthropological (happiness) pattern.

These 20 points will be examined now in more detail.

1) Technological means versus change of our ways of life

Priority is given to technical solutions (more renewable technology) instead of accepting to question deeply our ways of life.

The debate today tries to propose mainly technical solutions in order to maintain our standard and our ways of life unchanged, as if the implementation of new (more renewable) techniques alone could solve the problem of climate change without our customs to be questioned and deeply transformed. In fact only a new mentality and way of thinking, a new world view or anthropology, giving priority to human immaterial values, as well as the choice for new spiritual meanings, based on self-limitation and social solidarity, can foster a different future, in changing deeply our habits and creating new kinds of behaviours. As summary we could say: technology versus

anthropology; we do not have so much to find new technical means but we have before all to question our present values and purposes which have caused the present damages.

As I mentioned it before, technology provides technical means which can be mastered only if they integrate into a philosophy which is able to control their use. It is why mere technical solutions will never be able to solve problems nor to answer challenges. Our main energy remains always the human spiritual energy which, alone, is able to give meaning and content to what is done, especially when this spiritual energy animates the whole community as a same and unique body bound by solidarity.

When priority is given to technical means, it is almost always a way to escape the real challenge, the real interrogation which questions our ways and our understanding of life. If there is a major problem in the way our society is developing, it is not because of the awkward implementation of its technical means but it is because of the wrong orientation of its energies and choices. In our society technology has replaced meaning. It allows to “solve” problems without thinking because it has its own inbuilt rational.

Certainly the narrow mere technical solution provides a way to avoid the questioning, especially when huge economic interests are at stake. It allows a distortion of the debate and the creation of many illusions of false solutions. It allows an “elite” - which does not qualify anymore as such - to preserve its own privileges while leading people astray.

In order to answer the present challenge about climate change and about the form of development which is adequate for our society, we need to question our values and myths. What are our needs? What is

the meaning of our present ideals of comfort, material well-being, wealth, profit, work, mobility, speed? What is the deep meaning and the real role of the values which guide us, or should guide us nowadays, such as personal freedom, individualism, pleasure, or such as duty, justice, love, peace, sharing, generosity, solidarity? certainly these questions cannot be answered easily because they remain the hidden roots of philosophy and of our human search for truth, but, as soon as we put these questions back at the core of our quest, the whole materialistic pattern which guides the present development of our society collapses and a creative and promising space opens for another way of thinking and understanding life.

The question about the adequate means for producing clean and renewable energies is certainly a real issue and remains a deep challenge, but it will be well understood and solved only if these new means integrate into a new orientation for our society, i.e. only if a new way of thinking applies which gives priority to human values and expresses a will for self-limitation. This new orientation will provide a new frame for a different form of development which will use less material goods and therefore diminish the pressure our society puts on its natural and social environment. A more human form of development cannot avoid integrating the requirements for equity and solidarity and will therefore give priority to spiritual values over material accumulation. This change of mind, or metanoia, consists in fact in recognising how spirit controls matter and how matter and technique are only an expression of the spiritual use it is made of them. The philosophical and spiritual orientation which provides the authentic solution to the present crisis emphasises also how much the present way of proceeding according to mere material values is poor and therefore harmful and destructive for our own soul. It is why we need to (re)discover a “new” anthropology which will be rooted in human and spiritual values.

2) Rich against poor versus no solidarity

Instead of calling for solidarity to save the future of our common home, climate change creates a deep rift between rich and poor.

The debate today ignores the growing gap between rich and poor and the extreme divergence of experience of the challenge by these two categories of people. We have only one Earth; climate change concerns everybody; it is about our common survival, about the quality of life we want to foster for all people; our planet is our unique home; all natural resources should remain available for all yet in a limited quantity that needs to be shared in equity. It means that the challenge of climate change should call us to transform our relationships and to shape our social network in the practice of more solidarity.

Indeed it does exactly the contrary. Rich nations have a deep untold debt towards poor nations because they have created the problem since the industrial revolution in consuming too much energy. They should become nowadays the leaders of a wide movement of solidarity that would protect the most vulnerable from the sharpest consequences, because the victims for the past excesses are now mainly the poor inhabitants of poor countries such as the Maldives or Bangladesh or the coral island of the Pacific Ocean, who are more exposed to extreme conditions, for two reasons:

- 1) First these countries are suffering more from climate change because of the extreme or more contrasted climate under which they live: tropical typhoons or melting of the permafrost, arid countries exposed to drought; on top of this the geography of lower latitudes makes them more vulnerable: low altitude above

sea level for coral islands, mighty tropical rivers generating floods, more open exposure to nature forces.

- 2) And secondly they have very poor financial and technical means to face the change and to protect themselves.

On the opposite, western countries, that mainly created the problem, live under more clement latitudes, on higher altitudes, and have much more powerful means to face the change: they buy now fertile land in southern countries to ensure their food supply and subsistence in future, they import what they need, they build dams to retain floods, they have air conditioning in their homes, etc.

It is why the problem does not seem so tragic to these richer countries while the poor nations already experience the harsh conditions ensued by the deep imbalances created by human activities. The rich spends and the poor pays. The rich acts in a mad way; and the poor suffers the consequences. Migrations of climatic refugees will soon overflow our western countries and awake us from sleep.

It is urgent that we understand that climate action and equity are the two sides of the same coin and that climate change is very much an issue that opposes rich and poor. As consequences of climate change seem to us westerners still unreal and more a topic about which we read in our newspapers, inhabitants of coral islands or arid sub-Saharan countries experience the harshness of change in their everyday life: drought, tornados, crops that fail, lack of fish, melting of the permafrost, etc.

In economic crises there is evidently enough cash available to spend trillions of dollars to bail out banks after the mad investments they badly managed, but there seems to be no means and no will to implement a gigantic plan of recovery for all countries, a kind of

general international intervention plan that would make subsidies available for our common home to find remedies against climate change, in order to save the most exposed populations from drastic consequences. This is evidently a choice that has nothing objective; our privileges prevent us to see the true problem. Such a fund would have to be constituted by the main industrialised countries.

Some western governments or corporations consider even climate change as a favourable opportunity for them because it will make the conditions of the competition harder for others and in certain cases, like in Siberia, climate warming could possibly improve the conditions for agricultural production. Climate change can even be perceived as the opportunity for more profit because it opens a new market for green gimmicks that sell well because they work on solar energy or integrate an ecological factor; it seems in this logic that the more you drive your hybrid car, the more you save the environment! The improvement in technology is certainly a positive step as it reduces the negative impact of our excessive way of life; yet the global effect of such a use (the car for instance) remains globally negative, and it is what matters. At the origin of this way of twisting any new form of awareness to turn it into a source of profit, there must be a basic trait of human imagination that the suffering of others can be perceived as an opportunity for exploitation, depending of course on the ethical frame it is referred to.

The sad thing is that climate change is considered as the problem; the good news is that it is indeed the solution, because it is the true opportunity to change our world and to establish more justice and equity, more peace and joy. We become so far the victims of our own blindness as long as we refuse to see this aspect of the issue, especially because the disparities in our respective exposure to climate change are not easy to perceive: we won't be able to respond

to the challenge as long we do not recognise that the issue involves a deep rift between rich and poor and we do not decide to implement solutions of equity.

Climate change can only be fought seriously if we are all involved on the same level and equally, whether poor or rich, whether powerless or powerful. Privileges work clearly against climate action. Most people are truly ready to make sacrifices and give up a certain (excess of) comfort if they know that all people participate with equal commitment to bring more harmony or justice; or more exactly that everybody participates proportionally to the measure of their wealth and privileges. If I know that Bill Gates consecrates all his fortune to implement new ways of life, I'm more ready to do my share, even if I am aware that my involvement does not depend on his commitment.

There is a big contradiction in the issue of climate change: it seems that the powerful and rich corporations create the problem as they are the main actors led by the motivation of profit more than by the general good. They are also the main influencing protagonists of the general orientation of our development. It seems in this way that we have to wait for governments to be ready to put pressure on them to do the right thing, i.e. to give up extraction of fossil fuels, to stop the production of fuel cars in order to develop new ways of transport, or any similar creative reorientation of their activity. It is clear that the huge amount of cash generated by these activities that harm our climate creates an extreme imbalance between on one hand the influence that such corporations or main economic powers have and on the other hand the empowerment of simple citizens and consumers who are indeed the principal people who have to suffer under the consequences of such choices. This extreme disproportion in degrees of influence seems to indicate that the solution depends on the way

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governments can constrain such economic powers to transform fundamentally their approach and adapt it to the laws of nature.

Yet we, as simple citizens and consumers, remain the users of these goods they provide; some of us are even the investors who finance these activities through a (even modest) contribution into the stock exchange. The car industry would not make any profit if nobody would buy any car. The fuel and coal extraction corporations would not be viable if nobody would consume these sources of energy. In last resort their success depends on our collaboration. The divestment movement is based on this logic; if ethical institutions, or ourselves as individuals, stop investing in dirty activities, these activities are revealed more openly for what they are: destructive. Our mobilisation against these harmful activities makes them less profitable and less secure on the short term. The investments in this same sector appear more fragile and risky. Hence preference is given to other sectors. Our consumption also works as a vote: I encourage everything I buy and the way it is produced.

The opportunities to understand this truth rely on two conditions: first our power becomes effective only if we can be united, it means agree together (consensus) on our choice to counter the destructive activities of these corporations; it means we have to become aware of the terrible impact of such activities and we have to share this awareness and make it the focus of our collective way of life. Secondly we need to resist the temptation of having it easy and satisfying our individual superfluous needs or our greed, or even our basic needs in the way that is proposed instead of the alternative way we can organise. Both reasons require from us to imagine together (consensus again) new ways of consuming and especially new ways of imposing our control on the land and territory where our community lives and on our economic relationships. It is mainly a

question of endurance and determination. It is clear that it is more difficult to win control when our livelihood depends on the good will of, or respect by, the powerful actors than when we are capable to fully occupy the territory that provides the resources that are needed by big corporations. This is the true issue of democracy: is the local government on our side or does it defend major economic interests, even when these interests harm local population? are police forces acting against local populations or for them?

3) Governmental versus collective initiatives

New ways of life can only be initiated by local communities and then, by cumulative effects, generate governmental responsibilities.

The debate today mentions the necessity for governments to take decisive measures (top down politics). It is certainly necessary and even urgent, but it is also a decisive fact that democratically elected governments are by nature conservative because they try to preserve their own position of power and remain under the conservative pressure of their electorate. In fact the pressure for change can only come from local communities and from small social groups (bottom up activism) which choose by consensus their own priorities and express by their own practice a real will for change. Creativity can then be contagious and government initiatives can take place as expressions of a democratic need or of a popular pressure; only a demanding practice, and not empty discourses, can be the true sign of real commitments and convictions.

It is certainly the role of governments to lead their people on the way to happiness, but in fact governments appear to be in the worse position to do so, when change has to be implemented, especially if this form of change concerns main issues. In fact governments are the

hostages of their electorate, and therefore they adopt mainly conservative measures, except when they are led by exceptionally strong, clear-minded, independent and generous people.

In a real democracy change can only happen from the bottom up, it means when local communities practise what they want to see implemented on a more general level. In order to practise alternative ways of life which are more suitable with their own interests, local communities have therefore to agree about a minimum of consensus concerning the main issues which concern them. Consensus seems to be an ideal unreachable goal, but it is in fact only a very pragmatic way of keeping a minimum of control on local issues because any topic about which the local community will not find consensus will simply be controlled by external interests that will care for themselves and therefore, most often, go against local priorities.

Two main laws govern the way local consensus can be implemented:

- 1) We know that the destruction of our natural environment is the consequence of the cumulative effects of our respective individual impacts. The law of cumulative effects says that everybody is responsible for their own part of individual choices, although each personal choice has only a very small impact on the surroundings and although each personal sacrifice seems huge, especially in comparison with its real effect.
- 2) The law of *a choice = a vote* says that each choice we make expresses a vote for the goods, the values or the behaviours we have chosen; in this way we vote for everything we consume or we use; these choices mean therefore that these goods and services are the signs or expressions of just products or values that should be practised; it means also that, when a community of people practises rigorously their own values and conforms to what they

believe in, pressure on commercial channels and on political decisions occurs and generates reactions: either as resistance if conflict arises, or as implementation of change if good will and sense of necessity remain clear for all.

These two laws constitute the fundament of what Gandhi called the power of truth (what he called in Sanskrit *satyagraha*). It constitutes also the core of a true democracy where power is practised in real life through own commitments. It is evident that this more pragmatic form of implementing change is more consistent and more suitable to actualise the change of mind we have described. Of course, it is also much more demanding for the people who practise it, yet also more enriching as life experience.

In their tendency to answer pressure more than to be stimulated by new challenges, governments are more susceptible to answer positively a form of expression of popular will that is really practised by people. In fact, any government is nothing else but the practical form of administration of a society, and the expression of the level of maturity of this society; politics can only be the fruit of social, cultural and spiritual growth; it cannot be delegated to any government. In democratic states, we have just the quality of government we merit globally.

On top of this, main social patterns are leading our evolution. In our case, in western societies, market and economic forces have generated values of profit, exploitation, competition as leading representations that foster our world. It is urgently time to replace these destructive and competitive patterns by more human values of care, solidarity, integration and compassion. A society focused on the needs of each of its members is evidently more harmonious than a society obsessed by individualism and material accumulation. It is

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our role to show how these other values can take shape, and the only way to do so is to practise them in order to give life to the new anthropology we need to rediscover. Then the patterns of behaviour will change and generate more generous attitudes.

4) Reduction of CO₂ versus integration into natural cycles

Climate change (excess of release of CO₂) is only a partial sign of the non-integration of our activities into natural cycles.

The debate today says that we have to reduce the quantity of CO₂ which we release into the atmosphere. This is true, but it is still very incomplete. In fact it is not only about reducing quantitatively our emissions but it is more exactly about integrating also quantitatively and qualitatively our activities into natural cycles. This requirement for integration means - and it is a very important difference - that it is not enough to reduce unilaterally our production of CO₂, but that we have to ensure that all forms of combustion we use integrate into natural cycles. It means that only natural cycles can give the right measure (i.e. the maximum acceptable quantity) of what can be burnt. This is a fundamental difference because nature, and not mankind, is dictating the measurement for our consumption and because the requirement of integration into natural cycles provides a much wider and more complete picture. The acceptance of this more constraining rule brings the true change of mind, the real metanoia: recycling instead of mining.

In what concerns climate change, cycles of combustion are very important because the huge excess of CO₂ which makes the core of the problem is the consequence of the combustion process that takes place when we produce, consume or transform energy.

- 1) Photosynthesis is the natural process which, out of the carbon dioxide (CO₂) any plant takes in the atmosphere through its leaves and out of the water (H₂O) it takes out of the ground through its roots, produces carbon (wood of growing trees or biomass in general) and releases oxygen (O₂) into the atmosphere. Biomass in general, trees in particular, are mostly made out of gas (CO₂) and water (H₂O) and solar energy, and not much else but a few mineral components; after combustion there is almost nothing left except a few ashes.
- 2) Respiration, which is a special form of combustion, is the contrary process of photosynthesis: respiration burns carbon (food or biomass) and oxygen it takes in the atmosphere, produces CO₂ and releases the energy we use as living beings. When we burn wood or coal or hydrocarbon, we do the contrary of photosynthesis; coal and hydrocarbon are nothing else than previous plants (biomass) that have been mineralised over some 500 millions of years²⁴.

The first process consumes energy (solar radiation) and releases oxygen (O₂) while the second process liberates energy (vital energy or heat) and produces carbon dioxide (CO₂). Most part of the energy we consume for our activities, our transport or our heating, proceeds out of the second process that consists in combustion; nowadays we have to recognise that combustion in general produces this severe excess of CO₂ - which is the main cause of climate change - because the importance of our consumption of fuel (combustion of biomass or

²⁴ Photosynthesis creates carbohydrates, like 1 molecule of glucose out of 6 molecules of carbon dioxide and of 6 molecules of water, and releases 6 molecules of oxygen: $6 \times \text{CO}_2 + 6 \times \text{H}_2\text{O} = 1 \times \text{C}_6\text{H}_{12}\text{O}_6 + 6 \times \text{O}_2$. This transformation consumes solar energy because the resulting combination incorporates more energy in the binding of the molecules than the original one.

As opposite transformation, when one burns 2 molecules of hydrocarbon while consuming 55 molecules of oxygen, it produces 38 molecules of water and 36 molecules of carbon dioxide: $2 \times \text{C}_{18}\text{H}_{38} + 55 \times \text{O}_2 = 38 \times \text{H}_2\text{O} + 36 \times \text{CO}_2$. This transformation liberates energy (heat) because the resulting combination incorporates less energy in the binding of the molecules than the original one.

coal or hydrocarbon) is in a very large excess not related to the capacity of natural cycles to absorb (recycle) the CO₂ it produces.

It is important to notice that this process of combustion is in fact more complex than it has been described here; different types of fuel will produce different quantities of CO₂ because the proportion of carbon and hydrogen they contain has an influence on the way combustion happens, either producing only carbon dioxide (CO₂ out of carbon C) or carbon dioxide as well as water (i.e. H₂O out of hydrogen H).

The necessity for the integration of our activities into natural cycles has been long examined before and we won't describe it again. What is important here, about the debate on climate change, is that natural cycles must be the first and main references for our measures. Certainly it seems very good to reduce our emissions in CO₂, because we evidently need to; it is precisely what all kinds of measures of cycles will tell us. But the direct reference to natural cycles changes in fact completely the meaning of our examination process because it presents a much wider picture. If we accept the priority of integrating our activities into natural cycles, we are challenged to a much more radical change because it is not only about a one-sided reduction we are free to decide for but it is about adapting fully to nature, it means to something which is given externally and which we cannot change. The process of adaptation to natural cycles is much deeper and complete than the simple reduction of some emissions, as drastic as this reduction could be or appear to be.

This fundamentally different approach of the problem of climate change will prevent any falsified decisions, like the ones which promote only reduction of 10% or 20% of our emissions in order not to perturb economy. By contrast, the requirement of integration into

cycles will define the real necessity of not producing anymore excesses of gas with glasshouse effect which cannot be absorbed naturally by these cycles (reduction of 100% of excessive gas). On the other hand this need for integration will also require from us a qualitative adaptation to the nature of these cycles: their proper characteristics, the form how they develop, the duration of their whole evolution, the speed at which they evolve, the variations in their successive stages, their localisation. For instance it is not the same to produce CO₂ in a forest, in a desert, on a mountain or in the sky. It is not the same to produce it in winter or in summer. It is clear that this new way of looking at reality provides a much wider picture and therefore a much more adapted response if we choose to be intellectually and ethically honest in accepting the constraints this other approach provides as new evidences. This more radical requirement makes it also more constraining for high densities of population to adapt to their natural context, even if one admits that these cycles are more global than purely local.

5) Renewable versus non-polluting energies

It is important to make a clear distinction between renewable energies (which do not exhaust resources) and non-polluting ones.

The debate today says that renewable energies are the solutions for climate change. This is in fact a terrible confusion between two notions which are clearly distinct.

- 1) On the one hand, energy can be renewable: it means that it does not exhaust the original resource out of which it is produced because this resource is naturally renewed as long as it is not consumed quicker than it is produced by nature.

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- 2) On the other hand, energy can be non-polluting: it means that it does not produce any heavy wastes or any light wastes which are not able to be recycled at the same speed or quicker than they are produced. In the case of climate change, it means practically that gases with glasshouse effect (such as CO₂) can be only released at the speed they can be reabsorbed.

We can see that both characteristics of being renewable and of being non-polluting are not linked one with another. Any energy can have neither or one or the other or both characteristics. This fundamental distinction between renewable and non-polluting energies shows how it is important to consider what happens upstream, before consumption - it means whether the resources are renewable or not - and also what happens downstream, after consumption - it means whether the wastes it produces can be absorbed (recycled) naturally and quickly or not.

In regard of this elementary distinction it becomes evident that some energies can be renewable and polluting, like biofuels for instance, because they produce CO₂ although they can be renewed by the yield of the following year. By contrast, some energies can be non-renewable and be not producing CO₂, like atomic energy which yet produces very dangerous and heavy wastes which cannot be recycled and therefore are polluting. On the other hand, we have solar and wind energies which are ideal forms of energy because they are renewable and simultaneously do not produce any wastes; and we have also fossil fuels which are very noxious because they are simultaneously polluting and non-renewable energies.

The clear examination of this distinction provides a much sharper tool in order to resist illusory proposals like the one for a general use of biofuels. It is astonishing that biofuels can be proposed as a wider

solution to climate change although they produce roughly as much CO₂ as fossil fuels do, given that these two categories of fuels rely equally on the principle of combustion of carbon, and although biofuels generate many forms of destruction as secondary effects of their production:

- Biofuels could never satisfy the actual needs in energy because the surface of agricultural ground that they would request to cover our consumption would probably excess the surface available for cultivation.
- The production of biofuels comes in competition with food production and it diverts yields from food production to energy production, creating therefore a terrible penury and starvation as well as an increase in food prices.
- The production of biofuels also provokes deep social changes because it increases the dependency of small farmers from the international market and GMO producers.
- The cultivation of plants used for the production of biofuels leads also to a terrible form of ecological destruction as it means in many cases deforestation or other similar negative environmental impacts.

Why can then such a negative impact of biofuels remain so hidden? Certainly huge economic interests, such as fossil fuel companies and producers of genetic modified seeds, are interested in these new developments and conversions in order to prepare their own future.

Biofuels remain nevertheless a positive contribution when they are not produced as such but when they are a way of recycling existing wastes, like cooking oil. It is today very easy to convert any diesel engine for the use of vegetal oil. Yet the same double main question remains valid: is it possible to recycle the wastes (pollution as CO₂)

they produce? and are the wastes they use as resources for their production not missing in another natural cycle, as compost or other vegetal wastes are necessary in order to give back to the Earth what we have taken out of it, through agricultural production? It is evident that biofuels, in this regard, are only a very marginal solution, for instance for agricultural machines as tractors and similar in contexts where CO₂ can be easily and quickly absorbed by vegetation (proximity of dense forests).

6) Source of energy versus form for use or transport

It is essential to make a clear distinction between the real source of energy and the form into which it is transformed before use.

Any given form of energy can be transformed into another form of energy; for instance coal can be burnt to produce electricity and electricity can be used to produce heat; in this example, coal is a fuel which contains potential energy which will be liberated when it will be burnt; electricity is a form of energy which derives here from coal; heat is also a derived form of energy. Because of this frequent process of transformation of energy from one form into another, the debate about climate change tends to make a confusion between the form of the original source (coal) which is used to produce energy (electricity) and the form into which it has been transformed (heat) when it is used, or in order to be used later, or to be transported or stored. Therefore it becomes difficult to judge whether a given form of energy is renewable or not and whether it is clean or not, if one does not consider how it has been originally produced.

This is a main property of energy to have the ability to be transformed. This transformation is meant in most of the cases for an easier transport or storage, or for a better performance of energy use.

Because of these frequent successive transformations, we have to go back to consider the original source which has permitted to produce the energy in question.

Electricity for instance can be provided by a hydroelectric or by a nuclear source, or by a coal plant, or by solar panels. In the first case of an hydroelectric source, energy is renewable and clean although it creates main disturbances for rivers and for the natural ground which has been flooded by the hydroelectric dam. In the second case of a nuclear plant, energy is not renewable, does not generate CO₂ but creates very dangerous wastes which cannot be eliminated. In the third case of a coal plant, it is not renewable and generates CO₂. In the fourth case of solar panels, it is renewable and does not produce wastes except for the production of the solar panels and eventual batteries. Electricity cannot therefore be simply declared always renewable and clean.

Especially in what concerns new technologies for cars, this confusion prevents a clear understanding of what the real ecological cost is when the form of energy used to run the car seems at first glance to be clean, although it has been in fact transformed out of another source of energy which is not renewable or has generated CO₂. We have to examine which is the true original source of energy that is used to produce the power and not only the form of energy that is used for the storage or transport of the necessary energy in the tank or in the batteries. Electric cars can be said to be clean only if the electricity comes from a renewable and clean source.

Hybrid cars get their energy from fuel and use electricity in a complementary way in order to recuperate, any time it is possible, the energy that otherwise would be lost or wasted. It is a clever improvement of car technology, yet it is also the sign of the very low

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effectiveness of combustion motors: so much energy can be recuperated that it shows how much is usually wasted on conventional cars. And it does not change the fact that hybrid cars run originally on fuel only.

Some new cars will soon appear on the market which will be run on compressed air²⁵. It is certainly fantastic, because it does not pollute our cities, but the question remains yet how the air will be compressed, because compressed air is not a source of energy but only a state of transformation for storage and transport in the tank of the car. Compressed air will certainly be compressed through the use of electricity. Where will then the electricity come from? If it is solar electricity, this model of cars will be the best possible solution: not polluting, clean and renewable, and no need even for batteries. Even better than a solar car; in the same way a car can be said solar if it has its own solar panels, but also if it is recharged at home from a fix solar system on the house. Yet in both cases batteries are necessary, which mean consumption of energy for their production and frequent replacement.

7) Solar or renewable versus really sustainable energy

Almost everything is made out of solar energy (plants, fuels); yet rare are the energies which are 100% renewable and sustainable.

Almost everything on our Earth derives from solar energy: the plants grow only because of the energy they get from the sun. Any organic life and especially our own life as well as our living tissues are made of solar energy. As shown before the combustion of biomass provides us with energy which is in fact from solar origin. Coal and

hydrocarbon are nothing else than mineralised pure solar energy from the past. Wind energy and hydropower are a derived form of solar energy too, as air movements, waterfalls and rain are the results of changes in temperature, of evaporation (ascendant forces) and of condensation which result from solar heat and its variations.

Yet rare are the really renewable and sustainable energies which do not rely partly on fossil fuels: solar power in the form of electricity needs solar cells to be produced which are made of minerals we can only extract or transform with the use of powerful machines and so far of fossil fuels. Solar hot water systems need pipes to transport the captured energy and these pipes are made of processed materials. Wind turbines are made of sophisticated industrial materials. Only sailing boats are 100% sustainable, and even only if they do not include one small piece of metal and have been built entirely by hand and with only organic energy. Only the old Dutch wind mill or the wooden water wheel are 100% sustainable, and even only if they do not produce electricity which would need copper wiring for production or transport.

Yet reconversion of available materials and self-limitation in the forms of transformation we implement for producing goods or tools can allow us to find a narrow opening for future and, in order to use it for sustainable means, to recuperate the gigantic amount of material (and the energy that has been necessary to produce them) which has been wasted in the recent past or used for unnecessary purposes.

This statement that there is almost no 100% renewable and sustainable energy seems very shocking, pessimist and depressing. Is there really no future? Sure, there is a future! Yet this future will be possible only if we become aware of this deep dependence today of renewable energies on what today fossil fuels provide.

²⁵ See the car by MDI (Motor Development International) Guy Nègre, Nice, France, to be produced also by Tata India under MDI licence.

So far we have lived on the storage of solar energy the Earth has accumulated for some 500 millions of years. We have burnt a huge stock of past sunlight²⁶. To be sustainable, we should have respected two conditions:

- 1) First, we should have consumed this resource only at the speed it could be reconstituted by nature.
- 2) Second, we would have been able to consume this reduced quantity through time only if we could be sure it would reconstitute in the same way and same duration it did originally.

As it has already been said the metamorphosis of previous biomass (the trees and plants which grew 500 millions years ago) into hydrocarbon and coal would not happen necessarily today in the same way it did, because deep transformations happened, millions of years ago, in the structure of the different geological layers of the Earth which were necessary for this metamorphosis of biomass into fuel or coal to happen; these same transformations would certainly not happen again in the same way. It means that even a slow consumption (for instance a yearly amount equal to one 500 millionth part of the total available amount) would not have made this resource more renewable.

Today we continue to rely on this supply of fossil fuels that should last still for 45 years, according to the most optimistic evaluations. It means probably that before ten years we will see the price increase drastically and the scarcity of this resource provoke huge social turmoil: wars, social violence, paralysis of our cities, terrible lack of food by lack of transport means, unemployment, penury of the most essential goods. We can foresee now the worse scenarios. In clear, it

means that we have still 10 years maximum to prepare for the change, especially if we consider that change can only happen harmoniously if it does not happen under the pressure of urgency or extreme scarcity of a vital resources. So far, fossil fuels are a vital resource, not because we could not live without them, but because our whole development is based on their consumption. No fuel, means almost no food, no work, no energy, no goods. Yet this extreme dependence can be changed over the next ten years; it depends only on us. Do we want to face it or not?

What are then the solutions if the solutions have to rely on solar energy but not on the (derived) form we have used until now? What also about the fact that solar or wind energies cannot be 100% renewable and sustainable, because they need mining and industrial products which rely on fossil fuels, in order to be produced?

The debate about climate change proposes solar and wind farms as the solution for climate change. Yet it never says how solar panels, wind turbines, generators, batteries, wires, inverters will be produced. Shall we really return to the wooden boat, to the Dutch wooden mill or to the wooden water wheel? Even at the time these machines were used, they were produced thanks to the combustion of wood and coal, as the combustion of hydrocarbon started only in the middle of the 20th century and concerns thus only more recent types of machines.

At this stage a distinction must be made between materials and the necessary energies for the transformation of these materials:

- 1) On one hand, the extraction of materials depends nowadays on the use of powerful machines which rely on fossil fuel. Yet, if we want to act in a really sustainable way, we have to renounce on extracting more minerals out of the earth, because these materials,

²⁶ This expression is inspired by Thom Hartmann: *The last hours of ancient sunlight*. Bantam 1999.

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especially if their quantity is limited, are not renewable. Therefore, the solutions consist in processes of reconversion of the existing materials. We have to undo the existing machines, which we will not be able to use anymore by lack of fuel, and to reconvert their materials into the tools and machines we need now and which do not rely on fossil fuels. These materials become extremely precious and can be only used for priority purposes.

- 2) On the other hand, the transformation of materials into goods, tools and machines, including the reconversion mentioned before, must be completely redesigned in order to be compatible with the use of renewable energies, which will inevitably use sparsely non-renewable materials which have been recycled. This transformation must absolutely respect the law of natural cycles and it must be reduced to the strict necessary minimum.

This transformation can thus only happen if it is based on two principles:

- 1) The principle of scarcity in what concerns the non-renewable materials. These rare materials should be replaced every time it is possible by renewable materials, even if these more sustainable materials are not so performing. And we can even consider these rare materials as renewable, although they have been extracted with non-renewable means, because they become now parts of the natural cycles, as long as we respect the necessity to recycle them. They constitute available resources which have to be used without exhausting them.
- 2) The principle of self-limitation and of small size (small is beautiful); every time we have to make a choice between two means or two qualities or two quantities, we must remain aware how the smallest scale allows always a better control and a more adapted process.

It is certainly a huge improvement to produce electricity with solar energy, even if it is not 100% sustainable. Yet it is urgent that we implement already now these two principles, not only in order to organise a really sustainable form of electricity production but also to implement a form of industrial or manufacture production which will be able to last beyond the time where there will be no more available fuel; in about ten years. It is thus a question of survival, as far as we need electricity to survive, which is not at all sure.

This drastic description seems to lead to a very sad and poor way of life. Yet it is not at all the case! it is in fact a real liberation. Our basic needs are not concerned by this form of self-limitation, because these basic needs are satisfied by nature inasmuch as we are capable of adapting to natural cycles. The scarcity here concerns only industrial and market related products, it means products which are not absolutely necessary for our good life. We will be freed of the dominating power of growth and development, of market and accumulation. A more mature choice for a more evolved form of social life which uses only the available resources and which shares them in the social network can only bring justice and happiness. The size of everything can then become more human; big industries are no more possible; we have to replace them by smaller workshops, where people see what they do, in more human settings, similar to the manufactures which prevailed before the industrial revolution but yet with a technology which is more evolved, while in the limits of sustainability, and with better social conditions and security. This self-chosen form of self-limitation will not prevent us to produce the necessary goods, tools and machines. And we will discover the kind of happiness that simplicity provides.

8) Carbon neutrality versus transformation process

The principle of carbon neutrality is treacherous: biomass cannot be burnt under the pretext it will be replaced by biomass.

The debate today asserts the carbon neutrality of biomass. The principle of carbon neutrality of biomass says that biomass can be burnt indifferently because it re-grows in any case and that the carbon dioxide that has been liberated by combustion will be sequestered again into biomass when biomass grows. Hence it affirms that combustion of biomass, in principle, should be considered as not generating any gas with glasshouse effect.

In fact this principle would be only true if the growing of biomass were certain to follow the combustion in the same quantity and at the same speed; but in nature it is the contrary: growth of biomass does not follow but precedes combustion - if not, combustion would not be possible - and no warranty is given that the gas that is released by combustion will be again transformed into biomass by photosynthesis. If the principle of carbon neutrality of biomass were true, we would be able to burn all our forests; it is evident that it would be pure insanity, because biomass has a much wider role to play than to absorb only the wastes produced by the combustion of biomass we need for our purposes.

The principle of carbon neutrality of biomass is only true when complete natural cycles are able to run fully in a non-perturbed way. In fact the respect of the law of natural cycles is not automatic because there is no warranty that cycles will occur fully, especially when our human activities intervene all the time to perturb them. Not only natural cycles are not automatic but they are even very fragile because the smallest influence can throw them drastically out of balance. Climate change is an illustration of this truth.

Another aspect which the principle of carbon neutrality neglects is the fact that reabsorption of CO₂ into biomass can only happen where biomass grows and it is not necessarily the case where combustion takes place; for instance, fuel is burned in high density in cities where little biomass grows or it is consumed by planes at 10'000 metres above the ground.

It is also interesting to notice that the principle of carbon neutrality of biomass offers the main argument for the use of biofuels. Yet we have just seen earlier how the situation is more complex.

In conclusion, there is no law of carbon neutrality of biomass. There is only an on-going process of transformation which is the resultant of all ever changing influences. Hence no law of stability exists.

9) Carbon sequestration versus restoration of processes

The focus on carbon sequestration hides the wider urgency of restoring the integrity of natural processes mankind has destroyed.

The debate about the mitigation of climate change has mainly focused on the best possible ways to sequester carbon into forests, soils or even through artificial means, in order to reduce the proportion of CO₂ in the atmosphere. It is certainly the short term objective but it is only a way to hide the symptoms without solving the problem. As we are challenged to adapt to natural cycles, the main problem consists in the fact that we have deeply perturbed these cycles and destroyed the equilibrium of the natural processes which have been established for millions of years and which have been managing the general balance of nature, compensating any move out of balance by the counter influence of reaction. This difference is

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essential: between hiding the consequences and repairing the complete system. The urgent problem now is not how to sequester the carbon we produce in excess but it is to repair the natural conditions and cycles that work naturally for the maintenance of a healthy Earth. The first option remains a necessity but it does not reach the core of the problem which only the second option can solve.

Feedback processes are essential in nature because they are the only forces which are powerful enough to compensate imbalances without creating other problems. Through our human impact on the environment, especially through the deforestation of huge surfaces of land that became almost bare, through the perturbation of water cycles by the practice of irrigation or dams, and through the pollution that changes the chemical composition of our air, water and soil, we have dangerously destroyed an important part of the capacity of nature to react to imbalances.

Our forests have been destroyed by deforestation at an incredible speed. It is still nowadays the practice in the Amazon and in most tropical forest regions where the exploitation of mineral or fuel resources destroys the natural forest environment with its traditional people and biodiversity. It is also the case because of the clearing of new productive surfaces for agriculture, mainly cattle farms, biofuel production or soya planting. Australia is suffering today a lot from the deforestation which has striped it naked from its protection and living cover, although it was, already before it happened, the driest continent on Earth. This manmade evolution endangers the future itself of our planet. Forests are the lungs of the Earth and work as an essential regulator for climate. The Amazon is for example the source of the main rains which fall on North America or on Argentina.

Forests breath in and out carbon and oxygen; with their foliage, they protect the ground from excessive insulation; they generate and protect an essential cover of humus which stores carbon and absorbs water, and where water can be stored for months; they are also water pumps which regulate the regime of water in the ground and prevent it from more salinity in productive soil. And, most important, they are regulators of climate, while they regulate the evaporation of water, which has a cooling effect on the surroundings and transfers heat to the outer layers of the atmosphere; by generating evaporation, they not only expel the excess of heat but they participate also in creating the cloud cover which protects the ground and the plants from exposure to more sunshine; because their albedo²⁷ creates a resistance to the incoming heat of the sun, clouds have the capacity to reflect between 0 and 90% of the incoming heat, participating in this way to reduce the ambient temperature by some 30 degrees in the best case.

The surface of all the leaves of a tree is phenomenally big; through each pore it creates an effect of cooling when it is necessary, because evaporation and transpiration need to take the necessary latent energy²⁸ in the surrounding air. The more the heat of the surrounding air increases, the more the process of evaporation will accelerate in order to compensate the impact of increasing heat. Evaporation transports then the captured heat into the external layers of atmosphere, because hot air has a tendency to rise.

²⁷ The albedo is the reflective capacity of a material, according to its substance and colour.

²⁸ The latent heat is the amount of necessary energy to provoke the change of state of water from liquid into steam without yet changing its temperature. Each time a drop evaporates it takes heat out of the surrounding air which cools down. When water condenses it gives back the same amount of energy into the air. The latent heat of water is 80 kcal/kg; it means each kg of water which evaporates takes 80kcal in the environment. It is also the same for the change from ice into water. This principle is used by traditional societies for cooling water and conserving food.

Not only forests play a fundamental role that we have completely disturbed with deforestation. Water cycles have also been perturbed by the quantity of water we have taken out of rivers which often stop flowing. Irrigation generates excessive evaporation and salinity of soil. It deprives rivers from the necessary water which would allow maintaining swamp areas and flooding plains where water could be stored in the ground.

Pollution has also changed completely the chemical composition of air, water and soil, killing vegetal and animal life, changing also the systemic balance of these subtle systems of regulation of our climate.

Water, air, soil, forests, plants, animals are the natural components of a necessary equilibrium. We have to restore the liveability of these systems if we want to survive. This is the first urgency. Once it is done, they will again be able to absorb carbon dioxide and other inevitable wastes, if we produce them only at a speed which is in relation with the ability of our environment to recycle them, as part of the regulating role of natural systems and processes. The question remains: How far can it still be done? How far can we restore the lost balance?

The present debate talks mainly about the possible technologies to extract the excess of CO₂ that has been released into the atmosphere and to store it in secure conditions where it won't participate anymore to the glasshouse effect. It is for instance envisaged to store CO₂ into existing cavities, such as the pockets that the extraction of fossil fuel has emptied. What a legacy for the coming generations! These artificial technologies are of course completely wrong practices because they do not integrate into natural cycles and do not recycle the existing wastes.

Geo-engineering tries to escape the danger of climate change in creating still stronger imbalances. It refuses to accept that extraction of fossil fuels has to stop immediately (leave it in the ground!). With sophisticated means, such as injecting sulphates into the stratosphere, geo-engineering intends for instance to decrease the light of the sun by creating a "gentle" mist that would reduce sun light impact on the Earth. It is called the Pinatubo effect, according to the name of this volcano in the Philippines whose eruption in 1991 created such a natural input of gas into the stratosphere with the consequence of a general cooling of the planet. Of course such action can only on long term escape human control as it would perturb many essential components of the general equilibriums that manage the evolution of our climate. It would certainly generate terrible droughts or floods in Asia or Africa at the expense of the poorest population. How could a minority of scientists decide who can live and who cannot?

The only possible way of a precautious form of geo-engineering would be the restoration of equilibriums by measures that work with natural forces such as planting trees or cleaning sources of pollution or re-establishing original flora and fauna in regions where it has been depleted. Even such action is not without danger as we have learned from our own experiences. In each action there is a hidden aspect that we often do not foresee.

10) Hidden dimension of time versus storage and flexibility

The question of quantity (how much?) must also integrate the dimension of time (when?). Two necessities: storage and flexibility.

The debate today considers mainly the quantity of energy that is needed, without expressing how much production and consumption have also to be compatible one with each other, not only in total but

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especially at any time of the day or the night. Time is in fact the big neglected dimension of the debate. Because renewable energies depend on natural conditions like wind and sunshine that cannot be foreseen nor controlled, and because they are submitted to an alternation of abundance and penury that characterises natural cycles, renewable energies, if they are not used in combination with storage possibilities, are not reliable for producing the necessary quantities of energy at the time when they are needed. Time of production (good conditions of sunshine, good speed of wind) does not necessarily correspond with the time of the highest consumption.

- 1) The use of renewable energies means therefore a necessity for storage in order to better manage the dimension of time, i.e. in order to make available later in sufficient quantity the energy which has been captured earlier. Storage provides means to enjoy relative plenty when there is relative penury; it provides also means to choose the right time when to draw out resources from nature - when there is abundance - in order not to perturb the balance of the surroundings, especially when penury occurs, but yet to satisfy needs at the time when they arise.
- 2) Flexibility of consumption is also necessary. We have to adapt our needs to what is available. In case of penury, we have to reduce our needs and their satisfaction to a minimum, but, when abundance is given, we can even indulge.

The debate quasi never mentions this fundamental necessity for storage that ensues out of the use of renewable energies. For instance, as far as systems of private home production of solar electricity are concerned, many specialists assert that the connection to the grid is a very good solution: connection to the grid exempts the owner to install his own batteries - it means his own storage - and nevertheless it makes it possible to produce solar energy, while, on one hand,

feeding into the grid the excess of energy which is not needed by the producer at this time or, on the other hand, at other times, getting power back from the grid when the solar system does not produce enough energy for the needs of the producer. It is certainly a way to encourage an alternative form of private renewable production of power at home, through a wilful price policy which proposes in principle to buy renewable energy into the grid at a very advantageous rate for the producer. This price policy can reveal itself to be fragile because it depends on political will, or on the contrary strong because it depends only on social will and maturity and it is therefore not submitted to the law of market.

Grid connection is certainly effective, but it does not consider the fact that the peak for consumption is situated around 8 pm, it means at a time when solar energy is not available, unless it has been stored. This incompatibility in time between renewable production and current consumption means that the renewable production does not alleviate the need for power at the peak hour. Therefore the usual form of production (hydroelectric, coal or nuclear power plant) must remain capable to produce enough power in order to satisfy the peak demand and it must run therefore at full potential, which cannot be switched on and off so easily; it means that it must run quasi permanently and therefore it makes the production of renewable energy much less effective. The alternative form of energy production becomes in this case more a form of supplement than a possibility for real substitution, as we will see next. Grid connection seems in fact to be mainly motivated by the fact that it allows air conditioners to run at full power when it is hot and abundant sunshine allows solar systems to feed the grid generously. This shows how much the principle of grid connection is more oriented towards maintaining high consumption than providing truly ecological solutions.

The same kind of necessity for storage appears also when one considers what exactly happens when some users are connected to a source that provides green energy and say that their consumption is pure. It is certainly very good to encourage the production of green energy by paying what one consumes to the providers of energy who use renewable and non-polluting resources for their production. Nevertheless the fact of changing only the address of destination of the payment is not enough to solve the problem of consumption and of climate change. It is exactly the same energy that is consumed finally at home, in the office or in the workshop as it was before the change. We are all connected to the same “river” of energy (the grid) where all sources come together and are mixed. I cannot say: I drink only clear and pure water out of the river when I know that I drink what flows in the river, i.e. in fact a mixture of pure and of polluted water, as all users do because they are all connected to the same flow, even if they pay their consumption to a specific pure (green) source.

Without the complement provided by the other usual forms of production (hydroelectric, coal or nuclear plant), green energy would not satisfy the totality of the needs at all times for green consumers and payers; green consumers yet rely nowadays on the total production and not only on the green energy. If they had to rely only on the green energy, they would have to be connected to a specific grid that would transport only green energy; this would certainly be a perfect solution but then their consumption would have to fit with the intensity of the flow of production, that itself depends on the natural conditions of sunshine, of wind, or of availability of other green sources. They would then notice how much the time dimension must be mastered and therefore how much different forms of storage are necessary.

These diverse forms of incompatibility between production and consumption in time demonstrate how much the storage of energy is necessary and cannot be avoided, especially if self-sufficiency has to be achieved. It emphasises the importance of the time dimension which is almost never considered: When? And not only how much?

In hydroelectric plants, it is possible to retain the quantity of water that would have produced the quantity of power produced by grid connected solar systems: this is a good solution for storage. One can also pump water back into the storage (the lake behind the dam wall) in using the surplus of available energy on the grid which is not needed by the users - it could be a positive contribution of grid connection - and to accumulate more energy in prevision of the time when more energy will be needed than it will be available at that time. For smaller solar production units, batteries are generally the most common means for storage and for facing the time dimension, but they have the double disadvantage of being voluminous and heavy and to have to be replaced regularly because of their quick obsolescence (about 15-25 years), which creates problems of costs, of elimination (chemicals) and of renewable means of production in terms of energy. These few unsolved aspects show how this dimension of time needs still to be reflected upon.

Natural cycles are characterised by the alternation of abundance and penury: abundance of light during the day but penury during the night, abundance of food in summer but penury in winter and spring, abundance of water when it rains but penury in drought. And yet it is in time of drought that more water is needed in order to water the garden and to give water to animals. If for instance I live in a situation where I have to pump my own water out of the creek, I can choose to do that at any time when the tank is empty and when I need water. In this case I probably will use fuel for my pump, because it

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can happen at night or when the sky is overcast and no solar energy is available. But I can also choose to have a pump which works only when solar energy is abundant. It will then fill my tank when the sun shines; the water will be stored until I need it and I will not have to start my fuel pump at any time. Storing water will be a way of storing (or saving) solar energy. I will save fuel and the cycles of my water consumption will better integrate into natural cycles. I can even do more: I can choose to have a bigger tank and to pump water only when there is abundance of water, it means when it rains or when the river overflows, knowing that this water will be “lost” (not needed) in any case. It is still better if I do that using only solar energy which is available when the sun shines. I can also store solar energy in batteries in order to have it available when water is abundant. I can convert the superfluous solar energy (that I do not need at that time) to compress air into tanks and reuse this stored energy when my batteries are low; in this case there will be a loss because of the conversion, but a loss of free energy that would anyway be lost. Many forms of storage can then combine one with each other in order to offer the ideal model.

The law of alternation of abundance and penury is the key for the integration of our activities into natural cycles. It says that light (solar radiation) must be captured in day time, and then stored in order to be used at night. It says that food should be stored after summer in order to be available in winter and spring; it is what traditional societies have always done. Only through transport we found the way to escape this constraint because we consider that storage costs money. The law of alternation says also that heat should be stored during the day in order to be used in the evening; it could even be stored in summer for being used in winter, although it makes it more difficult, but nevertheless possible, first stored underground (pipes running through an important mass of soil) and later recaptured with a heat

pump run on solar electricity. Storage can then take many shapes in order to cross time. Limits are only imposed by climatic conditions (number of hours of sunshine), by economic available means... and by our will to do so.

Storage is usually practised in our society, but rarely for ecological reasons and principally for profit, because storage allows speculation.

On the other hand, an intentionally limited storage can be also considered as a very good solution for diminishing our needs, because any reduction of resources participates to reduce consumption, as users are constrained to do with what is available. It is then the law of flexibility that dominates. We have to learn how we can adapt our needs to the quantity of these available resources, and not adapt the production of our resources to our needs. Flexibility lets the needs vary through time, instead of trying to store enough resources in order to allow a regular and stable consumption. Of course storage and flexibility combine very well and their combination provides certainly the best form of solution.

11) New resources versus substitution and reduction

It is not enough to implement renewable sources of energy: consumption must be reduced and usual production dismantled.

The debate today says that we have to implement new sources of renewable energy, like solar or wind power. It is right, but very incomplete. In fact this attempt has a sense only if these new sources replace the usual production. It means that, each time we install a source of renewable energy, we have to dismantle the same quantity of power in the usual system of production. If it is not done, new renewable energies will not change anything about climate change; it

will only participate to increase production and consumption without reducing the emissions of gas with glasshouse effect. In fact we should even go further than substituting, we should reduce drastically our global consumption in order to reduce our global impact on the Earth.

It is practically easy to increase the global production of energy through the progressive installation of many small decentralised solar or wind power units, such as solar photovoltaic panels or wind turbines on home roofs. It is yet practically more difficult to dismantle the existing system of production because the usual power plants are generally huge units which work as a whole and which it is impossible to subdivide or dismantle by stages.

On the other hand, from a psychological point of view, it is welcome to offer more energy, especially if it is recognised to proceed from a clean i.e. renewable source. But it is much less popular and it is felt as a menace to propose the reduction of the existing production, especially since past provisions have always foreseen an increase in consumption and therefore an increase in the necessity of production. Yet renewable energies have to substitute themselves to usual forms of production and not to be added. Only a real substitution can offer a solution to climate change and allow a reduction of the global consumption.

This difficulty we have to accept the dismantling of the existing system shows very well how we have to review our patterns of assessing our needs and of satisfying them, and how the whole balance of our way of life is questioned, in our rich countries.

12) Concentration versus decentralisation or solidarity

While usual production is centralised (coal power plants, hydroelectric dams) renewable energy allows decentralisation.

The debate today is aware of the necessity for new sources of renewable energy, but it envisages mainly centralised forms of production in big solar or wind farms. Certainly centralised production can appear cheaper, despite the cost for an extensive grid. In fact the question of centralisation is never discussed truly:

- 1) What are the advantages of smaller production units, on the scale of the smallest possible unit or of the immediate neighbourhood?
- 2) Is a centralised production really cheaper and more efficient?
- 3) Do usual forms of centralised production, as we are accustomed to, with power plants or dams, influence unconsciously our representations of future alternative production of renewable energy, and are these assimilated patterns of big dimension plants so strong that we are not capable to resist them?
- 4) How can yet solidarity help find simple forms which allow combining the irregular needs of different consumers and to support the less privileged?

Which are the criteria for an ideal size? Small is beautiful, and the sun or the wind do not need to be transported. Autonomy and relative self-sufficiency remain important potentials to escape control and centralised power.

The question of centralisation is very important from the technical as well as from the social point of view.

There is first the question of the right size which production units should have. It depends of course on the size also of the cumulative

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needs and on the intensity of consumption as well as on geographical density of users. While we have to review the form of production of energy, it cannot be dissociated from the form of consumption that has to be questioned too. If smaller production units of energy seem to be preferable, it is certainly also possible to implement smaller forms of consumption that do not need so high concentrations and intensities of power. The major constraints concerning the intensity of necessary power will probably come from the industrial sector. It is worth reviewing the size of our industrial production units, as I have noticed it before, because it seems more human to organise smaller workshops where each worker can better see what happens and identify with the products of their effort and creativity, and it will certainly participate in reducing the need for the concentration of energy production.

Once needs and intensity of power that is needed are better defined, the second question concerns how centralised the production should be, it means how many homes and workshops should be fed by the same power production unit. It is of course essential to look at what is the most effective, but the aspect of efficiency is not necessarily the most important, because other more qualitative aspects can prevail in regard of more human and social aspects. We have to remember that the size of investments, it means the price expressed in monetary units, is never a true measure of the real value of things but only an evaluation of the conditions of exchange which are defined more by speculative aspects; it is only a measure of part of the practical necessary means for the implementation of what has been planned. Even if the aspect of efficiency is important, it is not the only dimension which defines the ideal size of production units, especially when it concerns a form of energy which can be considered free, like sun or wind energies that are given without

limits and that get in any case lost if we do not use them. It does not mean of course these free energies should be wasted!

The smaller the size, the less flexibility it has to face irregular demands and to combine different forms and intensities of consumption in time due to the diversity of the users. This aspect of lesser flexibility can be also considered as a positive factor for reducing the global consumption, because only the available power can be consumed and, in case of relative penury, users have to do with what they get. It can hence be a conscious ethical choice for smaller means and probably introduce a system of indicative quotas.

The aspect of solidarity is also important because, in a community where the imperative for cooperation of the different members becomes central, it is essential to watch that everyone gets their share and that nobody is left behind. Solidarity means sharing and therefore would exclude more individual forms of production, as well as too big disparities in consumption.

Centralisation provides also means for power and control. It allows speculation on the price at which energy is sold, especially in cases of relative monopoly. It implies also the possibility to deprive some specific users because of their social, political, ethnic particularities. It is why a control through the community remains an important aspect of these infrastructures that have to remain under public control. The recent practice of privatisation in the energy sector has shown how catastrophic incidences it can have from the point of view of the users, especially the poorest ones.

One of the main advantages of renewable energies is to enable decentralisation. Our old ways of thinking in terms of centralisation and of concentration of power (in both meanings of the word) must

be therefore questioned. How far are the old patterns still influencing our way of planning our future?

13) Forecasts versus acceleration of imbalances

Facts reveal prognosis to be wrong as based on obsolete data; imbalances provoke an ever increasing acceleration in change.

The debate today announces increasing temperatures and rising sea levels which scientists have tried to calculate in advance, according to different scenarios. Yet in fact these forecasts reveal to be always underestimated. Change always happens quicker than it is foreseen. Change integrates ever new components; it is never linear; it happens by leaps; each time a resistance is broken by accumulation of pressure from the imbalance, it crosses a new threshold, gets some more speed and participates to accelerate the total transformation or process of destruction.

Change, especially in case of imbalances and perturbations of natural equilibrium, happens in general quicker than it has been foreseen:

- 1) Firstly because forecasts are based on data that are already obsolete when, after being measured, collected and treated, they are integrated in reports that have still to be written, discussed and approved by official instances.
- 2) Secondly because imbalances, like a falling stone, increase their own speed of evolution while they are becoming worse. For instance the melting of the polar ice cap generates an acceleration of the warming process, as the accumulation of gas with glasshouse effect provokes an ever stronger glasshouse effect, i.e. more heat.

- 3) Thirdly change does not happen linearly. It follows an evolution by successive leaps, each time it crosses a given threshold, when the previous limit of resistance gets broken and it falls into a new stage of accelerated evolution. Predictions are usually linear because they cannot include these complex breaking points in an evolution. Yet the change therefore happens quicker than predictions have foreseen.
- 4) Fourthly change involves the whole of the system, with its many branches and complex structure; any evolution generates repercussions on other parts of the same system which then counter-react and participate to redirect the orientation of the dynamic of change, into a slightly different process, in unforeseen ways.
- 5) Any system has also inertia. It means that even drastic measures to counter climate change won't have an immediate effect. Time is needed to reverse a destructive process such as climate change. It is a reason more to act quickly.

Many phenomena are not even known and cannot thus be considered. Even when they are known and agreed upon - which is not evident - most of them cannot be evaluated at their right quantity and speed. For example²⁹, the NASA observed that the world's oceans initially absorb most of the CO₂ emitted, but that this quantity of sequestered carbon dioxide is then partly released and shared later with the atmosphere over the 25 to 50 following years, while the ocean expels back into the air an approximate proportion of 60% of the CO₂ it has stored. This has of course a serious impact on the quantity of the CO₂ content in the atmosphere, especially after the heavy level of emission which has characterised the past 50 years.

²⁹ According to an article by Walter Jehne, in the Australian magazine *Nature and Society* (Dec 2006 - Jan 2007) - www.natsoc.org.au.

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Computer models have revealed themselves to be very precise as long as they include all the data scientists need to consider. But they cannot include what scientists ignore and only experience and comparison with the reality can show which parameters have still not been included in the model or need to be added because of what we learn out of the recent evolution. It means that computer models can only describe what science can master, and do not consider the influences it ignores or the influences that have not been noticed or that have not been active in the past. Despite the best computer simulations it is impossible to foresee the evolution of our climate if the ice cap is melting, if the ice covers of the Himalayas and Greenland are disappearing or if the Amazon forest turns into savannah. What will be the impact on the different winds and streams? And on biodiversity?

These questions cannot be answered, yet the computer models help us to study the evolution, to describe the most probable changes, to understand them and to think about the general tendency. Despite their weaknesses these simulations are very useful because they describe what will certainly happen, even if it happens in a slightly different way. Because of this insecurity in their reliability and according to the principle of precaution, it is important to consider them as the most optimistic of all possible scenarios.

On the other hand, scientists are always very prudent and do not dare to say what they are not sure of. Because climate issues are so complex, it is very difficult to be absolutely sure of what we can foresee. Yet all converges to show that previsions are globally right in what concerns the general nature of the tendencies. The observation of what happens around us shows that these previsions go in the foreseen direction and that they are all too optimistic. In fact

things happen much quicker. What was foreseen to happen in decades is happening already now.

Measures are not the precise indicators of how far we can go in order to remain at the limit of what is acceptable, but they are on the contrary only the general signals that something must be done as soon as possible. It means that we have to do all what is possible to keep a maximum margin of security in order to protect us from the risk (if it is still time!). Even after we will have stopped causing climate change, changes will still arise, which will be the consequences of the still existing imbalances and the inertia of systems. Many centuries will probably be necessary to heal the cumulative effects and to absorb the accumulated wastes.

This sort of pessimistic attitude is still more justified when one knows that the reports of the IPPC (Intergovernmental Panel for Climate Change), which describe the conditions in which climate change happens, are the lowest common denominators between all the members of this Panel which includes mainly scientists but as well governments representatives who defend also their own interests.

14) Strategy for public awareness versus absolute urgency

Conscious groups and institutions need some time to make the public more aware of the urgency for change. Yet urgency is now.

The debate today tries to make people and politicians aware of the reality of climate change and of the necessity to act. Public awareness needs time to arise. Any strategy, in order to be efficacious, must propose a schedule for action which fits with people sensitiveness and acceptance. It takes time to convince people and to start a move

towards change. Yet, in fact, the urgency is absolute: action must be taken now, by absolute and immediate reduction of any harmful activity. A deep contradiction appears, in this way, between these two requirements, on one hand to convince people in the best way they can accept and on the other hand nevertheless to answer the time pressure which is the real schedule dictated by the urgency of the situation.

In facing climate change, we have to react immediately. We have to stop immediately any activity which does not fit into natural cycles. As it has been already said, the effects of imbalances will last still for a long time before we will be able to see the impact of the changes we will implement. These negative effects of present imbalances will even still increase despite the effectiveness of the dispositions we can take today.

Politicians advise a progressive adaptation to what we assess. They propose a small reduction of emissions of gas with glasshouse effect, because they do not dare to endanger the economic system. But this attitude shows how much they do not want to recognise that this economic system itself is not the only cause of the problem but is even under severe menace. The preservation of our economic viability requires an immediate change.

Proposing soft dispositions is in fact like saying in case of a car accident: I will stop in 500 m because I do not want to shake my passengers; yet it is evident that I should brake and stop my vehicle as soon as I can, in order to save my life and the one of my passengers. Why then ignore the coming heavy impact if we can avoid it? In terms related with climate change, it means stopping immediately extracting fossil fuels as well as consuming anything

which produces gases with glasshouse effect which cannot be absorbed naturally.

Theory and discourses have never changed the world. People listen to them but they become only convinced when they see a change in attitudes and behaviours of the ones who try to convince them. The fact itself to take energetic dispositions and to express in this way the absolute urgency for action is certainly the best way to convince people of the seriousness of the situation.

15) Excellence versus equity (factor 4)

We dream of the ideal solution; yet excellence remains far away: to become “simply” average, we need to divide our life standard by 4.

The debate today describes often how our community could become the ideal example of a perfect practice. Yet, in fact, we excel nowadays in excess. On the other hand, true excellence today is the fact of Chad, Mali or Laos, but for reasons of penury and not by idealism or because of special skills. Our first priority, as rich countries, consists today in becoming “simply” average. As we belong to the 20% of the world population who consume 80% of the global wealth, we have first to reduce our life standard by a factor 4, in order not to deprive others of their just share. When we will reach this basic average level of standard, we will then be average and, only at that time, it will be time to think of proposing a model for excellence. As natural resources and energy supply are common goods, excellence requires the practice of sharing and of equity. Yet our process for reducing our standard can become exemplar and inspiring. Especially when we have to divide it by a factor 4!

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The aspiration for excellence is something very positive because it can mobilise people around a concrete project for sustainability. Different places exist around the world where the inhabitants have understood not only the necessity to react urgently but also the advantage of change if it happens now. On some far removed islands, they have installed wind or solar power. They have changed their habits of consumption as well as their practice of mobility. They have created a form of ideal community. It is in fact interesting to notice that these examples of some sort of excellence happen generally in removed places, where people feel more marginal and therefore certainly freer, but also more under the pressure of urgency because of a relative fragility which is the characteristic of more marginal communities. Excellence certainly can better arise where fragility is experienced. The problem of inertia, as astonishing as it can be, is more the fact of rich people, despite the fact they have more means to implement change.

16) Carbon trading versus a criminal right to destroy

As incentive, carbon trading should reward who pollutes less. But carbon trading becomes a new form of speculation.

The debate today advocates carbon trading as the best possible way to organise a financial system for rewarding good practices, and as principal incentive for change. Yet carbon trading turns quickly into powerful means in the hands of the richest, either allowing them to export their nuisances to poor countries, or allowing them to increase their capacity for polluting forms of production, in buying the shares of the poorest. Carbon trading becomes a way to acquire more rights to pollute. It becomes even a permit to pollute which can be sold at incredible price. It is completely unethical. Out of what should be a solution for a common threat, speculation has made a tool of power

that participates in accelerating the negative effects of climate change. Yet carbon trading should not be confused with the carbon tax, which is a very appropriate and dissuasive tax which carbon emitters have to pay and whose whole income can be invested for creative purposes in the search for more adapted energy alternatives. It remains nevertheless true that economic incentives such as the carbon tax are only a support for wider politics based on a clear social option. Neo-liberalism tries to convince us that the market can regulate our behaviours. That is a complete nonsense and illusion; we, as a human community (local or regional), have to choose options that control economic forces, and these options are social choices about the quality of life we intend to protect and develop for ourselves and our children. Economic processes are only mechanisms without soul. They cannot generate a quality. Only the social maturity of a community can choose what life is meant to be.

Carbon trading relies on two false and reducing beliefs:

- 1) People are bad in themselves and they can only be led by their greed for money. Awareness cannot be the motor for change.
- 2) The right financial measures must lead people to do the right thing, as the carrot and the stick do, mechanically, without their thinking being involved,

Not only these two beliefs are wrong, but they generate wrong behaviours:

- 1) People are better motivated by awareness and by their need for honesty and love than by mere material compensations. It is mainly because of void of human values that people take refuge in material aspects of life. It means that the first mentioned belief, that people can only be led by their greed for money, prevents in

fact real awareness to be fostered, to arise and to lead people in adapting their behaviour. It can be easily observed that people are in general very generous with their own children, with their family, with their neighbours because, in these very practical and human cases, they experience a personal, rich and rewarding relationship. Mature societies rely on social awareness and sense of solidarity which take very lively and personal forms. It is why it is primordial to trust people that they can understand necessities and change their own behaviour, and this for the right human reasons and not for treacherous money rewards. Trust in humanity generates honesty, awareness and creativity.

- 2) Material dispositions, whether technical or financial, can never lead people mechanically to do the right thing. This kind of principles is always twisted. This is the case for carbon trading: it does not lead people to do the right thing but it is misused, in the way it becomes a tool for speculation; and the richest can better exploit the poorest. For this reason also, social awareness and maturity are the only reliable guides for change that allow tools like the carbon tax to be used in the correct way, without possibilities to be side-tracked.

In fact it is ethically unacceptable to envisage a right to pollute or a right to destroy as carbon trading does in selling a right to produce gas with glasshouse effect. We have all of us the main duty of reducing our impact to a minimum and immediately. Carbon trading is like saying: we have given birth to two children; therefore we can kill two people. Or worse; they have given birth to two children; because I have money, I can buy their right to kill two people! It is purely criminal and insane!

In the practice, carbon trading leads even to worse than to a right of destruction; it leads to the mere negation of what is our personal or

collective responsibility. In the logic of carbon trading we see even how some corporations or countries ask to be paid (they say “get financial compensation”) for not doing something that would be contributing to climate change, as for instance they ask for millions of dollars for not exploiting fuel reserves or for not cutting down trees. This sort of claim asks for a reward for not being harmful. This is in fact the same logic which provides blackmail power to gangs who are taking hostages; nobody can ever have any right to get any ransom. Nobody can say: I want you to pay me for not killing my neighbour! Such form of reward for not doing wrong would be the end of personal restraint; yet, in accepting this kind of logic, carbon trading can also be interpreted as a sort of official acceptance and generalisation of criminal behaviour, or at least of the practice of ransom. Here again, we see how much financial mechanisms cannot lead people on the way of awareness, but only ethical considerations can do.

This statement does not exclude that polluters should have to pay large amounts. This has to be understood as a fine. The system of fines remains a necessity as long as our maturity cannot lead us on the right track. The carbon tax plays this role and should be introduced. Money cannot solve problems but it can yet participate to reorient creativity onto more inventive and efficient roads.

Nevertheless these economic mechanisms will never replace social options that are truly of a qualitative order and that are taken by people aware of which quality of life they want to promote and protect. The social option, i.e. the option based on our human choices for human qualitative values, remains the only and true core of our evolution.

17) Slow negotiations versus spontaneous commitment

Procrastinating negotiations hinder the spontaneous commitment of communities for the restoration of eco-systems.

The spirit of Munich: like before World War 2, governments and policy makers refuse today to see what happens in front of us all and to take a firm stand. Negotiations about climate change divide rich nations against poor nations, and focus on theoretical aims instead of working on effective strategies. Despite scientific evidence that any further increase of temperature will destroy our planet, the talks concentrate on postponing action while aiming at tolerating temperature increases of 2 or even 3 degrees (above temperature of pre-industrial times) over the next decades, which is much above what eco-systems can bear without changing fundamentally. Yet our planet is one whole system. Like on a boat that is sinking, nobody can be safe; solutions must be effective for all, it means especially for the most vulnerable countries (Kiribati, Maldives, Bangladesh, Sahel, Antarctic and Arctic, etc.). The ethic norm for decision should be given by the situation of the poorest and the most fragile. It is evident that talks must concentrate on the most effective ways to stop immediately extraction of coal, oil, gas, tar sands, to stop carbon emissions as soon as possible, to restore natural eco-systems and even to sequester carbon by natural means, in order to reduce the already much too high proportion of greenhouse gas in the atmosphere and to counter inertia and foreseeable reactions of natural systems.

Democratic governments are indeed in a very conflicting situation. When they represent their country at international meetings they are expected to commit themselves, as well as their citizens, to fight radically climate change and to take drastic measures to reduce CO₂ emissions. If they don't, they are considered as being timid and

irresponsible. Yet when they come back from these international meetings they cannot implement the agreements, independently from how much radical these agreements are or are not, because the conservative inbuilt essence of the democratic system does not allow them to implement any fundamental change. Their electors would immediately eject them if these measures would dare to challenge general habits and comfort, even if they could bring essential improvements. It is evident that democracy, although it is probably the best of all systems, is also an important hindrance for any deep change. Citizens vote according to their own personal interest instead of developing a concept of what the common good is, even in cases when the implementation of this common good could be the best warranty for their own happiness. Democracy is indeed based on the addition of individual superficial beliefs and small short-sighted views instead of being the reflection of a well-informed world view and of a culture of mature collective awareness.

Because they are postponing action, official negotiations on high diplomatic level hinder responsibilities to be taken on the grassroots level. Urgently communities (families, neighbourhoods, regions, nations) must first commit themselves spontaneously to practical drastic action and aim without regard to what others do. Then negotiations can challenge these same or other communities to do more. In emergency situations competition consists in doing more than the other, and not less! As I have described earlier scientific scenarios are only illustrations of possible evolutions; they are not a certainty; they cannot be played with as if they were the certified limit of security unto where we can dare to go.

Negotiation is not a game; it is about choosing our future and our survival; we cannot afford any mistake nor any delay. The base for any effective action consists in the spontaneous commitment of

communities of any size (from the family to the whole humanity) to implement immediately the most requiring means for reducing emissions and restoring eco-systems. It must be done without concern for what others do. Each person, each family, each local community, each nation should take a stand how they see their own responsibility and especially their own possibilities to act. The choice concerns our own future, our own survival. What others do should not influence what we do. It is meaningless to promise something under the condition that others do the same. Truth and ethics cannot be changed by negotiations. It is why it is easy for each one to take spontaneously a stand by committing themselves to very precise aims and actions, in conformity with truth and responsibility. Commitment to an ethical stand, where each one declares what they are ready to do, must precede negotiations, where insufficient targets can be condemned and where each stand must still be challenged to something more radical.

The base for negotiation can only be ethics, truth and equity. This is the only acceptable base. Many references can play a role. It is easy to estimate how far each nation has participated in the past to climate warming (past and present ecological footprint) and to show who are the most responsible for the damages today and therefore the ones who have to show exemplary commitment. It is much more realistic for rich nations to reduce their emissions than for poorer ones. They have further margin and more means.

We cannot aim at accepting further increases in temperature as the tipping point of natural balances seems already to be reached. Action is here and now, in emergency, as quick as possible, with the strong requirement for the highest effectiveness. The aim can only consist in a quadruple emergency action:

- 1) stopping extracting coal, oil, gas, tar sands because they are the source of the problem,
- 2) stopping immediately our carbon dioxide emissions (as quickly as possible before 10 years),
- 3) restoring our ecosystems (mainly forests, water ways, biodiversity) as the most powerful means for re-establishing the right balances,
- 4) diminishing³⁰ the proportion of carbon dioxide and equivalent in the atmosphere to 300 or maximum 325 ppm (part per million), for a maximum increase of temperature of 0.5 degree above pre-industrial time.

This is the aim. We are far from being sure of reaching it soon enough, even if we do everything that is possible. Yet it requires all our will and imagination and other faculties. Beyond these limits mentioned above we know that our systems will collapse and that survival will become very difficult. It is especially true for poor nations exposed to sea level rise, to lack of water supply or to desert progression. Yet this does not concern only poor nations. Rich nations will be hit too, by the lack of food and water, by floods and drought, by huge streams of refugees, by violence and wars, etc. The consequences of deeper natural imbalances will strike us all, whether rich or poor. The destruction of our planet means our death sentence.

We have especially to focus on strategies: how to stop emissions, how to restore natural ecosystems, how to sequester carbon dioxide. The debate must concern the means and we have to share our respective knowledge and experience. We have also to foresee that the inertia of natural eco-systems as well as the effect of the past emissions will still have a lasting impact for decades and will even

³⁰ These targets are inspired by David Spratt and Philipp Sutton: *Climate Code Red - the case for emergency action*. Scribe, Melbourne, 2008.

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increase before we see the signs of real improvement. Implementation of special means must be even foreseen to counter these side effects.

It is also essential to foresee a grid of criteria which will allow to evaluate the effectiveness of the respective commitments and to reorient the process. The fruits of action will be the only yardsticks to measure the progress and the authenticity of action of all communities.

18) Free trade versus climate

Free trade agreements prevent effective action against climate warming as they increase pollution and paralyse local governments.

Free trade agreements under the hat of the WTO or trade agreements between a few nations such as the Trans-Atlantic or the Trans-Pacific Partnership constitute a major obstacle to a profound and consistent action to be initiated by public powers to act and take drastic measures in order to reduce the negative impact of our activities on the climate. This dominant obstacle created by free trade agreements works mainly in three ways:

1) First it is evident that free trade participates mainly in extending international trade because it is precisely the purpose of these agreements. It means it increases directly production and consumption as well as transport, which all participate in producing more CO₂ that is the main cause of human made climate change. On the other hand it favours bad quality and cheap products instead of good quality long lasting ones; this is also a cause of higher pollution and waste.

- 2) Secondly it prevents the free action of local governments that would be ready to subsidise renewable energy or favour the creation of jobs in this sector because such action can only be led under conditions of protectionism. A local government can indeed only subsidise investments in renewable energies if some measures can be taken that ensure that the fruits will remain local. Free trade agreements under the hat of the WTO forbid most forms of subsidies or protectionism and the legal frame of these agreements allows any corporation or other government suing efficaciously the governments that dare to protect their own people.
- 3) And thirdly trade agreements prevent local governments from shaping a human friendly environment that would favour human values at the expense of economic power. This kind of agreements offers the possibility that any corporation can sue any government if the latter has taken local measures of protection (ecology, work conditions, social solidarity) for its people and these measures have participated in reducing the possibilities of profit of the former. This sharp defence of the profit of corporations over the freedom of any local government to create good conditions of life for its people is an evident domination of the law of profit over all other aspects of life. It prevents in consequence local consensus and politic life to develop in a way where it has to control the excesses of money power. It shows how these trade agreements are pure nonsense.

Let's see these three points in more detail:

Free trade extends production, consumption and transport that all are harmful for our climate. To act vigorously against climate change we need to do exactly the contrary; we need to limit our consumption and our needs to what is really absolutely necessary. It is not difficult

to do so as much of our consumption is pure waste and indulgence that do not bring real happiness. On the other hand the extension of international trade increases competition and encourages any corporation to lower the prices of their products because it brings more profit to produce high quantities of goods of bad quality than to produce long lasting goods. This degradation of quality works clearly against the cycles of nature because a lot of waste is produced and goods have to be replaced again and again. It means a much higher consumption in materials, energy and transport. Pure madness! Today technology would allow to produce long lasting goods, but it goes against the interests of corporations as profit remains the dominating law.

Otherwise the principal possible measure against climate change consists mainly in local (or national) initiatives that are aiming at replacing polluting fossil sources of energy by renewable clean ones. This can only be done if the local governments that intend to do so are free to organise programs of substitution that run locally, it means that rely on the local production of new sources of energy that become much more effective if this change is also accompanied by the local production of the elements (technology, products, know-how, corporations, jobs) that make this other form of energy locally available. To start such a vast program means important public investments and subsidies aiming at creating new local jobs. It is clear that no local government can afford to subsidise the whole world. Such program can only be local, it means well protected from external influences. Such creation of new forms of energy requires then a drastic control over the means and effects; the use of these means and their direct effects have to remain local if the investments have to bring fruits in different fields of the local life. It is indeed when all local initiatives become interrelated that they work the best. In other words local governments can only act against climate change

if they can take the necessary measures to protect these initiatives from being side-tracked or exported. It becomes in consequence evident how much free trade agreements tend to prevent this type of absolutely necessary initiatives and protection measures.

Thirdly this form of protectionism is also necessary to implement local conditions of life that are not ruled by the laws of profit and the dominant power of economy. The most recent trade agreements protect the right of corporations to sue governments when the latter take initiatives that participate in reducing the possibilities of profit of the former. It is pure madness because it prevents any government to govern, if truly governing means controlling the conditions in which the local community lives. Indeed the role of a government is to defend human values over material constraints. The gift of modernity consists in being able to improve the conditions of life of the majority, in protecting people from exploitation, in implementing measures that protect the environment and care for the maintenance of the principal equilibriums of our planet, whether they concern climate, nature, society, culture, education, family life, creativity, spiritual matters, etc. In imposing the domination of the law of profit over all aspects of life trade agreements dismantle our society. They destroy the core of our life. If this trend gets reinforced in the near future, there will be no limits how to protect life, because any measure of basic protection of the weaker (child, women, people, nature, spirit, etc.) can be considered as a limitation of profit and can therefore be successfully legally attacked and destroyed.

Globalisation and free trade agreements work against the empowerment of local communities to choose the social option, i.e. to base the path of their future evolution on the protection and implementation of human values. Such a social option is usually based on consensus and consensus can only arise when the maturity

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of the local community allows it to. It means it is essential for this kind of fragile consensus to be protected from the aggression of exterior traders.

One of the main options that are necessary today is the choice of stopping immediately extracting fossil fuels (oil, coal, gas). Leave it in the ground! Many traditional communities are ready to defend this choice because they are aware how much their survival is endangered by the extraction of fossil fuels that would pollute their environment, destroy their forests and deprive them from fishing and hunting in the traditional way. Even the temptation of using such exploitation of natural resources to fight poverty in a spirit of equity is generally excluded because it is clear for these mature communities, that are sensitive to the many rich and deep immaterial dimensions of life, that such compromise would generate more destructions than improvements. This clear choice can only become true when people are rooted in their land and attached to it by a deep love of beauty and harmony, by an authentic sense of belonging to a local life community that encompasses all people, land, animals and plants that are all interrelated and whose quality of life depends on one another. From a form of domination, our connection with our surroundings will be able to evolve in this case towards a true reciprocal relationship of partners. It is no more a one way form of control but a true exchange of two partners: nature and humanity become complementary. When love becomes the principal motivation, the social option is truly anchored in solid ground: the Earth. Such a life choice should not be exposed and challenged by the forces generated by money.

Today trade is prevalent upon protection of life. We are concerned by ecology but economics rules. What a shame!

19) Radical fight versus adaptation

Rich countries have given up today the will to fight radically climate change. They resigned to adapting to the consequences.

The fright of the necessary changes in our ways of life has led the richest, mostly western, countries to opt for adaptation to the consequences of climate change instead of fighting the causes of climate warming. Most rich countries are not concerned as sharply by the impact climate change has for instance on water levels and agriculture or, at least, they have much more means to protect themselves and adapt, because they can rely on a larger availability of capital for investment. They can invest in building dams or they can import food from further countries because they are well integrated in the international market where they play in general a dominant role.

The situation is of course very different for poorer countries. First, as it has been described, because they are more sensitive to the change as they are situated under more tropical latitudes where typhoons become more frequent (like Haiti) and where their low topographic level above the ocean exposes them to any form of tsunami or sea level rise (like Bangladesh). Secondly they don't dispose of potential for investments because of their poverty.

It is important to see that the choice of adaptation is the easy choice that is available only for rich countries and especially that this choice denies the solidarity's dimension of the challenge. Adaptation means: I don't care for what others have to undergo. I just solve my own problem in my own interest! I want to continue living as I do, without reducing my standard.

Official circles like the World Bank promote more and more this idea of adaptation, even for poor countries. This becomes even a condition for receiving credits from this institution. In the best cases they speak of mitigation, which is a much softened form of the ideal radical fight we should expect to be promoted by such institutions. Mitigation just means softening or gently reducing. It does not have the meaning of a struggle for survival. This shows how our dependency on our privileges and comfort prevent us from reacting as we should.

We can even hear people talking of a need for measures of adaptation because they worry how their own comfort could be maintained unchanged and how climate change could even threaten the way they can continue to access the usual quantity of fuel and coal that are the main contributors to the problem. This complete lack of awareness shows how far the blindness of our rich nations has developed.

If we want to survive, whether physically, emotionally, ethically or spiritually, there is only one way and this is the way of the radical fight against the human made causes of climate change, and this in caring for all people and all nations, without boundaries due to distance, race, culture or wealth. Adaptation can only be envisaged for temporary conditions which have to be reversed in any case until we can fully reintegrate natural cycles. This is a question of life and death, not only of the body but also and especially of our spirit, that work in any case both indistinctly together.

20) Economic pattern versus anthropological (happiness) pattern
We are afraid of questioning the validity of our economic system and of searching for the truth about the meaning of life.

The main blockage we have about change is our fear that our material wellbeing will be threatened. We strongly believe that capitalism brings happiness. Capitalism is probably the most efficient system to produce accumulation and increase of capital but it can only do so at the expense of justice, equity and destruction. This apparently high performance is only made possible because this system is based on exploitation, both of nature and of people. As such it destroys happiness because it prevents harmony to arise and, more important, it kills life.

Most decisions our governments take are based on economic priorities because rare are the leaders who dare to question the domination of economics upon our ways of life. Most essentially almost none of them is able to develop a wider perception of life. Subsistence is evidently an important base on which we have to build our societies but it is only a minimal requirement. It is not the main thread that has to lead us.

The main thread is evidently the need of all of us for harmony, equity and justice that are the necessary conditions to provide a form of wellbeing that goes much beyond material comfort. It is why the main question is not how we make money but how we can thrive in our relationships with nature and with people. This includes of course the question how we share the available resources and how we care for each other, in our awareness of how much we depend one on another because we need each other in our differences and complementarity to realise a complete experience of life.

This thirst for harmony is not opposed to economic wellbeing. It is on the contrary the true fundament for a wellbeing that offers more than only material security. This aspiration for a deeper experience of life can only develop if we dare to question what the meaning of life is.

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This search for meaning is the anthropological process that allows us to discover deeper values, to reach a higher level of development and to ensure that we focus on the right thing. It does not mean that we have to provide for all a ready-made answer to this complex and bottomless question. It is enough to ask the question and to search for the answer which will remain for ever a mystery. Who am I? Why do I live? What is the link between all of us, Humans and all sentient beings?

Asking the question creates another focus on truly human issues. It will confer to our common evolution an equally truly human quality. It will also reveal how much the capitalist belief is a deep illusion based on lie. When we will become aware how much our dream of material accumulation is empty, we will be free to follow a more subtle path that can lead us to true happiness, based on the quality of our human relationships instead of remaining imprisoned in a false dream for show and virtuality.

The golden rule

It is not about reducing unilaterally our consumption, but about integrating into natural cycles; any other behaviour is criminal.

The golden rule that summarises the 20 points I mentioned above and describes best the solution for climate change is - let's repeat it again - the law of absolute integration of all our activities into natural cycles. As I showed before, the good-willing restriction of our consumption does not constitute the solution, when it is not directly related to natural cycles, and when we believe that we know the right measure; on the contrary, the absolute law of adaptation dictates from outside the true reference which is the immutable law of nature and forces us to adapt to the real external constraint.

The corollary of this law of absolute adaptation says that any activity which does not integrate into natural cycles is criminal. This assessment seems very absolute and excessive, but it is yet a clear expression of the law of nature: any activity that does not integrate into cycles is destructive of something which mankind cannot replace and which will disappear for ever.

The first question which ensues out of this strong statement is the question of evaluation and measure: how do we evaluate how much an activity integrates into natural cycles, or not? These cycles are very complex and therefore difficult to assess. Yet a rigorous observation and a strong independent spirit based on detachment are the two main conditions for a favourable examination. And self-limitation provides the complementary means for a secure integration. Self-limitation is not the leading energy but it is the way which arises out of respect.

The law of integration can sometimes reveal a rich abundance which could even allow us to consume more than we would, especially when nature provides extra quantities: water in abundant rains, solar energy during days of abundant sunshine, excessive yields in favourable conditions. An attitude which respects the law knows also to indulge when the conditions make it possible.

Given the central role which the law of adaptation plays the criminal dimension of our acts that do not integrate into natural cycles is a fundamental truth. If it were recognised it would provide a powerful ethical and juridical way to require an adequate behaviour from everybody, whether poor or rich, whether mighty or weak. It would foster a deep ethical revolution, and our way to evaluate our acts would change fundamentally. What seems today to be a right, like

driving our car or flying to London for the week end, would at least appear for what it is: a purely criminal attitude, even when it arises out of ignorance, without any malefic intention.

Although it is not easy to enforce this approach practically, it changes fundamentally our understanding of life and of our relationship with the cosmos. The acceptance of this law would certainly be the most powerful tool we could implement to fight climate change, injustice and violence in the world. Let's make it a juridical law.

But we certainly have difficulty in accepting this basic truth.

Climate change denial

Acceptance of the reality of climate change is more fruitful than denial because it will force us to mend our relationship with nature.

The debate about climate change has become the scene for a violent struggle between people who accept that climate change is generated or at least aggravated by human activities and people who deny it is manmade. The complexity of the phenomenon of climate change reveals not only factors of human influences but also some normal regular cycles of cooling and overheating of our planet Earth. The question of knowing whether climate change is manmade or not can even be considered as irrelevant for the following reason. While the denial leads to keeping our ways of thinking and our ways of life unchanged, the acceptance challenges us to find new attitudes of respect and attention which are the prerequisites for allowing any change in our relationship with nature. It is evident that nature nowadays suffers from the impact of human activities; climate change is not the only reason why we should care for nature; it is only one more argument to take better care of it. The urgency for

change that this reality forces us to consider can only be fruitful if it challenges us to become more in tune with natural cycles. This positive way of confronting the attitude of deniers, instead of arguing about scientific data, is certainly the simplest and strongest argument in favour of considering climate change as a real manmade menace for our survival. It can only be helpful.

Certainly the whole examination and process of understanding about the causes and the nature of climate change remain essential and even crucial as we have to know the forces against which we have to work. Yet it is also interesting to consider the fruits of each attitude we could possibly adopt and to select which attitude is the most appropriate in regard of the quality of the fruits each attitude is probable to foster.

There is indeed a very painful aspect in the attitude of the deniers, when they refuse to consider that climate change can be real, and even manmade. By denying the whole process they choose to take the maximum risk for the future of humanity and they leave no space for the principle of uncertainty or for the principle of precaution. When the limit speed for a curve is advised as being 60km/h, there are always people who enjoy driving at 100km/h in order to test the limit. One can take this kind of risk when the risk remains small or concerns only oneself. However it is completely irresponsible to adopt this kind of stupid blindness when the whole future of humanity and biodiversity is at stake.

Yet the main problem about climate change denial is not about what happens truly in natural cycles but it is our common capacity to remain blind because we want to save our ways of life and protect our privileges. The discourse is purely defensive; it is mere talk and propaganda that has nothing to do with what truly is. We refuse to

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see what is happening because we resist recognising that our way of life is mad and based on deep injustice, extreme exploitation of nature and our fellow human beings beyond anything that is sustainable. Most of our denial is rooted in our attempt to protect our present way of life. We are attached to our mobility, to our material standard of life, to our material wealth.

This is evidently the key of our blindness – and it remains true as well for activists as for deniers, although of course in a very different measure. We are all afraid of being wrong, and we are attached to our privileges. This is enough to prevent us from seeing the situation as it is. And we are also afraid of confronting life in its nakedness. Yet it is certainly the best thing we could do in order to find happiness. What a tragic contradiction: we become the destroyers of our own life potential! For purely materialistic reasons of lazy comfort!

Accumulation as debt / death of relationships

Industrialised countries have a huge debt towards poorer countries; our constant will for extraction has destroyed true relationships.

It is usually said that poor countries are nowadays collapsing under their financial debts towards rich countries. It is true that they have contracted enormous debts that have then considerably increased because of cumulative interest rates. These debts are nothing else than the expression of another form of debt that is rarely mentioned: the debt that rich countries have towards poorer countries because most of the powerful wealth of the richer countries has been extracted or made possible by the extraction of the wealth of these poorer countries. This extraction of natural resources or of workforce has generated a severe of ecological systems, while the use of its products has fostered the wealth of rich nations. It means that the present

financial debt of poor countries is indeed mainly the expression of the value extracted by rich countries that has not been paid for at its true value. It seems to me that we can decompose this debt of rich countries in four main parts:

- 1) the total ecological debt (pollution and especially CO₂ production and disturbance of some main fundamental world ecological systems),
- 2) the natural resources that have been extracted from poorer countries (fuel, wood, minerals, fruits, coffee, tea, etc.) and that have not been paid for at their true value,
- 3) the workforce under domination or the form of slavery that has provided one of the most essential (direct or indirect) components of the wealth of industrialised countries, and
- 4) the present cheap conditions of production (low salaries, weak social protection, lack of ecological regulation, totalitarian regimes, etc.) that justify dislocation of production to southern countries (mainly China, India, Brazil, South Africa).

All four of these forms of debt illustrate a common tendency: a general greed and want for extraction of the riches of these poor countries has killed our capacity for true relationships with others, with nature, with indigenous people, with true values, etc. Climate change is the last opportunity to rediscover these essential dimensions of life: true relationships.

Let's examine these four forms of debt in more detail:

The first major part of this debt is the general cumulated ecological debt of industrialised countries since 1800. This is the amount of pollution (mainly CO₂) and all the main disruptions of the general ecological world systems that rich countries have caused for their

own development in using the global capacity of absorption of the Earth, that is indeed a common good. Now the system is saturated and we all have to reduce our CO₂ production if we want to survive. The profound injustice is that the richest countries have built their own welfare on this exhaustion while the poorer countries have hardly survived. This considerable debt constitutes basically the reason why industrialised countries have morally to finance and support the effort, research, imagination and implementation of the measures that are necessary to combat climate change and to support poorer countries in that effort.

The second part consists in the enormous quantity of resources that western countries have extracted from southern countries since the beginning of colonialism or even earlier. These poorer countries, even in earlier times often still pretty wealthy, have been deprived from their own natural resources. Without the gold, the silver, the precious wood, the many products of plantations (tea, coffee, sugar, fruits), the fuel and similar goods that have been extracted from southern countries, western nations would not be what they are today. Most of this wealth has been extracted under conditions of violence or power. This is called robbery.

The third part consists in the benefit western countries extracted from slavery. Most of the riches mentioned in the precedent category have been made available by a tremendous amount of work that has not been paid for, because slavery even did not produce any income, even not undervalued, for the workers. Not only have the resources not been paid for, but the necessary work for their availability either. It is also evident that all this human energy, if free, would have had generated much better local conditions for a present wealth and wellbeing.

Since a few decades the western industrial system has developed the practice of dislocation of many industrial activities to southern countries where the conditions of production allow bigger profits. As salaries are there much lower, and conditions of work are not protected by social laws (no trade unions, no unemployment benefits, no welfare), it allows corporations to make bigger profits or to sell their products at a much lower costs that allow finally more benefit. On the other hand these countries are often characterised by authoritarian political regimes that offer less freedom for the people, it means more security and more benefice for investments. Ecological or security standards are inexistent or very low. That allows reducing still more the expenses for the welfare of local workers and inhabitants. On top of these advantages any pollution of that type of production or any production of CO₂ are accounted at the expense of these developing countries. It means these corporations have not only reduced the quality of the conditions of work, they have also exported the pollution and wastes of their production.

I will not extend more this description because I do not have the skills to go more into details. What is striking in the description of these different forms of debts is the fact that they all proceed from an unequal form of exchange. Rich countries have extracted all they could from these southern regions and this wealth has not been compensated for. It means that the flow of wealth is going only in one way, without compensating value in the other. First: it is amoral because this is not a just exchange but simple robbery. And second: such exchange cannot last long because it has soon exhausted the weaker one and there can then be no more exchange.

This form of depletion seems to be more and more frequent with globalisation when wealth accumulates only on one side. Equal exchange transforms into exploitation or extraction. Extraction seems

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to be the dominant law of our world. The evident consequence of such one-sided trend is that one gets richer while the other gets poorer. If one side drains the other from its riches it comes soon to a stage where the latter cannot anymore be part of the exchange because it has lost everything. Out of this assessment about exhaustion ensues the rule that each exchange must care for justice and equity if it intends to last. By draining one's partner one kills the possibility for exchange. And in the case there is unequal exchange, it is important to find ways for the wealth to return home. Some measures must be consciously taken to correct the imbalances. This kind of measures would probably erase most part of the present debts of poor countries, especially if they take in count the four forms of debts I mentioned before.

Another aspect seems to be still much more important than the lack of scruple and lack of equity. It is the fact that extraction kills relationships. Accumulation is an obsession that does not consider the value of relationships between partners. It is why it creates the four types of debts I have described. Accumulation fosters extraction that wants to take everything that is possible without considering the limits. There is no capacity for self-limitation because there is no ability to see that we can't escape the following truth: we are in principle "condemned" to only act always in relationships with partners, with a context, with nature, with system laws we have to adapt to. We can deny this truth but it nevertheless remains. This absence of awareness for the importance of relationships explains why we lost control of our relationships and of the deeper meaning of life.

This is the main flaw of our modern society: because we lost the sense of relationships we have lost the substance of life itself. The search for a way out of the present situation (climate change and the

system of injustice it makes visible) can only be a positive experience that will lead us to a better quality of life: less stuff, more relationships, more life, more joy, more love. Life instead of robbery!

5) ESCAPE THROUGH UPROOTING

After we have seen how we take refuge in denial and illusion through force and virtuality, in domination and destruction through false mastery and excessive use of technology, and in accumulation and competition through extreme exploitation and lack of respect for natural cycles, we will examine now the fourth form of escape from the indifference and power of nature: our tendency to uproot ourselves from our local surroundings and community and to isolate ourselves in a world which is no more related to the Earth.

Refuge in isolation and material values

This form of uprooting happens because we developed a twisted way of considering what our reality and our most important needs are. How do we create a false reality in which we take refuge? In which ways are needs different from desires? When does need become greed? We will now look at the nature of our needs and desires and how they combine.

Needs and destruction

Our society exacerbates any possible need. The meaning of life is the key that allows us to choose which needs and desires are real.

Already for many years our rich societies have not anymore been just aiming at the satisfaction of our essential vital and spiritual needs, but every sector of our economy is trying to exacerbate our desires in order to create new needs and new desires, to sell more and to make more profit. It is already in our human nature to desire more and

more and to feel never completely satisfied. Publicity and fashion play an easy game when they aim at creating new superfluous needs and at exploiting our weaknesses more than at caring for our real deep well-being. In the way they are exacerbated much beyond what nature can provide and much beyond what helps us to mature, needs and desires become the triggers for the destruction of our environment and for the destruction of ourselves. Under the influence of the many pressures for consumption and attraction for easy pleasures we lose the track of our own path and of the real deep meaning of life. This meaning, in the way each of us understands it differently, remains the key that allows us to choose what helps us to develop according to our personal priorities and philosophy. It is why it is urgent to question our needs and desires.

When we consider the impact of our consumption on our natural and social environment, it becomes clear that we are extracting too many natural resources which have insufficient time to reconstitute and that we are exploiting people who produce what we consume but who, for most of them, cannot nevertheless satisfy their most basic needs because their work or production is not rewarded at the right price. The only way to propose a serious remedy to this double injustice (exploitation of nature and of people) requires that we change our attitudes towards our needs. We have to question them and to recognise that all of them are not justified and do not have to be satisfied, and that they have to be drastically reduced. It is much easier for us to change our attitude towards our needs than to change the way our consumption impacts on the environment, first because our excesses are the cause of such a negative and powerful impact on nature and, secondly, because we have a much better control on our own behaviours and attitudes than on what happens around us.

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Needs and desires

Needs and desires are hard to tell apart, especially in a society that plays with this confusion; we have to learn to see the truth.

Needs seem to be very different from desires:

- 1) Needs arise out of constraint: thirst, hunger, cold, rain, despair, loneliness. Needs seem to be caused mainly by a lack of something which is vital.
- 2) Desires arise out of possibilities, when something attractive seems to be accessible or possible. Desires beyond needs seem to be caused by abundance, by the possibility of something which is possible but not always necessary.

Yet there is a kind of continuity from needs to desires, and it is difficult to define any threshold between the two categories, although discernment seems to be possible. Discernment is a personal matter which relies on personal evolution, i.e. in terms of past experiences, in term of interpretations, in term of references, in term of maturity.

Needs can be basic: air, water, food. They can be more sophisticated, but it does not mean that they are therefore less legitimate. The intensity of our greed is probably the best form of yardstick which allows us to “measure” the reality of our needs.

Desires seem to be inextinguishable because, as Buddhism teaches it, their satisfaction seems to generate more desires. When pleasure vanishes through the satisfaction of desires, desire for more pleasure arises again and again. Satisfaction seems paradoxically to exacerbate desires.

Discernment and detachment are the best ways to escape suffering, but this attitude can only ensue out of a personal way of evolution which cannot be generalised, and which can even less be imposed because it is rooted in a personal evolution in maturity.

Being, doing and having

In our life, being is the most important need, much more essential than doing and having, which are often escapes more than needs.

It is very inspiring to make the distinction between these three forms of needs which appear constantly in our daily life:

- 1) Being is the primordial need; it means first surviving, i.e. it needs air, water, food, shelter, health, security, education, recognition, love. But being is also the core and essence itself of life. Being is the central experience: breathing and being aware of being alive and of what is around us.
- 2) Doing is necessary in order to provide us with what is necessary - and even with more - for our survival, for our deep evolution and for our enjoyment. Yet doing is not the essence of life. It is only a secondary way for providing us with necessary conditions, experiences and opportunities. Doing is a form of teaching: it helps us to be and to learn how to be, yet it is not being itself. The real quality of our doing relies in fact on the spirit which animates our action, on our awareness and on the way we interpret our experiences; this awareness and this capacity for interpretation are truly part of our being.
- 3) Having is the least important of these three dimensions of life, especially when all basic needs are satisfied. Having, in the meaning of an accumulation of goods, is certainly not an essential condition for happiness, especially when it concerns non-basic

goods, i.e. goods which are not necessary for our survival or for the development of our essential being.

Doing focuses on our own projects, it means on what we know and what we want, while being focuses on our needs for searching and learning, it means on listening to what we do not know. Doing reinforces hence our ignorance and our imprisonment in our own representations, which are the only guide we can rely on, despite the fact they are very limited and twisted. On the opposite being opens us to the unknown, to the mystery of life, to its sacredness which we become more and more ready to discover.

Out of this simplified distinction between being, doing and having, a hierarchy ensues between these three different categories of needs as well as inside these categories:

- 1) the essential needs for being and the superfluous ones,
- 2) the less essential needs for doing and the superfluous ones,
- 3) the still less essential needs for having and the superfluous ones.

The distinction is a mere question of personal evaluation, but yet of central importance in our choices and in our evolution, as well as for individuals and as for communities.

These three categories have simultaneously a material and a non-material reality, in a polarity which illustrates how much we are hanging in the tension and complementarity between spirit and matter.

Being: we need before anything else to satisfy our basic material needs for air, water, food, shelter, health, security. These material needs are very simple and elementary. It requires very little means to

satisfy them and it is why it is a scandal that we as mankind are not able to ensure them for each human being in the world. But these basic material needs are not all we need; we need also a non-material quality of life which only education, social recognition and love can provide. These qualities do not cost anything (at least not much); they flow naturally out of normal social conditions. Where they are missing, something is going wrong. When these basic conditions are actualised, happiness can take shape, and this is the core of being which relies more on the simple awareness of being alive and of the natural harmony of life.

Doing: action is part of our life. We can influence our environment and adapt our conditions of life. Action allows also interaction and relationship between human beings or with our natural surroundings to take shape. Work, in this sense, creates relationships between sentient beings; this creation of links between persons certainly constitutes the main reason for work, before any larger subsistence purposes and beyond any useful or superfluous meanings of any job. Our action provides us with what is necessary for our survival, but our action is only a small part of our life. Doing is in this way subordinated to being, because our quality of being determines the quality and impact of our doing. When we try by our action to influence our surroundings for more justice, we try in fact to bring more quality of being. Our love for justice is the essential force which leads us to act. Needs which ensue from doing consist mainly in tools and opportunities, which are the material and non-material conditions for our ability of doing. Here again, basic needs require little means.

Having: use and ownership are two different things; access to necessary objects and goods is more important than property of these objects and goods; any form of sharing or of collective property

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makes access easier for all. Accumulation by individuals deprives in fact the other users: it limits the use to the use by the one who owns and does not share, and it excludes the use by others. When I declare owning something, I declare also not having access to what others own. Once access is ensured, having is no more a necessity. Here again, needs which ensue from having are in fact easy to satisfy when they concern only very basic needs.

The screen and the movie

Life is like a movie; the screen is the truly permanent Reality, while the projection never stops changing and creating new illusions.

When we sit in a cinema, we remain alive independently from the nature and impact of the movie we watch. Our true being is sitting and watching, although we get moved by what we see. If the film is sad, we experiment sadness; if it is joyful, we feel joy. But the sadness and the joy are not real dimensions of our true being; they are only passing episodes of our life and temporary illusions created by the film. If one changes the film, the feelings will change. Yet we never stop sitting on our seat in the same way. And the room remains the same reality as the screen does too. The screen is in fact the core of the experience, despite the fact we focus on the film.

This comparison is a good, although simplified, metaphor for life. When we focus on the surface of appearances, we get involved in many superficial emotions and feelings which are the ripples on the surface of the sea. Yet the ocean is not made of ripples; it is this huge mass of water we cannot grasp. In the same way, the screen remains the only real element in the film. Whatever the film is, the screen remains the same. For us, it means that the Reality beyond appearances remains always tangible, even if it is not fully revealed

to us. We have to become aware that we are sitting on our seat and watching illusions which are projected on a real screen. It does not mean that the emotions and feelings the movie generates in us are unimportant; there are parts of life, but they are only the ripples on the surface and they have a meaning only if they are related to the screen; if we can remain aware of the fact we are witnesses and that the permanent Reality is the screen itself, we can shift our concentration onto the essential and make it the reference for what seems to happen on the surface of the screen; the being of the screen remains behind the doing of the movie. The first is essential, while the second is anecdotal.

This metaphor is inherited from the more recent Buddhist teaching about what is real and what is not. It brings a great insight into our everyday life. We are acting permanently and a lot happens in our lives. We get involved in many events which create huge amounts of emotions and feelings. These impacts on our persons are very important because they weave our relationships with others and with our environment. Yet they are only the surface. It is essential that we remain focused on what is behind: the screen, i.e. the true essence of life, as the eternal and permanent Reality.

Our awareness of being is the root of this deeper consciousness. Our action and involvement in the world is only the episodic and anecdotal surface, while the joy and rootedness in our own being constitutes the true ground on which we stand. Our deeper maturity can develop when we become aware that our being is the fundament (the screen) and that what happens to us is only the ephemeral (the movie). It does not mean that we have to neglect what we do; it is important that we give everything we can into our everyday life. Yet our deeper being does not depend on our success, and these episodic events acquire only their true meaning when they are situated in the

true context of the screen as permanent and absolute background. Our being is much beyond and deeper than the ripples. This is certainly the core teaching we have to assimilate. It is evidently not easy to do, although extremely simple. It is the key to the true peace and joy which allows people like Etty Hillesum³¹ to sing her bliss in a concentration camp. At a more accessible level for us, this quality of rootedness in our consciousness of being witnesses is the key for accessing serenity and true happiness. Before we act, we are witnesses; we simply are. Witnesses who become active parts of a whole.

Greed and ignorance

Mainly greed, and also ignorance, are our main trends which push us to escape away from being, into more doing and more having.

As we are afraid of confronting the mysteries of being, we escape into the easier and more material dimensions of life which consist in doing and having. This trend follows the hierarchy of these three dimensions: we escape from being into doing and from doing into having.

1) Being, as an awareness and acceptance of what is, is characterised by mystery: we cannot grasp what being is. It is why it is such a special experience, when we accept to surrender to it in a complete open mind to what is or can be, because it brings us in touch with the essence of life. This experience is pure experience inasmuch as it is a discovery of the hidden dimensions of life. Yet, as we are afraid of being confronted with something we do not control, we tend to take refuge into what we think we can better master, like action or possession.

2) Action is for us much clearer than simply being, because it seems to rely more on our capacity to plan and to control what happens. Yet our action remains deeply dependent, on one hand, on the deep quality of our being which defines the quality of our action and, on the other hand, on the way other people accept to play the role we hope they will play in our script, which we have written only according to our own expectations. Other people will fit into this script only if it suits their own script. It is evident that this compatibility between different scripts depends mainly on chance, more than on real cooperation, unless the maturity of the group interferes and opens more possibilities than mere chance would do. Satisfaction versus frustration depends therefore more on chance than on suitability; good projects can fail while mischievous plans can succeed. When action becomes difficult, we tend to take refuge in violence and virtuality as it has been described before, it means in ways which allow us to avoid confrontation with the truth of the chain of causes and consequences, as well as with the reality of matter and incarnation.

3) When we want to avoid the complexity of being and of doing, refuge in having offers the last possible escape: life is then reduced to an accumulation of material or non-material goods. Accumulating books seems to replace knowledge, accumulating works of art seems to replace creativity; of course these forms of escape are only illusions. The most degenerated form of life seems to consist in accumulating material wealth much beyond what is strictly necessary for daily life. Yet our western society considers very highly the ones who have accumulated huge fortunes, although there cannot be any accumulation without injustice and corruption, as any transfer of wealth can only be based on unjust exchanges and as any form of retention deprives the poorest from elementary goods which are necessary for life.

³¹ Etty Hillesum: *An interrupted Life* and especially *Letters from Westerbrook*.

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Spiritual traditions teach us that mainly greed and ignorance are the two main causes which generate this form of escape from being into doing and into having. Greed is an active force which arises more from fear and frustration than from a real desire to harm others. Ignorance is more a rather passive force, because it consists in a lack of awareness of the hidden Reality of life and of the impact of our representations and actions. Ignorance hides very often behind simulacra of competence and a social façade of success. When greed and ignorance combine, they generate destruction and harm, which generate hate. Hate generates usually more hate.

It is much harder to climb up the ladder back into true being than to descend it into hell; it is therefore easier for dominant forces (political or economic power, publicity) to activate negative forces such as fear and greed than positive forces such as compassion and care. Yet people incline in general more towards positive attitudes despite the fact they do not know often how to practice them. This is the reason of the success of so many destructive and evil powers.

Material and non-material goods

As soon survival is ensured, non-material goods (love, peace) become more important; they have a lesser environmental impact.

First priority should be given to conditions for survival which can be achieved with very simple basic means. When these conditions for decent living are given, people usually strive towards an emotional and affective quality of life which requires mainly non-material goods such as love, justice, security, peace. These non-material qualities do not depend on heavy material conditions. Matter is in this case more the simple support of a non-material content, in the way a book consists in the minimal material support for wisdom,

knowledge or creativity or in the way a painting consists in the minimal material support for beauty or emotion. Most non-material goods require little material support and have therefore only a minimal environmental impact; they do not pollute, except when their message is destructive for the soul. Qualities like knowledge, wisdom, peace, justice, love are generally free and freely given, like air, water and sun are freely available in nature, like education is freely given in public schools, like tenderness should be freely given in families. The more we share these immaterial gifts freely, the more they take shape, multiply and enrich people. Sharing these gifts does not deprive anybody; on the contrary, it enriches everybody who accesses them. Generosity generates generosity which generates true wealth. It depends mainly on our human maturity to actualise these gifts and to make them accessible for all. Out of these statements ensues a kind of rule: basic conditions for a good life are easy to implement for all if the will to do so is real, especially on a community level. Non-material goods are more essential and more precious than material ones, and they do not cost anything and can be shared freely.

- 1) The first corollary of this statement and law is sad: it assesses that misery, hunger, violence and destruction in our world are more due to a lack of will for creating harmony than to a lack of material means. Here again greed and ignorance appear to be the real keys of human unhappiness and therefore their remedies are also the keys for an inversion of our negative impulses.
- 2) The second corollary says: the age of modernity consists in the possibility to choose what constitutes the best resources for mankind, especially when we know that our available material means are able to make happiness accessible for all, if we are mature enough to have the will to do so.

- 3) The third corollary says: as soon as our material conditions for a decent life are actualised, we should strive towards non-material qualities; they are free, easily accessible and do not impact on the environment as much as material goods do. They satisfy better and deeper needs for true being. Therefore we should concentrate on the quality of our affective, artistic, intellectual and spiritual life, because it is the easiest way to satisfy a maximum of people, especially when the pressure of demography impacts so much on our environment; as I showed it before, demographic pressure reveals that the impact of rich people, because of their high level of material consumption, is far more consistent and geographically wide-spread than the one of poor people; this fact confirms that the path towards affective and spiritual values is the path to go, because it has a lesser impact on nature and it brings certainly more happiness.

Services between care and profit

Services like health and education rely on a combination of material and immaterial goods; the simplest are the most effective.

Services are the most effective when they concern basic needs and do not rely on much material support; pure water, or basic health or literacy can be made accessible to a large population in using only very simple means. High density of population makes this kind of effort still more potent.

Public services, which are by essence in charge of the most basic needs of the population, are nowadays more and more managed according to financial considerations which tend to convert them into lucrative businesses. Privatisation becomes the general rule; the State government does not need any more to care for its citizens but

transfers many of his fields of activity (water, energy, health) to private corporations. The general rule of maximisation of profit and the integration of these services into the mechanisms of free market economy negates their initial vocation; it becomes more profitable to deliver more sophisticated services and to concentrate on the richest part of the population. Water, health, transport, energy become therefore new fields for profitable investments which are planned mainly in function of improved possible financial returns. Poor people remain unattended. This is the negation of the basic principle: basic cares are the most efficient and must be made equally accessible for all, without leaving out any marginalized minority.

Even private businesses transform their activities in order to accumulate more profit for their owners, managers or shareholders. Workers are no more considered; clients are no more the kings they used to be. Corporations do not care anymore about quality or about the satisfaction of their clients through their products. Clients are becoming the slaves of the interests of corporations instead of production being aimed at meeting real needs in the most complete way. This terrible inversion makes some products almost useless, like so many very cheap products out of China. Luckily a few smaller corporations remain which have understood the value of satisfying truly the expectations of the ones for whom they are working. The spirit of public services remains in this case a living concept, even for private businesses; these more mature corporations are usually very well integrated locally and value the conditions of work of their employees.

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Cancer, Aids, depression and obesity

The major illnesses of our time are an expression of our collective lack of awareness for the meaning of our common evolution.

Illnesses are not only the causes of our physical and personal suffering; they are also the expressions of our deep and more hidden conflicts, in ourselves and with the outer world. Our body is the book in which we can decipher our pains; illnesses therefore express our spiritual ill-being. It is true in what concerns individuals, and it is also true on a collective level. The major illnesses of our time are the deep expressions of our uprooting; they are especially the visible signs for the dimensions of life we socially deny and of the conflicts we socially did not solve. Our modern society is carried away by an uncontrollable growth (cancer), by an incapacity of discerning priorities and hierarchies (Aids), by a destructive rampant state of fear and despair (depression), and by an insatiable desire of accumulation and destruction (obesity). Cancer, Aids, depression and obesity are the physical expressions of this social ill-being; why must this price be paid by specific individuals who are not more responsible for these imbalances than others? This remains a mystery.

- 1) Cancer is a disorder in a form of growth that does not follow anymore any conscious general pattern. In our modern society we miss clear references and choices for spiritual values that could guide us through life. Everything has been made flat by a general way of evaluating priorities in terms of financial benefits. There are no more dominant leaders of development. We have lost therefore out of sight the general patterns that govern life.
- 2) Aids is a disorder in the identification of what we have to fight against. Natural immunisation is narrowly linked with discernment of what is harmful. In our modern society we have developed a

concept of freedom that tries to make everything equally indifferent, neither good nor bad. Drugs are legalised, profit and exploitation are generalised, public lie and violence become official weapons for achieving dubious aims. We have lost therefore the sense of priorities and hierarchies as well as the awareness of the impact of our choices.

- 3) Depression is a disorder in our capacity to perceive how life is a powerful creative energy which can foster just and loving conditions for ourselves, our children and our community. In the face of the cruelty of our society, which has lost any restraint in its quest for power, we feel dis-empowered and without hope in what concerns our own ability to live a truthful life. Governments foster fear because it is much easier to manipulate people who are afraid: terrorism, security issues, immigration are current topics for generating fear of the other. Main general issues like destruction of biodiversity, climate change, violence in everyday life, starvation of the poorest, degradation of democracy or similar degeneracy trends of our modern societies depict a very frightening future which seems not to offer any possibility to escape or to find remedies to these problems. Depression invades our daily life in a rampant way and it is difficult for us to identify the causes of this deceitful state of despair. When there is no heart or a broken heart (another disease of our time), where is life?
- 4) Obesity is a disorder due to excessive accumulation and a form of self-destruction. Our modern society has lost the sense of frugality and simplicity which became by mistake synonyms for sadness and self-inflicted harm. We have lost our trust in non-monetary exchanges, in generosity and self-giving which are the elementary qualities for a true social recognition which would not be based on false appearances.

These illnesses result all from our uprooting; if they are truly the expressions of our self-destructive trends, they have to be understood also as the indicators of what we have to change in order to protect ourselves from this form of collective self-inflicted harm. The pain is the indicator for the right remedy and shows us clearly the suffering of our community, which the general orientation of our development inflicts on the different persons and social categories. We have to revise our priorities in what concerns the qualities we find essential to protect in order to satisfy the fundamental needs of all.

Market society as uprooting

The integration of traditional communities into the wider industrial society uproots people from a vernacular convivial network of social links and from their relationship with nature; this forced integration throws them into a production system which tends to privatise any form of common wealth that can be transferred into private hands.

The word *vernacular* means *indigenous, domestic, which is born in the family home*. A vernacular society contrasts with a market society by the fact it is rooted locally and lives in a narrow link with its natural environment that provides the essential of what is needed.

The transformation of our vernacular relationships into economic exchanges ruled by money is fundamental. It is why we will examine now in more detail how the vernacular and the industrial economic systems are in contrast one with another and why.

1) Wealth of the commons versus scarcity

Market economy has forced traditional societies into a global society obsessed by unsatisfied needs and by fear of scarcity.

The trend of our modern society for privatisation of common property and for an extensive use of money in order to regulate exchanges has strengthened private interests and provided means for concentration of wealth, at the expense of the common wealth and of the collective cohesion and solidarity of traditional societies. Traditional exchanges are usually based on reciprocity, i.e. on endless imbalances which are permanently compensated in a lively and human way by new exchanges that generate an abundance of new social links and experiences and that strengthen the importance of common wealth. On the opposite market economy aims at replacing these informal exchanges which fostered traditional societies by more measurable, objective, “just and equal” monetary compensations. Market economy is based on scarcity; it means that goods become rare because limitation of means (money) as well as exacerbated needs and competition prevent any equality of access to resources. In consequence needs are defined negatively, as resulting from a lack of satisfaction. Fear of scarcity prevails.

In a vernacular society³² most natural resources remain in common property and constitute what is called *the commons*, i.e. the goods that nobody owns and to which anybody has access: the surrounding forest that produces wood for fire and construction, the river that brings water for the people and for the fields, the land that can be cultivated without being strictly owned and that provides food, the community that offers support and help, the common knowledge and experience that are shared through direct social and personal contact,

³² See Ivan Illich, *Gender*, Pantheon Books, New York, 1982.

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the inherited wisdom that is transmitted by the elders to the younger generations.

In our modern world these invaluable natural and social resources and these complex and fragile relationships, based on reciprocity inside the vernacular community, are destroyed by a general trend for privatisation which transfers these originally common goods into the private hands of the most powerful and dominant actors, either members of the local community (landlords) or external actors (investors). What used in the past to remain open, public and freely accessible becomes enclosed, private and acquires private economic value which can be exchanged on the market: natural resources, which are provided freely for all in nature, like water or wood, are sold privately on the market; common species of plants and natural traditional remedies are patented in order to be sold under monopoly; public space is reserved for the single use of mostly private traffic and transport; collective knowledge is turned into corporation's secretive know-how, etc.

One of the most explicit examples in this matter are the enclosures of the 14th and 15th century in England and of the 18th and 19th century in Scotland, when private landowners decided to enclose their land as paddocks for sheep grazing and to prevent local farmers from accessing natural resources such as wood and grass which had always been available there for them as a common wealth and which they had the right to access for their daily survival according to the rules of past feudalism.

In such a trend of privatisation of common wealth that has grown still stronger since the industrial revolution, the subtle vernacular relationships based on reciprocity are replaced by monetary exchanges and the new powerful owners of this previously common

wealth become the employers while the excluded simple people become the workers. Money, earned through wages, becomes the main means for exchanges and for access to necessary goods which are no more accessible freely as they used to be. This process of privatisation, or enclosure, not only transfers wealth into private hands but creates also dependence of the poorest towards land owners for what concerns work and resources.

This main shift, which I described here in a very simplified way, creates a strong dependency of most people upon market and monetary exchanges. The negative aspect of this evolution is not the extension of exchanges, nor the specialisation and diversification of trades, nor the improvement of complementarity it encourages between parts of the community; the negative impact of enclosures is the depreciation of nature as a common nourishing context for all, the exclusion of many people from the normal circuit of human exchanges, their transformation into servants and the reduction of social exchanges to their monetary value.

2) Vernacular abundance in self-limitation

Vernacular societies relate to their natural environment which defines the laws of self-limitation and of solidarity and reciprocity.

Our natural environment provides us with everything we need if we are prepared to contribute to its work in supplying our labour which is necessary to help to grow or pick or extract what becomes available. The direct proximity of the environment, the visible degree of (non-)availability of resources and the necessity to supply human work and physical effort in order to access these resources provide evident limitations and clear indicators for self-limitation and respect of the laws of natural and social cycles. The evident fragility of the

balance of natural laws as well as the vulnerability of any form of subsistence which relies directly on the natural environment foster the social relationships which have to be based on solidarity and complementarity in order to provide a minimum of security for the community and for the individuals.

Vernacular exchanges are based on reciprocity, it means on a continual debt of everyone towards each other, which continually evolves in a dynamic way at each new exchange. It can be compared with the walk which is similarly a movement that, by each step, corrects the precedent imbalance by another imbalance. Reciprocity says: I help you building your house and you help me cutting my wood. Exchanges are not measured according to the unique abstract monetary yardstick but they are valued according to the more subjective feelings of each actor. Money has little impact on this kind of exchanges because money is in it almost non-existent. Each one who needs the support of the community can measure the value of exchanges either in a moral debt owed because of what one has received or in social recognition gained by what one has provided.

Vernacular societies live on a subsistence pattern. Needs arise out of necessity and are adapted to, and satisfied by, the available resources. No publicity is used to create artificial needs or to activate exchanges because exchanges have much more value than a simple monetary exchange. On the contrary of market economy needs are reduced to their minimum and work stops when basic needs are satisfied. Creativity and leisure take place as soon as subsistence is ensured. In general no external contributions are made to provide luxury goods.

The free availability of resources in nature, or in forms of yield such as organic agriculture that are integrated into the laws of natural cycles, makes these resources abundant as long as the population that

relies on them remains in a right ratio with the speed of renewal of these resources. Abundance exists only where self-limitation and parsimony are practised or at least where the level of consumption is constantly adapted to the availability of resources. Our Earth provides enough resources for our needs but not enough for our greed, as Gandhi used to say.

3) Vernacular versus industrial

Vernacular subsistence generates continuity, diversity and life while industrialisation creates disruption, repetition and virtuality.

Industrialisation is always falsely understood as a progress and as a natural development out of vernacular patterns of life. This is a way to mistake materialist abundance for quality of life and happiness. Exchanges of material goods and services provide more life and happiness only if they happen under conditions where they do not dominate the social complexity but on the contrary reinforce the social cohesion and solidarity. While industrial development patterns generate the segregation of social activities and the domination of the economy and of the laws of free market³³ upon human values, exchanges according to the subsistence and reciprocity patterns create social links and generate cohesion in the community. Subsistence encompasses all aspects of social life; the practical and more material aspects of life are not separated from the more human, social or spiritual dimensions. Cultivating one's field, helping the neighbour, having a chat, educating the kids, worshipping are all aspects of the same living practice.

Manual work – at least as one component of daily life - is the base for a truly related way of life with the laws of nature. It allows the

³³ See Karl Polanyi, *The Great Transformation*, 1944.

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worker to be responsible for one's own subsistence. Gandhi always insisted on the true value of handwork because it is the core of our relationship with the material world and with our environment. It fosters thus our expression as incarnated beings. On the opposite urban civilisation has completely twisted this relationship by delegating handwork to lower social classes against remuneration through money. This way of thinking creates a false social hierarchy that transforms the rich in parasite and the poor in an under-being, as slave worker for the ones who can afford to pay.

The subsistence pattern of life transforms only the wealth that is necessary. Hunters-gatherers used to stop hunting or collecting food when their needs were satisfied. They could then spend time dancing and celebrating life. Subsistence and celebration were not even distinct.

The subsistence pattern aims at creating relationships between people. Exchanges are the fruits of necessity or of generosity. The retribution is not money but satisfaction of needs and social recognition. This need for recognition can be so powerful that it can even go so far as to disturb social peace. Yet the need for love and social recognition is certainly more natural and more necessary for our own growth than the accumulation of money.

On the opposite the industrial pattern generates mass production of superfluous goods in order to sell them and make money. Economic activities appear thus as something distinct from social life and seem to be inevitably accepted as dominating all relationships between people. Market becomes the law that rules social exchanges. Because it is not related to the satisfaction of real personal needs but based on anonymity, the industrial pattern creates monotony (repetition of

goods and identical forms) and disruption of the social network, under the power of private speculation and individual hope for profit.

As we saw earlier vernacular languages and vernacular architecture are expressions of simplicity and diversity. They are the signs of adaptation to the natural context and to the richness of accumulated experience. Vernacular architecture knows how to keep a house cool in warm climate, to ventilate naturally, to allow natural heat transfer. It is the best expression of traditional wisdom and adaptation, of respect of nature and of the sacredness of the environment. It recognises the surroundings as the law that is able to provide the frame in which life has to unfold.

Subsistence activities make each one more responsible and independent: no employment, no salary, no working time, no transport between home and work place; not even any distinction between work and leisure because everything is simply part of life.

The awareness of the negative impacts of industrial patterns does not mean we should abandon any form of technological progress. The industrial pattern is not meant here as an implementation of technology but it is meant as a philosophy and a way of organising artificially what becomes distinctly production and consumption. The vernacular economy can also produce manufactured goods of higher intelligence. Small workshops can be the places for transformation of matter into useful goods for subsistence. Of course any activity of "production" of - or more exactly transformation into - more sophisticated goods requires generally a stronger integration in the wider market which then does not restrain itself from dictating its own rules. Necessity and contribution to the social good and common wealth remain here the keys for the right choices.

4) Market's creation of scarcity

Market transforms normal life into acts of production and acts of consumption which are linked only by money or market laws.

Market uproots vernacular societies from their own subsistence patterns. Scarcity is created by the laws of market because these laws reduce the accessibility to goods by imposing a single possible channel: money. Who does not have money does not have access to market or to the goods which are only available on the market. Competition arises from scarcity and inequality. Production (in fact work which makes resources available) and consumption (in fact enjoyment and use of available gifts) become artificially distinct acts which are disconnected from one another or more exactly only related to one another through the channels of market and money.

Market defines new rules for accessing resources and necessities. Goods, services, knowledge, become rare because they can only be accessible under limited conditions which are no more free; food must be bought in shops instead of being picked in one's own field; problems of health have to be treated in institutions instead of being cared for by the local healer who exchanges his help against what everybody can provide; knowledge has to be learned in schools where a further training is offered which will define possibilities for future employment instead of common knowledge and know-how being shared freely and acquired in the local community and family through the practice of everyday life. These few remarks do not mean of course that schools and health institutions are useless; it says only that they should not be the exclusive means to access these services.

As living beings we are no more considered as whole human beings but we are split into producers (employed or independent workers

who get an income) and consumers (buyers or payers). Instead of providing necessary and well adapted goods exchanges become thus more opportunities for speculation that makes poorer communities ever poorer. Yet it remains unchanged that the most valued natural resources are mainly located in regions where poor communities live and are employed to make them available: fuel in Nigeria, minerals in Congo, coffee in Brazil, rice in Thailand. Who is truly rich?

Despite the form of artificial scarcity and of generalised injustice that the domination of market laws generates, the specialisation of our market society, which results from this evolution, allows and stimulates also the development of new very precious competencies and of new valuable knowledge or know-how. Yet, although it could enrich the commons, the increase of this potentially common wealth becomes sadly, at the same time, more and more private and only available for a decreasing number of people. And the effect of marginalisation in our society becomes ever stronger.

5) The illusion of wealth creation

Industrial society pretends to create wealth; production is an illusion because it consists only in transformation of what is given.

The myth of industrial society consists in growth and wealth creation; it is what we call production. Yet it is impossible to create goods out of nothing. Energy and matter cannot be created; they can only be transformed from something existing into something new in form but composed of the same basic elements. The creation of wealth is therefore impossible; wealth, or goods, can only be transformed or transferred or taken away from where they are available in nature.

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“Nothing is created, nothing is lost, everything is transforming” as Anaxagoras of Clazomenae (5th cent. BC) put it. Matter and energy are continuously transformed into other forms of matter and energy. The form changes but the content remains, as the same quantum of energy and matter in their different expressions.

The quantity of available materials and energy in the universe is constant. Matter can be transformed into energy and reciprocally. Water is transformed into steam or ice when energy is respectively added or liberated. Photosynthesis transforms gas and water into plants. Combustion liberates energy while it transforms plants back into gas and water. Such processes of transformation generate new forms and new appearances but the total amount of matter and energy remains globally constant.

In fact, to be more precise, the total quantity of available energy in the whole universe has even a tendency to diminish; the second law of thermodynamic says that energy has a tendency to entropy, it means towards degradation. Energy, when it is used or transformed, tends to turn - it means to degrade - into its lowest form, which is heat. Any use of energy sees thus part of it turning into heat, and heat has a tendency to dissipate and therefore to lose its own power as nothing can reconstitute the original concentration which could have a sufficient impact to provoke transformation. As any transformation towards a more complex material form needs energy and as this energy tends to turn into heat and to dissipate, the fact that there is only a limited quantum of energy that is available in the universe - although it is an astronomic quantity - indicates that the universe will have a limited life span.

What is true about energy and matter is also true for wealth. It cannot be created; it can only be transformed. Wealth can concentrate in the

hands of a few, but it cannot be produced out of nothing. Concentration of wealth can only result of a simple transfer from one person to another. Accumulation can only be made possible where there is unbalanced exchange between a loser and a winner.

Production, as the creation of wealth, does not exist either. It is only a transformation of materials that nature provides freely to us. Production is an illusion which our industrial society has shaped. It is time for us to awake and to recognise that this illusion has destroyed our environment as well as the spirit of our society. On the opposite transformation has a very different meaning which will change our relationship with nature: it emphasis how much the quantity remains always the same and has thus to be managed wisely.

Nevertheless transformation remains a fascinating process because it involves all our faculties: creativity, imagination, know-how, awareness, love, etc. that give new shapes to what we handle.

6) Protectionism and globalisation

Protectionism allows weaker societies to consolidate according to their own pattern; opening to external exchanges comes later.

Rich western countries have consolidated their wealth and might during the last centuries under very protective measures that allowed them to develop, to construct a solid infrastructure and to establish external commercial relationships where they soon became dominant, precisely because of this wealth and might they had consolidated beforehand. Now these rich western nations want to force poor nations to open their own markets to this dominating external power. They invoke the pretext that exchanges will create wealth for these poor countries also, yet exchanges seem always to profit the

dominant ones. If this were not true, why would these rich nations bother so much for the extension of market possibilities? Globalisation happens under the false hope that wealth can drip down from the top to the bottom. In fact we can observe how globalisation is only a very materialistic process which uproots traditional communities in order to integrate them into the international market and which kills diversity and destroys the genius of vernacular societies, transferring wealth from the poor to the rich.

Therefore it is important that poor communities be able to protect themselves from this external intrusion until they have consolidated their own subsistence system and until they can resist external pressure or attraction, once their own pattern of development is established. Then external exchange can develop under control of social options and of ethical priorities. Any community can only construct itself under protection until it is fully grown up, it means until it has chosen its own patterns of development and has acquired the means to control them, especially if these patterns are not reduced to a simple materialistic option. This true consolidation happens when the whole community is empowered to choose what is essential for the local population. Consensus is the real way to attain an agreement which can be maintained on a long term. Consensus allows the community to agree about common priorities and rules which everybody has to apply by. It includes also the need to resist in a spirit of solidarity the tougher times and difficult circumstances which inevitably result from these collective choices.

Roots, subsistence, reciprocity and exchanges

7) Subsistence and reciprocity do not exclude exchanges but require social awareness to protect the practice of human liveliness.

Vernacular communities teach us the quality of connectedness with the Earth and the natural environment as well as between members of the same community. Traditional societies are certainly characterised by frugality and simplicity that become more acceptable when true human qualities compensate the lack of comfort. Nevertheless external exchanges are vital for such societies because they offer the opportunity to escape a form of imprisonment in traditional rigid forms. They bring members of the community into contact with the otherness of different communities, be it with the globalised market. Awareness is necessary to distinguish the quality and the noxiousness of what becomes available through these exchanges and to choose what to remain open to and what to protect from.

Simplicity is always a help for discernment because every aspect remains more understandable than in a more complex and open network of exchanges. This form of simplicity should be also the natural consequence of the fact that life happens here and now, and that the introduction of foreign goods or influences will never improve fundamentally this given quality.

When a community is well rooted locally and develops its own potentials, it flourishes better than when it relays on external inputs. It is why we should go back to more local forms of integration: let's buy local; reduce our mobility; invest our energy and creativity in improving the quality of life of our own local community; be rooted in our own reality; implement patterns of subsistence and of reciprocity because they help to remain grounded and to create this common wealth which should be reconstituted and should remain accessible for all; let us practice reciprocity because it escapes the laws of market and creates the real common wealth, in the joy of giving and receiving; let us open also to other patterns from elsewhere, but mainly in what concerns immaterial goods if they are

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not the supports for destructive values and influences; let us contribute to protect or even improve diversity, adapt to natural laws and listen to the Earth. Let us live here and now, be rooted in our place, in our community, in our own being, in our life.

Rootedness in the land

So far I have described out tendency to be uprooted. Food is certainly the best example that illustrates how much we are uprooted from the earth and especially from our own place. Our relationship with food is really an expression of our relationship with the world. Small children who have troubles with food have very often as well a difficult relationship with their surroundings. It is why they cannot absorb what comes from outside. For us as adults, it is very similar: the food we eat is the image of how we relate to the world. Food is also our link to the land we inhabit.

Food as energy of the place

Food nourishes us with the subtle energies it has been loaded with through the “production” process, from growth to absorption.

Food is one of the most basic needs for each of us. Yet its production is generating huge injustice; half of the world population cannot feed itself properly; one fifth is starving. Originally food was produced locally, according to the rhythms of seasons, as a result of natural cycles and of human work. It was a visible process for all which could be easily understood and of which the quality could be checked. Nowadays food production is a complex, anonymous and often goes through an industrial process that cannot be controlled.

The main motivation for producers is profit and the mediocre quality of food results directly from this priority for financial advantages.

Originally food had a kind of personified identity because it was directly linked with the people who had produced it and who were known directly. It was rich in the energy of the place which was tuned with the proper needs of the inhabitants, in terms of nutrients and of subtle forces. The available quantity was shared by all the members of the community. In traditional societies many social rules cared for an equal sharing.

The industrial production of food, because it is oriented towards profit, does not restrain from adding any ingredient to make the production more abundant, cheaper or quicker, without any consideration for health consequences or any respect for consumers or awareness about the impacts of means of production on the natural and social environment (animals, pollution, degradation of soil, social exploitation). The major part of food market is now in the hands of a few major corporations which hold in this way a form of monopoly. Strong variations of prices linked with the laws of market and speculation make this invaluable resource inaccessible for many. Food consumption creates huge social contrasts.

The place of production of our food plays an essential role because it determines many factors that define the real quality of the food:

- The place where food grows defines the subtle energies and qualities which are in relation with the real needs of the inhabitants of the place. Local food adapts to local climatic and energetic conditions and act in order to correct imbalances. It means it gets the precise subtle qualities the inhabitants of the place need for their physical, mental and spiritual health. It is

always amazing to observe how plants can adapt to a given environment and change their patterns of growth in a relative way, adapting to new soils, new climatic conditions, new forms of agriculture, new consumers. Food provides the nutrients and minerals that people need locally, especially when it is produced according to organic principles. When food is transported and consumed elsewhere this special appropriateness is missing.

- Food is sacred; it is a gift of nature where everything is given freely except the work of the people who prepare the right conditions for its growth. As it has been said, food is the illustration of our relationship with the world; it is why it should be cared for as for the most precious thing we can share and give and receive. In this context search for profit can only pervert the conditions of production and the products themselves, attacking in this way one of the most intimate parts of our being. Centralisation, accumulation, concentration and distances can only contribute to make the process more anonymous and more out of control for the consumers.
- When food is produced for exportation - it means essentially for monetary income or for paying the national debt - it creates main imbalances in the local economy and social network. In poor countries it deprives the local population from the basic food they need. Superfluous or even luxury food production for export replaces food for subsistence of indigenous people. Fruits and vegetables are exported while indigenous people cannot even cover their basic needs.
- Transport causes multiple flaws or lacks because fruits must be picked before they are ripe, or products must be frozen to resist transport. The quality cannot be the same as the one on the market place, for fruits and vegetables that have been picked at a mature stage the previous day.

- Consumption of energy for transport, exchange rates or international selling prices of food products can vary drastically from one day to the next and hence deprive workers from their regular income or consumers from access to what they need and depend on for living.
- Distance and packaging make the conditions of production very abstract. It is impossible for the consumers to know what these conditions are and whether they respect the basic human rights, ecological requirements and health qualities. An impressive package on the shelf of the shopping centre can hide terrible conditions of exploitation and destruction. This process is what I called earlier the whitewashing of goods. This deep opacity deprives us as consumers from any control or pressure, and it generates a diffuse guilt feeling as it remains clear that something unfair remains hidden to us, while we are not very convinced to give up what our desire is striving for.

When food production remains local, it is in harmony with seasonal cycles, and the quality can be checked at any time because everybody can have a look how it is produced. Producers feel also more obliged to respect the people they know personally, as they have also the opportunity to enjoy good reputation or even social valorisation because of the high quality of what they sell on the local market place. Food also becomes more accessible for all, in conditions which do not vary so sharply, because they are under better control and are not submitted to further pressure and competition, like cheaper work forces in China or in Africa, or like social and ecological conditions which are not respected elsewhere and allow cheaper means of production.

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Fast food or slow food

Food production is a lucrative business which has nothing to do with real needs; consumers become the slaves of big corporations.

Food has been made an international business in the hands of a few quasi monopolistic corporations; this business becomes still more profitable by the fact that the need for food is a basic need which cannot be postponed; everybody has to eat every day. The transformation of food production into business transforms drastically the quality of food products. What is indeed a basic human right becomes a tool for speculation. No morality; no limits!

- Food becomes more and more artificial: chemicals are used as fertilisers or even as parts of the food itself (colouring or preservative agents, addition of artificial nutrients or minerals, artificial food); genetic is manipulated in order to present fruits which look good but are generally tasteless, or to make the farmers more dependent on the seed provider; food is produced industrially in a way that makes it difficult to identify what it is made of. Very often dangerous substances are even mixed with this kind of “food”.
- Animals are not respected and not treated as living sentient creatures. They are considered as objects, raised artificially or in terrible conditions of confining, fed with ingredients that have nothing to do with their usual food. They are deprived from natural light and vital space, or on the contrary submitted to constant artificial lighting. They are killed in dreadful conditions, or even plucked alive. Many animal diseases (e.g. mad cow) are due to these bad treatments and bad feed, while usually organic farming avoids these kinds of epidemics. These diseases are even transmitted to human beings and spread out quickly because of the increasing mobility of people.

- Corporations exploit all the possible means to make clients dependent. The design of products is guided by this need to make the client a slave, especially by the use of sugar, grease and artificial additives. It has been demonstrated that MacDonald’s food acts like a drug which makes the metabolism of consumers dysfunctional while they become needier and needier for this kind of food. Experiences have been made which show that medication which acts against drug dependency has the same effect on consumers of fast food, because this food contains some kind of addictive products that create similar dependency. Without any moral restraint corporations propose even attractive conditions for school canteens only in the purpose of attaching children to the consumption of their products. What a lucrative deal! How can people who are also fathers and mothers behave in this way, poisoning their own kids? The list of chemical products which are contained in this kind of “food” is unbelievable. It is the cause of obesity for so many poor people in our rich countries.
- Fast food corporations have mainly implanted their production units in poor countries where they find cheap labour and flexible legislation, or abundant natural resources they can consume without restraint. Indian women mobilised themselves powerfully against Coca-Cola which was exhausting water resources in Kerala.
- Distribution of this kind of “food” on the market has the same negative characteristics as the production itself: deterioration of working conditions, anonymity in action, monopoly in buying and selling strategies, manipulation of clients, narrow connections with some corrupt politicians, exhaustion of natural and social resources.

It is evidently urgent to replace this form of lucrative business by a more local, organic and respectful form of production which should

remain under the control of the local community. Transport would be reduced to a minimum. Diversity would prevail because of the diversity of actors and variation of conditions.

A new movement arises slowly which is called *slow food*: it cares for the quality of food, for its organic origin and its social and cultural meaning. Gastronomy is not a privilege for rich people; it can be a very simple practice where one learns to become aware of what food truly is in its complete range of meanings, when more traditional forms of production and consumption of food provide it with all the qualities it has been deprived from by big corporations. Food is par excellence the link between people. Food creates community. When we eat around the same table, we have a true sense of belonging.

Agriculture as landscape maintenance

Systemic agriculture participates in maintaining the landscape and in rooting people into their place and relationship with nature.

Our urban civilisation tries to avoid producing its own food because it prefers to avoid physical effort and the insecurity of food growing. It has chosen to concentrate on more specialised, more virtual or more speculative activities. Therefore food production is abandoned either to poorer regions or to industrial forms of production and to bigger corporations. Our rich countries are nowadays producing less and less food because land, especially in economically high developed zones, is being consecrated in priority to industrial or commercial activities. Food has more and more to be imported from regions or countries which have specialised in feeding urban societies; or it is produced on a big industrial scale by corporations which try to extend their power to the maximum. On the world scale food becomes even a weapon.

This form of specialisation is neither satisfying for the producers, when they are too small or too much subjects to the power of market; nor it is stable for the consumers, when they are forced to rely on economic relationships which show to be fragile: these links are subjects to so many climatic, social, political, speculative factors or circumstances. In cities we are three meals away from starvation, as available storage would not be able to feed the surrounding population for more than 1.5 day.

As such agriculture is the most basic human activity which is necessary for any society, not only because everybody has to eat and needs security, but also because agriculture provides the means for a right and harmonious insertion into the environment. It gives the means to listen to what nature teaches us as well as to care for what it provides. Agriculture is necessary for a good maintenance of the landscape, which has to be understood as the visual expression and health measure of our relationship with the Earth.

In mountain areas agriculture helps to reduce the effects of erosion, to consolidate the stability of the ground and to prevent avalanches. In dry countries it helps to diminish the danger for fire and it watches for a just sharing of water. It is indeed fascinating to see how in so many oases they manage the rare and valuable resource of water³⁴. Most countries could learn a lot from these ancestral techniques and practices which are the expressions of a deep and inspiring social maturity.

Instead of being understood as short term means for the quickest and most efficient exploitation of natural resources, agriculture must be practised as the wisdom which helps to respect the natural given

³⁴ See further an expressive example of it, at the end of the chapter about time.

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equilibrium and to compensate imbalances which appear consequently to demographic pressure. It must be aware how it impacts on a system (nature) whose components it cannot change without perturbing the whole general equilibrium. Not only it has to give up the use of chemicals because they cause irremediable damages, but it has also to care for the health of the environment.

Agriculture is much wider than a simple production of food for mankind. As it had to take care of all species of plants and trees, an organic and systemic practice of agriculture maintains the vegetation which in general manages the salinity of water in the ground and prevents the salt to come up to the surface and to make the soil unproductive. A more sensitive practice of agriculture will care for the general balance of environment and help to restore its health and the harmony of our relationship to it, by keeping alive and in good health all possible species of plants and animals, by maintaining hedges, bushes, wet and marshy areas, by protecting and even enhancing the diversity of natural surroundings and of the fauna which depends on them, by respecting the many essential and complex roles of water and by restricting our consumption of the main components that constitute the general frame and maintain the natural balances. It will also have a healing influence on climate.

Restoring our forests, waters, land as systems

Our forests, waters, oceans, glaciers are the systemic regulators of biodiversity and climate: life, food, heat, transfer, cover, storage.

Agriculture cannot be practised as a single activity; it has to integrate into, and is linked with, all actions that influence the dynamic of our wider environment. Forests, oceans, rivers, glaciers, streams, winds are self-regulating systems. Because they are systems which have

existed for millions of years, they have adapted to a general way of functioning which tends to re-establish balance every time it is perturbed by external factors. Natural original systems have the power to manage huge amounts of energy, resources or influences which are, luckily, far beyond what mankind can influence. The system of forests is only one among the many existing examples of self-regulating systems which participate in managing the health and balance of our surrounding; rivers, lakes and oceans too regulate many more parameters than just the cycles of water, like heat streams, CO₂ balance, food and seed transfer, etc.; ice cap, glaciers and snow covers regulate temperature but also water storage and flow, albedo and many other unknown aspects of our biosphere.

The system of the glaciers and snows in the Himalayas, especially in Tibet, is regulating the flow of the main rivers of Asia: Hindus, Ganges, Brahmaputra, Irrawaddy, Mekong, Yangtze, Yellow River on which half of humanity relies for their survival.

I showed already, in the chapter about climate change, how trees in particular, and forests in general, are part of this subtle system of breathing and of exchanges for heat, carbon and water cycles. Forests are breathing in and out carbon and oxygen. They are the pumps which allow water to be stored, to circulate, to evaporate and to condense. By cooling the surrounding air, trees expel heat and generate rain. They participate to create the cloud cover which protects us from too much sunshine. Regions which are rich in forests are usually also relatively rich in rain, while deforested areas suffer from drought and a lack of water. Forests are thus not the obstacles for food production or for any other use of land, as they are too often considered to be. They are the lungs of the Earth, the cradle for biodiversity, the regulators of climate. In a certain way, they are an

important part of the self-regulating nervous system of our living planet.

It is essential to understand that forests are much more than the simple addition of a lot of trees. The whole is more than the sum of the parts. It is why they are able to become essential systems of regulation which impact greatly on the local and global climate, according to their size. Their role consists in maintaining a general balance in a complex way we are not able to reproduce with human means. This is simply another degree of complexity and another scale which we can hardly grasp because of the incredible amounts of energy and matter which are involved and of the infinite interaction of so many parameters.

According to a British magazine³⁵, Brazilian physicist Eneas Salati calculated that the power of the sun captured by the 5 millions of square kilometres of the Amazon amounted to the equivalent of 70 Hiroshima-sized atomic bombs exploding every second of day and night (or more probably 1 bomb every 70 sec³⁶). He showed that a considerable proportion of the rainfall over Brazilian Amazon was recycled, using up to 75% of the solar input in generating “latent energy”³⁷ in the form of water vapour. It is clear that such enormous quantities of energy and resources can only be managed by powerful natural systems and cycles. Yet these cycles remain fragile because

the amount of CO₂ in the air, partly created by human activities, determines how long the stomata (the breathing holes in the leaves) remain open, while the leaves capture the CO₂ they need for photosynthesis, as it has been explained before. If the amount of CO₂ is important, they do not need to stay open so long and less water is lost and evaporates, reducing the amount of potential rain. It means that the high amount of CO₂ in the air threatens the rain cycle in the Amazon region which risks drying out and turning into savannah.

Our role - and the first urgency - is then to restore these systems we have deeply perturbed through our unscrupulous exploitation and domination of nature. We need them absolutely in perfect health because they alone are able to face the impact of natural phenomena as well as the impact of our human society. Of course, our trust in these systems does not replace the necessity to adapt our ways of life to the cycles of nature. The restoration of these natural systems is not a necessity because we want them to make it possible for us to continue on our mad road; their restoration is urgent because these systems have to do what nobody can do. It is time to understand how nature is a complex and single system whose parts are all linked and how much each part and subsystem is vital for our survival. We begin to understand this basic truth. It is then time to act in consequence.

Our local communities have to reconnect with their responsibilities for the good care of the land, especially in an attempt for stopping destroying what remains and in an effort for the restoration of what has been destroyed. It will be also the path for us to become rooted in the land again.

As they constitute the nervous system of our environment, these natural managers of global equilibrium belong to the *commons* because they foster the main conditions for the life of the whole of

³⁵ Magazine *Resurgence*, No 257, Nov-Dec 2009, Bideford, Devon, UK.

³⁶ A quick and approximate calculation seems to show a mistake in the quote. We assume an amount of sun radiation under the Equator of 12kW per m² and day (which is probably a high maximum) = $1.2 \times 10^4 \text{ W/m}^2$. Surface of the Amazon forest: 5 mio km² = $5 \times 10^6 \times 10^6 \text{ m}^2 = 5 \times 10^{12} \text{ m}^2$. Total sun energy: $5 \times 10^{12} \text{ m}^2 \times 1.2 \times 10^4 \text{ W/m}^2 = 6 \times 10^{16} \text{ W}$. We have 24h x 60min x 60sec in a day = $8.6 \times 10^4 \text{ s}$. Total energy per sec: $6 \text{ W} / 8.6 \times 10^4 \text{ s} = 7 \times 10^{11} \text{ W/s}$ (or J); Hiroshima bomb: 13 kiloton equivalent TNT, where 1 g TNT provides $4.2 \times 10^3 \text{ J}$. Size of the bomb: $13 \times 10^3 \times 10^6 \text{ g/bomb} = 1.3 \times 10^{10} \text{ g/bomb}$. Power of the bomb: $1.3 \times 10^{10} \text{ g/bomb} \times 4.2 \times 10^3 \text{ J/g} = 5.5 \times 10^{13} \text{ J/bomb}$. Number of bombs per sec.: $7 \text{ J} / 5.5 \text{ J/bomb} \times 10^{11} / 10^{13} = 1.3 \times 10^{-2} \text{ bomb} = 0.013 \text{ bomb} = \text{about } 1/70 \text{ bomb}$, it means 1 bomb every 70 seconds. Of course it is only a very rough estimate!

³⁷ About latent energy, see footnote for **Error! Reference source not found..**

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humanity today and tomorrow. Nobody has any right to exploit them for private purposes or to destroy any part of it. An international solidarity must provide the necessary support, especially when main settings are at stake and need an important rehabilitation, and when a first stage of conversion of the local livelihood has to implement a new form of subsistence to be compatible with the protection of these life systems. As an integral part of the *commons*, these systems are certainly under the responsibility of the international community. Yet the action can only be local, it means narrowly connected with the attitudes of the local communities.

If local communities refuse to be aware of the value of these systems or to respect their integrity, it seems very difficult to protect these essential regulators in an effective and durable way. The idea for the payment of compensations for the loss of the incomes and benefits which were originally linked with the exploitation and destruction of these essential resources does not seem to be realistic. It would be impossible to provide the necessary funds and to maintain their availability through a longer duration, with the certainty that this would guarantee that these systems remain untouched and well preserved. Financial help has clearly to be provided as means for common and concrete action but it cannot generate the only motivation for the local communities to preserve these invaluable resources. Thus the efforts made in international negotiations for compensating the actors who have taken advantage of the exploitation of these systems do not seem to be able to offer any viable solution. As it has been said earlier, this kind of financial compensation process relies more on an immoral blackmail than on any other basic value.

Local communities remain the best qualified actors to become aware of the necessary change and to implement it. They know best the

local situation and are directly in touch with their own present and their own attitude towards their environment. Certainly they need to find ways for their subsistence but they are also very much concerned by the quality of life which a harmonious relationship with their environment and the protection of the ruling natural systems can provide. Awareness comes through experience and involvement. Generally indigenous people are the leaders of this form of protection because they know how much they depend on the health of their environment. It is why it is mostly important that governments do not despise or neglect indigenous people and the role they can play in such issues. It is true that institutional power believes very much in specialists and scientists and funding and technology. But theoretical and technical knowledge and financial means are only partial practical aspects that need yet any healthy local social dynamic to find the right expression and take shape.

The main danger for local communities is not in any obstacle how to become aware and how to implement the change, it is much more how to protect themselves from the impact of foreign actors which are involved locally to exploit resources to the limit of destruction, like the big international corporations which extract fuel, minerals or tropical wood. These actors are rarely locals, and if they are, they are often hated because they represent intuitively the destruction of local livelihood and quality of life.

Many stories in the past tell us about different forms of restoration of our natural systems, like the man who planted trees. Nobel Peace Prize Laureate Wangari Maathai³⁸ from Kenya is a living and inspiring figure of this kind of approach. Caring for our own land is certainly the best way to root ourselves back into our place.

³⁸ See the Greenbelt Movement: www.greenbeltmovement.org

Local production as empowerment

When a community relies on what is produced locally, it becomes culturally richer, socially empowered, more aware and self-reliant.

Food is a powerful illustration of what happens with globalisation and the extension of free trade. Integration into the wider network of exchanges takes generally shape according to the relative power of each actor. The most powerful will dictate his law while weaker ones will have to adapt, to surrender and to become dependent. For food, it means power for the rich and starvation for the weaker. Therefore the choice to give priority to local production and to consume in preference what has been produced locally - not only food but also all kinds of goods and services - allows a more harmonious, secure and diversified development of the local community. Local development encourages rootedness, transparency, consensus, common wealth, reciprocity, know-how, diversity, subsistence, self-reliance and resilience, and many other qualities.

Local production will be encouraged when we choose to give it priority, especially through our own private consumption and production, each time we choose to privilege the local products or consumers. Priority for local community life fosters many positive forms of evolution:

- Rootedness: as a local community we find our bearings in the environment and remain rooted in harmony with it. Abundance and penury become very visible as well as the impact of our consumption or the way our wastes are recycled. Demography has to remain in a right measure with the possibility of the immediate environment to feed the living community as no artificial way can booster the production by importing goods from elsewhere and as

the available food has to be shared ideally. We learn to correct our impact on nature by adapting our behaviours and needs or desires in consequences of what we can observe directly as the effect of our behaviour.

- Transparency: we see how each of the members of the local community behaves. This fact encourages positive behaviours which valorise the most generous actors. Reality is more easily understandable as it is simpler because less factors from outside are perturbing the local balances which have been collectively established through the cumulative effect of respective influences. Locals are more able to situate themselves and to act in harmony with broader interests than just with own individual ones.
- Consensus: the smaller size of the community and a better control of the conditions allow us to decide together what we want and to find a form of consensus about priorities or noxious behaviours; because this possibility to choose the quality of our present and future empowers us, we are more ready to make relative sacrifices, as we see what these sacrifices allow to achieve and how far they are necessary conditions to achieve what we collectively want to. What is not controlled by consensus will be left to the control of the strongest or even to external influences which will certainly go against the interests of the local community.
- Common wealth: wealth remains in the community because it is not taken away by external interests like supermarket corporations or businesses which are based elsewhere. What is spent locally is reinvested locally. It is also true with knowledge or with any faculty which is shared locally. It brings life where it should instead of being exported to the main city, to the metropolis or to China. The *commons*, as common wealth which remains accessible for all, can be developed and protected: sharing of necessary goods, of knowledge, solidarity, justice, peace, silence.

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- Reciprocity: we become more ready to give, as exchanges are not reduced to their monetary value but become more and more personal and enriched of more human quality. Exchanges therefore escape the laws of market because they happen more and more outside the economic monetary frame. Reciprocity develops when we do not count anymore in terms of financial interests but when we see the global picture and when we practise a dynamic form of giving and receiving where generosity calls for generosity. This statement is not an idealistic aspiration; it is a very factual economic truth which reveals valid for communities where market laws are not dominant.
- Know-how: Local economy is based on quality. Goods have a more personal profile when the manufacturer is known. Goods and services are rich of creative value linked with the person who makes or provides them and this favours personal encounter. Ancestral and traditional know-how are stimulated by complementarity. Beautiful and well adapted dishes or baskets resist replacement by plastic moulded ugly items. Specialised industrial or artisan know-how is stimulated by the high expectations from clients. No cheap import kills the best local know-how. Inventiveness and originality replace the dull activity of shopping. Youth are taught what matters and find a new future in a positive role how to influence their local community, participate in it in a constructive way and be valorised. In other words local production is a protection against the destruction of local subsistence by import forces; it encourages any indigenous faculty to develop and to find its means for expression. This is also part of the *commons*.
- Diversity: the option for a form of relative self-sufficiency and for satisfying needs by local means participates in developing diversity. We have to stimulate diversity in the local community because diverse trades and faculties have to be practised or

invented in order to answer our own needs. We are also enriched by a form of diversity of the different communities because each one faces different conditions and has different skills or has to answer different needs, implementing therefore different means, priorities, values and choices. Exchange in this case aims at complementarity and can remain regional.

- Subsistence: we have to give priority to subsistence activities because the possibilities for overproduction, speculation and accumulation are locally more limited and because these ways of exploiting human exchanges for our own goals lose their attraction in regard of the more human values that can be easily practised in the local community. Subsistence means in this way much more than the strict satisfaction of basic survival needs. It is oriented towards the wider expression of our physical, emotional, intellectual and spiritual needs and skills. Living values can better be shared and therefore acquire more attraction power than materialistic values. Subsistence is the economic translation of self-limitation and simplicity.
- Relative self-reliance or resilience: finally - and this is probably the most important - if our local community produces most of what we need basically for our survival and daily life, we become, as a community, much more self-reliant and won't suffer too much from scarcity of goods and services provided by import when they are lacking. Local production proposes the most secure solution for the time when no more fuel will be available and when goods will no longer be produced nor transported in the way they are today. As peak oil has already been, this will probably happen, or at least start to have effect, in something like ten years. Local production is therefore the remedy to ensure local self-reliance. We need of course to prepare for this near future in converting our far reaching and highly specialised trade system in a more diversified local production system in order to be able to rely on

our own production for all basic goods. We will then be resilient to the change and be able not only to survive in good conditions but even to enjoy a better and more human quality of life, even if the material standard is simpler yet sufficient.

Local production as empowerment does not mean a chilly withdrawal into oneself but on the contrary a daring attempt to be fully creative. Many people say that protectionism and local production will condemn poorer regions or countries to become ever poorer. But it is in fact exactly the contrary: they are poor because they are forced to integrate ever more into an exchange system which destroys their own subsistence network and disempowers them from controlling their own resources. Local production will then help them to re-establish a healthier and more balanced subsistence. On the other hand, local production does not exclude external exchanges; it allows exchanges to remain under control of social options.

C) The new way

6) TIME, EVOLUTION, LIFE

Our western society denies the real dimension of time. It tries to create an illusion of a linear time in order to escape the cyclic time which is dictated by nature. Our civilisation is at war with time. Time is money. Time has to be saved. This attitude is the most absurd because it denies life itself. Time is nothing else than the flow of our own life, like the flow of our blood in our veins. To save it means to lose it, or not to live it to the full. This dimension of time is certainly the most central one in our move towards change, in order to re-establish a positive relationship with nature, with the universe, with our fellow human companions and with life itself. Time is also the window which opens onto eternity and wisdom.

Cyclic time as a fluctuating dimension

Time is not linear but cyclic

Our civilisation tries to tame time according to a linear regular measure, but time is in fact pulsing in cycles, at various speeds.

Our modern world is regulated by an illusory and virtual linear perception of time which flows according to the count of digital numbers on a watch; a regular and inexorable flow which we have to submit to: work, trains, machines, shops, services, everything operates according to the same universal time, although everyone experiments time in a different way. The alternation of days and nights, the phases of the moon, the seasons made visible by the height of the sun above the horizon impregnate with their own natural rhythms the different portions of our daily life and integrate our days into cycles. The same alternation seems to repeat itself, always the

same, yet the course of time develops and progresses like a spiral, in a slow and imperceptible evolution. Time evolves and can be experienced differently by each of us, according to our moods, to the kind of experiences we live through. Everything makes us aware of these deep variations, yet we persist trying to make it something scientific and regular, something objective, which flows like a countdown towards death, although science itself, with the theory of relativity, has shown that time is not this inflexible dimension it is said to be.

Of course a minimum of coordination is necessary if we want to meet or to work together, to take the train and to plan our activities. Yet time is the most fluctuating physical dimension in our life. It cannot be grasped but it is evidently present.

Time is the dominant factor which rules our modern daily life. We have usually to be at a certain time at work; we have to take the bus or the train according to a given time table; we work with machines that run according to a linear speed and timing. Our personal problem is to commit to this unknown and terrible master while we know that its existence is based on an illusion, or at least on a terrible misunderstanding. Everything in us tells us that this domination is against life.

Winter wants us to sleep longer, while summer encourages us to get up early. Light awakes us, while night helps us to withdraw in a more intimate way of being. Some traditional cultures have perfectly adapted to these variations which are experienced as many different rich ways to go through life. I remember this sign in the Greek island of Patmos: “no traffic in this street between 13h and 15h”, sacred time for siesta. Yet our urban life wants us to continue on the same rhythm, day as night (3 x 8h), or disregarding seasons. Who in a city

knows whether it is still day, whether the moon is waning or waxing, or what is the weather outside?

The sun, the planets and the moon influence us deeply. The moon influences women menstruation; it regulates the tides; it lifts the level of the oceans about a few meters; why wouldn't it have any influence on us, as we are made of 70% of water? It is reasonable that we feel the different influences of seasons and climate, of high and low pressure, of the stress of drought or of the menace of floods. Latitude too is an important factor which multiplies the effect of seasons: how do people live through long nights, especially beyond the polar circle? It is well evident that these natural rhythms influence drastically the way we experience time and they invite us to adapt to tuning with the environment.

Coordination of times

Daily life decomposes in different times: work, family, leisure, friends; as does life: childhood, adulthood, responsibility, wisdom.

The industrial society has organised our private lives according to segmentation in different times which are exclusive and incompatible: work, transport, family, friends, leisure, sport, pub, shopping, gardening, maintenance, learning, creativity, are usually times that cannot run together. When we work, we cannot take care of our children or be with the family. Work is understood as the contrary of leisure. Transport leads us from one to the next time section of our day. It is evidently difficult to feel as a whole despite this form of splitting of our person. We need to introduce a "coordination of times", as a Belgian writer puts it, in order to feel complete again.

In a similar succession of times of different contents, life evolves in fact according to patterns of transformation where each stage does not repeat itself but constitutes a necessary step in a global evolution. Childhood is the time for identification and training; adolescence is the time for experience and discovery of the world and of oneself, for learning a role (more often experienced as a constraint than as a help for expression); adulthood is the experience of responsibility and of family building; maturity is a freer time for expression and reflection; older age is the time for wisdom and for transmitting it to the next generations.

Roles are often linked with an age category. People are classified according to social roles, professions, incomes. These categories become cages, in which we are imprisoned, instead of being perceived as going through different stages in a flexible evolution. Crises arise when the person does not fit anymore the category. Classes of age become impermeable and are stored in different containers: children at school, adults at the office or in the workshop, women at home, old people in retirement villages or in a home. What a loss of wealth, wisdom, knowledge and heart!

The agenda, struggle against time

As life is understood as a project to be actualised in order to impose our will, the agenda becomes a war against time and our fellows.

Our civilisation refuses to adapt and to harmonise with the world. Life has therefore become a project which must take control over the elements. This form of dominance is an escape from life in its unforeseeable nature. Our mastery of time as an abstract linear flow of digits is part of the virtual system we have installed in order to interpose a security net between the violence of nature and our

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fragility, and to avoid a direct confrontation with life. The agenda is the tool in our attempt to master time. We are used to plan into time as we do into space. And the agenda becomes our strategy for mastering this fluctuating dimension that escape us constantly and that we never can stop.

Schedules and programs structure our lives. Every task has to be achieved in a given period, at a given time. Stress is the fruit of this fight against time. Creation is no more a living process but has only one goal: the end result. There is no more time for being. Even doing is under the pressure of the awaited result.

Speed is the obsession of our society. Time is money and time has to be saved. But what do we do with the time we have saved? We save it again and again, refusing ourselves infinitely the right to taste what time is in its raw and natural flow.

This form of imprisonment in action and in a definite time span prevents us from being, from remaining open to adaptation, to changes of mind, to welcoming the unexpected. Life becomes a business, a role to fulfil.

Our projects concern our carrier, our family, our sentimental life, our possessions. But what possesses whom?

Our society measures the value of people on their capacity to be productive, to fulfil a project, often even at the scale of their income. Children, mothers, older people, unemployed adults, foreigners, untrained workers, handicapped or ill people get consequently despised and feel rejected and marginal. What a waste of creativity and liveliness when one knows how much each of these categories of people is rich in humanity.

Unpaid work like the education of children, the preparation of meals, the maintenance of household, the cultivation of the garden, the building of a house, the learning process of new faculties are not recognised as work, although these tasks are recognised when they are done by a professional: a teacher, a cook, a cleaner, a gardener, a builder, a student, because the monetary income becomes the key for evaluation. What about people who produce their own subsistence without using money? Don't they work too?

Work has lost its creative dimension. More and more it is reduced to income earning, in conditions that become worse and worse as the globalisation exacerbates international competition. Private businesses use this trend to stimulate competition between employees. Work conditions deteriorate while they become more anonymous and lose their meaning as service and contribution for the community. The work process loses its content.

Leisure is the negation of work, and plays the role of a security valve; consumption and profit have invaded this field and emptied it of its potential for creativity. People wait for leisure after work as if it were their salvation: sport, cinema, restaurant, travel, become escapes which even do not nourish as they are often impregnated by the same logic as work: a need for profit.

Despite the fact we spend less time working for earning the necessary income, we seem more frustrated and more incapable of using the time we have for personal development and creativity.

Speculation is another form of fight against or with time: profit arises out of circumstances which have to do with time but which we do not control. Stock exchange is a game where many lose and a few win.

When they win, it is at the expense of the workers who see their working conditions deteriorate because the pressure for producing profit for shareholders has become the priority. Stock exchange is purely a form of organised theft that plays on time and should be forbidden.

Communication has also become a fight against time. Mobile phones, emails and internet have made the communication immediate. But nothing more gets said than it was the case hundred years ago. Everybody is talking, nobody is listening. We are so saturated by communication that we cannot absorb anymore. The mass of information which swallows us is completely undifferentiated: most of it is pure propaganda or advertisement; this is a flat land of banalities, without any hierarchy of values, among which the essential gets lost. There is no more silence to emphasise by an absence of sounds what is central or essential. We lose therefore our faculty to judge, evaluate, discern and choose. We get intoxicated and sick. Immediacy makes us drown. We have difficulty to maintain our own view and we feel threaten by the dominant way of thinking or living which seems so primitive and deprived of any sense of what really matters. Self-limitation, an aspiration for extreme simplicity and a strong detachment from all these false promises and illusions, constitutes certainly the best ways to protect ourselves from becoming insane. Silence is time for inner peace and deeper life.

True communication is in fact the time for sharing; it happens when people have more time than money and can afford and enjoy bargaining instead of loading their trolley in a hurry at the supermarket with unnecessary stuff without talking to anybody. When exchanges and work become opportunities and pretexts for human sharing, giving and receiving, for helping each other and for participating in the collective evolution of our own community, time

plays a very different role. From a force which constrains us to produce in a falsified world and to escape reality, it becomes a living flow which opens to the diversity and to the surprise of what takes shape between people where real communication happens in marvel of the deepest mysteries of life.

Time as transformation into maturity

Here and now

The new project does not consist in “doing things”, but in “being with”, here and now, in the present: life as an experience of love.

This is a quotation by a Belgian monk who consecrates his life to live in the awareness of the present moment. We are afraid of being confronted with the essence of life, with the deep meaning of this uncertain and ever renewed confrontation with mystery and overwhelming vitality and creativity. It is why we try to structure our lives in a way which gives us the impression we are in charge and in control of what happens. We invent a form of measure of time which is linear and regular; we escape in doing or even, worst, in accumulating; we have projects for changing the world; we refuse to adapt and to let life flow naturally. Yet life does not consist in what we do but in the way we experience what happens to us. The spirit in which we do what we do and the attitude we adopt towards others are the true expressions of our being and of our liveliness. Doing is not enough; life is about the way we are with others, about the spirit which animates us, about simply our experience of love: how do we integrate into the body of humanity, into the wider cosmos? Life is our own transformation into more maturity through the slow, progressive and personal discovery of the meaning of what life is about.

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We have made life a race against death, as if the ticking of the clock were the measure of our coming into the near proximity of death, understood as the negation of life. But life and death are not opposed; they are two different stages of the same evolution. Life is transformation; it is a cycle of growth towards more maturity where death and rebirth alternate all the time. Like days and nights, like seasons, we go through successive stages of transformation of our being which bring us to more awareness about what is essential.

The presence of death in our life is a fundamental component of our fragility and of our continuous transformation, as the butterfly which arises out of the death of the caterpillar. In Varanasi, on the shore of the Ganges (India), they burn the bodies of dead relatives on wood fires while life goes on around them; children play cricket and run to get the lost ball so far as between the legs of the ones who carry the dead for cremation. What a healthy proximity and visibility of death it celebrates, which we have completely lost in our modern hygienic society!

Life consists in “being with”, because it consists in the way we relate. It consists in the spirit in which we connect with others, with the human beings as well as with the animals, the plants, the minerals, the planets, the rain, the sun. We all belong to one body, which we are parts of. We are interdependent because each of us plays a minute but essential role, as a cell in a wider organism or as an organ in a body. We are all different with our own specificity; it is why we need the others. In uniting with them, we have to become more who we are. Our own personalisation, for each of us, is the condition for forming a true human community. Diversity and complementarity are the both main aspects of this belonging to the same whole, because they are the foundations of nature and life. And love is the force of

attraction which maintains the cohesion, the unity in diversity. We can love because we are different. Love is attraction for the necessary complement. Love is the energy in the here and now, in the present where life happens and develops.

Old age as maturity

We tend to grow into more spirit and less material; it is why old age is the stage of best maturity, despite physical and / or mental decay.

We tend to marginalize older people as we do with the ones who do not produce material or tangible goods. This scandalous attitude is the consequence of our materialistic approach. We are no more able to discern what is more interior, hidden behind the appearances of physical decay. Behind material decay, awareness remains, even if it is not expressed. Awareness is the core of life, probably the last faculty we lose when we die, if we lose it ever. In this sense older people represent, in their own way, the personal knowledge and wisdom they have accumulated through their experiences. Often this deep knowledge remains interior and not expressed, especially when older people are relegated into the hands of specialised caretakers.

In traditional societies elders have a special place; they are respected as the leaders and as the teachers of righteousness, certainly because of their experience but especially because of the personal transformation they went through.

Mental decay of older people is often a physical degradation of intellectual faculties which hides a deeper inner evolution in their preparation for death. Older people try to find usually a form of peace before they die. This ultimate search for truth and equilibrium is hidden in most cases. These people often need to get rid of normal

faculties such as memory or intellectual understanding that stand in the way of their deeper search because these faculties are too much extraverted. It is striking in fact how one can feel that people who seem to be clinically unconscious reveal often themselves to be aware of everything that happens in themselves and around them. It is at least what the many testimonies of near death experiences have taught us. It is also possible to notice this form of awareness in terminally ill people: they are very present and aware, even when the body is showing no appearance of life. Physical decay is in this sense a form of screen that help life to develop inside.

The essential wisdom older people have acquired should be venerated and valued. Instead of marginalizing them into old age homes, we should care for their optimal integration in the network of our relationships, especially wherever different generations can mix, in preference in the family or in the near neighbourhood. Of course this integration may make our life terribly more constraining but the perception of this invaluable wealth and depth is probably worth this powerful discomfort.

Past - present - future

Only the present is real; the past exists as memory (interpretation); the future exists as perspective (projection). Both in the present.

The past is the present of yesterday; it exists as a fact which has objectively happened and which has certainly generated consequences that can be noticeable in the present. Yet the past as such - it means as what is no more - exists only in our memories as personal interpretations which have transformed it into what we have understood, accepted and made of it. Past exists thus only in the present as a transformed reality which we have created according to

our representations and interpretations. Interpretations are subjective transformations of the past into something which becomes unique and personal and which differs from the memories of our neighbour.

In the same way the future does not exist as reality either; although it is something which will objectively take shape tomorrow in a way we do not know, it exists only in the present as a potential dimension of evolution which we are aware of and that we try to represent ourselves through our imagination and projections. Future exists thus only in the present as a perspective we create for ourselves according to what we know and to what we can accept.

Therefore only the present is real, and it includes the past as a self-created memory and the future as a self-created perspective.

The chain past-present-future is not a homogenous chain, like a train with three equivalent carriages that follow each other. Past and future are in fact integrated in the middle carriage, through subjective and creative perception and transformation. This process of transformation never stops. Past is constantly reinterpreted as memory, in the same way as future is constantly reconstructed as perspective. We never stop adapting our memories and perspectives according to the last stage of our knowledge and evolution towards maturity. It means, at least for the past, that the memories we keep of it never stop evolving more and more towards something which will be, finally and probably, far away from what this past has been. This trend to interpretation generates the increasing gap between past reality and memories under the influence of our mental and emotional work.

And a similar form of processing develops also in what concerns our projections and representations of the future as perspective.

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Let's consider in more detail what it means for our memories and our perspectives and how they impact on our present.

1) Past as personal and collective memory

Our memory is made out of our personal and also out of our collective memory, with their (un)told and (un)conscious parts.

As persons we accumulate experience through our daily life, and we store it into our personal memory with the constant reinterpretation of what it means for us. On the other hand we inherit and absorb indirectly also the content of the collective memory or/and myth of the social group (family, class, nation, religion) we belong to. More than our personal memory this collective memory is a social construction which simultaneously hides what it does not want to reveal and proclaims what has been either assimilated and recognised or, on the contrary, constructed artificially in order to better transform or hide what it does not want to accept. Both memories, whether personal or collective, are made of conscious and unconscious components, of told and untold aspects, of organically grown and artificially constructed parts. These different aspects, which are difficult to tell apart, can be the true expressions of what happened in reality or be complete products of imagination and creation.

- 1) Our personal memory collects mainly what happened to us. As it has been said, it is a transformation of reality by our interpretations and it becomes our new reality. We are afraid of water because our first experience of water has been traumatic, or we love it on the contrary because we used as a child to live near water and it belonged to our everyday life. The first difficulty of this process of reinterpretation and transformation of the

experience is that it does not store the objective events on one side and the interpretations on another side, but it makes a confusion of both which it accepts as the true reflection of reality. The memory cannot thus be checked nor revisited later. On the contrary the more it is revisited, the more it becomes something further away from what was originally, unless new external contributions force it to awake to a new perception. The many twists that result out of the successive interpretations participate to increase still more the gap between what is stored in the memory and what happened in fact. Psychology has widely demonstrated how unconscious aspects participate considerably in twisting this constructed image.

- 2) The collective memory of the social group to which we belong is more exposed to twists than the personal one, because it is the product of a discourse the group tells about its own past. The necessity to tell a story forces it into a transformed tale by the simple fact it has to use words and images. This twist becomes still stronger insofar as it becomes a social construction and myth. In most of the cases it does not tell what is important and it not only reinterprets an existing story but it also reinvents another story. It is evident that each social group has its dark sides and remembers the dark aspects of its past: examples of participating in historical forms of oppression and violence or examples of having endured oppression. It is normal that these dark aspects are not easy to tell the children and that the adults try to adapt them or in general to embellish them to their own advantage. Remembering means re-mem-bering (re-organising) in a different way. And the true story becomes a tale. The most difficult aspect of this transmission of an embellished tale is that it does not tell what is hidden, but hidden aspects yet remain unconsciously in the social collective psyche and continue to be active and to influence the behaviours of descendants. Silence can in that way be very telling. It is why it becomes essential to rediscover as much as it is

possible what the true story is. Every family has its black sheep or shameful stories, but they are never told. Yet descendants inherit, not only psychologically or culturally but also even genetically, these deep marks which continue to guide them in a hidden because unconscious way. Once one discovers the true content of these stories, one understands suddenly the reasons why one felt such a difficulty to confront this or that aspect in life.

For both forms of memory, whether personal or collective, it is a priority to investigate what is the true story and to understand the twists and interpretations which have transformed it. This is another form of interpretation which is yet guided by the need to untwist the twists. This is a form of psychotherapy which wants to reconnect with the original story. This is not an easy path because it confronts us with the inconvenient truth of what is really our origin. It requires a lot of love and compassion for the people who appear in these stories and especially a huge capacity for forgiveness.

Memory forms a pair with forgiveness and reconciliation. They are twin sisters. They walk together and cannot be separated. Any search into our deep memory reveals these dark aspects of ourselves or of our ancestors which need to be looked at, to be accepted and to be forgiven. Reconciliation is a way to reconnect with truth in a loving and forgiving attitude. It does not deny what is or what was; it accepts the true past as it is and is capable of recognising and loving the people who are involved in it, despite the condemnation of what happened and of the acts and attitudes of these same people. This is certainly a very long and painful path which leads us yet to liberation. Reconciliation condemns acts and attitudes but forgives people. In this process, we are the people themselves, because people are not always, or very rarely, the others. In this way reconciliation becomes salvation.

Time plays here an evident role; we need time to do this work, investigating and accepting and forgiving. Time plays also an evident role because memory situates itself into time. Time allows the work of transformation and reconciliation transforms our perception of time.

2) Future as hypothesis or projection

Our perspective of future should not be a projection of our views or desires but a hypothesis which has to be verified and readapted.

Future is by excellence the field of our projections; it is mainly shaped by the representations we create how we would like our projects and desires to fit into the future and become actualised. In this way our projections deform what future will be; they decide already today what tomorrow will become, although our control on tomorrow is insignificant. It is evident that this attitude creates many flaws. It is the cause of the terrible ecological crisis we are facing now. Instead of projecting our projects and desires onto tomorrow, we need to observe what in today's situation will have an influence on tomorrow. We need to be receptive to an independent perspective of future. Our perception of future should be constructed like a scientific hypothesis. A hypothesis ensues out of today's observations and concludes what tomorrow could be; yet it is only an approximate hypothesis. It is clear that it can be true or wrong or most probably a bit of both. Any hypothesis has to be checked and verified, with an open and critical mind; it has to be constantly reviewed and adapted or corrected. Our image of future should be like a compass which indicates the direction where to go and which moves and readapts its position at any time we move.

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As the humourist says, we never stop putting off the future till tomorrow. It is true, we are afraid of what the future will be and of our responsibility towards future generations. We have difficulty in recognising that through our attitudes and actions of today we are shaping the future which will be the present of our children.

It is essential to have a perspective of future which ensues out of what we can observe today, instead of being a created illusion, shaped artificially by the projection of our own desires and projects. A serene perspective of what future could be helps us to integrate today's attitudes and actions into a longer duration. This perspective relates today with tomorrow. It is the way to consider the impact of what we do and what we see today on what will be tomorrow. This perspective is essential because it forces us to accept the limits which our environment imposes. It is the best way to consider the chain of causes and consequences and to apply its laws to our behaviours and attitudes today. It is also the way to evaluate with a critical mind how far our actions integrate into the natural cycles which constitute the fundamental laws of nature and determine the impact of today's attitudes on our environment. Such a perspective becomes a vision when it clearly understands how today relies with tomorrow. A vision brings spirit into the understanding.

Present as listening

Present has no duration; it is the state of awareness of what is here and now, whether we like it or not; listening to it is a rich teaching.

We are used to being fully involved in what we do in the present. We are generally completely absorbed in our mind and thoughts which are leading us through action. We hardly notice what happens around us and even in ourselves. We remain hooked in the way we look at

things. Certainly it is good to be able to focus on what we do, but it should not be at the expense of our broader awareness. We need to keep a clear hierarchy between the different levels of our being. If we keep focusing on our action, we have yet to remain open to the wider dimension of our being which remains the fundamental base. Action is only a reduced aspect of life. The core of our existence remains always beyond our action; it is our deep being, where we listen to the pulse of life as something mysterious as such, as without purpose. Life is given and it is the core of our existence, beyond whatever we think or do. It is essential to remain in touch with this deeper core, in our heart. It is where we can learn to listen, to be receptive to what remains mysterious because it cannot be grasped nor described. It is, simply. We have to learn to be; just to be.

Although time can be measured and is said to flow regularly, we experience that it is flowing in very different ways, according to our very subjective perceptions; it can be very slow or very quick; it can be peaceful or stressing; it can be enjoyable or painful. All depends on the experience we have. Why should the mechanical measure be more relevant than what we experience in our depth? It is evident that present can have different speeds!

We are used to filling our time with whatever we can do or consume. When we act too much, we fill all gaps and nothing can be revealed to us. It is like the wise man pouring and pouring tea into the cup of his disciple until the disciple complains that the cup is overflowing; the master says then: "This is the way you are; your cup is full, there is no space to receive any teaching. Empty your cup and then I will be able to fill it". Certainly we have to learn how to empty our cup in order to be receptive to the unknown.

Silence is a neglected dimension of life. It is the welcoming space for revelation, when we stop doing and when we try to open to the unknown. As Buddhist teaching tells us, we know very little about ourselves, about the world, about the nature of life. Our representations participate to twist our view of the world and of what life is. We are continually building up resistance to being more permeable to what is already given. We escape from being ready to be surprised. In order to be more open, it is necessary to calm our mind. Our mind is working without stopping, like a mad sewing machine. In order to find silence and peace, it is important to stop the flow of our thoughts or more exactly to let them flow without concentrating on them, like clouds (thoughts) crossing the sky (our mind) without us looking at them. Traditional techniques propose to focus on the breath because it is something natural and fundamental for our life. Without breath there would be no life; and our breath has accompanied us throughout life. We even do not notice it anymore. We are not even aware of our own skin because it has been with us all the time. Life is very similar; we have it in ourselves and we are no more aware of it because it is too near to us. Silence, when it can calm the mind, can help us reconnect with this deep state of being alive. It is not a striking enlightenment; it is just becoming aware of being: I am; beyond what I do or think or want or have.

Present is the place for a new start every day. Present is only connected to the past and to the future through our preoccupation for past and future. In fact we can free our mind of any impact of this nostalgia that links us with the past, or of this worry that connects us with the future. Of course consequences of the past are acting all the time and influence our environment, but the main link that enslaves us consists in the way we are looking at it and in the way we are stuck in our old ways of thinking. When we reconnect with our fundamental way of being, in the fundamental core where we simply

are, all side aspects seem to be more irrelevant and to vanish. Present is marked by the impact of our memory of the past, but, as I described it before, this memory is not the past; it is the construction we have made of it; and part of the construction consists also in the way we perceive how this past impacts on us. When we become aware of this form of imprisonment we create, we get then more freedom to have a new start. Here and now. It is probably the deep meaning of salvation to know that the past does not matter although we cannot change it anymore, and that present only is real in the way we live through it, in the way we are no more what we were yesterday. When we become aware that only the present is real, today becomes the opportunity for change, for a new start. This is resurrection.

Duration as integration through heritage

We are never isolated; duration links us with the wider context, uphill and downhill, through our ancestors or children heritage.

Although we live only in the present, past (our memory) and future (our perspective) help us to relate to the wider dimension of our life community and history: with our fellow humans, with the natural environment, with our ancestors or past generations, and with our children or coming generations.

The heritage of our ancestors - “uphill” - links us with the many people who have lived before us and whose collected experience we have received in the form of teaching or in the state of our planet Earth. The heritage which we will pass on - “downhill” - to our descendants and to future generations links us with the people who will come after us and who will have to cope with what we have left them: preserved or exhausted necessary resources, recycled or

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accumulated poisonous wastes, relationships of justice, peace and equity or of greed, exploitation and violence. What is our choice?

Although only present is real, our insertion into the duration dissolves our egoism and forces us to consider our position in a chain of heritage. We inherit the Earth from our ancestors and we borrow it from our children, as an African saying puts it.

The aspect of duration is therefore a fundamental aspect of our life; we cannot concentrate only on our own needs and feelings but we have to view them as parts of a wider network of relationships. This integration in space and time breaks our loneliness and makes us the necessary and interdependent parts of a wider body of humanity; humanity in the double sense as a community of human beings and as a sense of compassion for the global life community of all sentient beings.

What I have described about the personal or collective memory and about our perspective of the future takes a much more lively shape when it becomes related to very precise living beings and gets therefore a more real and powerful meaning. I find it very striking that we can often ignore this very personal dimension, when we consume for instance fuel and exhaust this resource, knowing that by doing so we deprive our children and grandchildren, who are not abstractions for us. Either we believe that this resource is really necessary and it means that we have to leave it in sufficient quantity for our children, or we believe that it is of no special use and we then do not need to use it; in both cases, we morally have an obligation to spare it in order to allow our children to be able to use it if they want to. We see in this example that our integration in the duration of time reshapes completely our way of life, especially because the faces of the people who are concerned are real ones whom we know in detail

and whom we love. It is the same about the heritage from our ancestors. We maybe disapprove what they have done, but they are nevertheless real people we know from whom we can learn and to whom we have created a bond, even if this is a complex bond, mixed with love, anger, regret or anything else.

Present and eternity as a gift

Our integration into a wider chain of heritage provides continuity; what we give to others is assimilated, recycled and will last for ever.

When we become aware that only present matters and that past and future are only memories and perspectives in the present, we escape the inexorable chain of time as a linear repetition of equal sequences such as past-present-future. We can express ourselves freely and give all what we can. This is the purpose of incarnation to materialise our spiritual gifts into visible and tangible signs and means of communication. What we create and offer to others will be received and transmitted, re-appropriated and re-transformed. In the same way we receive from others what they offer and we re-interpret it in our own way. Reincarnation is maybe nothing else but this form of transmission of a given identity from one being to the next, when we become aware of holding something precious which comes from another being. Or death can be understood also as the return of all gifts into the wider and indistinct flow of life where our personal identity mingles with others in a more or less distinct way. Eternity, in the Christian tradition, is maybe nothing else but this movement of flow and ebb between the parts and the whole, between the personal and the infinite, in a dance that lasts for ever. Whatever tradition describes it, it remains mysterious and beyond any representation.

The saying puts it this way: past is memory, future is hope, present in a gift; it is why it is called present. Our experience of the flow of time, in the present, evolves according to our successive states of mind and inner dispositions. As I wrote before, nobody experiences it in the scientific and objective way because the present is our personal life where we express our uniqueness.

Time is a fusion of different present instants which arise one after the other; or even maybe there is no succession and time is an illusion; maybe these different presents are simultaneous and it is why we have the impression that they are mingling.

The present has the special faculty to link us with one another. Time, as a confluent of different present times, does not appear anymore as linear but becomes associative and makes community more tangible; we are enriched by what we receive from our surroundings and from others and by what we exchange with them. The whole appears in a clearer form and we feel parts of this whole. This form of belonging provides us with a broader sense of identity. This experience of community seems to suspend time which becomes eternity in the present moment.

We even have difficulty in coping with this incredible intensity and richness of the present moment without escaping. When we experience this intensity, we become impatient to make our experience more consistent, as if we could catch it and freeze it in a visible and understandable object. We are tempted to do something with this ineffable gift and to re-express it, instead of focusing on the experience itself in an attempt of letting go completely. And therefore we tune out of the present time in projecting ourselves into the future: a future where we could tell the truth about what is our experience of life in the present.

What is our person? Is it a clear enclosed entity or is it only a minute part of something bigger with which we never stop interacting? Between birth and death we tend to identify with our body, with our mind and with our memory which are following us everywhere. Yet we are more than this body-mind-memory. When the body dissolves after death, as well as our mind and memory, do we return to the whole or do we keep a personal form of identity which remains the same as the one which was content in the body? Or do we recompose in a different way?

Eternity is certainly made visible in the spiritual expression of our person which we communicate to others. Our spiritual dimension exists more in this form of sharing than in our isolated individuality. It takes shape when it is given or communicated to others. Incarnation becomes real when we dare to share what we have through this form of personal expression. The essential is the gift and not what remains as the material sign which has supported it and made it visible. The sign dissolves, yet the expression remains vivid in the sharing. It is what changes our world because it loads it with a new spiritual content or meaning. Yet this meaning seems often so little and insignificant because of our limited personal impact. The present becomes in this way the activation and communication of our spiritual being. What we give cannot be taken back; it belongs to the whole which can re-assimilate it in its own way. This ever changing link we develop with eternity remains fragile although it is the core of our life. This core lives for ever but we ignore what it is; we feel how much it is rooted in something bigger and it cannot live and mature without finding a living connection with its source.

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Time as scarcity or abundance

The dominant shortage in our culture and society is the lack of time; time is in fact abundant; it is the basic material of our life.

Time is not money; time is relationship and belonging; it is the support for our being aware. When it is imprisoned in merchant relationships it cannot fluctuate nor find its own expansion because it is measured and regulated by something which has nothing to do with life: money. Luckily the most important part in our life happens usually outside merchant time: family, friendship, creativity, contemplation. Silence is an essential component of time which makes it perceptible as energy of life. It is also the space for our recreation. When it is free of artificial constraints, or experienced for the vanishing dimension it is, time becomes the space where we can choose our way of life. Time is then the real dimension for our personal and collective choices: to dominate or to adapt?

Time is abundant because it is perceptible in the present which has no limits of depth. When we learn not to escape present but to experience it fully, time becomes our first wealth which cannot be traded. As it has been said before, it relates us to others and provides us with the community dimension. Time in the present gives us the possibility to participate in the web of life and in community life. Time is the basic dimension where the local community takes shape. Consensus concerning the quality of present and future, which the community wishes itself, arises as a living and fragile harmony in the present. It is the arising of collective consciousness as a choice for new self-limited ways of life which concentrate on the quality of justice and peace. This is the space for participation and choice, in this harmony which is like music: it cannot be dissociated from time.

In his book *Chebika*, Jean Duvignaud³⁹ describes a scene which illustrates how water rights are shared for the irrigation of the palm grove of a South-Tunisian oasis. Time appears in this description to be the synthesis of all social relationships between people and with their natural surroundings: “In front of these men who are talking together, a small container called *gaddous* is hanging in a kind of cavity which looks like a cave. It is a 30 cm high earthenware jar which hangs on a hook and which is being filled regularly by some water drawn from a basin. This water flows slowly out of the jar back into the basin through a small hole whose size is calculated in such a way that the water runs out in about ten minutes. Around the neck of the jar, a grass thread has been knotted on which a knot is made every time the jar is filled up. Once the jar has been filled up according to a number of times made visible by the grass thread and corresponding to the share of water allowed for a plot of land, a *khammes* (tenant worker) or an owner gets up, takes his hoe, goes down to the gardens et modifies the walls of the channels in order to redirect the water to his own plot. In this way the measure of time is also the measure of water, and the measure of water a measure of the land ownership, because these shares of water are more important than the ownership of land. All things converge here: irrigation, ownership, time, and come together under this porch among endless talking.”

Time encompasses all aspects of life and reveals their synthesis.

³⁹ Jean Duvignaud: *Chebika*, NRF, Gallimard. In French.

7) HARMONISATION THROUGH NATURE

Nature is not the store of material we can exploit as we want; it is not the enemy we have to dominate; it is our nourishing Mother which helps us to be re-harmonised when we listen to her and try to re-integrate our true place in the web of life.

Consciousness and re-harmonisation

3 stages for an urgent change

If we want to survive, we need to change deeply our ways of life: 1) stop destroying, 2) be in harmony with nature, 3) discover true life.

The present environmental crisis is not a calamity; it is a benediction: this is the opportunity to be forced to change and to discover new ways of life which will be no more a form of escape from Reality but an authentic discovery of what it is to be alive.

The way scientists describe the urgent need for change shows clearly the ravaging self-destruction we have initiated. This is the basic visible truth. If we do not change we will perish. But the true content of this message is in fact much deeper: if we are destroying ourselves in the way we do, it is because our way of life is ill-adapted; it is pure folly. It is not sustainable because it is out of balance and completely out of place. The problem is also the solution: we need to replace sterile and destructive behaviours by a form of self-limitation which will focus on the quality of being together. Self-limitation and awareness are the keys for this new way of life. A new balance will allow a new quality of relationship with the universe and offer harmony. The present crisis is much more about happiness, than

about destruction, even if destruction is the visible sign of it. It certainly requires a deep change of mind, a fundamental reversal of our habits. This will be only possible if we see what we will gain through this change: simply everything.

Fuel and money

Fuel and money are the two main powers we use in our society; they allow speculation which fascinates us but goes against life.

As summary what I described previously can be said in two words: fuel and money are our principal means of speculation in order to escape life.

- 1) Fuel allows speculation about physical power. Machines get their energy mainly from fossil fuels and allow us to implement changes in our surroundings and satisfy our desires in a way which we would never afford if we would only have to rely on our own organic energy. We lose in this way the sense of right measure and we overcome our rights in manipulating the world. We bring it out of balance.
- 2) Money allows speculation about values and speculation about spiritual power. It changes our priorities and allows us to replace the true values, that emerge naturally from our experience with the world, by artificial values which are made of illusion: accumulation, power, prestige.

Fuel and money are said to be unavoidable necessities because it is the way the world functions. Yet they stimulate the two forms of illusion and speculation which never stop killing us slowly.

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Fuel represents not only the power of machines but also most of the goods and facilities we are used to: all synthetic materials from our shirt or socks to our tooth brush, most of our packaging, most of our means of transport, most of our sources of energy, most of the means used by agriculture, industry and services. Without fuel, little remains untouched. Yet the essential in our life has nothing to do with fuel.

Money has completely changed our world. It has created the new values we respect the most: our income which makes everything possible, our possessions (in the material and in the spiritual meaning of it), the speculation which prevails and gives priority to stock exchange before human work and creativity, the preference for material goods over moral values like honesty, transparency, generosity and over spiritual values like justice, peace, love. Yet money as such has no value but it is only a social and abstract convention. If someone gives you a bank note of an unknown country, you do not know what you got. If someone gives you a fruit or expresses any sign of humanity, you are touched even if you do not understand the language.

Fuel can be replaced by renewable energies which make us more aware how much we depend on the conditions around us and on the balance of our surroundings. Money can be replaced at least partially by more reciprocity which does not need to keep a strict account of our exchanges, or money can be used as such, only as a mean for exchange, without power in itself; it is at least what it should be! These different forms of exchanges encourage more local connections and solidarity which make conditions and consequences better visible and understandable and protect us from speculations which lead us astray.

If fuel and money stop ruling our relationships and if ethical and spiritual values can prevail and guide our evolution as a community, we may gain access to another and higher quality of life.

Harmonisation through nature

When we listen to the laws of nature, our life is re-harmonised; peace and love arise naturally; and true evolution can happen.

The natural cycles and the laws of nature are giving rhythm to our surroundings and are organising the structure of the universe. To live against these laws and cycles or without noticing them is pure folly. Living in accordance with them brings harmony in our life because it links us with the true source of life. We become aware of what provides us with all we need as basic material resources as well as spiritual goods. We learn to understand how our environment is alive and follows its own pulsating rhythms and evolution. We learn also to observe how a given order and evolution rule the whole, how everything fluctuates, how everything never lasts but is integrated in cycles of transformation and evolution, in alternation of birth, death and rebirth. We discover how much our listening and adaptation are not weaknesses but stimulating ways of discovering depth and meaning in our being. Awareness of these natural cycles and laws makes us more respectful of all forms of life. We feel called to develop harmonious relationships with other humans. Solidarity, sense of justice, commitment for peace arise naturally out of respect for life. Our evolution is transformed into something more authentic that leads us further on the path of wisdom.

In our world of competition, people are reduced to be only separate individuals who have to compete and to struggle for surviving. Loneliness and despair are dominant and increasing feelings in our

modern society. On the contrary we feel valued when we can relate to others and commit ourselves for the good of all. We need to be recognised for what we are. We all need to love and to be loved. Yet we remain ignorant and awkward. We do not know how to find harmony by ourselves. We need to be guided, and when harmony is given to us we know better how to respond to it. It is why, listening to nature and adapting to our environment guides us towards a better quality of life, towards justice, peace and happiness.

Listening to nature makes us aware of what evolution is, in a true sense and not as an artificial and illusory projection for more technology, more comfort, more protection. Evolution is the main force which drives the universe and nature; it is the law of harmony and transformation. By opening to it, instead of resisting it, we let us be taken in this flow which helps us to grow in a true way instead of an artificial one. We stop dominating the world and believing that we have a special right or even responsibility to decide who can live and who cannot. On the contrary, we submit to the laws of nature as other species do, and we let them operate. This opening to what is allows us to go further on our spiritual path in our search for truth and for meaning.

Yet this way of listening to nature and adapting to its laws and cycles can only happen when we live simply. We can hear well what nature tells us only if we dismantle the web of protection we have built through the recent ages. We need to be more in touch with some rough aspects of nature, and less protected. We need to reduce our comfort to the minimum in order to be more aware, to be more flexible and to be more alive. We can then see the sky at night, see the moon in its different phases, feel when it is cold or hot, windy or quite. Seasons have an impact on us; we integrate the sense of alternation, of transformation. Wildlife appears and disappears as so

many quick experiences of enlightenment. We feel part of a wider whole. Our senses become fully aware and we are fully alive.

Nature as a teacher

Nature is like a book that teaches us the true meaning of life and how to live in harmony with our natural and social surroundings.

Only when it is in its original state can nature be an expression of what life is originally, before we manage it and transform it in our own way, and according to our ignorance and illusions. When we try to adapt nature to our illusionary wishes of comfort and easy life, we modify deeply its expression and we destroy not only what sustains us physically in terms of vital resources but we destroy also the image of life it presents to us, as a teaching about the true meaning and true essence of life.

Nature is like an open book about the essence of life. The more we live far away from it, the more we cut ourselves from its teaching. The more we try to exploit nature in our own way, instead of adapting to it, the more we destroy the source itself of our true inspiration.

We could say that nature, it means the whole universe, is what makes God or the invisible Spirit of creation visible to us. Nature is a little bit the touchable body of the invisible energy that leads our universe, as a source of life and of constant evolution and transformation. When we lose the track of this trend we can only get lost because we lose our own references.

Beyond the beautiful sight of nature a sacred dimension remains always hidden that can never be seen but only perceived. As well as

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the two longer following quotes, Olivier Clément, in his anthology from the Patristic era⁴⁰ reports the following writing by Vincent van Gogh from Arles to his brother Theo: “Anyone here who does not believe in the sun is a complete infidel.”

And the first quote from Origen (185-254 AD):

“It may be granted that these creatures, seeds, plants, roots and animals, are undoubtedly at the service of humanity’s physical needs. However, they include the shape and image of the invisible world, and they also have the task of elevating the soul and guiding it to the contemplation of celestial objects. Perhaps that is what the spokesman of the Divine Wisdom means when he expresses himself in the words: ‘It is he who gave me unerring knowledge of what exists, to know the structure of the world and the activity of the elements: the beginning and the end and middle of times, the alternations of the solstices and the changes of the seasons, the cycles of the year and the constellations of the stars, the natures of animals and the tempers of wild beasts, the powers of spirits and the reasonings of men, the varieties of plants and the virtues of roots; I learned both what is secret and what is manifest.’ He shows thus, without any possible doubt, that everything is a symbol, and refers to an invisible reality to which it is related.”

And the second quote from Dionysius the Areopagite (c. 500 AD):

“What praise is not demanded by the blaze of the sun? For it is from the Good that its light comes, and it is itself the image of the Good. Thus we give glory to the Good by calling it Light.

Indeed, just as the goodness proper to the deity permeates everything that exists, so that it illumines every creature and gives it life, and is its height and breadth, its cause and its purpose; so, likewise, with the image in which divine Goodness is revealed, that great sun which is wholly light, and whose brightness is unceasing. It is the sun that enlightens everything and pours out upon the whole visible world the brightness of its rays. It is the sun that allows the bodies to develop, bestows life on them, purifies and renews them. And just as Goodness moves all things, and just as God the Creator gathers together all things that are scattered, turning them towards himself as their source and centre and perfect fulfilment; and as according to the Scriptures everything receives from the Good its structure and existence, and as every object finds its own proper borders in the Good and all objects aim at the Good – the intelligent by way of knowledge, the sensible by way of the feelings, the merely animate by natural instinct, the inanimate by their simple share in existence – so, likewise, the light uses its property of revelation through images to gather together and draw to itself everything that receives its rays. That is why it is called ‘sun’ [*helios*] because everything is gathered together [*aolles*] in the light and the light reunites what has been scattered. It is towards this light that all perceptible realities are tending. I am certainly not asserting in the manner of the ancients that the sun actually governs the visible world as god and maker of the universe. But since the creation of the world, the invisible mysteries of God, thanks to his eternal power and godhead, are grasped by the intellect through creatures.”

To this quotation we can add the remark that everything is made out of solar energy as it has been demonstrated earlier.

⁴⁰ Olivier Clément: *The Roots of Christian Mysticism*, New City Press, 1995.

These two very ancient texts show how nature has always been perceived as a revelation of the invisible, a perception we need to rediscover today.

Well-being or bliss

As we behave like takers instead of leavers, we make a terrible confusion between comfort (well-being) and bliss (deep joy of life).

As takers⁴¹ we want to grab, but we do not see that, by doing so, we destroy what we want to catch. Like a butterfly life is too fragile to be caught. It must remain free. Traditional societies which live in harmony with nature are behaving as leavers; they take only the minimum that is absolutely necessary because there is no purpose in taking more. When subsistence is ensured, nothing else needs to be done, except being. Our huge handicap as a materialistic society is that we make a terrible confusion between material well-being and happiness, the former representing the escape from nature because of our incapacity to know how to reach the latter. Happiness is in the deep joy of life, in its essence, when the experience of being becomes bliss. Bliss does not need much; only to become aware of what is already given. We have it here and now. We just need to learn how to see it: by becoming pure witnesses of what is and by loving it.

Our awareness about the environment is slowly growing and concerns much wider aspects than the only physical aspects of destruction. We become well aware that the ecological crisis is in fact our own crisis of identity as a society and a crisis about the meaning of life. More and more people see that material well-being and

comfort are not the same as happiness and real joy of life. Yet this difference remains too abstract, too much confined in our thoughts, instead of penetrating our whole being and dictating new behaviours in our guts, and completely changing the way we live and relate one with another and with nature. We are able to partly clear the confusion between comfort and bliss in our mind. We have still to enact this change. And for doing so we need to leave behind our attachment to the illusion of well-being we practise now. We need to be made free of our addictions: comfort is like a drug we have to be severed from. Yet it is not necessary either to go to the other extreme of harming ourselves. This liberation is the challenge for a deep change of mind and in our deep being. It is a way to develop our resilience and accepting to confront life itself.

In our awareness of the necessity for change and for liberating ourselves from our dependence on comfort, it is essential that we remain aware that nature is not only a place of harmony but it can also be a place of violence and destruction in its cycles of transformation: earthquakes, tsunamis, avalanches, bush fires are as much parts of nature as the beauty and fragrance of a flower. It means that life is evidently much wider than what we are ready to accept and we have to open to this mystery by stripping ourselves of our carapace of comfort and illusory well-being, yet not stopping protecting ourselves from conditions which we cannot resist because they are too harsh for our fragile physical or psychological capacity to cope with adversity. We have simultaneously to learn how to confront all aspects of nature, without reducing it to the Eden picture we have created of it, and also to remain aware how our fragility requires protection, yet not extensive comfort. By accepting nature as it is, we allow ourselves to see the Truth.

⁴¹ The distinction between takers and leavers is inspired by the book of Daniel Quinn: *Ishmael*, Bantam Books, 1992.

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The main constraint which our deeply engraved materialism imposes on us consists in the fact that we believe that true pleasure and joy depend first on our material well-being.

It is staggering to see how much the average reference in rich countries for what is considered as the normal necessary material level of comfort consists in an incredibly high level of material security. We deeply believe that we need so much for our basic well-being and refuse to see that in fact our basic needs require only very little to allow us to be happy: just enough food and drink, a few clothes, a roof, and love! It is shocking in rich countries to see how much our average comfort, which is among the highest in the world, becomes the norm for measuring our needs: it is accepted that an average American or Australian should desire a three bedroom house with air conditioning, a swimming pool and a car, while the Bushmen of the Kalahari needs only his spear. And, worse, this “basic” standard becomes the reference in all what we do. It constitutes even a right. It seems that I have the right, and even the duty, to behave according to this measure of plenty to get it. This attitude accepts no restriction, even if deep in ourselves we know that our behaviour is destructive or creates inequity.

We are yet very good people, but the problem remains that we lack awareness how much we are addicted to comfort and social conformity. Certainly material goods have nothing bad in themselves, except when they make us dependent slaves, when they drive us to behave in an unjust way and when they prevent us from opening to life each time we cannot enjoy our usual comfort. A true openness to life should lead us toward material simplicity as this is the only way to expose ourselves to the true vibration of life. Any form of comfort or protection constitutes like a filter which isolates us from freedom.

Byron Katie was a very depressed lady until she awoke one morning to a deep truth which she now presents in a very simple method called *the Work* or *Loving what is*⁴². She says: “For thousands of years we’ve been told not to judge, but we still do it all the time - how our friends should act, whom our children should care about, what our parents should feel, do, or say. In *The Work*, rather than suppress these judgements, we use them as starting points for self-realisation. By letting the judging mind have its life on paper, we discover through the mirror of those around us what we haven't yet realised about ourselves. [...] *The Work* is a simple yet powerful process of inquiry that teaches you to identify and question thoughts that cause all the suffering in the world. It's a way to understand what's hurting you, and to address your problems with clarity”. It consists in three stages: first, personal statements are collected; secondly, four basic questions allow examining these statements in depth; thirdly, a turnaround shows many different ways of interpretation.

First the statements. You reflect on the following situations:

- 1) Who angers, confuses, saddens, or disappoints you, and why? What is it about them that you don't like? (Example: I am angry at Paul because he doesn't listen to me, he doesn't appreciate me, he argues with everything I say).
- 2) How do you want them to change? What do you want them to do? (Example: I want Paul to see that he is wrong. I want him to apologise).
- 3) What is it that they should or shouldn't do, be, think, or feel? What advice could you offer? (Example: Paul should take better care of himself. He shouldn't argue with me).

⁴² Byron Katie: *Loving what is*, Rider, 2002. Website: www.thework.com The extracts of the present description are copied from the website.

- 4) What do they need to do in order for you to be happy? (Example: I need Paul to hear me and respect me).
- 5) What do you think of these persons you listed? Make a list. (Example: Paul is unfair, arrogant, loud, dishonest, way out of line, and unfeeling).
- 6) What is it that you don't want to experience with that person again? (Example: I don't ever want to feel unappreciated by Paul again. I don't ever want to see him smoking and ruining his health again).

Second stage: the four following questions will help you to examine the statements you made. The Work is meditation. It's about awareness, not about trying to change your thoughts. Ask the questions, then take your time, go inside, and wait for the deeper answers to surface.

Example of statement: Paul should better listen to me.

- 1) Is it true? (If it is true, then why doesn't he listen to me?)
- 2) Can you absolutely know that it's true? (Soon I see that this truth I have constructed is not so certain because it is a construction by myself, a projection onto the other of what I imagine it should be).
- 3) How do you react, what happens, when you believe that thought? (I usually feel bad).
- 4) How would you be without the thought? (Much better)

Third stage: turn this sentence around. Find three genuine, specific examples of each turnaround.

Example: "Paul doesn't understand me" can be turned around to "Paul does understand me". Another turnaround is "I don't understand Paul". A third is "I don't understand myself".

Byron Katie says: "Be creative with the turnarounds. They are revelations, showing you previously unseen aspects of yourself

reflected back through others. Once you've found a turnaround, go inside and let yourself feel it. Find a minimum of three genuine, specific examples where the turnaround is true in your life."

"As I began living my turnarounds, I noticed that I was everything I called you. You were merely my projection. Now, instead of trying to change the world around me (this didn't work, but only for 43 years), I can put the thoughts on paper, investigate them, turn them around, and find that I am the very thing I thought you were. In the moment I see you as selfish, I am selfish (deciding how you should be). In the moment I see you as unkind, I am unkind. If I believe you should stop waging war, I am waging war on you in my mind."

"The turnarounds are your prescription for happiness. Live the medicine you have been prescribing for others. The world is waiting for just one person to live it. You're the one."

This is certainly a simple and powerful method for coming back to what is real, for accepting what is and for learning how to love it. It is a true way to freedom. It is authentic and comes out of love. To be convinced of it, one has just to see how Byron Katie shares her method with generosity on internet and free of charge.

Then let's use the same approach concerning the truthfulness of our needs and rights. What is the right measure?

Reconciliation as conversion

True reconciliation is a deep change of mind, a conversion much beyond guilt, in the recognition of what is and of our own limits.

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If we want to reconcile with the world and the others, we do not need to adapt the world to our needs and desires, but we have to change our own mind.

Reconciliation is a conversion. In Greek, it is the same word as for repentance: *metanoia* = redirection of the mind-heart, change of world view. Repentance is not the guilt trip it has been made of by a highly patronising Church institution. It is a radical change of perception, much more like what St Augustine practises in his Confessions: nothing else than a sharp and honest glance at the nature of what he is truly, i.e. a beautiful creature, full of potential but also caught in its own limits.

When we look at ourselves and accept ourselves as we are, with our abilities as well as with our limitations, we make ourselves free from guilt, from grief, from shame, from fear. In accepting ourselves, we do not have to submit to the impossible requirements we use to confront ourselves with. Reconciliation, as a true way to look at ourselves, opens the door for the freedom to be ourselves and for an authentic relationship with our surroundings, with nature and with our fellow human beings, with all sentient beings.

True reconciliation creates a new energy which reconstitutes the harmony and the unity of the whole. In the way it changes ourselves, true reconciliation helps us to take better care of our loved ones and of our surroundings. Children we care for with authentic love will flourish better because they will feel cherished and secure inasmuch as they are well fed and taken care of. Our natural surroundings will better thrive too, not only for physical reasons when we will stop destroying them, but also because our new awareness opens the door for respect and harmony.

One can observe this new energy in case of drought or of a destruction of our natural environment caused by human impact. When there is only the intellectual awareness that the behaviour has to be adapted, the action is modified but the spirit which drives it has not changed in depth. The change remains external and cosmetic; it is about the technical means, more than about the spirit and heart of our deeper attitudes. On the opposite, when there is a true reconciliation based on a deep change of mind and heart, with repentance (i.e. recognition and regret) of having caused harm and asking for forgiveness, one can feel how the change is fundamental and reaches the core of the matter. I am even convinced, in case of drought caused by deforestation or similar human impacts, that this deep form of *metanoia* can go so far as allowing rain to fall again because a new energy and harmony is created which will deeply affect all aspects of the situation and allow true harmony to flow again. It cannot be used evidently as a manipulative intentional means to obtain what we want, but only as a true conversion which opens the door to real peace and truthfulness.

Of course this change of mind and heart is not an easy process. It can hurt, it can bring us out of our comfort zone, but it will finally impact on us in a positive and creative way because it will bring us back to life.

We have sadly the tendency to make a false amalgam between the temporary suffering that this process of inner transformation cannot avoid generating and the inevitable feeling of guilt which has been badly exploited by moral institutions in order to control people. Yet, the unavoidable guilt feeling, which appears naturally in any stage of sorrow, regret and transformation when one looks at the negative aspects of the past, is only a side aspect of transformation and needs to be digested into the positive energy which flows out of the true

recognition of our own limits. The fact to recognise our wrongs is a powerful way to liberation, and not enslavement in guilt. Destructive guilt is essentially the expression of any resistance to the recognition of what is real. On the opposite life, when it is not imprisoned in rigid precepts but open to confront the natural and unforeseeable, is an incredible and powerful way to salvation, making us free from our past and from our wrongs as soon as we are able to look at them with serenity and to accept them. This *metanoia* sends us back to our true vocation: we do not need to perform anymore; it is enough just to be what we are, as we are, in harmony with the general order of our surroundings or even of the whole universe.

Consciousness and complexity

Consciousness exists in all parts of the universe: mineral, vegetable, animal, human; its depth grows with complexity.

Teilhard de Chardin explains this statement in his book *The Phenomenon of Man*⁴³; each entity in the universe, whether a particle, an atom, a molecule, a mineral, a cell, a vegetal, an animal or a human being, has its external side (“the Without”) which is its form in its material visible aspect; and it has also its interior side (“the Winthin”) which is its own form of consciousness. For science it became clear that consciousness only appears in an evident way in human beings. This fact seems to exclude consciousness in other beings or entities. Yet consciousness can only exist in human beings if it has its roots further up in early origins, in a long previous evolution, according to the principle that nothing is created out of nothing, and that any phenomenon has its origin in a long and slow transformation of matter and species. This statement means that for each state of previous material development, i.e. for each state of

Without, there is also a Within with its own corresponding stage of consciousness. As matter tends to evolve towards more complexity, consciousness evolves towards more depth. The degree of possible consciousness is thus proportional to physical complexity. It means that each entity in the universe has its own degree of consciousness which differs from the next. Teilhard describes how this subtle relationship between matter and consciousness translates itself in evolution by two forms of energy: 1) the tangential energy which links any entity with its equals and 2) the radial energy which attracts each entity towards more complexity.

It is first important to clearly understand that matter (Without) and consciousness (Within) are not opposed, but on the contrary that they work together as the two sides of the same reality. The Without makes the Within visible; the Within shapes the Without as expression of itself. Without matter we would not be able to become aware of the content. Between the Without and the Within there is a constant play of dialogue. Because of what we see, hear, touch, smell or taste, we become aware of the hidden nature of things; we are in touch with the Within. When we look at the night sky, we discover the mysterious nature of the universe and its sacredness, and we are deeply moved. Spirit influences matter but matter influences also the spirit, in an endless exchange of awareness and energy.

The description which Teilhard de Chardin makes of the presence of consciousness in the different expressions of matter is mind blowing. It says, approximately in his own words: “Coextensive to its (material) Without, there is a (conscious) Within for each thing”. “When one looks back in evolution, consciousness seems to fade away in a spectrum of progressive nuances of which the origins disappear into the night”. “Spiritual perfection (conscious centrality)

⁴³ Pierre Teilhard de Chardin, *Le phénomène humain*.

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and material synthesis (complexity) are only the two sides and linked aspects of one same phenomenon”.

Teilhard describes the evolution of complexity and consciousness according to the two main energies which have already been mentioned:

- the tangential energy, which leads any element to establish links of solidarity with all the other elements of the same order of complexity (or centrality), it means a trend towards more community,
- and the radial energy, which attracts each element towards a state of ever more complexity and centrality, it means also of deeper consciousness.

This description and understanding of the role of consciousness in the universe, leads us to notice two main characteristics about the relation between matter and consciousness:

- the more a being is materially evolved (complex) the more its consciousness is also evolved,
- and the more a being is conscious, the more it will establish connections with other beings of the same level of complexity - and even relate to other levels - and the more it will tend to develop its own complexity and consciousness.

Growth of consciousness brings therefore community life. This is an essential truth: consciousness and community are linked as the normal fruits of evolution. Consciousness and community are both signs of a higher degree of maturity for the beings who practice them.

This link between complexity and consciousness and our awareness of the presence of consciousness anywhere in the universe mean that, as human beings, we can communicate with the other parts of the Creation, with the other beings. We can talk to the animals and the trees and the landscape and they can answer in their own way, because they have consciousness. Of course they do not use our verbal language and do not understand each word we say, but they capture our attitudes and “listen” to the set of mind and the spirit which these words or sounds and body language express.

It is exactly what happens in our experience: if we dare to talk to animals and to wildlife, it happens sometimes that they stop, look at us and listen. It creates for a short while a kind of bond which is more subtle and mature than the mere bond of fear when they simply escape. The attitude of the surrounding wildlife towards us, as human beings, changes day after day when they observe progressively that our attitude remains peaceful towards them. They establish slowly a kind of trust and of personal bond with us, as the unique persons we are, while yet remaining wild and not being tamed.

Community arises in this way, and also similarly with plants, and with the whole natural surroundings. We can hug trees or let us be recharged by the vibrations of the land. We can also experience the distress of our environment when it has been violently disturbed by man or when it suffers drought. We have also to observe the limits of our relationship with nature, when we have to protect ourselves from its violence, when natural forces become too powerful for our fragility.

It seems very contrary to our representations to write these lines, describing how we can communicate with animals, plants, minerals and the whole landscape; but this is just the fruit of observations.

This shows how we can change our relationship with the environment and with nature when we become more aware of what it is, especially when we experience how our own level of consciousness allows us to communicate with other conscious beings in the Creation and to create links. The community of life is not an abstraction; it is a reality when we take care of it. Our awareness allows us to give it shape.

The development of our consciousness as Teilhard de Chardin describes it corresponds to a potential we never extend to its maximum. It is therefore essential for us to do our possible to develop our own consciousness to further stages of maturity. This is also part of our evolution toward more depth and more community. Already by attempting to do so we make this evolution a reality in our lives.

One conscious body in interaction

As humans we are not only parts of nature; we form one body with the whole community of life, into which we act as consciousness.

As we saw earlier, the Ojibway tradition tells us that, as human beings, we stand at the periphery of the life community because as human beings we depend on other species and resources of nature but they do not depend on us. This truth is yet not complete if we are not aware of the strong link which integrates us into the Creation, despite our marginal position. Our presence is a necessity because our human species is, more than any other, capable of consciousness. It brings into the Creation the consciousness of its own belonging to Creation and of the unity of Creation as a whole. As a witness, our human species has to be aware of the consciousness of all sentient beings and of their belonging to the unity of Creation as one body. By being

aware of this consciousness and belonging, it actualises this new unifying energy. Life is recognised as the conscious energy which animates us, as human beings as well as the whole body of life community, not only organically but also spiritually. Our consciousness actualises life as a practice of love and makes it the core of the living experience for the whole universe.

When we walk in nature our five senses relate to our environment and make us aware of what our relationship is with our surroundings. The sense of view is the only sense which goes out of ourselves into the external world. It penetrates it and we become part of it, as it allows us to be aware of its shapes, colours, light. The sense of view projects us into the world. The sense of hearing is playing the contrary role; the surroundings penetrate us and become parts of ourselves; the world is projected into ourselves. The senses of smell and taste are similar, in the way they penetrate us too. The sense of touch is active at the physical point of contact between what we perceive as the interior and what we perceive as the exterior. Yet there is no interior and no exterior, except physically. In fact sensations penetrate us while we project our perceptions out of ourselves. Our apprehension of the world creates in this way a wide bubble which surrounds us and which has very blurred limits.

If we add to these few observations of our sensitive interaction with the world, the fact that we never stop breathing in and out the surrounding air or that we live in complete osmosis with our environment through absorption of heat and humidity, or through rejection of what are for us toxic substances as wastes, it becomes clear how there is no clear boundary to our wider being. Each of us is like a tiny centre of energy and perception which is exchanging endlessly with what is around us.

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At a more subtle level, we experience the same kind of exchanges in what concerns our awareness. This includes not only what we witness at any time and how it moves us, but also how it integrates into our experience and representation of the world and of the meaning of life. Our witnessing of what is at each instant integrates into a wider consciousness which is linked with our memory of the past and our perspective of the future. It is part of a wider knowledge which takes shape in a mysterious way because it is much more than what we learn intellectually. It is the root of our living consciousness.

What Teilhard de Chardin describes takes here its full value. The material experience I just described has its own spiritual corresponding experience. We come in touch with the material aspects of the surroundings (the Without of the experience) and at the same time we experience a spiritual exchange (the Within of the experience). Our bubble of energy is material as well as spiritual. We are one materially with the world and we are one spiritually too.

Hence we are not above the Creation; we do not escape the laws of nature; our role is not to dominate and exploit nature; we are not an exception in the cosmos; on the contrary we are integrally part of it; we are even nourished spiritually by our surroundings, by their beauty, by the inspiration they generate in us. This deep energy is not our own power but it brings us to life. The origin of this life energy is not nature itself, because nature is only the visible form of its expression. It is originated by the Reality which is beyond nature. Life, as we experience it as human beings, is more than survival because survival is only the material visible organic aspect of it, the Without. Life is mainly spiritual, the Within; it is the invisible force which animates everything in the Creation.

As human beings we are more than our body-mind-memory. Our experience of life allows us to discover that, beyond our material existence, a wider range of dimensions remain mysterious which become conscious at the core of our living experience. We are mainly consciousness because, as beings, we are witnesses to what is in ourselves, around us, between us. Life is apparently nothing else than this experience of being witnesses of what is and of learning how to love it. Love is the core experience which links everything. As the spiritual correspondent to gravity in the material realm (Without), love is the force of attraction which maintains all things as a whole (Within)⁴⁴.

As humanity we live in a form of dialogue with the universe. We are at the same time one and two with the Creation, as we are in a dialogue with our Origin (Ground of Being, Reality, Brahman, God, Allah), being with Him or Her at the same time one and two⁴⁵:

- 1) One, because we are nothing without Him or Her who nourishes us and provides us with everything we need, starting with the energy of life itself and with our spiritual energy, and because S/He is our deep nature and reveals to us our true vocation.
- 2) Two, because we dialogue with Him or Her and we experience the relationship of love in the You and Me and we remain free to follow our path (His/Her path) or not.

In the same way, but on a very different and more graspable level, we dialogue with nature. It provides us with everything we need and we care for it by adding our part of consciousness into the universe. This

⁴⁴ See Brian Swimme: *The Universe is a green Dragon*.

⁴⁵ See Fr Henri Le Saux (Abhishiktananda): *Intériorité et révélation - Présence de Dieu, Présence à Dieu*.

role is far wider and removed from the one of mere exploitation; it is a true relationship of love, it means of respect and care.

As Thomas Berry expresses it⁴⁶: “The human emerges not only as an Earthling, but also as a Worldling. We bear the universe in our beings as the universe bears us in its being. The two have a total presence to each other and to that deeper mystery out of which both the universe and ourselves have emerged.”

Evolution as an expression of love

When Darwin understood evolution, it seemed cruel and amoral to him; yet evolution is guided by a loving energy towards harmony.

When Darwin discovered the principle of evolution, he stated that it was based on the crude appearance of new forms which had been generated mainly by chance and based on the power of the fittest; this power resulted from the new acquired advantages that these new forms provided. Evolution appears in this way as a violent, cruel and amoral competition that seemed to Darwin in contradiction with the Christian teaching. It made it hard for him to stand in conflict with his own faith: is the world based on love and harmony or is it based on competition and a cruel struggle of the fittest as his theory of evolution seemed to reveal it?

Yet, with his interpretation about consciousness as a faculty that can be found at different levels in all inert and living beings and with his understanding about the constant dialogue between the physical form (Without) and the inner state of mind or vocation (Within), Teilhard de Chardin brings a new light on evolution. Evolution does not stop so far to be a violent struggle for survival but it includes in this new

perspective a more or less conscious orientation towards more complexity, more consciousness, more harmony and more unity. Chance continues certainly to play its role in creating new combinations, but it is not the only acting force. The Without, in its new form, allows evidently a deeper development of the Within.

And the reverse is also true - and it is a great contribution Teilhard de Chardin brings to science - the Within influences the evolution of the formal Without. As all Within's are narrowly interrelated by the fact they are parts of a wider common body (the Universe), our inner motivations are all inspired by a common source, source of life and love, which is the true guide of evolution. Without this guide, evolution would be nothing else than a chaotic expression of mere probability. And probability could not have created, even in 15 billion years, the complex forms of life we know today.

Darwin had understood in his brilliant intuition and observation that new forms create new possibilities for a deeper development of each species towards more depth and more maturity. Yet he could not see what could guide this movement of evolution, because his theory expressed only one aspect of the trend towards complexity: the fact that any new form allows new functions. He was a genius to understand that and it was the first necessary and essential step towards an incredible insight into the laws of nature. Teilhard de Chardin's contribution makes this first step still more relevant when he affirms that the Within can also participate in shaping the Without. He says that a tiger not only becomes a carnivore because it has developed teeth which allow it to devour raw meat but that its vocation, his soul as a carnivore, leads it to develop the right teeth and claws which will allow it to live as such. The proposition of Darwin is here reversed, without denying the original theory, when it

⁴⁶ Thomas Berry: *The Dream of the Earth*. Sierra Club Books, San Francisco, 1988.

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reveals the essential role of the influence of the Within on the way the Without finds its new shape.

Chance is in this case not the only force of evolution. It becomes a directed and guided chance. A wider law exists, which is hard to define with precision, but which works as a kind of magnetic pole by the fact it gives a general orientation to what seems only pure chance. This force acts towards more harmony, more consciousness, more Within. It can be understood as the power of love which is the basic energy of the universe, which creates order and complexity, towards more depth and meaning, towards more life and more unity. Love becomes the force which attracts and keeps everything together. This is the magnet which directs evolution and the force of gravitation which preserves unity and harmony.

Consciousness and community

Because consciousness tends towards community, it abolishes the trinomial: individualism / competition / distance from nature.

As it has been described, more complexity means more consciousness. More consciousness means more links, and this means more community and more unity. Evolution leads us to more differentiation, despite growing communion and unity, and to more subjectivity, in the way - positive or negative - we influence our world through our consciousness. This evolution means also more depth, i.e. more awareness of the spiritual dimension which governs the universe, and less focus on the material and visible side of appearances. The natural laws of differentiation, subjectivity, communion and depth show how much our present modern tendency to more individualism, more competition, while breaking away out of our relationship with nature, is completely contrary to what our

evolution into more maturity should be. On the opposite, if we reverse this trend of egocentrism, if we tend towards more consciousness, more community, we are lead to reconnect with nature and with the whole universe; we are lead to become a real diversified and conscious force of peace, justice and unity.

Our tendency for egoistic behaviours (what we call freedom) goes today against our deep and true nature, against our fundamental and natural vocation. Because it goes against nature, the way to individualism and materialism is also the path to our destruction as well as to the destruction of our natural and social environment. It is staggering to see how much our modern society, instead of developing deeper links between human beings, between humanity and nature, instead of providing more security, more justice, more peace, more happiness, creates in fact isolation, competition, aggressiveness, violence, destruction. Yet we have all the necessary means to implement a just world. Sadly, the richer we are, the further away from ideals of peace and justice we go. Isn't it paradoxical?

There is evidently a very strong perversion in our way of thinking, feeling and living. Deep in ourselves we know it and we feel that it is not right. This feeling has to develop and to become the energy for change.

As soon we grow into more community, into more mature relationship between human beings and in our relationship with nature, we notice how everything harmonises. We discover how it becomes suddenly the true path, although it is contradictory to the dominant trends of life which our market society stimulates.

Teilhard de Chardin adds another remark to his theory of evolution in complexity and consciousness. He says that we are meant to evolve

beyond our state of individual persons towards a form of wider community that takes shape when we tend each of us towards more personalisation, at the same time as we tend together towards more unity. It means that unity calls for personalisation; and personalisation calls for unity. This statement is fundamental because it shows that our evolution towards more community does not consist in an indistinct way of melting into an undifferentiated whole that would absorb us as a unified mass. On the contrary the trend towards unity calls us to become more ourselves in our diversity. Personalisation means diversification; it means that unity is not based on assimilation but on differentiation that allows complementarity, i.e. exchanges. The wider body of community we are meant to form as a further stage of our collective evolution consists in a form of unity based on our differences and specificities. To be well unified, we have to be unique. Each organ has its function in the body. Our vocation is thus to become more ourselves in our uniqueness.

The four intentions of the Cosmos

The evolution of the universe is guided by four main intentions: towards more differentiation, subjectivity, communion and depth.

As Swimme and Berry describe it⁴⁷, we are then as human beings - it means as integral parts of the universe - ruled by the basic principles which lead the universe in his process of evolution and which consist in the primordial intentions of the universe towards differentiation, subjectivity and communion:

- An intention towards differentiation, because of the extraordinary diversity and distinctiveness of all varieties in the universe, where

no two things can be found to be identical; and when diversity is ever growing by giving birth to new species.

- An intention towards subjectivity, because consciousness orients the evolution of the whole universe, aiming at a mysterious end we do not know, while our own consciousness is yet part of the means to reach this goal.
- Intention towards communion, because we are one body, in complementarity and interdependence, in the relationship of the You and Me, and we can relate to each other because of differentiation and subjectivity, because of the diversity which makes us ever more complementary and interdependent, in need of one another.

To these three intentions that Swimme and Berry describe, I would like still to add a fourth one which is of different nature because it rules over the three precedent ones; it is a little bit the hat which covers them:

- Intention towards depth, i.e. spiritual maturity and contemplation, because differentiation, subjectivity and communion lead us into the realm of less materialism and more consciousness, of less matter and more spirit, while we become less focused on the material Without and more aware of the conscious Within. We can see how matter evolves towards its more spiritual content or more exactly how we become more aware that the content is essentially of spiritual essence, more than of material nature. We become more aware of the energy which fosters matter and ourselves.

⁴⁷ See Brian Swimme and Thomas Berry: *The Universe Story. From the Primordial Flaring Forth to the Ecozoic Era, a Celebration of the Unfolding of the Cosmos*. HarperOne, 1992.

Freedom as our root in the invisible Reality

The description of these four intentions and of the Within and the Without by Teilhard de Chardin in relation with the theory of evolution by Darwin fosters a new understanding of our Universe and a new attitude towards nature as an expression of a deeper Reality. This new understanding calls us to change completely our way of life if we want to experience a true spiritual freedom.

The 4 steps towards freedom

We need 1) to overcome our instinctive handicaps, 2) to resist social pressure, 3) to adapt to natural laws and 4) to delve into mystery.

If it is true that the evolution of the Universe is guided by the four intentions I just described and by a desire for more consciousness, it becomes for us an absolute necessity to adapt to this truth and to overcome the forms of resistance that prevent us from growing spiritually and becoming free. I propose to describe this spiritual transformation as four steps in our struggle over resistance:

- 1) First step. Our instinctive handicaps are our fear, our ignorance, our awkwardness, our denial, our greed and our cruelty. They prevent us to see the true reality and they encourage us to pursue and live in illusions.
- 2) Second step. Our social adaptation is not a free acceptance of what we recognise as fundamental values of life but a form of forced submission to the false values on which our society is based: praise of power and might, of greed and profit, of competition and destruction. We need to recognise this fact and to

accept the consequences this truth means for our choices and behaviour. We need to practise a new anthropology.

- 3) Third step. The laws of nature create the frame to which we have to adapt; it is completely illusory to believe we can change these laws or dominate and control nature. Nature is in fact a precious guide and teacher: it is the visible expression of a deeper reality and we can only be winners if we learn to read the deep meaning of what it teaches us.
- 4) Fourth step. This deeper reality is invisible although it manifests itself in everything and especially in life and love. We have to find our anchor into this unknown and invisible world which will remain for ever a mystery. It is essential to learn how to overcome our false representations and live in a kind of formless void or emptiness which challenges our needs for self-created images and idols.

Let's examine each of these four steps in more detail.

1) Overcoming our six instinctive handicaps

Our evident tendencies to fear, ignorance, awkwardness, denial, greed, cruelty imprison us in a self-destructive attitude denying life.

In the depth of ourselves we know our limitations but we have the instinctive tendency to do everything we can to escape this awareness and we tend to construct a false personality based on the appearances of mastery and success. Our deep need for comfort and wealth is indeed the expression of this search for an illusory refuge. Our main instinctive handicaps are permanently reinforcing our tendency to hide behind a false mask; they express themselves under so many forms, it is difficult to grasp and to describe them, especially because they take different forms according to different people. Yet I will

describe here six main tendencies which seem more or less to encompass them all:

- 1) Fear: we are afraid of what we do not know, of what is new and challenges us, of what forces us to recognise reality as it is and to have to adapt to it in a new way; we are afraid of differences, of people who do not think, act or believe as we do; we are afraid of other races, cultures, religions and social classes; we are also afraid of being seen as we are with our weaknesses and awkwardness, with our limitations and feelings of being overwhelmed; we are afraid of simply being, and we take refuge in doing and having; we are afraid of life itself and of death, its corollary. Fear prevents us from living because we are constantly needy to imprison ourselves in rigid forms that are believed to provide us with security but that indeed isolate us from real life energy. The antidotes for fear are love and joy, trust that life is harmonious and harmless, rich in its intensity and meaning.
- 2) Ignorance: the more we learn, the more we become aware how we know little and how what we know is incomplete and often twisted because it has been shaped by our own experience which is inevitably incomplete and self-centred. Knowledge is essentially understood as intellectual, yet this form of knowledge is very limited; the most important knowledge is the one of the heart-mind which includes self-knowledge and awareness that we are not our own creator but the expressions of a wider Reality which is the true Source. The antidotes for ignorance are awareness, clear-sightedness and wisdom.
- 3) Awkwardness: despite the fact our intentions are often good and generous, we remain terribly awkward. We want to help and we impose our way of being; we want to be generous and we are caught by our own interests and privileges; we dream of big actions and we remain small; we want to be perfect but we are confronted with our own ignorance and illusions. Smallness is our true way and it is liberating to be able to recognise it; then we do not have to overcome it but only to act with it. The antidotes for awkwardness are concentration and patience.
- 4) Denial: although we know more than we think and we are often confronted radically to the nature of truth, we never stop denying it in order to protect our laziness for daring review the way we understand life; we try - mostly unconsciously - to protect the conditions of our comfort and to defend our privileges. In doing so we delude ourselves. The antidotes for denial are equanimity, peace and self-mastery.
- 5) Greed: greed is evidently a main incentive of our behaviour because we want ever more and more. Greed is probably our main refuge when we feel awkward and maladjusted. The antidotes for greed are detachment, self-limitation, trust and gentleness.
- 6) Cruelty: this aspect of our behaviour is well hidden because we know that we should not be cruel. Yet violence arises all the time. There is always in violence a more or less hidden and unconscious will to harm. This destructive trend can arise out of anger, out of hurt, out of humiliation, out of the feeling of not being recognised; these feelings can be certainly much justified, but they have to learn how to be healed in a constructive way and especially to be cleansed of this terrible will to harm. Cruelty opens a window to a huge and threatening world: the world of evil which is not just the absence of good but is an active force that tries to penetrate everywhere where there is no awareness of the necessity to protect oneself and the others against it. Without the existence of these evil forces there would be no concentration camps, no child molesting, no satanic cult. The antidotes for cruelty are compassion, goodness, spirit of service and the awareness of the unity that leads us, in our diversity and

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complementarity, to form one single living wider body: hence, what we do to others, we do it to ourselves.

About fear: our fear of life and death is certainly our main hindrance to live to the full. This fear generates all kinds of escapes into false refuges that offer us the illusory security of the form of a slow death. It becomes fascinating and eyes opening to consider our actions not as the fruits of mastered intentions but as the illusory escapes into side tracks. Being remains the essential wealth of life and it does not require much; yet we are never stopping being busy creating or more exactly longing for the ideal conditions which will provide us with happiness; in the middle of water we are crying because of thirst. Love and joy and trust are the antidotes to fear because they open us to recognise the true harmony of life and the abundance of what is given.

About ignorance: we certainly need to learn a lot about the world we live in and about our fellow men and women; we need to learn about the laws of nature, about the limitation of resources; we need to learn to see how the world is truly, independently of our self-centredness. Yet this intellectual knowledge is not sufficient. We need to learn who we are truly, to see our own limitations and to accept them, to learn how to identify our negative trends to fear, denial, greed, anger, violence, cruelty. We have to learn not only to accept them but also to see that their acceptance is liberation and allows our true faculties for generosity, creativity and love to be expressed more freely. We have also to learn how to recognise these negative and positive trends in others and to discern that others are very similar to ourselves in their struggle for truth; in this way they become all loveable. And we have mainly to learn how to look behind appearances in order to recognise the invisible energies of life and love which work behind the scene. Awareness and clear-sightedness and wisdom are the

antidotes to ignorance because they help us to accept our limitations and recognise our true fragile position in the creation; they make us aware of how much we depend on others and on the whole cosmos, on the life energy given by the Source of all beings, to be able to survive and to evolve into more mature beings.

About awkwardness: it is liberation to recognise our limitations and to accept them. It is also very freeing to accept that our influence is limited to the real scale of our being and action, yet to recognise that this tiny contribution remains essential. We do not need to be super-heroes. We can just be ourselves. What is essential is the spirit which animates us, more than what we do and how we succeed. Concentration and patience are the antidotes to awkwardness because they introduce balance and endurance into our lives.

About denial: the power of denial is huge in our lives and we underestimate it permanently. We live in a world where all the red lights of warning are flashing all the time like crazy every time injustice, exploitation, humiliation, destruction of nature become patent, but we refuse to see them. We feel disempowered; this shows how much in fact we have unconsciously integrated our limitations; yet our personal stand and the way how it combines with the stand of others are what makes the world what it is; we have very little influence on what the others do or are, but we can remain a truthful witness to truth. This is certainly the main power we have, as Gandhi used to demonstrate: *satyagraha* or the power of truth. Equanimity, peace and self-mastery are the antidotes to denial because they make us stronger to recognise and accept what is as it is.

About greed: the force of greed is constantly in action in our lives. This is the energy which fosters development and growth beyond what is strictly necessary. In fact we need very little, as it has been

said before. Free of greed we could give most of our time and creativity to the community if we were not trapped in overcomplicated relationships and desires. Detachment, self-limitation, trust and gentleness are the antidotes to greed because they make us independent from illusory needs for external conditions and allow us to focus more on the search for the deeper meaning of life.

About cruelty: there is cruelty which arises out of our wounds and cruelty which is a fruit of evil influences. Of course there is no clear limit between these two categories. Our feelings of frustration, of anger, of humiliation, of not being seen and recognised for what we are, are strong energies which often overwhelm us; yet we can learn how to channel them in a constructive way. The anger generated by injustice or oppression is not only a legitimate feeling; it is even a necessity and a wealth. It is important to be aware that destructiveness does not arise from the feeling itself but from the way we channel the energy the feeling has generated. Anger can give shape to beautifully creative attitudes when it is well oriented and cleansed of any possible desire to harm. Evil influences are from another nature because they are forces which try to do the contrary in channelling the energies which arise in us into seductive or destructive ways that can only harm ourselves and all victims of it. Compassion, goodness, spirit of service are the antidotes to cruelty, violence and hate because they make us aware that the whole universe is only one single living body of which we are parts and that we cannot harm or destroy any part of it without hurting or destroying ourselves. This awareness of a wider unity of life which sustains and nourishes us opens us to the unfathomable mystery that the true dimensions of our existence remain invisible although we can experience them when we transform ourselves into forces of love and compassion.

2) Resisting social adaptation

We tend to conform to social values and pressures, but they are contrary to our spiritual path; we have to become free of them.

This is certainly the most difficult of the four steps: because we have been trained and formed by our social environment, and because our survival depends on it, we tend to accept its values and ways as immutable and true; we do not even bother to question them. Yet our modern society is woven with twisted values which are essentially a justification for letting freely express our instinctive tendencies and for preserving the present ways of competing or accumulating that our society has become attached to. It is in fact amazing how much the fundamentals of our western society are composed of destructive and primitive trends and values, despite the fact it pretends to be a very advanced civilisation: glorification of empires and unscrupulous domination, admiration for material wealth and public success, praise for harsh competition and violent technology, uninhibited motivation for untold profits and cunning speculation. It is why we can only become freer if we firstly learn to identify clearly how much these values are loaded with violence and greed and if we secondly find ways not to comply with these values. It means to find ways to practise in different ways and to resist social pressure for conformism. This form of personal and inner decolonisation means inevitably a violent transformation and rebirth into a new mankind with a new anthropology. Decolonisation is violent, as birth is a violent process; it does not mean external violence but the harshness of a deep inner transformation which everything in us will try to resist.

This step of resistance to social patterns is the most difficult because it asks us to take distance from our own surroundings. We have to be

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different and to cope with it. We need before all to become aware how much many things that have been taught to us have been also twisted by many corrupt values that justify “normal” social behaviour. Yet most of the heritage remains valid; only the interpretation and evaluation of its meaning and orientation change drastically. It is hence necessary to review the whole lot and to select what is worth keeping from what has to be rejected.

Our way to teach history concerns mainly powerful kingdoms and unscrupulous empires; we glorify the Roman and the British Empire. We glorify conquests and domination. Napoleon is never or too rarely described as a dangerous man. Traditional people are considered primitive although they know how to adapt gently to nature’s laws and practise most of our Christian values.

Our understanding of economics is more based on mutual robbery than on solidarity and common wealth. Money is revered as the universal measure for everything. It is hardly imaginable to give time and money without being seen as naive or privileged. Yet we know also how to be generous with our children and our neighbours. Why could these authentic values of free giving not constitute more the base for our society instead of being rejected for the private sphere only where people are allowed to love each other?

Once we have seen this terrible perversion of the energies that lead our social relationship we can only become more detached of what they provide and we become therefore more independent and free in our discernment. This personal transformation is a form of decolonisation. It takes shape in a violent form because our natural tendency is to resist change. Yet this violence is mainly an inner one in our own process of becoming free of false values that offered us a form of material comfort and illusory security, and discovering our

true motivations for life. This deep change of mind (or metanoia) reorients completely our life. It opens us to a new way for the search for, and practice of, a new anthropology; this is then a renewed understanding of the meaning of human life in a completely different frame; with different priorities and different roots in a less visible Reality; based on values such as love, justice and peace which in their true practice are indeed the values we are attached to and which challenge the very bases of our western society.

3) Adapting to the laws of nature

The laws of nature are our teacher: they reveal to us the ways to harmony and are the tactile expressions of the invisible Reality.

It has been repeated many times that we have to integrate all our activities into the natural cycles, and that we cannot decide how far we are ready to adapt because the reality of nature is one and we cannot change it. The necessity to adapt or to be destroyed constitutes the basic ecological argument. Yet this argument is very much a materialistic simplification. As the Universe is penetrated by the four intentions I have described (differentiation, subjectivity, community, depth) it is a living organism of which we are an integral part and which is impregnated by consciousness. Nature, as the body of natural forces, constitutes principally the visible and tactile expression of the invisible laws which have lead and continue leading the evolution of the Universe. When we learn to adapt to these laws, we discover a content which is not visible for the eye but becomes perceptible when we try to be in harmony with this wider context. The acceptance of natural laws teaches us surrender and obedience, that bring true peace.

The first necessity is to become free of the vision our western society has that nature is not more than a stock of resources we can grab as we want. It is also important to go further than the simplified version of ecology which consists in good management of these resources, because in this case the understanding of nature is not very different, despite the fact it is managed more cleverly.

Nature has to be understood as the place where life takes shape and expresses itself; it means it is the place where sacredness is made visible. Indeed everything in nature will talk to us about mystery, beauty, harmony, cooperation, complementarity, subjectivity, choice, depth, meaning, etc., despite the fact it is often not completed or appears in a form of chaos, where violence and suffering is not absent. It is not a perfect world but it is the most achieved form of incarnation and evolution we can see. The sad thing is that we got accustomed to sun rises, to birds flying around us, to fruits growing on trees, to life giving birth to life, even to our own skin and breath of life, as if these were the most normal things; we have lost most of the sense of wonder which can best open us to the dimension of sacredness. Nature reconnects us with our Source. It is like the visible part of God, the visible part of the iceberg.

When we have understood this quality nature has, we are transformed and we understand that we cannot choose how much and in which way we will adapt to it or try to adapt it to our needs because it becomes evident that we have to take the whole teacher as it is and that there is no question of not adapting totally to its laws if we want to progress. And, once we have been in touch with this deeper truth nature reveals to us, we notice that we need in fact so little to make us feel safe.

Yet it is important to remain aware that nature does not tell us everything about the mystery, but only a small part, the first lessons only.

4) Delving into the invisible Mystery

Although nature is our teacher, Reality remains not visible; we have to become rooted in what remains beyond any representation.

Reality is like an iceberg whose nine tenth remain hidden. As we have seen, nature is a good teacher for our first lessons but it is only like the visible one tenth part of the iceberg and we have to be aware - and it is what nature tells us - that the most part of the mystery remains invisible. Beyond the laws of nature which teach us harmony, differentiation, community, subjectivity and depth, there are more meaningful and powerful laws such as the power of love, of kindness, of gentleness, of joy, of peace, which are the true energies of the Universe. These energies are so powerful that they often interfere with and overrun the visible laws of nature and generate transformation, healing, generosity, consecration where it would seem possible to see only more mechanical forces arise. These energies are not supernatural; they are only the more fundamental core of the latter ones and they call us to discover them. Yet any of our attempts to describe the Mystery can only fail because this Mystery is beyond any possible description. God is in no way similar to the representation we have of Him/Her, as used to say N. Berdiaev. Yet it is helpful for us to try to describe this unfathomable Truth, to be witnesses to His/Her good nature. Despite - or because of - our failed attempts to express the truth, we have to learn how to get free of our limited representations, how to become more and more rooted in a Reality we cannot imagine, and how to remain like hanging in a kind of emptiness of any thought or image. This hidden Reality

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interacts constantly with our lives; without It we would not even be able to survive, and less to be truly alive and experience happiness in peace and joy and true love. Experience is our only key to discover Reality. It cannot be theorised; it can only be lived, beyond any representation, because representations are nothing but idols.

The Orthodox Eastern theology has developed what it calls the apophatic way which consists in not describing the Mystery that cannot be described. Hence it would be sterile to try to describe here what this unfathomable Reality is.

As it cannot be described, only personal experience allows us to discover It and to deepen our faith in Its existence as the main energy in our life. This experience is not a powerful mind-blowing happening but it remains a discrete and personal relationship with the sacredness of life in everyday life. One could say that God is shy by essence: true love cannot impose itself by powerful means because this form of violence would be its own negation. Love can only be discrete and humble; gentleness is the only way that can create links to be accepted freely inasmuch as freedom is the condition for true reciprocity and authentic love. God (as most people call Reality) is not a tyrant or a punishing father figure; S/He is pure love and is appearing in our life when we let Her/Him be part of it. Our experience of Reality depends on our openness to accept Her/Him interfering with us. It is why our relationship with the divine cannot be limited to be only a subject for talk; it takes mainly shape as the root and core of our own experience. Only experience makes it real and alive to us.

Our experience of sacredness starts with the awareness of our own skin, of our own breath, of our own heartbeat, of our own life as a mystery and topic of wonder. When we open the eyes to the inherent

beauty of our surroundings and of our inner life we open to more experience and deeper evolution and transformation. This will lead us on an infinite journey into eternity, here and now. Nothing powerful but a constant maturation and deepening of our awareness.

According to what has just been said, we can see how nature plays an important role in initiating us to the existence of this deeper reality; it is the visible part of the iceberg which tells us that the hidden part exists which is much more important in size and meaning. This is an invaluable teaching which means how much we have to care for the teacher who reveals us such a precious truth.

The rift between spirit and matter

The new anthropology we need has to repair the connection between spirit and matter: we have to live in our body (the cosmos).

Since the Greek philosophy has impregnated our culture with the dualism between matter and spirit, that have been understood since that time as contradictory forces, we have disconnected the two realms and we act separately on each of them without coordination, although they represent the two sides of the same coin. Reality is spirit and matter at the same time, the latter makes the former visible while the former shapes the latter. They cannot be disconnected because they are like the length and the width and cannot exist one without the other. They can both express themselves fully only if they are truly related one to the other. The deep dualistic rift in our perception of the world and of the nature of life generates a destructive split in our ways to relate to others, to community, to nature. This deep dualism is certainly at the origin of the destruction of nature. The new anthropology that I have mentioned to become the root of our new ways of life has therefore to integrate a harmonious

perception of the true relationship between spirit and matter and to reconcile them one with the other, the Without with the Within. This new anthropology has to reshape the way we become able to translate what we believe and what we love into material and physical forms of expression that include our own human bodies as open books that tell who we are, the dimension of our local community as a social body that expresses our common maturity, and the whole of nature as the visible expression of the Mystery that gives us life.

The double invitation to delve into the invisible mystery of life and to heal the rift between spirit and matter leads us onto a dynamic path into more depth; this path cannot be static; it is especially dynamic because it evolves under the influences of many antagonistic energies. Indeed the four steps on our way to freedom we have now described are impregnated by the presence of three antagonisms which interfere constantly with our spiritual path and evolution and which can sometimes explain our difficulty to move towards change; I describe them as antagonisms because they are constituted by pairs of opposite forces.

The 3 antagonisms of resistance, energy and dreams
Antagonisms of resistance (inertia-resilience), energy (entropy-growth), dreams (reification-choice) lead to, or away from, growth.

In our search for the meaning of life and for the right way of living, we are constantly under the influence of three main antagonisms which either can lead us into evolution and spiritual growth or can take us astray into regression:

- 1) Resistance is our strength against destructive influences when it provides us with resilience and incites us to follow our path of

growth despite adversary forces, but it is also our tendency to inertia which paralyses us and prevents us from moving towards change.

- 2) Energy is the necessary fuel for evolution when it helps us to reach a new stage in our own personal or collective growth, but it has a tendency to entropy, which attracts us into regression and dissolution.
- 3) Dreams are the leading forces of our evolution when they provide us with a clear vision of what the next stage of our growth may be and of the hierarchy that guides our choices, but it is also the illusion that traps us into the reification of our surroundings and leads us back into more materialism.

These three themes of resistance, energy and dreams are also inspired by Swimme and Berry, but I would like to comment them here in my very personal way as antagonisms.

Resistance is first our physical capacity to resist destruction, because our body has a mechanical resistance, as stone or wood does. Yet this resistance is not only material, because it is also our psychological strength to see clearly and to answer our own vocation. The oak follows the pattern of evolution which is written in the acorn, as we do also follow the laws of our DNA. The plants adapt to their life conditions and do whatever is possible to survive and to develop, with an incredible capacity for flexibility and invention. Resistance is our strength in life which goes much beyond physical life, because it leads us onto the path of our most subtle expression. It teaches us resilience, i.e. our faculty to go through tough times, to survive and even to mature under harsh conditions, to remain faithful to what is fundamental to us, to lead us into true incarnation and expression. But it is also the strength for our inertia, for our resistance against change, for our refusal to become aware of what threatens our species

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when we remain stuck in our own habits, representations and comfort. It is also the inertia of indecision, of laziness, of ignorance. Resistance is thus an antagonism between, on one hand, resilience as a driving force for our own spiritual growth and, on the other hand, inertia which prevents us from moving or even leads us back into regression and self-destruction. Resistance is an antagonism between the density or compactness of matter and its need to be energised in order to be able to change. Our challenge consists in becoming resilient in a dynamic way.

Energy is necessary to fuel any move or any change, especially towards growth into more complexity and deeper consciousness. Each stage of our evolution requires a new quantum of energy. It depends on us to choose onto what we want to concentrate the amount of energy which is available to us. As it has been explained earlier, the second law of thermodynamic says that energy has a tendency towards entropy, i.e. towards degradation and dissolution. It means that what we do not take care of will decay. It is why our awareness of personal or collective priorities and the energy of our choices are essential when they orient the available energy into creativity and give shape to subjectivity as the leading energy of change. But the tendency of energy towards entropy encourages us permanently to choose the easy way of regression, to avoid the challenge of life and to conform to the materialistic options of our society. Energy is thus an antagonism between, on one hand, the force of spiritual growth which leads us to our deep experience of life and to our full expression and, on the other hand, entropy which leads us into abstention, immobility and dissolution. Our challenge consists in giving an orientation to our life.

Dreams are our ideals, i.e. the inner representations of our understanding of life. They lead us in our choices and expression.

They are completely subjective and it is why they constitute our uniqueness. Dreams are our spiritual energy. They are our perception of what is the true content of things, of the deep meaning of life. They know how to see beyond appearances. Dreams provide us with an incredible energy for our own growth and deeper understanding of life. When they are translated into principles of action, they become ideals; ideals are the concrete form of our pragmatism because they define what we consider in our choices, whether we limit our representations to what is purely material and tangible or whether we include also the immaterial and less measurable dimensions of life. Because of their ability to see beyond appearances, dreams and ideals remain constantly under the threat of a more rational and material understanding that would consider only what is really visible and tangible and ignores what is not material or what cannot be proved. This is clearly the tendency of our society towards reification, i.e. its tendency to deny what remains mysterious and sacred when it is invisible. There is a strange paradox in this dimension of dreams and their impact on our lives. We can truly experience this sacred dimension of our dreams only if we remain open to it; we will then notice it clearly and be able to deepen the knowledge of it through our own experience. On the contrary, if we deny it, sacredness will remain unknown as long as we are not ready to consider that it can exist and that it can be discovered in daily life. Dreams are thus an antagonism between, on one hand, our subtle perception of the unknown which allows us to develop a more complex and mature representation of life and of the universe and, on the other hand, the tendency to reification and to materialism which denies sacredness and wants to interact with the world in considering only what is tangible. Both attitudes are forms of pragmatism, where the first includes in its daily action the invisible dimensions while the second does not. Our challenge consists in building the complex body of life.

Swimme relates these three trends with past, present and future. It is true that resistance is linked with the past, it means with heritage; energy is linked with the present, with this instantaneous spark which makes the difference in our choices, which decides at each instant between life or decay; dreams are linked with the future, with the perception of the potential of today in the perspective of what tomorrow may be.

Diversity, choices, unity and depth

After describing the four steps of our personal transformation and the three antagonistic trends that accompany them, it will be easier to examine in more detail the three intentions of the universe I mentioned before, as well as their fourth covering principle: differentiation, subjectivity, communion and depth.

1) The intention towards differentiation

Our society tends to level any difference and to create flat land, while evolution tends to generate ever more diversity or complexity.

The intention of the universe towards differentiation consists in creating ever new forms of life and complexity. Complexity itself generates more relationships, deeper consciousness, more communion. On the opposite our modern society generates globalisation which implements the way for the uniformisation of all what has been created. Uniformisation and normalisation tend to destroy biodiversity as well as cultural diversity. As I already described before, cultural and biological diversities are narrowly linked. Diversity of languages is the expression of this incredible wealth of perceptions and complementarity. Yet this fundamental

source of life is denied by trade and business. Everyday many languages disappear; human cultures do as natural species do too. Because the present trend for more relationships through globalisation creates only standardised (not diversified) relationships, the trend of our society towards globalisation goes completely against the evolution of the universe. We destroy what the universe builds up.

Other words for describing this intention of differentiation: diversity, complexity, variation, disparity, distance, multiform nature, heterogeneity, articulation, structure, hierarchy.

The fundamental intention of the universe towards differentiation reveals how much the present trend of our modern society towards globalisation is antagonistic to our true vocation; globalisation develops as a flattening and unifying process where diversity is destroyed by a form of poor single materialistic monoculture, levelling everything at bottom level.

It is urgent to react against this flattening trend of uniformisation:

- Dominant colonial languages like English, French, Spanish should refrain their extension by supporting the expression and practice of local languages as it is still the case in Africa or in India where English cohabits with Hindi, Tamil, Malayalam, Gujarati, Bengali, etc. As I mentioned before, diversity of languages should be reintroduced wherever it is still possible: aboriginal languages in Australia or Amerindian languages in America should be taught at school and become the first local language of the regions where they were originally spoken. White people should have to learn and practice these languages as the true original languages of the place where they live. We have to become a multi-linguistic

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society which learns how to use many languages without having one dominating the other. Local newspapers and magazines should use indifferently these different languages; and social meetings, schools, businesses, churches, parliaments too.

- Traditional and tribal cultures should be protected in the regions where they live and their natural environment should remain under their own control. Protection is not a form of museology for pure scientific conservation but it is the real recognition of the true value of a form of life which is necessary for the equilibrium and health of mankind and of the planet. It is thus a recognition and empowerment of the tribes and communities which practise these more natural and traditional ways of life.
- Biodiversity must be not only protected but stimulated, by redeveloping all kinds of natural environments (biotopos). The different living species must be protected or reintroduced wherever it is possible.
- Diversity in the agricultural production should cover the basic needs of the local population, without having to transport the necessary products over long distances. The diversity of fruits (for instance so many species of apples) should be made again available, in contrast with the few sterilised species that are nowadays for sale in supermarkets. Local diversity in industrial and artisan production participates to foster creativity and local complementarity of people.
- Local communities should work together in diversity and complementarity with the neighbour communities to provide what is needed locally to satisfy material and immaterial needs: education, contemplation, art, intellectual life, sport, work, recreation, etc.

These many ways to support and develop diversity are completely opposed to our modern mentality. It would be a rediscovery of life.

Our main obstacles to follow these new patterns of diversity are inertia, entropy and disbelief, in our tendency to go the easy way without questioning our path but generalising merchant relationships as the base for human exchanges and spreading out our patterns of technology and material well-being. Merchant exchange is the lowest possible form of all forms of human exchanges. These flattening patterns are completely void of any philosophy or belief. They are dry and materialistic, without any flesh or heart.

On the opposite diversity stimulates every part of our being. Resilience is the strength for differentiation, when we accept to go a more challenging, certainly harder yet richer way.

In following the intention of the universe towards differentiation, we develop our own resilience and creativity, and we learn how to refrain our inertia and tendency to entropy, far from globalisation and from flattening and levelling processes. This new pattern towards diversity is evidently the path to life.

2) The intention towards subjectivity

Our society tends to be rational, neutral and indifferent while evolution tends to generate spiritual choices and commitments.

The intention of the universe towards subjectivity consists in recognising that the universe has a spiritual orientation because it is guided by an energy which rules its evolution towards an aim which remains yet unknown to us, the Omega point as Teilhard de Chardin used to call it. Our universe is the visible expression of something much deeper which we can observe in its evolution towards more complexity and deeper consciousness and of which we have to discover the mysterious meaning and entity. On the opposite, our

modern society generates indifference, i.e. the attitude which does not see differences. Everything is said to be of equal value. Freedom is only the choice between equal possibilities. There is no hierarchy, no commitment, no right, no wrong.

Other words for describing this intention towards subjectivity: autopoiesis, self-manifestation, sentience, self-organisation, dynamic centres of experience, presence, identity, inner principle of being, voice, interiority, Within, sacredness.

The fundamental intention of the universe towards subjectivity is denied by our materialistic values, by the large range of possibilities our society indulges to propose in an undifferentiated way, by our lack of hierarchy in our choices. Freedom is considered as the right of the individuals to do whatever pleases them. Yet the universe follows an evolution that is oriented towards more depth. It is urgent for us to recognise the influence of this mysterious goal. Subjectivity is the visible side of sacredness. The sacred Reality is evidently much deeper than what is visible. The universe is more than the result of chance and necessity; even in billions of years, pure probability could never have produced the simplest existing cell and ever less the evolved forms of life and consciousness we experience around us and in ourselves. Yet our modern society refuses to recognise the sacredness and orientation of our universe.

The main obstacles to subjectivity are reification and indifference, because they deny anything else than what one can see or touch and refuse to become aware of differences of meaning and value. Science has for a long time played the role of disbelief, as if science had to be understood as the opposite of religion. In fact science and religion - understood as practices and not as institutions - are two different ways to describe the same reality, and each of them contributes with

an indispensable knowledge. Science is certainly the most powerful way to help us never finishing marvelling at the beauty, depth and mystery of our universe.

Reification and indifference deny the necessity to take a stand, because they pretend everything to be value free. We are made spectators and consumers; we are deprived of responsibilities; we do not need any more to fight poverty or climate change because it is said to happen beyond our influence. Our role of spectators, enjoyers and consumers disempowers us. We are deprived of our identity.

The awareness that something deeper and invisible exists beyond appearances, which guides the universe in its evolution, is the starting point for any personal search for Truth. This is a long personal way which requires independence, courage and commitment, concentration and will, yet also humility and openness. Truth is accessible through life itself, through our own experience, especially if we accept to be taught by the wiser people who inspire us.

On this path we learn how our own stand is important because it actualises our beliefs and impregnates the universe with the discrete but yet influent spiritual energy of our stand. Our way to look at the world becomes reality when it starts to orient our behaviour and to impact on our environment. It is much more than just the mechanical influence it has according to the chain of causes and consequences; our look at the world is also a spiritual energy that loads the surroundings with love or hate, with peace or violence, with openness or fear, according to our own state of mind. People like Gandhi or Martin Luther King influenced the world by much more than just their personal action and teaching; their most powerful influence has certainly been their spirit and their being itself.

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In this way, modern science, especially quantum physics, has discovered how our spirit or consciousness influences our material world. From now on, it includes in its research an image of the divine called consciousness, as the Reality behind the scene which influences matter. Yet consciousness in this perspective remains a form of power of mankind to dominate the world. It is considered as a new form of energy which we can learn to master. God is understood as a form of energy of which we have still to discover how to write the mathematical formula. Quantum physics tries to appropriate itself this new energy of consciousness. In this sense, the spiritual path reveals itself to be fundamentally different, because it recognises that the source of consciousness is not in our power but in the Source of life, and that we have to surrender to this force if we want to be in harmony with the whole and with ourselves as parts of this whole. Power of domination is excluded in favour of a more subtle and humble adaptation and integration. This truth constitutes certainly the main argument why we have to adapt to nature as an expression of something deeper, better than to dominate it through sheer force.

Our tendency to reification and to indifference is our obstacle to subjectivity, because we get always side-tracked by material appearances and we have difficulty in deciphering the deep meaning of life beyond them. On the opposite energy, as the spark of the moment and as the force of our intuition, is what makes us capable to choose and to commit, to set ourselves in movement and start a dynamic search for meaning. Once again energy is not something we possess but something we receive when we are in harmony with our surroundings.

Choice and commitment are thus the new fundamentals for change; they make us witnesses of what we believe in. We have to be the

change we believe in. In following the intention of the universe towards subjectivity, we develop our own self-manifestation as witnesses and our own interiority as expression of something wider, and we learn how to refrain our inertia and tendency to entropy, far from reification and indifference. This new pattern towards subjectivity is evidently the path to life.

3) The intention towards communion

Our society tends to foster individualism and competition while evolution tends to create communion and unity; one body of life.

The intention of the universe towards communion is the key of the unity of the universe as a whole body where each part plays an indispensable role. On the opposite our modern society fosters egoistic behaviours, competition, division, fear, hatred, which prevent unity to arise and the whole to come to expression. Competition for the lowest common level goes against the tendency of the universe towards more complexity and deeper consciousness. Under the pretext of making us materially wealthy, it deprives us of the most precious thing we have: our relationship with the Whole, the body of life community.

Other words for describing this intention towards communion: inter-relatedness, interdependence, kinship, mutuality, reciprocity, complementarity, inter-connectivity, whole.

As it has been said, the fundamental intention of our universe towards community reveals how much the present trend of our society towards accumulation, competition and individualism is contrary to our true vocation. With the menace of climate change a more optimistic and creative attitude starts to take shape when people

can better express their own aspiration for more solidarity, justice and peace. We all suffer from frustration, aggressiveness and violence and we dream of more harmonious links in our local community, yet we do not believe we are capable of reorienting the actual trend. The fact we can recognise that our deep longing for justice and peace is truly the expression of the dominant tendency in the universe towards community should give us the courage to reunite with our fellow humans and to implement the necessary changes. We know by experience that a harmonious community life allows the expression of our best qualities, while competition and individualism allow mainly our weakest sides to prevail. Community is not the oppression of personal expression and freedom, it offers to us on the contrary the possibility to be heard and valued and recognised for what we are, as unique diversified beings. As it has been described, unity calls for personalisation.

The universe evolves toward more community and deeper consciousness; it shows us the way how to find one with another a form of consensus in what concerns our common future as local community. The maturity of a local community translates itself in the way people are empowered together to choose and control their future, yet respecting the diversity and complementarity of all members. The quality of choices shows also how much the community is mature enough to choose long term options which relate to spiritual values more than to material practicalities. A lively community which is able to practise according to its own choices is certainly the example of the most mature and aware form of evolution towards which tends the universe.

The main obstacle against the building up of community is certainly our tendency to reification and materialism which is the root for the false understanding of freedom which grounds individualism and

competition. The whole is more than the addition of the parts; it is why community brings more. Our strength to achieve community relies on our capacity for dreams and ideals which allows us to implement what we believe deeply in our interiority. Dreams become the energy which pulls us out of inertia and doubt. They are our new pragmatism which leads us to harmonise with the intention of the universe to create links and communion between the different parts and levels of consciousness of our surroundings. This new pattern towards communion is evidently the path to life.

4) The intention towards depth

Our society fosters materialism while evolution tends to make us more aware that matter is the thin envelop of a spiritual content.

There is no dualism; matter is not opposed to spirit; there is in fact a constant dialogue between matter and spirit; matter makes spirit visible, while spirit orients matter. Even the rational approach of science has perceived how far energy is an intermediary between matter and consciousness and how it orients matter in its evolution: the original formless matter of the big bang has given birth to galaxies and living cells and complex beings, according to a pattern of evolution which is not the produce of chance and necessity but of intention. Evolution makes us more and more aware of the existence of this subtle content, behind matter, which is of spiritual essence. Matter loses its opacity, when it starts revealing what is beyond appearances. The intention of the universe towards depth leads us on the path of discovering the unknown meaning of life, when we see that the laws of nature are the expressions of this intention.

Other words to describe the intention towards depth: Reality, contemplation, meditation, silence, Source, Origin, meaning,

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consciousness, hierarchy, surrender, harmony, peace, love, justice, truth, life.

Since the origin spirit leads matter in its evolution towards a more subtle world where the materialist dimension becomes less important. Matter becomes more and more visibly the thin support for a immaterial (spiritual) content and we become more aware of it. In other words it means that the energy of the spirit becomes more and more patent and evident in our eyes as the leading energy in our world. Yet incarnation, i.e. our experience of matter as an expression of our spiritual maturity, remains the basic experience. We do not escape matter but we understand it differently and become more able to be receptive to material phenomena as the teaching about something deeper that is more fundamental.

It means that any event can be interpreted as a material fact or can be, in a deeper sense, understood as an expression of something more subtle and immaterial. The second interpretation is not in contradiction with the first. The first approach can be understood as the interpretation of the only two dimensions of the plane of what is visible, while the second approach adds the depth of the third dimension which reveals a more subtle content. The first approach is like admiring the beauty of a lake from the shore: the surface of water seems to be solid and hides the content which is below the surface and which the observer cannot see. The second approach is like being in a boat and rowing from one place to the next, on the surface of the lake, discovering step by step an unknown third dimension, while looking into the depth of the water and marvelling at the view of the riches it contains, fishes, algae, coral, minerals, light effects, etc. The second perception is like an extension of the first; it is richer and never stops discovering new aspects which had remained hidden previously.

The balanced dynamic of constant change

The Death-Life cycles in nature unlock our freedom and challenge us to experience life as creative chaos leading towards wisdom.

As it has been explained at the beginning of this book, we escape nature because we are frightened by its violence and power which menace our fragility. Nature looks like a gigantic chaos and a huge power of destruction: volcanoes, earthquakes, tsunamis, avalanches, bushfires, without to mention the explosions in the cosmos, the dissolution of existing forms, the creation of supernovas, the apparition of new galaxies, etc. Yet these apparently terrible destructive forces, which seem to generate so many cataclysms, are also the causes for fundamental changes in the cosmos and for the emergence of new forms of life: towards more differentiation, subjectivity, communion and depth.

They are even the necessary conditions for evolution without which change could not happen. These forms of destruction cause certainly a huge amount of suffering and pain, yet they liberate also positive and creative forces which shake us and break our sleepy state, allowing us to release finally our true energy and creativity. Chaos in nature seems to be without purpose, without meaning and without form, yet it has an orientation which slowly gives shape to the unknown and unbelievable. The chaos of transformation appears more violent when it surprises and destabilises us. Yet as soon we accept the new circumstances and orientations, and as soon we try to discern what in chaos is in fact the new emerging life event or structure, the dynamic of change becomes slowly the key for our freedom to rediscover life in a broader way, beyond the well-established structures which imprison us. Nature becomes in this way

the true teacher which challenges us to remain free and open to transformation, and also to experience life at its full.

Nature appears to us as a terribly destructive power, but we have to learn that its tremendous capacity for transformation is the necessary condition for our own transformation and evolution towards more mature and more evolved stages of our own development. Life is a movement of constant evolution which is not content in our genes but which emerges through adaptation to ever changing circumstances and environment. Nature is mainly creative; it has this genius of “balanced turbulence” (Thomas Berry) which knows how to combine an extreme capacity for destruction (“the power of cataclysm” as calls it Brian Swimme) with an incredible faculty for inventing new patterns of life (“the power of emergence”). The flood of the creek in front of us seems to generate chaos but in reality it gives birth to an ever renewed environment and biotopos; it generates a slow transformation out of which emerges the unknown and the new born.

Pain is our reaction to change. As Proust puts it, “illness is the most headed of doctors: to goodness and wisdom we only make promises: we obey pain”. Our suffering is principally our form of resistance to adaptive change. As soon as we accept the world as it is, we make ourselves more adaptable and more aware of what has changed and of what the present moment offers to us. Transformation can be perceived as a loss because of our attachment to what has been, or it can be perceived as a gain because we learn to discover the novelty of each instant. Every time we cling to what has disappeared, we are condemned to suffer. Each time we are ready to adapt, we become able to learn and to invent a creative way: new life takes shape in our everyday discovery. We become free as a tightrope walker.

While we become more conscious of the nature of life, we become more aware how much the wider spiritual energy of the broader natural community of life, which includes all sentient beings and other entities, is in fact leading us and constitutes our fundamental energy in our actions.

Giving as the law of life

Not only returning sustainably to nature its gifts, but feeding everyone with the inexhaustible energy of love we receive endlessly.

The law of sustainability says that we have to return to nature what it needs for recreating all that we have received from it so that it can reconstitute the resources it has provided. This is the basic law of ecology. Because we break this law every day, the main equilibriums of nature are nowadays near collapse. The respect of this law of sustainability is certainly the basic and necessary condition we have to learn to understand and to apply. It remains completely true, yet this is not enough.

Life is much broader. The constant transformation of our networks of relationships towards an aim that is not imposed by force seems to express that the true law of life could be formulated in terms like these: instead of having only to pay back what we have received freely from nature and from other sentient beings, we have to become the free initiators of the art of giving. We have to integrate into the flow of nature and of the whole cosmos that never stops giving us generously what we need and what we can make thrive. We are indeed like the channels of gifts through which Reality is pouring its generosity into the world. It is why we have to nourish our surroundings with all the gifts we have received. We become transmitters and participate in feeding everyone without waiting to be

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replenished because the mystery is that the more we give, the more we receive. This is because we distribute our gifts that this wealth feeds us and takes shape. There is no possibility to accumulate because accumulation stops the flow of the river of life. In becoming the spontaneous feeders of the universe we open ourselves to receiving still more. The basic energy that allows us to move forwards and to become givers of life is an inexhaustible energy of love and wonder that leads the universe in an invisible way that we can perceive each time we comply with this law of generosity. Flowing with the energy of life allows us to be replenished constantly by it. That is when life becomes really alive.

The law of the universe is: everything is freely given; air, water, life, food, education, love. The more we help these qualities to flow, the more they multiply and become real, and the more they become accessible for many sentient beings, i.e. human but also animals, plants, and even stars. In this art of giving we are indeed the initiators; we do not need to receive before we start giving. We have paradoxically the power to initiate the act of giving although we are not ourselves the source of the gift. For doing this we need to enter the flow of generosity life and nature teach us to perceive and to understand.

It is no more nature feeding us (although it does) but it is us feeding the universe. It seems megalomaniac, but it is not, because we are not the source of what we give; we are only the channels of transmission. It is our choice to let flow and pass on, or to retain and to try to accumulate; but then the flow dies out when it is dammed. Whether we accept to participate or not in this mysterious law, the Source of Life - call it Ground of Being, Reality, Brahman, Emptiness, Tao, Yahweh, God, Allah, or X - remains fully available and generous, and it continues to feed the whole universe with its transforming

energy. In this law there are no more givers and takers but only receivers who become spontaneously providers. This is the reverse of narrow ecology; we are not only meant to return what we have taken but we become the inexhaustible givers of life and love. Deep and true ecology, when it is understood as a new anthropology and a sacred perception of life, becomes rooted in this deep and fathomless mystery of abundance. Is it not paradoxical that we destroy nature because we take too much but do not know how to live of its true abundance?

A strategy for today

In a democratic frame the only way to change our relation with nature is to implement sustainable ways of life at grassroots level.

It becomes more and more evident that governments are incapable – i.e. deprived of the necessary maturity and not in the position - of taking the necessary drastic, quick and effective measures to fight climate change and, in a further and more general stage, to correct our twisted relationship with nature. Either representatives of each country come back from international negotiations without having taken a firm stand and we condemn them, or they come back after committing themselves to drastic measures and they have to implement them by force (the feast is over!). We will then probably not accept happily that they impose onto us constraints we did not choose, such as quotas for energy consumption, car mobility, flights, etc. Especially because such measures will be necessary but - as I hope I have demonstrated that the development of new forms of energy is not sufficient to solve the problem – they do not provide the complete solution as we need also to review our values and perception of the meaning of life. New ways of life are necessary that focus on a new anthropology that has to guide us on the path toward

more humanity, more happiness, and less material dependency. The only possible strategy for tomorrow relies on the implementation of these new ways of life by the people who are the most mature and want to practise them. We are finally the citizens and consumers who feed the present processes by our choices to participate and to consume. Governments are only the illustration of what we are, as communities, and wish in last resort; they are exactly the image of our maturity, in a positive or in a negative sense – it depends on us. If we want them to implement drastic measures, we have first to practise these new ways of life ourselves.

The main reasons for this strategy are the following:

- 1) Our development is nowadays dominated and steered by the values of market. As long as these values control our social life, we have no chance to escape what becomes then the fatality of climate change. The first priority is to illustrate a new form of development inspired by human values of justice, care and compassion. It does not need to be done on a large scale; it just needs to become visible: a local practice of more human relationships that makes this new way of life attractive for people who live nearby.
- 2) The practice of new values and their translation into material and practical forms (small businesses, local exchanges, social consensus, etc.) will make this new model more visible, understandable and practically convincing. It will show that happiness is more easily accessible through human orientations than through the power of economics. It will also help us to better experience what it could be. Only practical experience is the true test and true means for a convincing project. Our own experience in the doing will help us to reorient the project where it needs to be improved.
- 3) This will allow us to create new relationships, or more exactly to restore relationships where there is none because of too much emphasis on extraction: relationships with nature as our context and feeding mother on which we depend for our survival; relationships with partners in work and trade exchanges that value, and care for, our needs for creativity and recognition; relationships with our human and spiritual values that are recognised as essential; relationships with the diversity of cultures and religions that is understood as a source of wealth and complementarity.
- 4) As soon we start implementing by ourselves the quality of relationships we wish and we need, governments will have to follow because we will put on them a stimulating and life giving pressure. This is the only way to make these changes creative and positive, instead of them becoming necessary and concrete through measures imposed by force. Which politician today is ready to take the step of imposing unpopular measures? As I have explained democracy becomes a brake for change when the urgency is not perceived and understood by the majority of citizens. Of course the implementation of change at grassroots level goes in pair with energetic decisions on regional and (inter)national level. Yet these decisions can most probably be only inspired by grassroots activist movements.

The major obstacles on the path toward change are the main economics interests, especially the extraction sector (minerals, wood, agriculture, fishing, fuel, coal, gas, sand tar, etc.). They are believed to be the source of our prosperity, but it is an illusion because renewable energies and processes of cyclic transformation are the solution. We are sadly culturally attached to the extraction sector as a pattern of development that costs us a lot (pollution, destruction, and even public subsidies) and for which we are ready to accept the black

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spots of destruction, yet this way of considering natural resources is not a fatality. The new sustainable and renewable model can take shape very quickly if it is supported by our collective will and the investment capacity of many of us with state support and any form of carbon tax (the polluter pays). The process itself becomes true social and political action.

It is important to see that we have the technical solutions today but we have still to experience the social forms of their implementation. We need to learn to build up consensus on the local level. We have to learn to control local development to avoid being side-tracked by false intuitions or external influences or opposite interests. Clarity of mind, social awareness and creative imagination are qualities that we have to practise to be able to rediscover them. The process itself is a laboratory where the right form is designed step by step.

The most important aspect of this new form of experience is to ground it upon living relationships. Market has striped our lives from many aspects of liveliness. Material constraints have invaded our personal life. Work has been reduced to income earning, exchanges to exploitation. We need urgently to rediscover life as our main purpose that overrides economic pressure. This is precisely the core of our rediscovery of harmony: we must get rid of all the clutter that prevents life from emerging. Life is our essence, our purest value. It is where our new model becomes attractive because it will show that shared happiness is easily accessible when we care for life. The process itself is an educational (re-)discovery.

If as citizens and consumers we are ready to change the way we live, change can happen very quickly. In a few years we can go a very long way. And in parallel we can build up the infrastructures that are necessary. If we start now investing (on personal as well as on

national level) all the money we spend for weapons, airports, roads, prestigious buildings and superfluous goods into the necessary means for healthy local production of what we truly need, the result will be visible in a few years, and it will be so positive that we will be encouraged and confirmed in our choices. We don't need much: we just need to choose to do it, at local level. The process itself is a commitment to a life choice.

The choice for a true life

When we learn from the laws of nature (our teacher), we discover a new simple harmony (anthropology) that provides true freedom.

In our awareness that we have to change urgently our relationship with nature if we want to survive, we have two possible options:

- 1) The first option, that we can call restriction, considers climate change as a problem. When we refuse to reconsider our ways of life and our ideology, there cannot be any qualitative change because we continue to think in the same way and we can only act on the measure of our impact on nature that will remain basically the same, i.e. fundamentally destructive even if more restricted. This is the strategy that our governments propose: let's reduce the production of CO₂ but let's not question our production system or the domination of economics over society.
- 2) The second option, that we can call change of mind, considers climate change not as a problem but as an opportunity. Climate change is not the main problem but only the sign how much we live a life that is in conflict with the cosmos because it is based on false premises and deep inversions. If we listen, nature is telling us how we have to change. It is a teacher and a guide to instruct us what is the true harmony of the cosmos, i.e. the laws that rule

life. This teaching, because it makes the essence of life more understandable for us, reveals to us on which fundamentals we have to build our existence. It is important to see that nature is not the original source of this teaching; it is only the expression or the visualisation of the energy and will that are driving evolution, life and nature.

These two fundamental attitudes are completely opposed and incompatible. We have to choose which one of the two paths we want to follow.

The first option (restriction) is based on the same logic and ideology as we practise them today. As it is completely disconnected from the laws of nature, it is a creation of our own culture. We have invented a world that we try to make our reality of everyday although it is in deep conflict with the wider natural context in which we live. Because our attitude is based on the desire to escape from the evidence that presses us, we are in this way condemned to reinforce endlessly the creation of a fiction, of an illusory world based on the false representations that stem out of our desires and projections. We invent a world that is the fruit of false premises and we are therefore condemned to imprison ourselves deeper and deeper into this fiction. There is no way out but changing fundamentally our way of thinking and living. And that, we refuse to do. In order to reduce our destructive impact on the environment on which we depend, we have evidently to reduce the production of CO₂ but even this form of restriction is not in harmony with the values we found our life style on because our attitude does not question the roots of the imbalance and maintain the values that have generated the cataclysm. Our values remain the ones of infinite growth and egocentric comfort, of accumulation and of competition. Nothing has changed except that we have to live under the constraint of restrictions that are necessary

for our survival but that only generate frustration and dissatisfaction. In fact we believe that it is enough to hide a basically distorted way of thinking and living under a varnish of morality that tells us to restrain our trend of destructing nature and our social network. There is no true freedom in this way of escaping into another illusion because nothing has changed indeed in this way of hardly correcting our devious ways.

By contrast the second option (change of spirit) is radically different from what we practise today. It consists in going back to the source of what life is in its essence. The destruction of nature makes us indeed aware that we are fundamentally wrong in the way we practise life. It is therefore a fantastic opportunity to change our habits and our philosophy, and to discover truth. We are lead to a deep change of spirit (metanoia), it means a deep transformation of our understanding of the true essence of life. Nature is there to make visible what matters in life and what is the deep energy that fosters it and what are the laws that govern it. That is a fundamental discovery of another reality, of a new anthropology, i.e. of another meaning of life. This change happens on a much deeper level. It is not a varnish of morality that is added to what has not changed but it is a new anthropology we discover that transforms life. It is all about ontology: the way we are. It is about being and not about doing. We are here at the core of the problem. This fundamental change does not generate minor changes but a fundamental reorientation of our way of being and also of our doing, because from our new way of being ensues a new way of doing too, but the action is not the essential; the mutation happens on the level of being and it brings a completely new light at the way we perceive life. Being, i.e. existence itself, becomes the central point. The change is consequent because it reorients our values. We discover that abundance is given. All resources are provided gratuitously: life, air, water, food, wood,

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energy, etc. Nature is a community of life where all beings are interdependent. Nature and society are both generous when they provide all we need. On this different path we wonder and focus on the quality of the life we share with all sentient beings. It is no more about our individual self but it is about community, how we can create harmony in our relationships, with our relatives, friends, neighbours, or other unknown people as well as with other living beings (animals, plants) or all other aspects of nature (rocks and stars). Self-limitation arises naturally because we do not have the need to escape into illusory accumulation. We are just satisfied with what is minimal. Consequently the commons develop in intensity and breadth because they are more and more nourished and respected by the whole community. Commons encompass then all the precious natural resources: clear water, pure air, good food, silence, peace, etc. They include all the treasures of our society: knowledge, wisdom, spirituality, love, kindness, justice, etc. Abundance becomes a daily reality because sharing and caring become the acted priorities. The laws of harmony shape our life and we become able to experience a fundamentally different quality in our relationships. As we do not need any more to deplete the earth it can recover. We live then in cycles of renewable transformation.

This is of course an ideal description of what may happen if we accept to undergo a deep mutation in our mentality. But it remains nevertheless evident that such a profound change implements naturally what nature needs us to do. The flow of life is naturally re-established and it brings true freedom. Society is restored.

When do we start? It depends on you, on me. We just need to commit to this path. We have to learn the ability to choose and commit on long term. Hence the following 10 commitments as an illustration of

what this path could be. In the hope these commitments could be debated, and help us to find consensus.

D) The action

8) TEN COMMITMENTS FOR DAILY LIFE

In order to find harmony in our relationship with nature, we can conclude the present essay with the list of the following commitments we can propose for a change in our attitude.

10 commitments for reconciliation with nature

In order to allow reconciliation between nature and humanity we should conform in our daily life to the following 10 commitments.

- 1) Part of nature: Mankind is part of nature, without exception. We want to reintegrate this fragile yet powerful body, which is our nourishing Mother, despite her apparent indifference towards us. Nature is not a landscape nor a garden of Eden; it is a living body torn between love and destruction.
- 2) Eco-theo-logy: The Ojibway tradition shows how as mankind we stand at the periphery of nature because we depend on other species but they do not depend on us. Yet human beings contribute to the evolution of the universe through their own form of consciousness. We want to recognise traditional people as our guides and teachers for helping us reconnecting with nature and with our belonging to the land, and showing us how to find harmony with the universe. We want to rediscover in a new anthropology the mystery which guides the universe in an unknown yet real orientation.
- 3) Force and virtuality: Our society tries to escape the power of nature through technology, into denial and illusion, into domination and destruction, into accumulation and exploitation, into uprooting and isolation. We want to practise self-limitation, choosing the way of minimum comfort and breaking our bubble of insulation; confronting ourselves with the material reality of our world: distance, weight, height, effort; privileging the use of renewable non-polluting energies

and of tools over machines; using technology with restraint, as the art for the adequate aims and means; reinventing cars and their use as well as a new practice of mobility; trying even not to use any fossil fuel.

- 4) The 6 questions of the Tibetan monk: Our society has lost the measure of needs and desires. We want to choose a form of simplicity (spiritual poverty) which opens us to life, to rediscover what our true needs are in order to privilege our personal and collective growth; facing our greed and ignorance. Is it true? Good? Right? Beautiful? Necessary? For spiritual progress?
- 5) The integration into natural cycles: Nature provides freely anything we need and we have to respect and adapt to its rhythms, cycles and variations. We want to integrate all our activities into natural cycles and adapt our needs to what is available and has to be shared in order to practise equity (golden rule).
- 6) Peak oil and reconversion: Peak oil is the announcing sign of a general collapse of our society probably within 10 years. Our present crisis is the crisis of our ways of life. We want to take this opportunity for a deep reconversion towards less material stuff and more meaning, in our local community, according to the 2 principles (cycles and ethics), the 5 practical paths (parsimony, imagination, choices, incidences, management), and the 18 points about climate change; converting before 10 years (2025) our local community into a society without fossil fuel.
- 7) Vernacular subsistence: Our society practises the “virtues” of accumulation and individualism. We want to practise a form of fluid exchanges where wealth is shared and circulates, where the *commons* are the collective property of what cannot be divided, where basic goods and services are made available for all. Everywhere when it is possible, patterns of subsistence and reciprocity have to replace market exchanges; avoiding even to use money, every time it is possible (LETS).

- 8) Local community: The tendency is now to globalisation. We want to give shape to our local community as a place for empowerment and consensus about our common future, a place of resilience (self-reliance). We want to consume local goods and services, to restore our faculties for creativity (trades) and for sharing, making our place a place where to live fully, for our youth and the future generations; especially restoring the systems of regulation of our land and climate (forests, water, soil, ocean, sun, wind).
- 9) Praise of slowness (present): Speed and hurry are the dominant values of our society. We want to rediscover the intensity of being (being is more than doing; doing is more than having); here and now, yet in relation with our heritage upstream (reinterpretation of our past) and downstream (perspective of the future); time makes us free from unsolved issues when we accept to look at them; time is our life and our liberation, on the way for our inner transformation. The acceptance of death is an opening to a wider meaning of life.
- 10) Harmonisation with the universe: Our universe is one living body. We want to be inspired by and adapt to its orientation towards more complexity and deeper consciousness, towards differentiation, subjectivity, communion and depth; working with the 3 antagonisms of resistance (inertia / resilience), of energy (entropy / inner growth), of dreams (reification / choices); practising diversity and complementarity, choices and commitment, cooperation and sharing, in a search for the deep hidden meaning of life. We are aware that this change has to happen first on grassroots level because we are the citizens and consumers that make the world what it is through our behaviours and attitudes.

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Industrialised countries have a huge debt towards poorer countries; our constant will for extraction has destroyed true relationships. 122

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Refuge in isolation and material values 125

Needs and destruction 125

Our society exacerbates any possible need. The meaning of life is the key that allows us to choose which needs and desires are real. 125

Needs and desires 126

Needs and desires are hard to tell apart, especially in a society that plays with this confusion; we have to learn to see the truth. 126

Being, doing and having	126	6) Protectionism and globalisation	138
In our life, being is the most important need, much more essential than doing and having, which are often escapes more than needs.	126	Protectionism allows weaker societies to consolidate according to their own pattern; opening to external exchanges comes later.	138
The screen and the movie	128	Roots, subsistence, reciprocity and exchanges	139
Life is like a movie; the screen is the truly permanent Reality, while the projection never stops changing and creating new illusions.	128	7) Subsistence and reciprocity do not exclude exchanges but require social awareness to protect the practice of human liveliness.	139
Greed and ignorance	129	Rootedness in the land	140
Mainly greed , and also ignorance, are our main trends which push us to escape away from being, into more doing and more having.	129	Food as energy of the place	140
Material and non-material goods	130	Food nourishes us with the subtle energies it has been loaded with through the “production” process, from growth to absorption.	140
As soon survival is ensured, non-material goods (love, peace) become more important; they have a lesser environmental impact.	130	Fast food or slow food	142
Services between care and profit	131	Food production is a lucrative business which has nothing to do with real needs; consumers become the slaves of big corporations.	142
Services like health and education rely on a combination of material and immaterial goods; the simplest are the most effective.	131	Agriculture as landscape maintenance	143
Cancer, Aids, depression and obesity	132	Systemic agriculture participates in maintaining the landscape and in rooting people into their place and relationship with nature.	143
The major illnesses of our time are an expression of our collective lack of awareness for the meaning of our common evolution.	132	Restoring our forests, waters, land as systems	144
Market society as uprooting	133	Our forests, waters, oceans, glaciers are the systemic regulators of biodiversity and climate: life, food, heat, transfer, cover, storage.	144
1) Wealth of the commons versus scarcity	133	Local production as empowerment	147
Market economy has forced traditional societies into a global society obsessed by unsatisfied needs and by fear of scarcity.	133	When a community relies on what is produced locally, it becomes culturally richer, socially empowered, more aware and self-reliant.	147
2) Vernacular abundance in self-limitation	134	C) The new way	151
Vernacular societies relate to their natural environment which defines the laws of self-limitation and of solidarity and reciprocity.	134	6) Time, evolution, life	152
3) Vernacular versus industrial	135	Cyclic time as a fluctuating dimension	152
Vernacular subsistence generates continuity, diversity and life while industrialisation creates disruption, repetition and virtuality.	135	Time is not linear but cyclic	152
4) Market’s creation of scarcity	137	Our civilisation tries to tame time according to a linear regular measure, but time is in fact pulsing in cycles, at various speeds.	152
Market transforms normal life into acts of production and acts of consumption which are linked only by money or market laws.	137	Coordination of times	153
5) The illusion of wealth creation	137	Daily life decomposes in different times: work, family, leisure, friends; as does life: childhood, adulthood, responsibility, wisdom.	153
Industrial society pretends to create wealth; production is an illusion because it consists only in transformation of what is given.	137		

Nature and humanity

The agenda, struggle against time	153
As life is understood as a project to be actualised in order to impose our will, the agenda becomes a war against time and our fellows.	153
Time as transformation into maturity	155
Here and now	155
The new project does not consist in “doing things”, but in “being with”, here and now, in the present: life as an experience of love.	155
Old age as maturity	156
We tend to grow into more spirit and less material; it is why old age is the stage of best maturity, despite physical and / or mental decay.	156
Past - present - future	157
Only the present is real; the past exists as memory (interpretation); the future exists as perspective (projection). Both in the present.	157
1) Past as personal and collective memory	158
Our memory is made out of our personal and also out of our collective memory, with their (un)told and (un)conscious parts.	158
2) Future as hypothesis or projection	159
Our perspective of future should not be a projection of our views or desires but a hypothesis which has to be verified and readapted.	159
Present as listening	160
Present has no duration; it is the state of awareness of what is here and now, whether we like it or not; listening to it is a rich teaching.	160
Duration as integration through heritage	161
We are never isolated; duration links us with the wider context, uphill and downhill, through our ancestors or children heritage.	161
Present and eternity as a gift	162
Our integration into a wider chain of heritage provides continuity; what we give to others is assimilated, recycled and will last for ever.	162
Time as scarcity or abundance	164
The dominant shortage in our culture and society is the lack of time; time is in fact abundant; it is the basic material of our life.	164

7) Harmonisation through nature	165
Consciousness and re-harmonisation	165
3 stages for an urgent change	165
If we want to survive, we need to change deeply our ways of life: 1) stop destroying, 2) be in harmony with nature, 3) discover true life.	165
Fuel and money	165
Fuel and money are the two main powers we use in our society; they allow speculation which fascinates us but goes against life.	165
Harmonisation through nature	166
When we listen to the laws of nature, our life is re-harmonised; peace and love arise naturally; and true evolution can happen.	166
Nature as a teacher	167
Nature is like a book that teaches us the true meaning of life and how to live in harmony with our natural and social surroundings.	167
Well-being or bliss	169
As we behave like takers instead of leavers, we make a terrible confusion between comfort (well-being) and bliss (deep joy of life).	169
Reconciliation as conversion	171
True reconciliation is a deep change of mind, a conversion much beyond guilt, in the recognition of what is and of our own limits.	171
Consciousness and complexity	173
Consciousness exists in all parts of the universe: mineral, vegetable, animal, human; its depth grows with complexity.	173
One conscious body in interaction	175
As humans we are not only parts of nature; we form one body with the whole community of life, into which we act as consciousness.	175
Evolution as an expression of love	177
When Darwin understood evolution, it seemed cruel and amoral to him; yet evolution is guided by a loving energy towards harmony.	177
Consciousness and community	178
Because consciousness tends towards community, it abolishes the trinomial: individualism / competition / distance from nature.	178

The four intentions of the Cosmos	179	3) The intention towards communion	192
The evolution of the universe is guided by four main intentions: towards more differentiation, subjectivity, communion and depth.	179	Our society tends to foster individualism and competition while evolution tends to create communion and unity; one body of life.	192
Freedom as our root in the invisible Reality	180	4) The intention towards depth	193
The 4 steps towards freedom	180	Our society fosters materialism while evolution tends to make us more aware that matter is the thin envelop of a spiritual content.	193
We need 1) to overcome our instinctive handicaps, 2) to resist social pressure, 3) to adapt to natural laws and 4) to delve into mystery.	180	The balanced dynamic of constant change	194
1) Overcoming our six instinctive handicaps	180	The Death-Life cycles in nature unlock our freedom and challenge us to experience life as creative chaos leading towards wisdom.	194
Our evident tendencies to fear, ignorance, awkwardness, denial, greed, cruelty imprison us in a self-destructive attitude denying life.	180	Giving as the law of life	195
2) Resisting social adaptation	183	Not only returning sustainably to nature its gifts, but feeding everyone with the inexhaustible energy of love we receive endlessly.	195
We tend to conform to social values and pressures, but they are contrary to our spiritual path; we have to become free of them.	183	A strategy for today	196
3) Adapting to the laws of nature	184	In a democratic frame the only way to change our relation with nature is to implement sustainable ways of life at grassroots level.	196
The laws of nature are our teacher: they reveal to us the ways to harmony and are the tactile expressions of the invisible Reality.	184	The choice for a true life	198
4) Delving into the invisible Mystery	185	When we learn from the laws of nature (our teacher), we discover a new simple harmony (anthropology) that provides true freedom.	198
Although nature is our teacher, Reality remains not visible; we have to become rooted in what remains beyond any representation.	185		
The rift between spirit and matter	186	D) The action	201
The new anthropology we need has to repair the connection between spirit and matter: we have to live in our body (the cosmos).	186	8) Ten commitments for daily life	202
The 3 antagonisms of resistance, energy and dreams	187	10 commitments for reconciliation with nature	202
Antagonisms of resistance (inertia-resilience), energy (entropy-growth), dreams (reification-choice) lead to, or away from, growth.	187	In order to allow reconciliation between nature and humanity we should conform in our daily life to the following 10 commitments.	202
Diversity, choices, unity and depth	189	List of options (titles and short wordings)	204
1) The intention towards differentiation	189		
Our society tends to level any difference and to create flat land, while evolution tends to generate ever more diversity or complexity.	189		
2) The intention towards subjectivity	190		
Our society tends to be rational, neutral and indifferent while evolution tends to generate spiritual choices and commitments.	190		