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**Dealing with the
environmental crisis:
a case for cultural approaches**

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You'd think that the most intellectual creature on the planet would know better than to destroy its only home, but we are destroying the planet very, very quickly. We must learn to live in peace and harmony, sharing the same philosophy, not only with each other, but also with the natural world, because we will see the results tomorrow, if we didn't learn it we will pick up weapons, fighting over water, over the last natural resources...we have to help the young people to remodel the way how we act in this planet before it's too late. Giving them hope is the most important thing to do. If young people lose hope there really is no hope at all. And what I would tell every one of them is that every single day that you live you make a difference to impact the world, and you have a choice on what kind of impact you are going to make. Your life matters and you can make a difference.

Jane Goodall, from the documentary “*Jane's Journey*”.

Introduction

When I started to attend classes about Environmental policy and Sustainability, mostly run by economy or political science courses, I felt pretty outsider among all the other students. When I began to read, study and write about sustainability I have frequently been asked, with amazement of who asked, where was the link between my field of study and those matters. Philosophy has often been conceived in the most imaginary ways by people who have never approached it. I remember a friend asking me if my future perspective was about sitting under a tree smoking a pipe. However, to me the connection between philosophy and environmental matters was simply evident and spontaneous. How could the nature and the political role of the humans in it not be a philosophical topic?

Attending economic classes about environment was interesting and funny. My background and the lack of the economic knowledge didn't make things easy to understand. I used to utilise a deeply different language and way of thinking in front of problematics and it could happen that I brought in class input that were totally useless for my "economy colleagues". Nevertheless I continued to learn and research and the more I felt stranger to the economic approach the more I was persuaded that the reductionism of those lessons was missing something important. Those classes didn't usually consider the topic of their lectures, the nature, from a different point of view from resources, scarcity, costs and benefits, although they were aimed to speak about effective pathways to propose sustainable economic strategies. They were talking of technical instruments to pollute less, but their speeches were generally absent of ethical observations and very poor of cultural considerations . Yet, I repeated to myself, there is so much more than this!

I realised step by step that the Humanities have academically still a pretty reduced role into the research about sustainable development and environmental studies. They are late in being involved in the topic and the field is mostly approached by natural sciences, political or economic disciplines.

This reductionism is a consequence of the tendency of current responses to the environmental crisis that privilege technical strategies to deal with such issue. Nevertheless, the contribution of all these subjects whose topic is the humankind seems to me indispensable to have a faithful and integrated outlook of the current situation, because they deal with culture and culture is the stage where social,

economic and political dynamics take place. Can technical strategies produce effective and long-term results towards sustainability without the promotion of radical cultural change?

Modern global challenges, among which the environmental one, require a real deep cooperation of all fields of study and of the multiplicity of actors, in order to promote effective solutions. These solutions are not just technical, but especially cultural. The whole global population is involved and to make it politically active we need education and new paradigms of knowledge. To respond adequately to the ecological crisis, cultural approaches are urgently needed, next to and beyond technical solutions, in order to transcend their limits and reductionism.

I argue in this dissertation why, in my opinion, it is urgent to promote cultural responses to the environmental crisis, through educating citizens to “think” and live their daily life sustainable and addressing a more appropriate study approach to the issues, according to a trans-disciplinary perspective.

In the first part I will introduce the environmental crisis and the current responses to it, identifying the tendency to treat the problem through what I call “technical approach”. Such approach provides economic, political and legal strategies to limit the consequences of the environmental degradation and to “green” the economy, but, I will argue, their only attempt is ineffective if it remains lacking of a cultural strategy. In the second part I will explain what I intend with “cultural approach”, and why I consider this perspective indispensable to deal with global problems in general and in particular with the ecological one. To define the domain and social level where these challenges have to be met, I will touch on the context of globalisation to sketch the complexity and controversies of the “Global Village” as interconnected system. Such system is the stage to define a “Global Citizenship” as main actor that, with its activism, assumes a determinant role in dealing with environmental problems. Just involving the Civil Society and promoting strongly a culture of sustainability, it is possible to induce the social change and deep redirection of lifestyles towards sustainable patterns. I will identify two elements as instruments to promote cultural and effective responses and limit the reductionism of technical solutions. One is the education that passes through formal and institutional channels (schools, international frameworks and programs) and also through informal pathways (Civil Society movements and social innovations). An education to sustainability should shape the future citizenship to new ways of conceiving the relationship between humankind and environment and a different mentality towards the nature. To this end I will mention four examples of philosophies and outlooks of thinkers oriented towards paradigms like the *Ecosophy* and the *Deep Ecology* and a new spirituality towards the world and the nature.

The second element necessary for cultural responses is the promotion of a Transdisciplinary orientation in the research about environmental issues and in the academic milieu, that allows to conceive more adequate, systemic and holistic paradigms, through the integration among all disciplines, first of all the humanities that are extremely precious to shape minds oriented to sustainability, and to facilitate cooperation between academics and society stakeholders.

Part One: Environmental Crisis and Technical Approach

Chapter I - Understanding the background: the Environmental Situation and the current responses.

The Environmental Crisis

*An exponentially growing, partially or totally irreversible environmental deterioration or devastation perpetuated through firmly established ways of production and consumption and a lack of adequate policies regarding human population increase.*¹

Common speeches in the daily life concern often weather and meteorological conditions. When we entertain an informal conversation with somebody we don't have intimate relation with, we are likely to talk about the forecasts of the weather and how cold or warm is the day. Weather is considered a neutral argument to talk about and allows breaking the ice in the elevator or in the office, when we want to exchange some chat. In the last decades, however, our conversations about it differed pretty much from the chats of previous generations. My grandparents, all farmers born in the 20s and 30s of the XX century, used to talk about it in base of the agricultural phases of their fields and the natural development of the conditions to cultivate in the lapse of time of one year or of some years. They used to report the trend of the season, the singular atmospheric events such as huge raining, hail, ice or too much sun, and the consequences that they had on their cultivations. Then they used to compare the current season with the previous years, analysing which factors favoured or obstructed a better crop. Their output depended mostly on the behaviour of the weather and they had an attitude towards it of adaptation and dependence, even forced submission. A new bacteria bearing sickness to plants and spread from field to field could destroy a whole harvest of a season and their economic income had to deal with this. Somehow they learnt, living in the nature and transmitting the knowledge from the old generations, to predict and deduce how the weather would behave, even if always with the inevitable uncertainty, and sometimes they were more precise than our modern meteorologists would be. Still 70 years ago it was a little easier to forecast the weather deriving it from small signals, such us a kind of wind or a certain disposition of the

¹ Naess Arne (1990), *Ecology, Community and Lifestyle: Outline of an Ecosophy*, Cambridge: Cambridge University Press, p. 23.

clouds, unless big sudden events happen, as always has happened in the history. The capability of my grandparents to guess how the season will reveal in the last years decreased. It is pretty usual, now, while it was a bit less before, that they just show an astonished expression and are unable to find explanations if one asks them why in our warm and temperate region it snowed in April or why we had just 10 days of sun and hot in the whole summer. They are able to remember weird events like a snow in a hot season or a very bad annual crop for too much or too less raining, but they seem pretty surprised in seeing how these unusual events happen so often nowadays. The attempt to prevent disasters in agriculture crops is not really effective, because forecasting sudden frost or heavy rain and flooding² and the size of their impact is too difficult, so the farmers have to deal with millions and millions of lost income because of sudden, short but strong phenomenon. Few days of excessive cold can kill what has been brought up in months.

Beyond the astonishment of the common sense, which has always existed and is not of scientific relevance, sciences agree by now on many points about climate change and environmental degradation. The planet is experiencing an unprecedented situation of unbalance, deterioration and impossibility of adaption, and the activity of the humans is considered (even if not by all scientists) largely responsible for it.

This situation is resumed under the expression “Environmental Crisis” and the factors signalling the critical aspects are several. The main ones that include other consequent factors are:

- Climate change and Global Warming
- Fossil fuels exploitation
- Acidification of oceans
- Deforestation
- Biodiversity loss
- Global Overpopulation

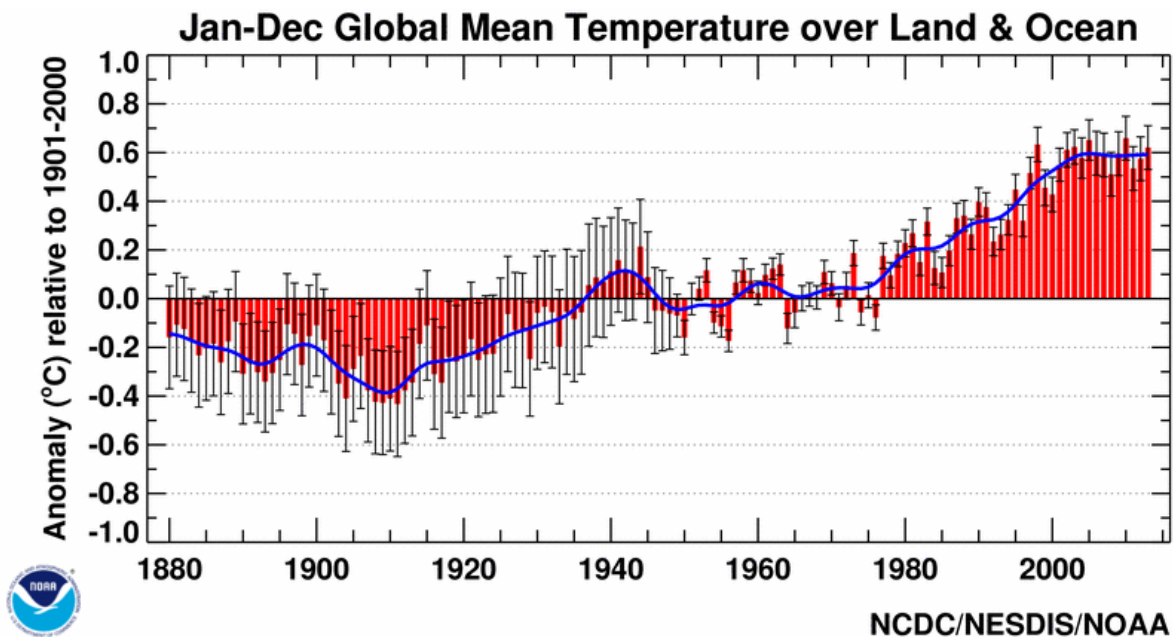
² See Legambiente Study (2014), *L'Italia delle Alluvioni. Gli impatti degli eventi estremi di pioggia nelle città italiane*, http://www.legambiente.it/sites/default/files/docs/litalia_delle_alluvioni_studio_ultimo.pdf Extreme weather events are becoming more and more frequent. One of the most diffused phenomenon creating problems in Italy are floods and they are not anymore “exceptional events”, but nowadays recurring and intensive, and create huge damage both to agricultural activities but especially to urban areas. As Legambiente states: Aumenta “la difficoltà, diffusa in moltissime città italiane, di rispondere ad eventi estremi di pioggia, di cui negli ultimi anni è aumentata anche l'intensità. Episodi che in passato erano eccezionali, oggi tendono a rappresentare sempre più la normalità. Anche se le proiezioni indicano per il Mediterraneo e per l'Italia una diminuzione delle precipitazioni in senso assoluto, gli eventi estremi purtroppo saranno sempre più frequenti, e ciò soprattutto nelle regioni settentrionali. Il cambiamento di alcuni parametri climatici, non solo rende inefficaci i regolamenti e gli strumenti di governo del territorio di cui disponiamo, ma più urgentemente svela l'incapacità delle città nell'affrontare questo scenario di forte cambiamento e di grande incertezza in cui siamo chiamati a ragionare”.

I will describe each of them, in order to show what are the elements signalling the “crisis”.

Afterwards I will talk about the current responses that have been and continue to be developed since some decades, focusing on the tendency to privilege a technical approach to the problem and explaining in what it consists.

1.1 Climate Change

The Climate Change issue refers mainly to the global warming and increase of temperature of the planet. According to NOAA’s National Climatic Data Centre (NCDC)³, the temperature of the globe increased by 0,85 °C in the last century.



Global average temperature since 1880. The graph shows the annual trend in average global air temperature in degrees Celsius, through December 2013. For each year, the range of uncertainty is indicated by the grey vertical bars. The blue line tracks the changes in the trend over time. (Image [NOAA's National Climatic Data Centre](http://www.ncdc.noaa.gov/climate-monitoring/).)

Despite it has happened in the history of the planet that the climate would change and cross glacial ages or hotter times, the climate change that we are experiencing is an exceptional event because it is happening in an extremely short time. We refer to a couple of centuries, since the industrial revolution transformed our role on Earth. While this warming process takes place in the lapse of

³ See NOAA, National Oceanic and Atmospheric Administration, <http://www.ncdc.noaa.gov/climate-monitoring/>, October 2014.

hundred years, usually this phenomenon required hundred thousand years in the past. The correlation between the human activity and the global warming is evident and the specific factor inducing or accelerating it is the excess of concentration of greenhouse gases in the atmosphere. The greenhouse effect is a condition to allow life on earth, because it simulates a protective filter from solar radiations, but that allows to reach a temperature on the surface of the earth enough warm (15°C) to survive for living organisms. As Common and Stagl explain in *Ecological Economics*⁴

60 per cent of the solar radiation reaches the surface of the earth; about 18 per cent of it is reflected back into space, with the remainder warming the earth's surface. With warming, the earth's surface emits infra-red radiation. The so-called 'greenhouse gases' in the atmosphere absorb some of this radiation, and re-emit it in all directions, including back towards the surface of the earth. The effect of this reflected infra-red radiation is to warm the lower atmosphere and the surface of the earth. The greenhouse gases act like a blanket around the earth's surface.

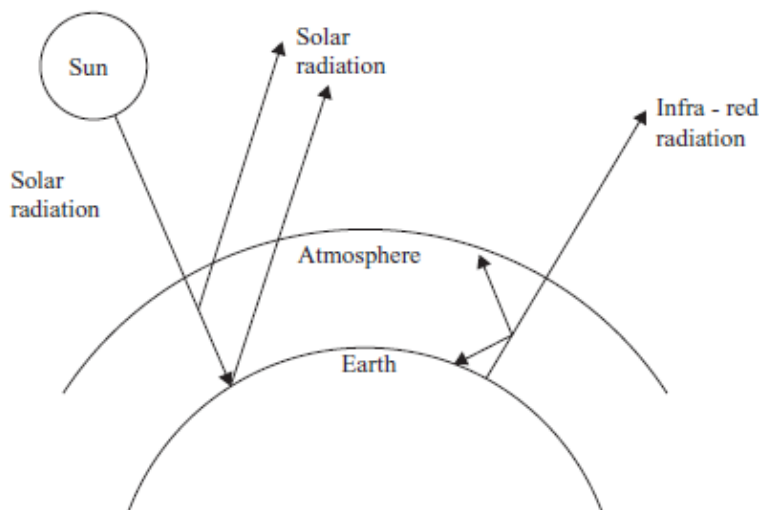


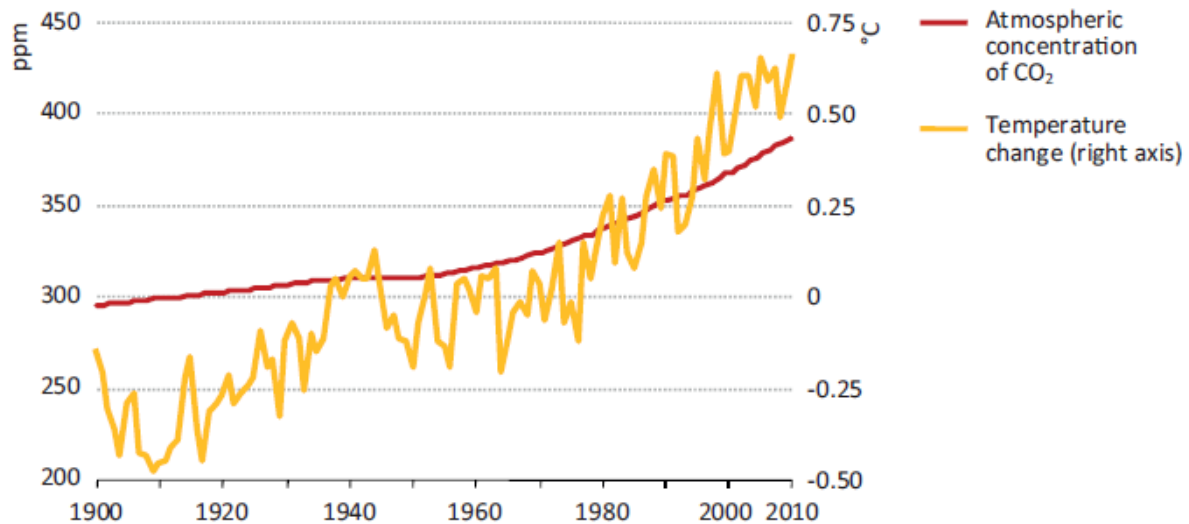
Figure 13.1
Physics of the
greenhouse
effect.

(Image: Common/Stagl (2005), p. 483)

Though, when the concentration of the gases is too high, their 'blanket effect' is too strong and the temperature on the surface increases. The main gases provoking this process are Carbon dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Ozone (O₃). The first two are the more responsible, respectively for the 60% the first and 20% the second, of the current additional warming. Their high concentration is due mostly to the fossil fuels combustion for energy production. As the graph

⁴ See Michael Common and Sigrid Stagl (2005), *Ecological Economics: An Introduction*, Cambridge: Cambridge University Press, p. 483.

shows, the correlation between the two variables is clear, to the increase of greenhouse gases concentration corresponds the growth of the temperature.



World atmospheric concentration of CO₂ and average global temperature change.

Sources: Temperature data are from NASA (2013); CO₂ concentration data from NOAA Earth System Research Laboratory.⁵

1.2 Fossil Fuels Combustion

Fossil fuels are coal, oil and natural gas. They all have organic origin, coal comes from vegetation, oil from animal tissue and gas consists in *methane released as a by-product during the formation of oil, and deposits are usually found in association with oil deposits*⁶. They employed millions of years to become what we use today to obtain energy. The human society started to produce energy from fuels in the last 250 years, as in the pre-industrial society labour was the main energy source, coming from animals, water power and wood. This simple society was based on local self-sufficiency and auto-production of food supplies and was organised in small and distant cities. After the industrialization modern societies needed to use four or five times as much energy as agrarian societies did, therefore the transition from biomass energy to coal and then liquid fuels (oil and gas) took place. With the high density power of fuels' energy the Industrial Revolution could start and phenomenon like technological progress, transports development and urbanization began.

⁵ Image: website Summer Daily Post, <https://summerdailypost.wordpress.com/>, October 2014.

⁶ See Common/Stagl (2005), p. 42.

Coal has been the first and most important fossil fuel for industrialization and its use is also the most environmentally damaging, as at least 50% of the CO₂ emissions in the atmosphere is associated with coal burning. Nevertheless the global demand for coal is still very high, especially among new emerging economies like China and India and it continues to grow.

Oil is less polluting than coal, but as it is the most used fuel in transports, its indirect consequences on emissions are anyway very grave. Natural gas used for electricity generation is about half as polluting as coal, but, as the methane (CH₄) in it is much more potent than CO₂, it is a strong contributor to greenhouse gas emissions too. However it is short-lived in the atmosphere compared to CO₂ (40-50 years against 100).

The alternative to fossil fuels energy production is the renewable energy coming from natural sources like sunlight, wind, rain, tides, waves and geothermal heat, but we are still far from investing in them rather than on the fuels. The negative effects of the fuels combustion, beyond the global warming for the concentration of greenhouse gases are also directly relevant for humans in their daily life, because water quality is threatened by pollutants' discharge in freshwater and groundwater resources, soil quality lowers for the waste released and the overexploitation of industrial agriculture, and the same thing happens for air quality due to the emissions themselves in the air that we breath.

1.3 Oceans' acidification and pollution

Seventy per cent of Earth's surface is covered by water and ninety per cent of this marine surface consists in oceans, the rest in glaciers, lakes, rivers. With the raising of global temperature, the glaciers (meanly the Artic see ice) melt and retreat at an unusual speed. As a consequence the level of sees rises risking to submerge costal territories in the next hundred years.

Apart from this, another problem dramatizes: water is a sink, because it absorbs CO₂. The disproportionate concentration of CO₂ in oceans' water, however, determines its alteration of the PH and it changes the chemical equilibrium. Oceans have never been so "acid" in the past and the rate of acidification is growing 100 times faster than any time in the last few hundred thousand years. This has deep consequences on the organisms living in it and the food chains. As water's chemistry changes so rapidly many marine organisms are not able to adapt to it and many ecosystems are impacted (for example some plankton species may not be able to survive in these conditions, jeopardising the food chain for other animals). Furthermore the waste released in oceans, has reached very grave levels. Beyond toxic waste, plastic is one of the biggest pollutant of oceans.

The huge amounts of it that can't be assimilated by natural elements remain on the bottom and on the surface of oceans for hundreds of years, with terrible impacts on animals life cycles. The rate of animals that die for having ingested plastic or being remained trapped into plastic objects grows day by day.⁷

1.4 Deforestation

While greenhouse gases increase their concentration in the atmosphere, human activity proceeds, in the same time, to harm the so called “sinks” that absorb the gases through natural processes, like the forests. A forest can be considered an ecosystem. An ecosystem is a *system comprising living organisms, known as biota, and their non-living, or abiotic, environment, and all of the interactions between all of the biotic and abiotic components of the system.*⁸ Every small group of interacting organisms can be considered an ecosystem. Plants are *autotrophs*, or producers, as they produce by themselves their energy. Animals are classified as *heterotrophs*, as they consume from the environment the food that will be transformed in energy. Plants use energy to make organic matter from inorganic one, using chlorophyll through the process of *photosynthesis*. As it is showed in the graphic⁹, they take inflows from the environment and give back outflows. The necessary inflows are water, nutrients from the soil, carbon dioxide and especially solar energy. The outflows are heat, result of the energy consumption in the process called respiration, water and oxygen. For their productivity plants need all of these elements. The absence or insufficiency of one cannot be replaced by the abundance of another.

⁷ See *Inside the Garbage of the World*, documentary edited by Philippe and Maxine Carillo, California 2014.

⁸ See Common and Stagl (2005).

⁹ See Common and Stagl (2005), p. 33.

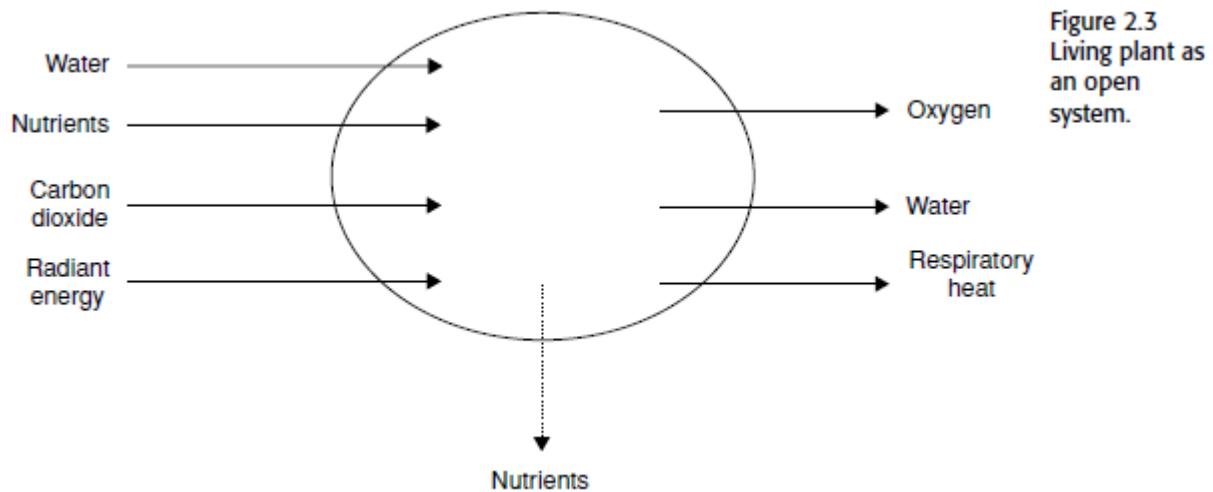


Figure 2.3
Living plant as
an open
system.

On the contrary, animals consume oxygen, water and nutrients and release out water, carbon dioxide and heat. Animals and plants are elements in systemic interrelation because the processes of one determine the processes of the others. The plants occupy also the first level of the so called ‘trophic pyramid’, the pyramid of nutrition relations among living organisms. They are producers and represent the source for the category of herbivores. Herbivores are eaten by carnivores at the next level. Without the plants as first ring the chain cannot start.

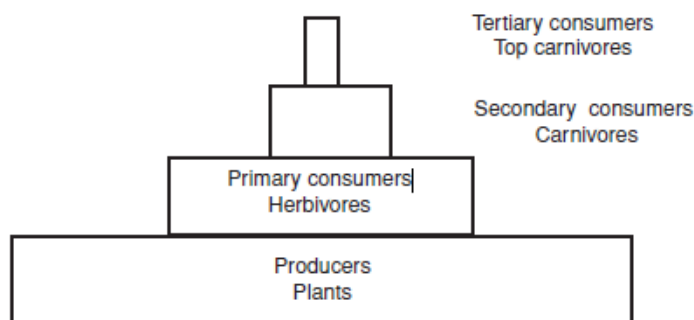


Figure 2.6 A
trophic
pyramid.

Image: Common and Stagl (2005), p. 38.)

The productivity of plants is not fixed but it varies with the latitude and the frame of the environment. Desert areas have a very low productivity while tropical and equatorial zones have the highest. *Although tropical rain forest accounts for only 3.3 per cent of the surface, it accounts for 22 per cent of total global productivity. Cultivated land accounts for 2.7 per cent of the surface and 5.4 per cent of productivity.*¹⁰

¹⁰ See Common and Stagl (2005), p. 40.

Therefore plants are essential to the functioning of the ecosystem, they produce oxygen, which is necessary for living organisms such as the human species and act as 'sinks' *bio-sequestering*¹¹ carbon dioxide and keeping the balanced concentration of gases in the atmosphere to allow the life. They are base element in the nutrition pyramid and preserve the natural conditions of habitats for animals protecting the biodiversity.

“Deforestation” is the process of removing forests and trees to destine the territory to non-forest use such as urban use, farming and industrial production of goods. It is deforestation if the removal is not compensated by replanting and reforestation. The main causes behind the massive cut of trees are land-use, pastures, cultivation and industrial production of fuels, charcoal and timber, together with other goods like paper, palm oil and so on. A minor cause of deforestation is the forest fire that can occur naturally but in most of the cases is provoked by humans.

Many operations of deforestation are leded illegally, out of the control of political authorities. The phenomenon has accelerated pretty much in the last decades and it is recognised as one important factor incrementing global warming. The role of forest as sink in absorbing greenhouse gases loses effectiveness if the concentration of the gases is disproportionally high compared to the forest surface and its capacity of photosynthesising.

Beyond other consequences such as hydrological alteration of water cycle (trees serve for soil cohesion, intercepting precipitations, balancing infiltrations under earth, controlling the humidity of the atmosphere by transpiring) and soil erosion (by growing the amount of runoff and reducing the protection of the soil from tree litter), deforestation contributes to the increasing of greenhouse gases emissions up to between 10 and 20%¹² on global scale. Forests indeed absorb 5 of the 32 billion of tons of greenhouse gasses emitted annually by human activity¹³.

1.5 Biodiversity loss

Destroying forests also means destroying natural habitats for many species that take the way of extinction. “*Biodiversity is the diversity of living organisms, the genes that they contain and the ecosystems in which they exist.*”¹⁴ The extent of biodiversity depends on the number of existing species on Earth, which is unknown but is supposed to be extremely high. The species' richness

¹¹ *Bio-sequestration* is the process of absorbing atmospheric greenhouse gas carbon dioxide by biological processes.

¹² See *REDD- Monitor* (Reduce Emission from Deforestation and forest Degradation program) website, <http://www.redd-monitor.org/2009/11/04/20-of-co2-emissions-from-deforestation-make-that-12/> . Data from REDD and the International Panel on Climate Change (IPCC) are controversial and continuously updated, but they never go under the percentage of 10 and over the 20.

¹³ See video *UN-REDD Indonesian National Program*, October 2014, <https://www.youtube.com/watch?v=wLxeiS4-J8s>

¹⁴ See Common/Stagl (2005), p. 521.

augments with the longitude and it is concentrated in tropical and equatorial areas. Species' extinction is a phenomenon that has always happened in the biological history, with some rare peaks like the period corresponding to the disappearance of dinosaurs and with them the 10% of terrestrial species and 15 % of marine species, 65 million years ago. Although species extinct normally, the rate of the phenomenon in the last 400 years increased dramatically¹⁵, with an estimation of hundreds of times more than the background rates, that are the “normal rates” referred to the standards of extinction in the history of the planet before the human activity became a main cause of it. Species extinction, among others, has also impacts on the medical sector as some biotopes sources of drugs are irreplaceable. Biodiversity loss means degradation and modification of ecosystems, whose inner balance is kept by the presence of different organisms' types and their interactions. It is not just matter of food chain and availability of nutrition possibility for humans. Neither it's a matter of possibility of amenity of the nature. Thinking in a systemic way, destroying ecosystems simply alter, in ways that are still not clear, the resilience¹⁶ capability of the planet. Every part in the ecosystem Earth has a role that is not just relevant for human consumption. Humans contribute to the phenomenon mainly through the intense human population growth and the growth per capita of energy and materials consumptions, which determines consequences like:

- Habitat destruction for agriculture, forestry and urbanisation.
- Overharvesting
- Pollution
- Artificial introduction of alien species in new habitats with uncertain impacts on the existing local flora and fauna (that, for example, can activate new competition relationships with native species that may be not able to defend themselves and go extinct)

1.6 Overpopulation and global Feeding

Global human population has seen a huge growth in the last century. We passed from the 1 billion in 1800 to the 2 billion in the 1950, to the 7 billion in 2012. It is expected that the rate keeps

¹⁵ See Common/Stagl (2005), p. 523-24.

¹⁶ The resilience is the capability of an ecosystem to react responding to perturbations and disturbs by resisting damage, recover and adapting to them. It has already happened in the history of the planet that temperature decreased or increased dramatically, but the difference is that it never happened in the incredible short time of decades like it does now. This speed does not allow to the ecosystem to use the natural resilience and adaptation processes in the necessary lapse of time. Therefore we cannot consider the global warming as a 'natural effect' independent from human activity that, as it has been accepted, has instead a determinant role in it.

growing in the future to reach 10 billion by the end of the century. For several factors, like the improvement of nutrition standards, health care and hygiene conditions the rate of mortality decreased deeply while the birth-rate remained too high to compensate the previous. Especially the global South contribute to the high birth-rate, while the global North keeps it at a very low level, insomuch as they are being defined more and more “old populations” because the presence of old inhabitants is higher than the one of youth. Bigger population means bigger request of energy and production and, in the scenario of resource’s scarcity and overconsumption this is not sustainable. We would need 5 planets to support such a global population with the consumption standards of the American society. This topic is directly linked with the consumeristic type of society that is responsible for the ecological disaster that we are living, but we will see this later. The more we are on the Earth, the more we ask to the Planet, the less the Planet has left to offer and the less it can support our survival in it, unless we change our way of living. Apart from the production and consumption questions, that will open the next paragraph, and the need of policies to manage the problem, an important factor determining the way how we will deal with global population growth is our nutrition style.

The topic of how to feed the world in the next century is complex. It is expected that with these rates of growth and urbanisation food production by 2050 must increase by 70 percent. It is arguable if the planet can support such a trend; however what is still very less considered is the role that nutrition styles and especially meat consumption have on these problematic. Meat consumption in the last century saw an incredible growth. It seems a consequence of the economic development, as earlier richer countries and now the current developing ones are starting to adopt so much this trend. Eating meat in the past was more an exception than a habitude. The availability of it was too less and private farming preferred to keep animals rather alive to produce milk, eggs, cheese and derived instead of killing them. According to some scientific positions the human species is not even omnivorous but is biologically herbivore.¹⁷ Without entering the topic of the vegetarian diet and its ethics and the scientific validity of medical positions towards it, it is a fact that the rates of meat consumption that the global North (especially US) keeps are unsustainable. Producing meat for a population of individuals (and this rate still refers just to the richer minority of the world population –that consists mainly in western countries- that can keep these habits at the expense of the majority of the global South that risk starvation or live under the poverty threshold) that consume it every day means dedicating an incredible large surface of fields to keep animals and to

¹⁷ Umberto Veronesi, important Italian oncologist, affirms that our species is biologically herbivore as we derive from the chimpanzees, which are not carnivorous, and just in some specific conditions in the history of the humanity – when there was no availability of the rest or no knowledge about it- the humans ate meat.

grow crop to feed them (30% of the earth's land area is estimated to be used for livestock)¹⁸. This means overexploitation of land, change in land-use and deforestation, pollution from land fertilising and transports of the product, and also impact in terms of emissions directly from the farming, because livestock is responsible for about 18 % of greenhouse gases increase. The most polluting animals are cows. As ruminant, a cow releases with the metabolism processes, that is belching and flatulence, a massive amount of methane in the atmosphere, even more than a car in a day.

If the world population that has access to meat consumption would diminish its usage to once/twice per week per individual only, reducing so the land-use for farming, we could decrease the impact of livestock on the environment and destine the same crop to human feeding, that needs 1/8 of how much crop's surface animals need, and the planet could probably be able to support such a population with these nutrition habits.¹⁹

Current responses

Having acknowledged the gravity of the environmental crisis, economic and political actors are moving, with great delay respect to the urgency of the situation and the time of earlier warning from academic voices about it, to develop strategies to deal with it. In the next paragraphs I will describe the current solutions and perspectives that are mostly adopted, identifying the approach that is most diffused as technical.

Sustainable Development and Ecological Economics

The environmental crisis, from an economic point of view, comes from the fact that the natural resources that we consume to satisfy our needs and produce commodities became scars. The economic exploitation of natural assets in the last two centuries were driven by a faith in their unlimited availability and the myth of the growth, according to which it never comes the time to stop incrementing production, consumption and well-being conditions. All this turned to be very unsustainable from an ecological point of view, and the environmental destructive consequences show it. Therefore economists started to talk about "sustainable development", in order to conceive economic models that allow preserving the natural heritage. For the purpose of sustainability, the relation between nature and economy should be considered in new terms from the traditional neoclassical models. Those models didn't consider the environment as the stage where economy

¹⁸ See *The hidden costs of hamburgers*, October 2014, <https://www.youtube.com/watch?v=ut3URdEzIKQ>

¹⁹ See *How to feed the world*, October 2014, <https://www.youtube.com/watch?v=QloMOOG-bbE>

took place, but as a different system, from which the system “economy” could take resources for its processes, therefore nature was considered simply in terms of capital to use. Recently studies of economic and ecological processes are trying to be integrated, in hybrid fields such as the Ecological Economics that is “*the study of the relationships between human housekeeping and nature’s housekeeping. Put another way, it is about the interactions between economic systems and ecological systems*” in their “*economy--environment interdependence and its implications observed with a trans-disciplinary approach, embracing parts of the traditional fields of study of the sciences of economics and ecology.*”²⁰

As Common and Stagl state in their book, neoclassical economics until the 70s tended to ignore the relation between “*human housekeeping and nature’s housekeeping*” and in its theories the environment didn’t figure as relevant element in the growth, which could rise indefinitely. There was no attention to the interaction that the economy has with the nature. On the contrary, the relation between them is interdependent, simply because economy uses the natural resources and releases waste in it. The environment is furnished of waste sinks, but it is important that the mass of waste and of extracted resources is the same, to keep the natural balance in the matter transformation processes. If this condition is not respected there can be too much waste and too less resources, natural assets can be overexploited and with it some sinks are diminished, like the forests. Economics is considered today to be an open system, as it takes from the environment and it returns to it matter and energy, therefore it depends on it.

After the scientific community recognised the evidence of the environmental degradation described in the previous paragraph, it has been understood that continuing this way we will simply not offer to the future generations to have good life opportunities, because the planet they will live in may not be able to offer the same conditions and resources that offered to us until now. As Jane Goodall²¹ says: “If we don't do anything to protect the environment, which we've already partially destroyed, I wouldn't want to be a child being born in 50 years’ time”.

In the seventies the first edition of “The limits to growth” commissioned by the Club of Rome (1972)²² was published and other important publications like “The Silent Spring” by Rachel Carson,

²⁰ See Common/ Stagl (2005), p. 4.

²¹ Jane Goodall started to spread her knowledge about the environment after having studied for decades primates in Africa, becoming one of the most important primatologists of our time. She founded the *Jane Goodall Institute*, a global non-profit organisation, supporting the youth program *Roots and Shoots*, a project to nurture values of civic responsibility, environmental stewardship, and peace, in order to create community-based solutions to big challenges run by young people. For more see <http://www.rootsandshoots.org/about>

²² See Meadows D. H., & Club of Rome (1972). *The Limits to growth: A report for the Club of Rome's project on the predicament of mankind*. New York: Universe Books.

started to focus on the environmental degradation. With the energy crisis in 1974, the concern about economic growth and natural resources gained more attention and from that period the protection of the environment became an issue of International Law, like we will see in the next part, and important institutional events have been collected, such as world summits, agreements and conventions²³. It has been accepted the need to conceive a pathway that can ensure to preserve the natural assets and the expression “sustainable development” has been coined, whose generally accepted definition is, according to the report of WCED “Our common World”/ “The Brundtland Report”²⁴ “*the one which meets the needs of the present without compromising future generations’ own needs*”.

The need to sustain economic development into the prospect of sustainability means, according to the mainstream perspective, opening the possibility to develop to many countries of the global South. We deal with a massive poverty in those parts of the world, and for them economic development and growth is the chance to alleviate these problems and promote better life conditions. However this claim crashes with the evidence that models of growth like the western of the last century, if adopted by these growing countries, will definitely provoke collapses in the environmental ecosystem. Alleviating poverty and developing emerging countries is one of the challenges of our time, but it must be done in a different way from how we learnt in the XX century in the West, that is considering the relation between economy and environment. The perspective of a Sustainable Development remains into the dimension of development, but that should happen respecting sustainable standards and limiting the destructive consequences in the ecosystem of models that ignored environmental and ethical responsibilities: *Sustainable development is about dealing with poverty without undermining sustainability*²⁵. Undertaking sustainable pathways, according to Common and Stagl will depend on many factors, the rate of growth of the human population, the patterns of consumption, the policies decided and the technologies developed and their possibility to be widely diffused in the next decades. This means, from an economic point of view that, although we have to act in the market dimension, the market alone will not take sustainable ways: “*Market forces alone cannot be relied on to do what sustainable development*

²³ For more information about the historical timeline of environmental issues see Common/Stagl (2005), p. 371. Some of the main moments to remember are, after the publication of *The limits to growth* in 1972, the first UN Conference on Human Environment/UNEP in Stockholm 1972, the publication of the report “Our common future”/ “Brundtland Report of the World Commission on Environment and Development in 1987, the Rio Earth Summit (UN Conference on Environment and Development UNCED) in 1992, the First meeting of the UN Commission on Sustainable Development in 1993, the Ratification of the Kyoto Protocol in 1997, after which almost one Summit per year on sustainable development has been led, among which to remark are the Johannesburg Summit in 2002, and in 2012 the Rio+20 UN Conference on Sustainable Development after 20 years from the first one.

²⁴ See *Our common future* also known as *The Brundtland Report* by the United Nation World Commission on Environment and Development (WCED), 1987.

²⁵ See Common/Stagl (2005), p. 117.

*requires in these respects – government intervention in market systems is required. This intervention needs to go beyond the correction of market failure, as efficiency, which is what an ideal market system delivers, is not the same as equity and may not protect the environment as sustainability requires.*²⁶

It also means, from a scientific point of view, that we are going to move under uncertainty and ignorance, as, science finally admitted, we know very less about natural ecosystems and their functioning and it cannot be predicted what will happen in the future.

Technical approach in economy: Green Economy, its limits and its strategies

The expression Sustainable Development is used to indicate a large range of issues. It keeps as core the “development”, but that must be pursued respecting environmental limits. As the framework of the concept is pretty open and flexible, it has been often weakened or adapted to ineffective strategies, that try to reduce pollution or improve the production processes but still remaining in the neoclassical logic of accumulation, progress, development and exploitation, therefore not promoting a real change of direction: “One of the main problems with the actual interpretation of the concept is the reliance on growth, innovation and technological solutions which has led into a lock-in situation”²⁷.

One of the approaches that can be included in this situation is the Green Economy and/or Green Growth. According to the World Bank, green growth is a growth that: is efficient in its use of natural resources, clean in that it minimizes pollution and environmental impacts, resilient in that it accounts for natural hazards and for the role of environmental management and natural capital in preventing physical disasters. According to OECD green growth means: fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.²⁸

The technical strategies “to green” the economy and address sustainable practices concern in part the production-consumption system. It means developing alternative innovations, technologies, organisation and controlling tools that would make the process more sustainable, reduce material of production, re-use and recycle it (de-materialisation) and increase energy efficiency and renewable

²⁶ See Common/Stagl (2005), p. 354.

²⁷ See Lorek Sylvia and Spangenberg Joachim H., “Sustainable Consumption within a sustainable Economy- beyond Green Growth and Green Economy, in *Journal of Cleaner Production* 63 (2014), p. 33-44.

²⁸ Ignazio Musu, Microsoft Power Point Presentations, Venice International University, Venice, May 2014: “Economic Growth and Sustainable Development”, “The Economy and the Environment”, “The global challenge to sustainable development: the Climate Change issue”.

resources' use (de-fossilization)²⁹. Among the innovations there are efforts to produce clean and prevent pollution, promote sustainable manufacturing, favour Corporate Social Responsibility engagement, encourage Eco Product and Co-Design, Green Supply Chain, Certifications and Labelling, focus on the Service rather than on the selling of product, and endorsing Industrial Ecology with Life-cycle-assessment. I will focus in particular in the last one, which may represent an effective innovation in the production cycle.

Industrial Ecology is *the systems-based, multidisciplinary study of material and energy flows through industrial systems that seeks to understand emergent behaviour of complex integrated human/natural systems*³⁰. IE shows that one of the stages where it is possible to act in order to change the economic process is at the level of industrial *production*. The usual cycle of production provides different passages, from the extraction of raw material, to manufacturing, distribution, use and depletion of the product. This cycle exploits resources from and discharges waste into the environment. The goods produced are usually consumed and then thrown away. This consumerist attitude is not sustainable because it implies an unlimited use of resources without concern about the waste released. Changing the models of production and consumption means transforming the attitude towards the nature and consider a relation of reciprocal support instead of the traditional one of exploitation and ownership. Industrial Ecology is able to define the framework for “greening” the cycle in this sense, conceiving to integrate the human activity with the natural system, through trying to understand how the natural systems work and imitate them. Natural systems have long-run perspectives because nothing in their life-cycles is wasted or lost: everything is transformed and reused through different processes. Similarly should the industry work, entering a cycle of energy and flow that is recycled producing very limited waste. Not anymore a pathway with a start and an end, but a continuous cycle. This idea is explained as the *life-cycle assessment*³¹: natural systems develop cycles over time, while economy is traditionally based on linear flows and throughputs. What Industrial Ecology proposes is to move from linear to cycling material and energy flows. Ecologic production should also think in terms of system: a system is a group of interacting,

²⁹ See Lorek Sylvia and Spangenberg Joachim H. (2014), “Sustainable Consumption within a sustainable Economy-beyond Green Growth and Green Economy, in *Journal of Cleaner Production* 63.

³⁰ See Allenby Brad (2006), “The ontologies of industrial ecology”. *Progress in Industrial Ecology, An International Journal*, Vol.3, No.1/2, pp.28 - 40.

³¹ A similar approach is the “Cradle to Cradle” design, elaborated by William McDonough and Michael Braungart, which proposes the adaptation of industrial processes to natural models, in order to create holistic waste-free systems, where the products and materials can turn again into the natural cycles, as circulating nutrients. Instead of just promoting efficiency, like ecology according to Braungart does, that *reduces, recycles* and *limits* the damages, but still acting wrong, so being just *efficient* in being “less bad”, this holistic approach is positive-oriented, in the sense that it wants to be effective in promoting a positive impact from the industry into the environment, instead of just limiting the bad impact.

interdependent parts that exchange matter, energy and information. It is a complex structure where many factors play a role and to understand it all of them need to be considered, with every variable and reciprocal implication. Essential to develop an effective knowledge in this sense is the study of stocks, flows of materials, water and energy that are involved. This conception implies the prospect of complex interaction between industrial and natural systems that are not isolated or differentiated from each other, but in concert with each other: properly economy must be conceived as a system into the natural one, because without natural resources there wouldn't be economy.

Although Industrial Ecology, as many others strategies mentioned above, may be useful and open to new possibilities, the problem with such innovations is the perspective according to which the “greening” of the economy is a process to be obtained especially through technological solutions. According to Lorek and Spangenberg³², with the focus on incremental improvements, Green Economy doesn't really promote the radical change that we need. Green Growth concept doesn't consider, for instance, as priority the redistribution of wealth and income, which is one of the main elements to reduce poverty, stabilise the population birth-rate and promoting welfare state. They affirm that

*The dominant paradigm that technological innovations, in combination with suitable policies, will be able to solve ecological problems, -it is becoming more and more recognised- will not be able to solve the problem.*³³

Others, like Kathleen McAfee, are even more severe. In her chapter “The post- and future politics of Green Economy and REDD”³⁴ she argues that Green Economy, through the adoption of market-based management of the nature, that focuses on monetary valuation of natural capital, is a way, for international financial institutions, private agencies and global-North governments, to *incorporate environmental factors into national and international strategies for economic growth and sustainable development. In short, a strategy to save globalized capitalism from its most ecologically and socially destructive consequences by constructing markets in environmental assets and deficits.*

Carbon-offset markets, which will be described in the next paragraph, are, for her, one of the instruments of the Green Economy to operate, by creating a market in nature that allows buying permits and therefore the right to pollute

³² See Lorek Sylvia and Spangenberg Joachim H. (2014), “Sustainable Consumption within a sustainable Economy-beyond Green Growth and Green Economy”. *Journal of Cleaner Production* 63, pp. 33-44.

³³ See Vergragt Philip, Akemji Lewis, Dewick Paul(2014), “Sustainable production, consumption, and livelihoods: global and regional research perspectives”. *Journal of Cleaner Production* 63, pp. 1-12.

³⁴ See Lane Richard and Stephan Benjamin (eds.) (2014), *The Politics of Carbon Markets*, Abingdon: Routledge.

In this way Green Economy attempts to slow the environmental damages and to keep the aim of economic growth and development in their conventional conception. This conception projects also an “idealized, static, unitary, and authoritative Nature” to be treated with “technocratic, environmental economic management “. McAfee directly affirms that the base of Green Economy is environmental economics, that is founded on neoclassical economics, where nature is considered as part of a “market-world” and where anything “ought to be subject to monetary pricing, ownership, and exchange”. The problem with it is the inner assumption that western-style of development is the best desirable and that economic growth is essential, also to manage the environmental crisis. In her words Green Economy:

is consistent with neoliberalism in that it presumes that such solutions can and must be achieved within the framework of capitalism and economic growth, albeit with increased public investment and regulation, and in its assumption that carbon trading and other markets in nature can overcome ecological limits and resource scarcities. This is the vision implicit in most green-economy discourse: that of a market-world in which individual interest and the competitive quest for profitable advantage are the most objective and efficient determinants of how resources are used, and in which the pursuit of growth is the necessary basis of both greening and development³⁵.

This approach, focusing on technology and remaining in the logic of growth and market instruments, has been defined also “Weak Sustainability”, in contrast with a “Strong Sustainability” approach, that considers the physical limits of the resources and starts to speak of alternative economies that consider the de-growth possibilities, focus on consumption patterns and warn against the limits of technology. The Weak approach, so Lorek and Spangenberg, simply has the potential of postponing disasters, without providing solutions on the long-run to avoid them. Its technical adjustments don’t propose an alternative or a solution to the long expected disasters like the peak in oil supply or the biodiversity loss.

Technical approach in Politic: ‘Green Parties’, Environmental Law and Environmental Policy Instruments

Politically speaking the environmental problem is delicate both at national and trans-national level. The way how politics can design pathways towards sustainability is mostly through the decision

³⁵ See McAfee Kathleen, “The post- and future politics of green economy and REDD”, in Lane Richard and Stephan Benjamin (eds.) (2015).

making process to develop policies, reforms and legal frameworks and apply them. Unfortunately at both levels, the effectiveness of policies until now has resulted to be pretty weak.

Green Parties

The representative of the environmental problem on the political stage has been assumed by associations involved in mobilisation and by political parties especially from the second half of the last century. After the first interest about the environment in the 70s, with the appearance of nuclear weapons the environmental mobilisation connected with the peace movement. Their reasons became close and interconnected because of the atomic tragedy and one example of this convergence is the birth of *Greenpeace*³⁶ Organization.³⁷ During the 80s and 90s, there wasn't a deep integration of environmental matters in the politics. Associations, social participation, non-profit organisations spread, but the political representation of the ecologic issue remained peripheral and had the only way to try to enter the political debate through the creation of autonomous parties mainly concerned with the environmental topic. They identified their politic as 'green', concentrating on contents like ecology, social justice, grassroots democracy and non-violence, but they were usually not enough strong to have an effective role in parliaments, so they needed to ally with other coalitions, when this was possible. We got the "Greens" in Britain, the "Grüne" in Germany, the "Verdi" in Italy, almost every country had a green party until we've got also an official "Green Party" in the European Parliament³⁸, in 2004.

The hoped perspective for the future is that the environmental issues will not be represented by a specific coalition, in competition with others, but that they will be integrated in the programs of every front, because saving the planet is not a left or right purpose but it is transversal and it regards

³⁶ *Greenpeace* is one of the most important environmental NGOs active at global scale.

³⁷ See the documentary *Greenpeace: the Story*, directed by Thierry de Lestrade, written by Jean Michel de Alberti, Thierry de Lestrade, France 2011.

³⁸ See *European Green Party* website, <http://europeangreens.eu/content/history>, : "The European Green Party was founded on February 22, 2004 at the Fourth Congress of the European Federation of Green Parties (EFGP). Thirty-four Green parties from all over Europe have joined it. For the Greens this was the culmination of a process which had started with the formation of a loose coordination 1979-1993 and the EFGP 1993 -2004. The first goal of the re-organized European Greens was the 2004 European Parliament election campaign. The EGP ran the first election campaign in Europe that featured common motifs and slogans in all EU countries. Greens had first contested the European Parliament elections in 1979 achieving representation there in 1984 as part of wider and diverse grouping, the Rainbow Alliance. Following the 1989 elections the Greens formed a separate parliamentary group, The Green Group in the European Parliament (GGEP). Reduced in numbers in the 1994 elections the Greens formed part of the European Radical Alliance but a successful outcome in 1999 allowed them to form a combined group with the European Free Alliance having regionalist parties as members (GGEP/EFA) which is the current parliamentary group".

everybody. A green orientation should be accepted independently from the side.³⁹ Time passed from the historical opposition of extreme ideologies⁴⁰ among parties and global issues require approaches that are free from this outdated antagonism. Using Naess image, the green should not be seen as alternative to the red or the blue, but be included in every orientation. Every political decision has green relevance and green parties should exist just until the green cause is absorbed into every other program.

International Environmental Law

Environmental laws are enacted at international, national and local level, but since I'm interested in the global domain of the issue, I will refer to the international stage.

From a transnational point of view, the situation is much more complicated than from the local, as we enter the domain of global problems, to be managed together by hundreds of states through International Law. *International Environmental Law* (IEL) is the stage where international environmental issues are set. As global problems require a large domain of treatment which goes beyond the national borders, through international laws it is possible to canalise the cooperation among the many political actors and address the tools that all of them will be required to respect and reach. IEL is defined indeed as the “aggregation of rules and principles aimed at protecting the global environment and controlling activities within national jurisdiction that may affect another state’s environment/areas beyond national jurisdiction”⁴¹. It has therefore to do with the kind of problems that can be defined as ‘international’, that are those that physically regard trans-boundary situations (when at least two countries are involved, like trans-boundary pollution), those that are economically global common problems (relating to trade and investment) and those that have transversal psycho- physiological implications (like the example of the pandas’ decline or the stress of species living in specific damaged areas). Part of the activity of IEL consists in promoting soft instruments such as recommendations, protocols, declarations, codes of conduct, and hard norms

³⁹ See Naess Arne (1990), *Ecology, Community and Lifestyle: Outline of an Ecosophy*, Cambridge : Cambridge University Press, p. 134.

⁴⁰ I refer here to the 70s decade of the XX century, known in Italy as “Years of Lead” (“Anni di piombo” in Italian), where the movements that in the rest of the world assumed more a socio-political character, involving people’s participation in base of arguments and sharing of causes (anti-war protests, environmentalism, feminism, civil rights, youth suffrage...), in Italy the social mobilisation assumed an extreme ideological character where the left and the right sides opposed each other with violence instruments and terrorism.

⁴¹ Massai Leonardo, Microsoft Power Point Presentation, Venice International University, Venice, April 2014: “Introduction to International Law and the Environment”.

coming from treaties, voluntary agreements, and customary laws. Through these instruments IEL defines the tools to which the national states refer when promoting policies and laws to implement.

Into IEL itself the actors are several and go from States to International Organisations and Institutions, and to Civil Society in the form of Non-Governmental Organisations. While the first two play an active role in the decision-making process, the third doesn't have effective power, although it can assist and influence indirectly governments.

We start to speak historically about International Environmental Law since the XIX century, when few meetings or conventions on specific issues were taken (like about birds conservation in 1868 or waters boundary in 1909). Nonetheless it's properly in the second half of the XX century, as already described, that more occasions were promoted in order to start a discussion related to the environment, and from this moment a series of summits, conventions and meetings are made every year or every few years. The first important result of these meetings was the Kyoto Protocol, the international agreement established in 1997 during the United Nations Framework Convention on Climate Change (UNFFCC), which commits the Parties that participated in it by setting internationally binding emission reduction targets through some flexible mechanisms (such as the Certified Emission Reductions- CER). The acceptance and participation to the agreements and the adoption of treaties into International Law by nations is voluntary. Therefore countries decide spontaneously whether or not assuming problems, commitments and implementations promoted. USA, indeed, one of the biggest polluters of the world, renounced to the Kyoto Protocol. From 1997 to 2014 time passed and the targets that were decided in the Kyoto Protocol are not anymore actual and effective. Therefore programs aim to establish new regimes in order to readdress the way to deal with global warming, as the lines used until now have been generally too weak or unsuccessful. COP⁴² meets every year in order to find agreements and improve strategies, but the democratic tactic of the *consensus on decisions* or the agreement among parties makes very problematic to define arrangements and conclude treaties, extending much the time of action. It comes up that although International Environmental Law has produced some theoretical results in terms of establishing general tools and goals, the way how it works is very slow and it gets stuck very easily, without producing relevant practical outcomes.

⁴² Conference of the Parties. See *United Nations Framework Convention on Climate Change*, <http://unfccc.int/bodies/body/6383.php> January 2015: "The COP is the supreme decision-making body of the Convention on Climate Change. All States that are Parties to the Convention are represented at the COP, at which they review the implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention, including institutional and administrative arrangements".

Environmental Policy Instruments

On the practical level the environmental goals and targets are pursued through environmental policies that work establishing instruments and laws to be implemented locally. Public Policies are considered essential because the market alone has shown to be unable to favour sustainability. With the definition of the concept of “sustainable development” the promotion of environmental policies gradually increased in the last 30 years. Conceiving economic sustainable models means realising some necessary conditions to reduce pollution and limit the damages that industrial production provokes. To fulfil this, market needs policies because alone it is not able to take into account all social benefits and costs. Neoclassical economists used to believe that the market is the best institution to address our desires and allocate scarce resources, so the policy makers should just work in order to allow market to function well. On the contrary, we experienced in the last decades that the market is not able to do this because most part of goods that enhance humans are not market goods. For example market can't tell how clean the air is.

This phenomenon is called “market failure” and derives from the incapability of the market to take in account the “externalities”, which are the social costs like pollution and are “external costs” because it is not paid a market price for them⁴³. These costs are paid upon environmental assets which have a public good nature because they provide non rival and non-excludable services. Non rival means that everybody has the right and possibility to enjoy the service without preventing others from doing the same. Non excludable means that nobody can be excluded from enjoying a service. As the benefits from the contribution to provide these assets are not received directly and totally by who contributes, individuals don't do it spontaneously. Therefore environmental policies, that oblige to take the responsibilities of natural public assets, are needed to preserve them.

There are different kinds of environmental policy instruments, more or less officially regulated. The less regulated are linked to informal moral suasion and social coordination. The traditional regulatory instruments are instead the so called “command-and-control”, through legal and administrative tools for emissions control and reduction.⁴⁴ More recently market-based

⁴³ See Common/Stagl (2005), p. 327.

⁴⁴ See Newman Julie and Robbins Paul editors (2011), *Green Ethics and Philosophy. The SAGE Reference Series on Green Society: Toward a Sustainable Future-Series Editor: Paul Robbins (Book 8)*, SAGE Publications, p. 204: “Traditionally, public policy theories focused on regulation, incentives, and information as the tools of government. From the 80s forward, the effectiveness of traditional public policy instruments for addressing environmental problems declined. They could not effectively deal with the growing responsibilities and ambitions of governments and the growing interdependency between private and public sectors”.

instruments have spread, as cited above when mentioning the critic to the Green Economy strategies by McAfee.

Instruments in detail⁴⁵

These instruments are conceived considering some principles that Common and Stagl list as reference points for environmental policies:

- 1- Economic policy always has more than one goal, and each independent policy goal requires an independent policy instrument.** Governments have multiple goals developed in a network of pressures, interests, influences in political and administrative systems. In such context they tend to select the most convenient. When speaking about environmental policy, the three main aims are:
 - a) achieve environmental improvements (e.g. a certain reduction in CO2 emissions),
 - b) cause the lowest possible cost for economic actors (businesses, households and governments),
 - c) Avoid negative, and create positive, impacts in other areas of society (e.g. employment, income distribution).
- 2- Policies should strive to attain the necessary degree of macro-control with the minimum sacrifice of micro-level freedom and variability.** What is done in the micro-dimension should give a result in the macro. For example population stability needs the average of 2, 1 child pro couple in the macro, but it admits variations in the micro (one has 3, one 1). Market is useful in providing micro-variability but not in macro-control.
- 3- Policies should leave a margin of error when dealing with the biophysical environment.** That means being careful in the demands to the planet and the estimation of its capacity, because we act in uncertainty and errors can be irreversible and too costly.
- 4- Policies must recognize that we always start from historically given initial conditions.** Everything that we'll do we do it starting from the institutions already existing. Transforming them instead of thinking new ones can be more convenient, but requires a certain gradualism. What are our present institutions? Basically, the market system and private property, but also public property and government regulation. The World Bank and

⁴⁵ The following paragraph refers mostly to Common/Stagl (2005), Ch. 11.

the IMF may be considered actors, though they are not nearly as basic an institution as private property or the market.

- 5- **Policies must be able to adapt to changed conditions. Adaptive management.** Changing policies as conditions change and as we learn more, must be a guiding principle. Change is an ever-present reality. Human impacts on the ecosystem are enormous and are likely to cause new and different problems over time.
- 6- **The domain of the policy-making unit must be congruent with the domain of the causes and effects of the problem with which the policy deals.** Local problems can't be faced in bigger dimensions, so that global problems can't be handled by municipal institutions. Everything has to be managed by the right domain, even if then we need an integrated management of the many dimensions (principle of subsidiarity). For example garbage collection is a municipal problem, but global warming a global one.

Given this premise, the main mechanisms currently used are the following:

- **Social coordination and Moral suasion:**

It consists in actions that function exerting persuasion and acting through and upon the moral nature or sense. An authority (e.g. the US EPA, EC, ministry of the environment) applies pressure without applying force in an attempt to get firms and/or individuals to behave in ways that serve a policy.

Moral suasion aims to manipulate the cultural environment.

Examples of it as an environmental policy instrument are:

- _ Finance of campaigns to raise public awareness;
- _ Product-labelling requirements (for example the ISO 14000 scheme⁴⁶);
- _ Voluntary agreements by emissions sources on emissions targets;
- _ Subsidization of research and development for alternative technologies;
- _ Finance of research.

This kind of conditioning allows modifying people's preferences over time, about for example their

⁴⁶ See *ISO International Organisation for Standardisation* website, <http://www.iso.org/iso/home/standards/management-standards/iso14000.htm> : The ISO 14000 is a family of international standards that "addresses various aspects of environmental management. It provides practical tools, [for instance eco-labelling] for companies and organizations, looking to identify and control their environmental impact and constantly improve their environmental performance." The different standards in the family "focus on different and specific environmental aspects such as life cycle analysis, communication and auditing."

consumption attitude and political participation. The crucial question is, however, what the mechanisms for changing preferences are. People form their preferences in interaction with other people, adapting their basic beliefs and norms to others, and imitate peers with regard to spending patterns. Preferences are also influenced by education, advertising and public policies, where mass media play also a huge role. Individuals make different choices depending also on how a given opportunity set was determined. For instance some issues may gain importance from participation opportunities in the political process. Proposing occasions to participate actively into the decision-making process provide involvement and inclusion, a feeling to have political influence and self-determination in the citizens, and this is a factor of happiness for citizens in democratic countries. *Policies which address people reasoning and adequate institutions to assure individuals that they are contributing to the larger good, will open opportunities which are beyond the reach of other policy instruments*⁴⁷, that is, if people were better informed there would be more chance that they would choose to act according to sustainable requirements and to vote for policies to protect the environment.

However, what makes moral suasion a limited tool is that people are often confronted with too many decisions, too much information, and too little time to process it all and many decisions in the daily life are made by routine or without attributing them enough importance to deliberate critically about.

- **Direct regulation or Command-and-control instruments**

They were the main method of environmental regulation in most part of the countries until two decades ago and *are mostly used for pollution control and the management of common property resources (such as ocean fisheries within territorial waters)*.⁴⁸

There are different tools:

Non-transferable emissions licenses

They consist in the setting of caps or limits (environmental standards) in the amount of pollutant allowed to be emitted. The standard is established by scientific communities, policy makers and stakeholders, so the safe emissions level is the result of a bargain among the different spheres of influence, with the arbitrary difficulty to establish what 'safe' emission levels are. The amount of

⁴⁷ See Common/Stagl (2005), p. 408.

⁴⁸ See Common/Stagl (2005), p. 410.

emissions permissible is limited by licenses, called also permits or quota, created by the regulatory authority.

Minimum technology requirements

It consists in the obligation for firms and households to comply with technology standards by forbidding or *phasing out technologies which are known for causing severe or unnecessary environmental damage*⁴⁹.

Regulation of location of polluting activities

There are some pollutants, like from diesel engines and trace metal emissions, that don't distribute spatially or don't disperse easily in the atmosphere. *In such cases, in order to reduce human exposure it is common to regulate by zoning or planning procedures which control where sources or residences can be built.*⁵⁰

- Economic incentives or 'market-based instruments'

They are *policy instruments which seek to address environmental problems via price mechanisms*⁵¹ and based on incentives and disincentives in order to make external costs perceived as internal. They consist mainly in environmental taxes and subsidies, including Deposit-Refund systems⁵², and tradable permits, the last adopted in Europe in 2005 with the European Union Emission Trading Scheme (EU ETS).

Taxation

The main aim is taxing the environmental damaging activities to reach *allocatively an efficient level of emission abatement and to encourage a sustainable production*⁵³. Typical is the taxation on the air pollution.

Generally, environmental taxes have a big impact on goods market. When a tax is introduced, every sector of the economy can be affected and provoke a chain of interrelated changes in the demand and production of commodities: for example the most part of the world's CO₂ emissions come from fossil fuel combustion. So carbon taxation, aimed at reducing the carbon dioxide emissions that

⁴⁹ See Common/Stagl (2005), p. 412.

⁵⁰ See Common/Stagl (2005), p. 412.

⁵¹ See Common/ Stagl (2005), p. 435.

⁵² See Walls Margaret, "Deposit-Refund Systems in Practice and Theory". *Resources for the Future*, November 2011 <http://rff.org/RFF/Documents/RFF-DP-11-47.pdf> : "A deposit-refund system combines a tax on product consumption with a rebate when the product or its packaging is returned for recycling. Deposit-refunds are used for beverage containers, lead-acid batteries, motor oil, tires, various hazardous materials, electronics, and more."

⁵³ See Common/Stagl (2005), p. 415.

come from fossil fuels, would be a strategy. This taxation would, however, change all the economic balance based on fuel combustion, so it would push up the use of other energy sources, it would raise significant amounts of revenue for governments, to use for other sustainable projects, but it would arise the price of other things, like oil gas and petrol and everything that is linked with primary sources. Every sector, in the systemic and interrelated economic process, would be affected, from agriculture that uses manufactory that needs carbon, to the service sector, communication and transport. The impact of such introduction would be huge, and that's why this kind of taxation is not currently in use in any economy yet.

From another side, emissions taxes are appreciated by policy makers because they produce incoming revenues for the governments. Taxing energy, for example, means a sure income because energy is something that everybody needs always and the elasticity of the demand of it is very low (that means that the reaction of consumers would not stop the use of it and the decision, individual or collective, to use it differently may take a long run time – e.g. heating a house differently requires building a new structural installation or changing the house; - e.g. using public transport instead of car requires a good public transports infrastructure, that can take years to develop). Generally these taxes may be effective, but they need a good, comprehensive of many factors, management strategy in a long term scheme.

Tradable Permits⁵⁴

They are licenses granted by the government, giving to firms' owners the rights to discharge pollution, usually greenhouse gas emissions, which can be bought and sold in a free or a controlled permit-market. They have mainly impacts directly on firms. If taxes establish the prize to be paid for the emissions, permits fix the amount that agents can collectively emit.

Also in this case, like with the instruments monitoring emissions, implementing a system of penalties for non-permitted emissions is crucial.

⁵⁴ See Common/Stagl (2005), p. 427: "On 1 January 2005 the European Union launched its Europe-wide Emissions Trading Scheme. This aims to reduce the impacts of climate change through lowering carbon emissions by providing clear incentives for investment in energy efficiency and cleaner technologies. The EU Emissions Trading Scheme (EU ETS) established the world's largest-ever market in emissions. Participation in the scheme is mandatory for companies in sectors covered by the first phase of the scheme. These are electricity generators, oil refineries, iron and steel production, cement clinker and lime production, glass manufacturing, brick and tile manufacturing, pulp and paper. In addition, installations in any sectors that have combustion plants of a thermal input of over 20MW, including aggregated plants on a single site, are also covered (hospitals, universities and large retailers may find themselves included under this provision)". For further details see <http://www.europa.eu.int/comm/environment/climat/emission.htm>.

The problem about permits is that economists organize policy instruments just in base of the prospect of their delivering the desired outcome at least cost. The calculation of abatement, however, is thought as a uniform taxation for every firm, but the abatement-costs of firms differ. In some cases it is cheaper for a firm to abate than to buy a permit, in others vice versa, and this is the main criteria of permits-market. So this lack of information doesn't ensure the same consequences to different subjects and doesn't guarantee to achieve the target level of total abatement.

- **Property rights**

They are the rights of the owner of a property and provide a more sustainable use of assets, which affect the relative prices on the market, influencing the impact on the environment in base of how an asset is used and sold. They don't refer just to private property, but the property can belong to individuals, communities, the state, the global community, or no one and they are a three-way relationship between one individual, other individuals, and the state: a property right for one individual simultaneously imposes a duty or obligation on other individuals to respect those rights. For example, if person A has the right to breath clean air, then person B has the corresponding duty not to pollute that air. The state ensures that person B will fulfill her duty.

There are 3 types of property rights:

- An entitlement known as a *property rule* holds if one person is free to interfere with another, or free to prevent interference. For example, an individual may own a piece of land. If he has the right to build a landfill that destroys the neighbor's view or prevents the neighbor from walking across the land, he is free to "interfere" with the neighbor and the neighbor is free to interfere with the landowner's landfill operation.
- An entitlement known as a *liability rule* holds when one person is free to interfere with another or prevent interference but must pay compensation. For example, the landowner might be free to build the landfill, but by law he is then forced to compensate his neighbor for the smell, loss of view, and other unpleasantness.
- An entitlement known as an *inalienability rule* holds if a person is entitled to either the presence or absence of something, and no one is allowed to take away that right for any reason. There may be certain types of chemicals or products that are absolutely not permitted in the landfill, regardless of compensation. The negative impacts of these products are so severe that present and future generations have an inalienable right not to be exposed to them. Dioxins and radioactive waste would fall into this category.

Beyond the already mentioned problem of the uncertainty, it is essential in environmental policies to consider the interdependence of policy goals in this complex evolving social-ecological system. There is no single instrument type that is best in all situations and every goal cannot run alone but has to deal with many other goals. Every instrument introduced provokes a consequence in other sectors such as weight taxation on population with probable impacts especially on the poorer subjects for an uncontrollable distributional effect. So far, it is necessary a systemic approach and coordination among different policies and strategies in international climate negotiations, the last taking into consideration some historical evidences, like the fact that most responsibility of this situation is of the western countries and their exploitation of fossil fuels in the last centuries.

Limits of technical approach in Politics

The instruments and policies described are the results of decades of framing. However, even though time passed, their implementation and respect didn't result in important resolutions and achievements. We continue to struggle in finding effective tools of change and solutions to global warming and environmental degradation, and although legal frameworks are essential to impose limits and address behaviours, simply imposing top-down tools hasn't demonstrated to have produced important outcomes until now. The inefficiency of those mechanisms is due to some limits that don't permit us to evolve into a new perspective of economic system and that derives from the logic of profit and the inner essence of the normative scheme that imposes rules into a system of sanctions. The lack of philosophical stage into this practical normative dimension has the consequence that rules are respected just because it is necessary to avoid fines; they are therefore based on external incentives, legal or economic.

Further risks arise when the knowledge of people in society and the meaning that they give to problems, purposes and practices are neglected and therefore problem solving strategies do not meet the needs of people and their circumstances with regard to the common good; or they are poorly understood and not adequately used.⁵⁵

When norms are imposed without a cultural background that makes them understandable and justified they are likely to be observed just under a strict system of control and penalty. However such a premise is less likely to promote a long-term durability of the results, because as soon as the

⁵⁵ Hadorn Hirsch Gertrude, Bradleyb David, Pohlc Christian, Rist Stephan, Wiesmann Urs (2006), "Implications of transdisciplinarity for sustainability research". *Ecological Economics* 60, 119-128.

circumstances allow it, people will look for the way to avoid and escape them, unless they bring profit or advantage. There are many chances to go around laws in legal ways and market-based instruments may allow doing it. Even systems of incentives to reward good and environmental actions have been promoted, proposing a turn of positive encouragements instead of negative punishment, but it still remains into the profitability logic. Following environment-friendly norms just as long as they are convenient may have an effect in the short-term and small range, but not in a long-term change-oriented perspective. Also, the less intrinsic motivation there is in following norms, the more norms we need to impose. While the more our purposes are intrinsically oriented towards sustainability, the less strict regulations we need. Having too many norms is not convenient for any population, as it stresses the coercive attitude of the authorities, and weakens the active participation and the capability to self-governance and wise cohabitation without top commands of a community. Regulations, instead, can be *minimised through an internalisation of norms*.⁵⁶

All of this depends, among other factors, on the value system of our social and economic reality. Since we depend on values such as progress and growth, measured by profit and capital accumulation, norms are followed if they are profitable. Since we define the progress in terms of GDP growth⁵⁷ (Gross Domestic Product), which measures the economic wealth without saying anything about how the richness is allocated and which consequences it has in terms of quality of life related to non-material values, norms are judged as well in base of the impacts that they have on economic costs and benefits. According to Naess GDP bases on value-neutrality and quantitative relations and inspires normative pathways that reflect very less the wishes and needs of people that are instead much more deep and qualitative-oriented than the market projects. GDP growth doesn't say or add anything in terms of intrinsic values, distribution, happiness, quality, sustainability. Different criteria of measurement should be considered and there are existing proposals about alternative indicators of progress, like the System of Integrated Environmental and Economic

⁵⁶ See Naess Arne (1990), *Ecology, Community and Lifestyle: Outline of an Ecosophy*, Cambridge: Cambridge University Press, p. 159.

⁵⁷ Ignazio Musu, Microsoft Power Point Presentation, Venice International University, Venice, May 2014: "Sustainable Development: an Introduction": "GDP is the value of all final goods and services produced in a particular country in one year period and revealed by market transactions. As measure of progress, given that it only considers market transactions, GDP is not an accurate measure of economic welfare. GDP, for example, does not: - capture nonmonetary activities such as unpaid household work or volunteer work; - take into account the "black sector" of the economy; - consider losses in environmental quality and therefore in human life quality. On the other hand GDP includes the outcome of market economic activities that worsen the environmental quality and produce environmental damages. The negative welfare outcomes of these economic activities set in motion other economic activities to repair the inflicted damages: they are also included in GDP as their costs are measurable by the market. Paradoxically economic activities damaging the environment and the consequent cleaning-up activities are both increasing GDP in a vicious circle making unsustainability more likely.

Accounting (SEEA)⁵⁸, the Environmental Sustainability Index (ESI)⁵⁹, the Ecological Footprint (EF)⁶⁰, the Human Development Index (HDI)⁶¹, and so forth.

Naess divides norms in *instrumental* and *genuine*. “Purely instrumental” norms are valid just as a means to the fulfilment of another end. In this context the instrumental end would be economic profit. The “genuine norm” instead has validity independently of means/goals relations and it comes from the intrinsic validity. With intrinsic validity I mean here the respect of a norm not for profitability, but for the rightness in itself, even if the engagement for preserving the environment can somehow be considered as an instrumental aim. According to Naess and the Deep Ecology’s perspective⁶² the only presence of instrumental norms wouldn’t be enough to pursue sustainability and the intrinsic ethical values and social commitment towards environmental issues should be encouraged. That means working on the social assets and developing an integrated and interactive system, where every rule has its sense inserted in the total net, understood and introduced in the cultural context. Realizing such integration of normative and social tissues depends on the ability of politics to incorporate the many fragmented contributions that different fields of study, analysis and stakeholders provide. Political considerations and approval of norms should be the result of the systemic synthesis among the several fragments and voices acting into the social context and should be able to answer to the biggest questions that precede any micro-intervention.

⁵⁸ Id.: In 2003 the United Nations provided a System of Integrated Environmental and Economic Accounting (SEEA) made up by: the System of National Accounts (SNA, on which GDP calculations are based); a system of Satellite Environmental Accounts. The SEEA considers how to adjust the SNA to account for the impact of the economy on the environment. Three types of adjustments are considered: - the costs of resource depletion; - defensive expenditures to remediate environmental damages; - degradation in the environmental quality.

⁵⁹ Id.: It combines and weights a wide range of socioeconomic, environmental and institutional indicators.

⁶⁰ Id.: It represents the biologically productive area required to support a certain level of economic activity taking place in that area without destroying the environment; if a wider area is required, this is a signal of unsustainability.

⁶¹ Id.: It is published by the United Nations Development Program (UNDP) in a yearly Human Development Report, and including income, life expectancy, and educational attainment.

⁶² I will talk about Deep Ecology later on.

Chapter II – Technical or cultural approach to the ecological crisis

With the previous chapter I aimed to briefly introduce the general background of the management of environmental problems, describing the strategies that economically and politically have been proposed in order to introduce sustainable pathways. Such current responses are identified under the umbrella of the technical approach that corresponds also to the “Weak Sustainability” orientation. This strategy has, I believe, huge limits and its main problem is the focus on technocratic solutions that can provide just short-term effects, without promoting a real deep change. Such change is instead matter of culture. What is essential, next to the technical strategies, is a cultural approach to the situation, the only way to provoke a radical and long-term effective change of direction that involves every individual. In the next paragraphs I will explain more deeply the limits and consequences of the technical orientation and the potential of what I call “cultural approach”.

The technical orientation and its reductionism

The attempts described above to walk towards sustainability consist mostly in top-down tools imposed to firms, enterprises, governments and citizenships from authorities. The application of these schemes takes less in consideration the role of people, as citizens and as humans and their cultural preparation about environmental issues. This approach to the ecological degradation speaks through technical language, monetary processes (production, costs and benefits, market dynamics, norm’s compliance...) and focuses on hard imposition of rules. The only instrument that focuses more on the action of individuals is the moral suasion, but it is generally considered the less effective. Governments and international agencies tend also to approach the problem counting on the technological progress and on the faith that the science will propose always new solutions. Top-down laws imposed to uneducated masses of people and faith in the technologic progress are two consequences of the reductionist approach that experts and politicians tend to follow.

Environmental problems are treated through scientific and technical tools, creating reductive and improper perspectives towards them, which miss the integral understanding of the whole and the main element of the culture as background where every social and economic dynamic happens. Already in the 80s several scholars denounced the deficiency of such approach, typical of the capitalistic system and of the national welfare structure. In 1988 Vandana Shiva publishes in the

book “Science, Hegemony and Violence”⁶³ an article with the title “Reductionist science as epistemological violence”.

The book describes the violence of the orientation of the modern society that in the name of instrumental technology and “scientific temper” as necessary for development brushes off the traditional cultures and ways of life and pursues the ideology of the economic growth and development. Science and technology are the tools and the aims: they allow to “develop”, that first of all means making the state able to compete in the international economy and to own an efficient military national security system against the others; science and technology are also the aims, because in the ideology of the progress the obsolescence of the new rules the system of knowledge, therefore new technologies have to substitute old ones at a speed that is always faster. Science, according to Nandy, gradually became a substitute for politics and the scope of public life. If this is recognised as violence by Nandy because science has been deprived of any ethical value and it is used to extend violence and inhumanity in the society, Vandana Shiva considers it violence especially because of the reductionist character. She opens her article saying that:

Modern science is quintessentially reductionist. Its reductionist nature under-girds an economic structure based on exploitation, profit maximization and capital accumulation. Reductionist science is also at the root of the growing ecological crisis, because it entails a transformation of nature such that the processes, regularities and regenerative capacity of nature are destroyed.

Science and technology are instruments of the capitalistic economy and they are dominant on every other kind of knowledge. Political decisions are kingdom of experts and specialists that lead the modern nation-state system with a techno-managerial perspective. Such perspective, based on specialisation, technology and reductionism is particularly dangerous in the ecological dimension. In the last decades the understanding about the environment has been driven by fragmented and inadequate knowledge and technological remedies. Modern science, so Shiva, destroys the integrity of the nature in the effort to transform it for profit, supposing the ontological assumptions that systems are reducible to their parts, that all systems are made by basic atomistic constituents and they have same basic mechanical processes. This perspective has, however, the consequence to lose the comprehension of the whole and to exclude from the legitimised range of knowledge all the

⁶³ See Nandy Ashis (1988) edited by, *Science, hegemony and violence, A Requiem for Modernity*, Oxford: Oxford University Press.

sources that are not science experts or specialists (that is for example local indigenous communities living for hundreds of years in environments according to traditional and harmonic ways of life but not educated and without scientific knowledge).

The reductionist approach of the science to the nature isolates elements and impedes to understand that the whole is not just the sum of parts interrelated, and the isolation of any distorts the perception of the total. Such perception is, though, adequate to the functioning of the economic systems based on profit, because the organisation of industrial societies and capitalist economy need a reductionist worldview, ideal to public and private fragmented sectors that “have their own efficiency needs in mind; and every firm and sector measures its efficiency by the extent to which it maximizes its gains, regardless of the fact that it also maximizes the social and ecological costs of the production process”⁶⁴. The reductionism lays, according to Shiva, in the fact that resources that generate profit arouse interest and are exploited at the expense of properties that are not profitable but stabilise ecological processes. Science and technology, are, in this sense, powerful and effective for the aims of the market, but inadequate for the knowledge about the nature.

The technical approach of political and legal interventions follows the logic of the scientific reductionism denounced by Shiva and it misses to include cultural approaches to the ecological problem. Top-down tools and norms and technological progress are imposed to the societies providing a limited and inadequate knowledge and they are placed in contexts where no cultural education, change and awareness are promoted. People are generally uninformed and uneducated or indifferent to environmental issues. If they are not, they tend often to have a deep faith in the possibility that technology will solve everything or that money will lead to new possibilities. The market orientation of our society alimts this “bias” to monetise values and to conceive problems in technical terms. The clearest result of this combination is market-based instruments in the Environmental policies just described. These tools treat environmental resources in terms of economic capitals, costs and benefits and propose a technical rule to manage their availability or scarcity.

This perspective is the most diffused still nowadays. The reductionist perspective allowed to the market system to extend its domain to every sphere of the human activity and to preserve itself. The consequences of those trends are from one side the improper invasion of the market ideology in every sector of the reality, on the other side the ideological faith in the technology as solution to all

⁶⁴ See Shiva Vandana, “Reductionist science as epistemological violence”, in Nandy Ashis edited by(1988), *Science, Hegemony and Violence. , A Requiem for Modernity.*

problems. One of the scholars to denounce the first element is Michael Sandel, while who analysed deeply the cost of the technocratic ideology is Hans Jonas.

The effects of the market ideology and its invasion of improper fields in the last decades

In his book "What money can't buy"⁶⁵, Michael Sandel shows, through many daily examples, the consequences of the market triumphalism of the last thirty years on the social and civil fabric. Since, in the 1980s, the faith in markets as only instrument for the prosperity took to deregulation and market-friendly liberalism (pushed by the political attitudes of Margaret Thatcher and Ronald Reagan, followed later by Bill Clinton and Tony Blair), our society became market centred and run beyond the myth of the unlimited growth and the uselessness of political and ethical interventions. This conception didn't just crushed in the huge economic crisis in 2008, but it changed the society itself. In the last decades we passed from having a market economy to becoming a market society. The marketing approach is totalizing, completely absorbing in our daily life. It makes everything potentially saleable, also things that have never being conceived as objects up for sale in the human history. The market invaded spheres of the human life that don't belong to it and with its principles altered the way how people think and value them. Advertising and selling have no limits in our society and the monetary criteria are the ones used to judge and value in matters like life and death, pregnancy, children, education, sport, nature and health care. From an economic point of view, applying economic principles to these dimensions means maximising the possibility of satisfaction of preferences linked to them. Markets, economists say, is not about ethics, but it's about finding the best and more convenient ways to allocate goods according to people's preferences through the price system. Markets, in this sense, just *allocate goods efficiently*, allowing people to *make advantageous trades* through the instrument of measuring their *willingness to pay* for them and putting a price.⁶⁶ Unfortunately, instead, the economy finds itself more and more troubled with ethical matters, especially in the last decades, because, on the contrary, economic models do have ethical implications. Economy can't be divided from morality, because its effects are social and human. Economy alone, ignoring anthropological, psychological, ethical and social implications cannot understand or manage the world. The supposed distinction between market and morality

⁶⁵ See Sandel Michael (2012), *What money can't buy. The moral limits of markets*, London: Penguin Books Ltd.

⁶⁶ See Sandel Michael (2012), p. 29.

reasoning and the claim that economics doesn't traffic in morality becomes wrong, unreal and even weird, as soon as we realise how every economic rule determines our social life.

*When market reasoning travels beyond the domain of material goods, it must 'traffic in morality', unless it wants blindly to maximise social utility without regard for the moral worth of the preferences it satisfies. [...] The more markets extend their reach into non-economic spheres of life, the more entangled they become with moral questions.*⁶⁷

The triumph of the Market reduces things to be up for sale. We can be paid to dress a tattoo advertising a brand, we can pay to have babies or buy children, we can bet on the death of people, we can pay to skip the queue, and we can pay to be allowed to release greenhouse gases in the atmosphere. Everything seems possible if we pay. However, Sandel wonders: can everything in our human life be up for sale? This invasion by market values into fields where things cannot be sold and cannot be conceived in terms of money is wrong. Markets triumphalism is wrong because it causes inequality and corruption. The first is easy to explain, as richer people have more access to commodities than poorer, since everything is treated and intermediated with money. The second is more of ethical meaning. There are material objects that are rightly treated as commodities to be sold for money. There are, instead, things that have spiritual and ethical depth, and this kind of depth is not and should never become up for sale. Simply because some things cannot be bought, and treating them with money criteria change their value. In this sense we speak of corruption, because some things are corrupted in their inner value if we treat them with money. Friendship, a relationship based on spontaneous affection, should not be bought. Children, being to love, shouldn't be sold. Making a queue to have access to medical treatment together with other people, in a condition of equality in front of a welfare service, shouldn't be avoided thanks to money by privileging some at the expense of others. Educational programs in schools shouldn't be sold by companies that provide the instruments if the schools accept to advertise their products to the kids. Reading books, an activity supposed to be motivated by spiritual pleasure, cannot be induced with money in the students. Political votes in the elections, expression of civic participation, should not be given for money. Environmental damage shouldn't be allowed if we pay money for it, as we won't be able to buy a new ecosystem (it's not a market good). And so forth.

Instead all these things, and more and worse, happen every day. Money and Market ideology invaded some social and human fields where they shouldn't have any right of existence and changed the value of them. The introduction of money change people's attitudes and deteriorates

⁶⁷ See Sandel Michael (2012), p. 88-89.

the moral and civic commitment. In psychological terms, it substitutes intrinsic motivations such as moral convictions, altruism, sense of community and common good, solidarity, civic duty and responsibility, with external ones such as money or tangible awards. Those values on the contrary are interior and spiritual and need to be practiced and trained in order to be developed and recognised for their significance. Commercialising the private and civic life erodes the commonality, the critical thinking capability and the way how citizens consume and participate to the public.

Our reluctance to engage in moral and spiritual arguments, together with our embrace of markets, has exacted a heavy price: it has broken public discourse of moral and civic energy, and contributed to the technocratic, managerial politics that afflicts many societies today. [...] But the moral and political challenge that we face today is more pervasive and mundane: to rethink the role and reach of markets in our social practices, human relationships and everyday lives.⁶⁸

Loss of political responsibility from citizens means that a society is unaware of its reality and doesn't worry of taking care of it. The degradation of our environment is something that has been officially acknowledged at least already 40 years ago, but the ethical lack of the economics didn't allow taking it really into consideration. Still today, I repeat, the approach proposed continues to base mostly on technical attempts to modify the strategies of production, but there is less ethical consideration beyond. Market-based instruments, the latest introduced, are apparently the favourite at the moment. As the previous ones based on volunteer agreements and compulsory recommendation didn't have effects, governments try to adopt a strategy that seems closer to the mechanisms that prevail in our society. Tradable Pollution Permits, instead of imposing emissions standards, put a price on pollution and let the permits to be sold and bought in a market. The introduction of market solutions seems not to have produced changes. Enterprises and governments still care of saving their own profits finding the way to exploit the system and avoid embracing the environmental responsibility, if this means having costs. The new, however, is that, while before the limit imposed on emission and the obligation to pay a fine if exceed implied a moral consideration, that is, not respecting the standard imposed is wrong, therefore who does it has to pay for it; with the permits the fine becomes a fee and the ethical implication disappears, as everyone is clean and has no fault if he pays for emitting greenhouse gases. There is no ethical commitment beyond the system of tradable permits, governments and entrepreneurs are pushed to find the way to be allowed to pollute, not to reduce their pollution because they damage the planet. The motivation beyond the

⁶⁸ See Sandel Michael (2012), p. 14-15.

use of permits changes the value of the thing that is being treated. The environment is not a market commodity and market values fail in addressing the way to relate to it. Approaching to environmental problems just from a technical and economic point of view risks to miss one core of the question, which is ethical. The planet is not just an amount of resources there to be exploited and consumed by humans, like the economic traditional scheme conceives.

The dangerous faith in the technological efficiency and Jonas' "Imperative of responsibility"

With the dramatic increase of technologic power, the belief that technics can solve everything and that technologic progress will find the solutions to re-establish environmental balances, strengthened. This faith encourages the delegation of the problem to 'others' by the citizens and discourages people to charge themselves for the things that are happening. It leads to the optimism according to which, sooner or later, somebody will invent a way to clean the air and to re-freeze the polar ice. Such attitudes, although healthy for our mental serenity, deforms the reality idealising the instruments that we have and that do could help, but for sure they will not solve the problems at our place.

Because of this consequence, the need of "responsibility" nowadays is much stronger than in the past. Hans Jonas explains in his book⁶⁹ how the technological progress increased our power to act and influence the environment. It emerges that, the more we can act, the more we should be aware and responsible of our possibilities, consequences and limits. Responsibility is proportioned to the power that the humankind has. The need of responsibility is an ethical topic and ethics has to do with action. With the "progress" and the deep development of our power in the last centuries the nature of human action has changed and this change calls for a change in ethics as well. The first dimension where we realise the reach of our power is the Nature. We have changed the natural pace and balance of the nature and the birth of Ecology, attempting to understand natural systems, is the consequent need. Such sway did the humans never have in the history. Modern technology raised our influence in the reality, but also modified our relationship with it, as we don't conceive the technic as mere instrument anymore, but we turned it in being an aim. Technological progress got

⁶⁹ See Hans Jonas (1985), *The imperative of Responsibility, In Search of an Ethics for the Technological Age*, Chicago: University of Chicago Press.

its inner aim and this has to do, for Jonas, with human ambition and power's thirst towards what seems to be a run to "conquer the nature".

The term "progress" could relate to any development, preferably towards something better, from a previous to a next condition. Every individual makes progress since the first day he's born, as *life starts out with nothing and must acquire everything*⁷⁰. The typical western version of the meaning, instead, relates mostly to the technological and scientific advancing, in order to raise the material well-being of the humanity. Technology is the symbol of progress in the global North. This idea of progress doesn't speak about improvements in wisdom, civic consciousness, solidarity, justice. Least of all it used to speak about nature's values and environmental sensitiveness. Together with the technical development it wasn't considered the urgent need of developing a morality and wisdom capable to manage this power without negative consequences. This ideology of the progress, though, has a high price, and it is what we are experiencing today, the danger of ecological collapses. The nature of the technological development has changed insofar that it arrived to threaten our proper home and the environment we live in. The atomic weapons are just the most immediate example of this power over the limits, but the provocation to the natural limits of our planet takes place through every daily action of every singular individual of the modern society. This dimension of *scientific-technological-industrial civilization* became excessive, an *apocalyptic situation*⁷¹ in Jona's words, and - assuming the forms of industrialization, excess of consumption and production and population growth- extremely dangerous, for the human himself and for the biosphere. *Care for the future of humankind is the overruling duty of collective human action in the age of a technical civilization that has become "almighty" if not in its productive then in its destructive potential.*⁷² For this reason, it is required a new ethics, a new value-knowledge that has to revise old patterns. In the past ethics concerned mostly with virtue and good, and with human actions and their consequences on other humans. There wasn't any consideration related to the effects that human actions have on the nature. Today, though, it would be desirable to think an ethics that addresses choices with the warning of being careful on the compatibility that they have with the survival of the humanity, with the preservation of natural assets and with the continuation of the life on Earth. Two centuries ago, when the humans didn't have so much power and influence on the reality, these advices wouldn't have been reasonable. There was not a fear for the most granted and elementary of the given, the life and existence possibility or a world and *sufficient natural environment* to live in. We passed from Kant's dictum "You can because you ought" to the

⁷⁰ See Jonas Hans (1985), p. 165.

⁷¹ Id., p. 140.

⁷² Id., p. 136.

modern “You ought because you act”, that is, you must be aware because you have so much power. We entered a time, Jonas warns, where we need an ethics of “preservation and prevention” and not anymore of progress and perfection. The call for responsibility needs a total new attitude towards the reality and ethical inclinations should be strengthen to this goal.

*The new nature of our acting calls for a new ethics of long-range responsibility, coextensive with the range of power, it calls also for a new kind of humility owned to the excessive magnitude of power. Men act and ethics must be there for the ordering of actions and regulation of power.*⁷³ .

An adequate ethics to our power should engage in envisaging the long-term effects of the technological interventions, but in the same time should prepare and educate people to the uncertainty of the previsions and to the possibility of calamities and sudden catastrophes they may have to deal with. Consequent of the unpredictability of the future should be a strong inclination to caution and prudence, in evaluating actions. Such ethics should emphasise the relevance of the aims beyond the interventions and the responsibility for them, reinforcing the humility of our position and our conditions, boycotting the perverse tendency of the human mind to wish to rule the game challenging natural forces and laws. It should deconstruct the anthropocentric culture of our age and readdress a conception of harmony among parties into a same whole of belonging. Especially, one of the most important jobs is to beware about the responsibility that we have towards the future generations, who are subjects not-yet-existing, therefore it is a non-reciprocal call of duty. We must charge actions with the awareness that they will affect future human beings, beyond other living organisms and natural ecosystems. Put more cynically, the impact of our actions will not determine just the quality of life of future generations, but also the same possibility for the human kind to continue to exist. The first duty towards our *successors is to make them exist*. Then it *turns presides over all the others, like the related to their chances of happiness*.⁷⁴

Acting, Jonas stresses, *makes impact on the world, and such acting is under the agent’s control, who should bind to a feeling of responsibility*⁷⁵. This is especially true for environmental matters. We are not anymore in the position to let the freedom of values and of personal realisation choose, independently from the consequences, because the effects of irresponsible decisions may be irreversible and catastrophic. Some issues should gain priority on others and the liberty of realising the self at all costs cannot be any more overriding some more dramatic priorities. It may arrive, for

⁷³ See Jonas Hans (1985), p. 22

⁷⁴ Id. , p. 42.

⁷⁵ Id. , p. 90.

example, the time when population growth will need to be controlled through reforms, and such intervention requires definitely a new ethics to be accepted by people (the topic is indeed very much avoided by governments, as it is politically inconvenient!).

*The concept of a new world order has the merit of identifying a number of relatively non-controversial areas where cooperation is indeed mandatory*⁷⁶.

Jonas describes the need of taking responsibility as a duty of every citizen, every individual who has power of action. It is not referred to a sphere of influence relegated to specialists or high level positions in the society. Not anymore few should decide for all, but every singular daily action of every singular individual must be responsible. In this direction, education is the most precious and necessary instrument to re-address the ethics of the society.

As Jane Goodall used to say:

Every single day that you live you make a difference to impact the world, and you have a choice on what kind of impact you are going to make. Your life matters and you can make a difference.

Cultural approaches beyond the reductionism of technical solutions: a culture of sustainability

On the other side of the reductive technical approach to the problems there are people who start talking about a “culture of sustainability”.⁷⁷ The problem is that, although there are currently many technical responses and initiatives to develop ecological societies and fight the climate change, very little has being done and studied about how to address sustainability on all levels of the society, in terms of lifestyles of people and cultural awareness. The alternative to the reductionism of what has been called “Weak Sustainability” approach, is a “Strong Sustainability” perspective to embrace, one that would not focus on technology or growth, rather on policies and real proposals to change consumption patterns and create a culture of sustainability, necessary background for any other concrete intervention. Adopting cultural approaches to the ecological crisis signifies

⁷⁶ See Santamaria Osorio Julian, “Some reflections on the new world order and disorder”, in Walzer Michael, *Towards a global civil society*, New York: Berghahn Books, p. 309.

⁷⁷ See Wagner Felix, “A culture of Sustainability”, in “Realizing Utopia : Ecovillage Endeavours and Academic Approaches” edited by Marcus Andreas and Felix Wagner, *RCC Perspective* 2012/8, p. 58.

transcending the limits of current responses and integrate them with more effective pathways that can produce change, new perspectives and outlooks investing in the cultural dimension⁷⁸.

Promoting sustainability in a cultural sense means developing social structures for it, that is not just institutions and physical elements, but especially culture. According to Wagner the difference and the hope of a change depend very much on the cultural address that we are missing to give to the civil society. Sustainability should enter in the routine of every citizen and should lead to adequate lifestyles. While the majority of uninformed society tends still to think that sustainability is matter for enterprises and governments in the reduction of pollution and it has little to do with the daily life of the citizens, it is especially there that we should instead operate. A sustainable culture must be, as the Libro Blanco⁷⁹ states, “una experiencia continua de aprendizaje que debe implicar a todas las personas en todos los aspectos y momentos de la vida”. From the bottom the change can take place and through it also push politics towards more ecological measures. The need of the involvement of the society in cultural terms is essential to promote change. In this sense we can speak about a “culture of sustainability”.

Quoting the expression used in 2002 by the German Federal Government articulating the national strategy for sustainable development in a chapter entitled ‘Developing a Culture of Sustainable Development’:

Sustainable Development is not simply the technocratic route to efficient methods of business, production that does not cause waste, and healthy life. Technical innovations are important, but on their own they are not sufficient to act as the driving force for sustainable development. Sustainable Development has a lot to do with the imaginative and creative vision of how we want to live in the future. In this sense it is a creative task, which challenges the creative

⁷⁸ See *China Daily news* website, article “Ecological Civilisation”, 10/24/2007, http://www.chinadaily.com.cn/opinion/2007-10/24/content_6201964.htm Recently the Chinese government spoke about and used the expression “Ecological Civilisation” to indicate the intention to promote cultural approaches to environmental degradation. Ecological Civilisation is defined as “a future-oriented guiding principle based on the perception of the extremely high price we have paid for our economic miracle. This concept reflects an important change in the Party’s understanding of development. Rather than emphasizing economic construction as the core of development as it did in the past, the Party authorities have come to realize that development, if sustainable, must entail a list of elements including the right relationship between man and nature.” The concept is not “to be understood as environmental protection only and neither is it adequate for it to be comprehended as a supporting tool only for balanced economic development. With its definition containing a much broader meaning, the concept emphasizes the cultural dimension of development. In this dimension, we need to put our relationship with nature in a new perspective: consider nature as part of our life rather than something we can exploit without restraint.”

⁷⁹ See Ministerio de Medio Ambiente - Secretaría General de Medio Ambiente, *Libro Blanco de la educación ambiental en España en pocas palabras*, p. 14. January 2015. http://www.magrama.gob.es/es/ceneam/recursos/documentos/pocas_tcm7-13555.pdf

*potential of our society on the basis of values, social models and our cultural tradition as a whole. Sustainable development doesn't simply mean the continuation of trends from the past. It invites us to leave the old beaten track and find new directions. Over and above the material constraints, the question of how we want to live in the future returns politics to the creative task and social discussion on this question to the crucial point at which sustainable development becomes relevant. Sustainability is therefore a cultural question.*⁸⁰

Sustainability, in other words, has to become an issue of the daily life of every individual. The citizenship must be addressed to develop a collective mentality towards sustainable patterns and slowly create an environmental ethic at global level, given that the environmental crisis is a problem of global domain.

*Economists often assume that solving global warming is simply a matter of designing the right incentive structure and getting countries to sign on. But this misses a crucial point: global action on climate change may require that we find our way to a new environmental ethic, a new set of attitudes toward the natural world we share. Whatever its efficiency, a global market in the right to pollute may make it harder to cultivate the habits of restraint and shared sacrifice that a responsible environmental ethic requires.*⁸¹

This means that a cultural approach is urgent, in order to join and to avoid the reductionism of technical interventions. Readdressing the culture is a slow process that takes place along generations, a very long time comparing with the urgency and gravity of environmental issues. However even if it is very difficult to change the habits of old and adults generations, whose models of life are usually already defined and stiff, it is very easy to educate the new generations to different lifestyles and awareness. One of the elements that will be determinant in promoting sustainability is education. The first way to promote a cultural change is educating to change things and to act in a different way challenging existing models. Instead of only providing norms and targets on emissions, we should put again the education at the core of the issues and investing much more in it. Governments, international community and institutions should focus on a cultural approach, rather than considering it just a side element and go for technocracy.

⁸⁰ See Wagner Felix , "A culture of Sustainability", in "Realizing Utopia : Ecovillage Endeavours and Academic Approaches" edited by Marcus Andreas and Felix Wagner, *RCC Perspective* 2012/8, p. 58.

⁸¹ See Sandel Michael (2012), p. 76.

Part two: Cultural Approach and how to realize it

Chapter III - The domain of environmental issues: global actors and the need to “think globally and act locally”

Education to sustainable life-styles should be a transversal purpose, independently from the geographic origin. It should promote awareness and a positive mentality towards the environment shared at global level. In this sense, to deal with the environmental crisis we need to “think globally”. For this reason it is important to orient ourselves into the dynamics of the “Global Village” and to identify the “Global Citizenship” as political subject and addressee of this cultural orientation.

In this chapter I will describe the context of Globalisation as it is intended by Bauman, in dialectic with the “Glocalisation”. The domain of the environmental crisis is global, but it relates strongly to local dimensions and it requires an integration of both, in line with the meaning of the popular expression “Think globally, act locally” and considering the structure of the world as an “interconnected system”. Then I will discuss the need of shifting from the national dimension of sovereignty to transnational and global perspectives, in order to deal appropriately with global problems, defining the main actor playing a role in the cultural approach to sustainability, the global citizenship. I will end the chapter speaking about the way how the global citizenship has power of action and can become a political actor, identified as Global Civil Society.

Globalization and Glocalization

The term Globalisation is one of the most used words in several contexts. While I won't here explore the complex speech about it, I will refer instead to Bauman's concept of *Glocalisation*⁸². Far away from the idea that a global world is a uniform system, like if one only subject is acting, he explains that globalization implies aspects of fragmentation and territorialisation. While we dispense of an unlimited platform to share, inform, communicate and act, this doesn't actually produce simply what he calls “a global culture”, but many different identities that elaborate the available inputs subjectively.

⁸² See Bauman Zygmunt (1998b), *Globalization, The human consequences*, New York: Columbia University Press.

«Globalizzazione» non significa unificazione culturale; la produzione di massa di «materiale culturale» non conduce al prodursi di qualcosa che possa sembrare «cultura globale». La scena globale deve essere vista piuttosto come una matrice di possibilità, dalla quale possono prodursi, e sono effettivamente prodotte, selezioni e combinazioni altamente variate; attraverso la selezione e combinazione dalla trama globale dei simboli culturali vengono tessute identità distinte.⁸³

There are two complementary pushes, one to globalise and one to localise. While the rich part of the world -and especially the small elite of individuals that keeps almost half of the world's richness-conquered the planet, are free to move everywhere and to exploit any territory, so they are "globalised", the other part gains spatial segregation, separation and exclusion from this possibilities, they get "localised". Globalisation, in this sense, increased the unjust gap between rich and poor.⁸⁴

Another consequence of globalization is the loss of the community as a meeting place to create norms and shared criteria of evaluation. The space dimension as reference to address life, social rules and behaviours lost importance as there is not anymore spatial limit. We live our daily life in a relative time-dimension, made possible especially by the digital technology. There is no difference between 'here' or 'there' when having to do with Internet and the speed of our lives is accelerated. Globalization means, furthermore, growing of controlling powers. The global dimension is a stage of public show where the private becomes public. It's a platform of what Debord⁸⁵ called "spectacle" and that George Orwell emphasised imaging the Big Brother Institution.

So far, we can say that if the Globalization allows the freedom of markets and capital and the flow of knowledge, effects of Glocalization are the unequal distribution of resources and the disproportioned concentration of richness and freedom of choice just in some parts.

This unjust consequence is expressed by Bauman through the description of the tourist in opposition to the vagabond.⁸⁶ The global world allows to the rich part to travel for choice and pleasure, at the expense of the other part that has to travel because it doesn't have alternative,

⁸³ See Bauman Zygmunt (1998b).

⁸⁴ Id. , p. 18: "Rather than homogenizing the human condition, the technological annulment of temporal/spatial distances tends to polarise it. It emancipates certain humans from territorial constrains and renders certain community-generating meanings exterritorial. For some people it augurs an unprecedented freedom from physical obstacles, to move and act from a distance. For others, it portends the impossibility of appropriating and domesticating the locality from which they have little chance of cutting themselves free in order to move elsewhere. With distances no longer meaning anything, localities, separated by distances also lose their meanings. This, however, augurs freedom of meaning-creation for some, but portends ascription to meaningless for others."

⁸⁵ See Debord Guy (1967), *La société du spectacle*, Paris: Buchet-Chastel.

⁸⁶ In the Italian translation of the book, the term used for the word "vagabond" is "migrant". This choice may change the undertone of the meaning.

hoping to find better life conditions. Rich societies have an aesthetic relationship to the world (the aesthetic of consumption)⁸⁷ and live their consumeristic dream thanks to the poor that are living their survival nightmare.⁸⁸ That of the vagabonds is what he calls “forced localization”.

*Quelle dei migranti sono come lune buie erranti che riflettono lo splendore dei soli luminosi rappresentati dai turisti; essi sono i mutanti dell'evoluzione postmoderna, il rifiuto di un mondo che si è dedicato a servizi turistici*⁸⁹.

As it is fairly arguable that the capitalistic part of the world is responsible for the global inequality, it is as well correct to individuate the western countries as the main responsible for the environmental degrade. Multinational corporations still control the economy and together with governments they exploit global South lands' resources and labour creating a relationship of exploitation and dependence that doesn't allow developing countries really to develop and become independent. They lose their natural assets and don't gain possibility of emancipation. One crucial point of this interaction is that the ecological degradation affects every of both sides and not just who is mainly responsible for that. Although just some have benefited of the globalisation and some have been harmed (or worsted), the consequences of some issues are equal for everyone and in some cases worst for the ones who have been already exploited, because of the poorer conditions. One of the main goals at global level of sustainable development should be the reduction of poverty and the equalisation of distribution of resources. These conditions would allow to global South countries to guaranty basic needs and to promote locally adequate development strategies, not similar to the western, neither dependent on global North aid or investment. Reducing poverty would mean also stabilising birth rates and the population growth in a future perspective. The environmental crisis is directly connected with the dynamics of the globalised economy, that made some richer at the expense of others and raised the inequalities. Therefore addressing sustainability means acting into the globalised economy considering the interrelations of trade, production and labour, which have effects especially on the local dimension. Production of goods in global South countries by multinational corporations - because the labour costs are minor and the rights of workers are not

⁸⁷ See Bauman Zygmunt (1998b), p. 95.

⁸⁸ Bauman notices also the attitude that tourists have towards vagabonds, that tends to exorcise them and criminalise their poorness. He explains it as the attempt to deny their nightmare: as the causes of this situation are the inner dynamics of the globalised economy, everything can change fast and without citizens' control and turn the situations. Tourists look at vagabonds and fear to become them, therefore they do as much as possible to keep themselves distant, stranger and protected from that condition.

⁸⁹ See Bauman Zygmunt (1998b).

respected- that are sold in the global North, is the most evident effect of both Globalization and Glocalization phenomenon. The process has global domain as the trade and labour exploitation happens in different countries in market relationship, but the consequences of it are mostly local, on the workers and on the place where the production takes place without any concern of sustainability. Since we live in a globalised world and the economy developed this structure, the environmental problem has to be treated into it, coordinating global and local domains and considering their interconnectedness.

The world as an interconnected system

Several elements show that the context where we live is global, like the migration waves from poorer to richer countries and, especially, the way how the economic system works. We are citizens of the world when we consume into a market which presumes the openness of the national borders. Every time we buy something which is produced in another country we participate to the functioning of a system that has a global size and where every action is not isolated but connected with the happening in a place far away.

La globalizzazione appare ormai ineludibile e irreversibile. Le nostre interconnessioni e la nostra interdipendenza sono già globali. Qualunque cosa succeda in un luogo influenza le vite della gente in tutti gli altri luoghi. Quando si calcolano le misure da adottare in un posto qualsiasi si devono fare i conti con le reazioni della gente in tutti gli altri posti. La nostra dipendenza reciproca ha dimensioni planetarie, e dunque siamo già, e lo rimarremo a tempo indefinito, oggettivamente responsabili gli uni degli altri.⁹⁰

Bauman emphasises the need of a global public space for the politics that should be addressed as planetary, which is different from the international. This space requires recognising the reciprocal responsibility for the planet and for every human living on it and the relevance of every action on one side for the other side. We need a planetary responsibility to address the problems and challenges of our time and this can happen just readdressing the systems of interdependence and relations among all political subjects.

The concept of the systemic interconnectedness of the world is evident in the environmental processes. The consumption of a good in a western country, which is produced in an eastern country through the unsustainable exploitation of the resources, damages the producer, although the action

⁹⁰See Bauman Zygmunt (1998b), p. 26

is acted in the far away consumer country. The actions take place into a process where every element is connected. Says Arne Naess⁹¹ that *all our actions and thoughts, even the most private, are politically relevant. If I use a clipped tea leaf, some sugar, and some boiling water, and I drink the product, I am supporting the tea and sugar prices and indirectly I interfere in the works and capital conditions of the tea and sugar plantations of the developing countries.* The action damages actually both countries, because it contributes to worse the conditions of the Earth ecosystem which is one, the same in every part of the world, even if it's not perceived so. The dimension where these processes take place are global, therefore we speak about global problems. Global problems are problems that regard people of the whole globe, of every country. There is no exemption for geographical belonging, but every country is involved and responsible for the issue. The dimension of interconnectedness is the condition that extends problems to global width, from local one. However the global domain has to square always up with local dimensions, and the integration of both is a big challenge. For instance, civil and social rights are still defined into national borders as they refer to the national constitutions. Yet, some of them belong to a dimension which is transnational, the ones that are considered universal to all humans. Human rights are identified in order to individuate why all humans are equal and deserve the same possibility of happiness. As the first article of the Universal Declaration of the Human Rights⁹² says:

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Already in the 1948, when the Declaration was adopted, a first element of “globalism” was perceived. In the context of the post-war such principles assumed a deep meaning, aiming for the first time to find elements of union and fraternity among all human beings, no matter the origins. A global conception of humanity and innate rights with it was spread and suggested, to adopt new patterns of judgement into the reality that, instead of dividing individuals, unifies them. Above the national roots and the cultural features every human can feel close and recognise himself in every other human and acknowledge him his same rights simply because of belonging to a planetary community, as Ronald C. Israel expresses:

⁹¹ See Naess Arne (1990), p. 130.

⁹² See *Universal Declaration of Human Rights*, 1948, <http://www.un.org/en/documents/udhr/>

*At The Global Citizens' Initiative we say that a "global citizen is someone who identifies with being part of an emerging world community and whose actions contribute to building this community's values and practices."*⁹³

With the recognition of shared values and of the human rights we enter the prospective of a global interconnected community that is supposed to base on solidarity and fraternity among members. They are one attempt to display on a larger platform what cannot be fostered by a national citizenship, and to open to a new *type of articulation between the universal and the particular*.⁹⁴

This articulation should foster a focus on the elements that unit individuals, rather than on the ones that divide them, in order to promote cooperation and sharing of goals. The idea of a world community emerges from a political structure that based on the concept of nation-state. Indeed it is often that concept, and the consequent power deriving from it, one delicate and determinant point when speaking about Globalization.

From the Nation-states to a Global Citizenship

One of the challenges of the globalisation is defining the role of national sovereignty. While citizens from different countries live into global dynamics, they also submit to their national laws, which keep the national territory as reference domain. At the level of international law the challenge of harmonizing and coordinating many national systems is complex, difficult and serious. Although the environmental issue is dramatically urgent, it seems impossible to obtain a uniform cooperation among all the national states, agreeing on the strategies to reduce and contain the consequences of the environmental degradation. It affects everyone, but every one tends to give priority to its own interest instead of proceeding as one hand, for the well of the planet, that is supposed to be important for each in the same way. Is it really possible, in these circumstances, to speak about a global citizenship or are we still strictly attached to national widths?

As Bauman states⁹⁵: *Il significato dell'espressione «lo Stato» è quello di un'agenzia che rivendicava e legittimava il diritto e i mezzi per stabilire e rafforzare le regole e le norme destinate a fissare lo svolgimento dei compiti su un determinato territorio; le norme e le regole sperate ed aspettate per*

⁹³ See Israel Ronald C. (2012), "What does it mean to be a global citizen?". *Kosmos Journal, Global citizens creating the new civilization*, Spring/Summer 2012, p. 79. <http://www.kosmosjournal.org/wp-content/article-pdfs/what-does-it-mean-to-be-a-global-citizen.pdf>

⁹⁴ See Mouffe Chantal, "Pluralism and the left identity", in Walzer Michael (1995), p. 297.

⁹⁵ See Bauman Zygmunt (1998a), *Globalizzazione e Glocalizzazione*, Roma: Armando Editore.

trasformare il caos in ordine. The past ‘global scene’ was composed by the political relations among states, so an inter-state politics, sum of many singular nations, where the sovereignty of every subject was preserved. Passing through the big blocks of the cold war, political power took a different scheme and today’s capacity of autonomy of the territorial State has been dramatically reduced.

The importance of the national sovereignty is still recognised, as space where citizens give themselves laws and have influence on their own lives through the political participation (when there is) and cultural diversity is defended. However, every local policy has a pretty partial view of the global problems, because it mostly works inside reduced borders and for the interests of the people belonging to the reduced territory. This means that every nation tends to decide things and to act favouring the internal goals⁹⁶. Nevertheless, we are today in some circumstances where the most urgent problems are of a global range and need strategies and solutions on the same domain. All the singular actors in the global stage must cooperate following the same line. Without this common walk it is not possible to find solutions. The current thinkers divide between Nationalism and Post-nationalism, less or more supporters of the idea of global citizenship as a successful dimension in promoting integration and democracy. The first approach identifies in the national belonging the necessary element to create social cohesion and integration. Liberal nationalists like David Miller argue that just the sharing of a common history and culture shape a sense of identity, membership and solidarity among members. These elements are prior to the political role and the active participation of the citizens and the creation of a sense of identity into the community. It is theoretically impossible according to this approach, to create a sense of global community and integration, because these elements don’t develop out of the national belonging, therefore citizens are not likely to participate to the politics actively and sympathetically with the others perceived as strangers. Post-nationalists such as Habermas⁹⁷, instead, argument that although the role of national boundaries is recognised as effective element to produce democratic attitudes in the members, it is not the necessary condition to obtain it. In the modern pluralistic and complex context nations must rather be aware of and integrate their specificities with *universalistic principles of human rights and*

⁹⁶ See Miller David (2005), “Reasonable Partiality towards Compatriots”. *Ethical Theory and Moral Practice* 8, pp. 63-81.

⁹⁷ See Habermas Jürgen by, C. Cronin and P. De Greif editors (1998), *The Inclusion of the Other: Studies in Political Theory*, Cambridge (Mass.): MIT Press.

*the rule of law, which does not imply the imposition of a particular majority culture on minorities*⁹⁸.

The Post-nationalism approach recognises the increasing loss of authority and power of the nation-states, transferred to supra-national entities, for all economic, political and cultural aspects.

The conception of the Post-nationalism is close and linked with Cosmopolitanism positions, in opposition to the so-called Particularistic ones (corresponding to *Kosmopolitismus* and *Partikularismus* in the German version) regarding the political theories on Global Justice. In the book “Globale Gerechtigkeit. Schlüsseltexte zur Debatte zwischen Partikularismus und Kosmopolitismus“ by Christoph Broszies and Henning Hahn⁹⁹, they are defined as follows.

Cosmopolitanism speaks from the perspective of the real possibility of a global justice, which moves from a moral Universalism that considers every human in equal way morally important. The Particularistic approach declares, on the contrary, that the principles of justice should not be intended in a global sense, but conceived into the specific geopolitical domains.

The main clash between the two theories regards the domain of the justice, global for the first, local for the second. The first considers the duty of a global justice, with the hold of the responsibility of the inequalities, on the base of moral human principles, so that, *just because I am a human, I must respect every other human, which is equal as me*. The second considers this responsibility owed just in case of some kinds of close and special relationships among people, because of social and cultural sharing of common projects, like in the case of national membership.

Between the oppositions of the mentioned conceptions, the Post-nationalist and the Cosmopolitan furnish more effective instruments to deal with global problems and allow the identification of a global citizenship. Even though it is different from the national one described by nationalists, the existence of a world citizenship is evident, not for elements like historical and cultural belonging, but for the dimension of interconnectedness and complexity of the political, economic and cultural system we live in.¹⁰⁰ Global problems are problems that involve the entire world and so all the

⁹⁸ See “Citizenship”, *Stanford Encyclopedia University*, retrieved October 2014 from <http://plato.stanford.edu/entries/citizenship/>.

⁹⁹ See Broszies Christoph and Hahn Henning (2010), *Globale Gerechtigkeit. Schlüsseltexte zur Debatte zwischen Partikularismus und Kosmopolitismus*, Berlin: Suhrkamp Verlag.

¹⁰⁰ Political theories about global justice are opened to different approaches. Some advert to the idea of Global Governance, of trans-national institutions, but that tends to exclude the possibility of a World Government that could risk an absolutistic and irreversible degeneration. For more see Nussbaum Martha (2004), “Beyond the social contract: Capabilities and Global Justice”, *Oxford Development Studies* Vol. 32, No. 1. N. speaks about the strengthen of international institutions, which should be coordinated in a thin and decentralised structure, result of deliberate normative reflection and not just of history like it is now. The responsibilities would be so distributed among domestic basic structures, multinational corporations, global economic policies and agencies, trade bodies (IMF, WB, WTO),

people living on it and whose management can be addressed on a global domain, through political reforms and the collaboration of every person in applying these measures.

*Nation-state membership or any other sort of particularistic relationship among persons is irrelevant to assessing the nature, depth, or scope of obligations they have to one another. Moral agents have identical obligations to all human beings and to nonhuman creatures.*¹⁰¹

So far, the idea of a transnational citizenship can be accepted if we don't remain attached to the traditional meaning of citizenship linked to the political community limited to the national territory.

*Supporters of global democracy reject the conventional identification between demos, territory and citizenship. In their view, citizenship is not a set of practices and rights that need to be anchored in a particular demos defined by specific territorial boundaries. On the contrary, citizenship is ideally exercised in a multiplicity of 'sites', situated at different levels of governance: local, national, regional and global.*¹⁰²

If we agree on the existence of a global citizenship, beyond the national borders that divide people, we can also conceive the right domain in order to address cultural strategies towards sustainability. Since the environmental crisis is a global problem and it requires a real deep change in the culture and in the socio-political and economic system, conceiving interventions just on the national domain is extremely reductive and inappropriate. Still keeping the importance of the local dimensions, it is important to create a stage of action that is not limited to nation-states priorities, but it has a larger perspective and it involves everyone. This perspective can conceive the world population as one actor with power of action and responsibility for the environmental problem. Just if people understand that they share the same trouble and they have all the same responsibility and possibility of action on it, we can create the kind of dimension that we need to address cultural responses and provoke long-term change.

What does *Citizenship* mean and the possibility to conceive a *Global Citizenship*

international political bodies (United Nations), International Labour Organization, World Court and an envisaged new world criminal court, nongovernmental organizations.

¹⁰¹ See Young Iris Marion (2006), "Responsibility and global Justice: a social connection mode". *Social Philosophy and Policy*, Vol. 23, pp. 102-130.

¹⁰² See "Citizenship", *Stanford Encyclopedia University*, retrieved October 2014 from <http://plato.stanford.edu/entries/citizenship/>.

In order to conceive or accept the identification of a Global Citizenship, it may be useful to define Citizenship itself first. According to the Dictionary of Politics by Pasquino and Bobbio a “citizen” is an inhabitant of a city or a member of a community, with some rights ensured by this membership.¹⁰³ The word “community” opens the possibility of a generic definition, not necessarily linked with the city or the state, of citizenship. “Community” can be the nation, but also the humanity as a whole. The meaning of the word *citizenships* has changed in the history. For instance, the citizenships that we can intend today in politics, contextualised in a globalised world is not the same as the one contextualised in the 18th century in a national context.

According to the Stanford Encyclopaedia of Philosophy¹⁰⁴ there are three dimensions involved in the concept of citizenship: the legal *defined by civil, political and social rights*; the political, which considers citizens as *political agents, actively participating in a society's political institutions*; the identity dimension, which represents the belonging to *a political community that furnishes a distinct source of identity*¹⁰⁵. The third one is the dimension from which cohesion and social integration depend, but all three are dependent on each other: the rights defined by the law influence the political activity and participation of the citizen, to which the shaping of identity is linked.

We find in the Stanford Encyclopaedia that there are two models to intend the citizenship, results of the history: the Republican and the Liberal. The first comes from the ancient Aristotelian Greek and then Roman conception of the citizens as active members of the community, with the duty to engage in politics by sharing the authority and exchanging the ruling role with each other. Everyone had a civic self-ruled role and participated actively to the decision-making processes. This model has been transmitted in the Middle age through the Italian city-states, but it developed next to the second one since the Roman Empire. When the empire expanded in Europe it needed a legal and fiscal system that could allow to Rome to keep the control from far. They extended the law system but not the elements of identity and political participation that were present in the city of Rome. The status of Roman citizenship represented a guaranty of protection and rights in front of the empire authorities, but not the identity element: *citizenship is primarily understood as a legal status rather than as a political office*. The Liberal model of citizenship *denotes membership in a community of shared or common law, which may or may not be identical with a territorial community*¹⁰⁶¹⁰⁷. Both

¹⁰³ See Bobbio Norberto, Matteucci Nicola, Pasquino Gianfranco, *Dizionario di politica*, Utet.

¹⁰⁴ See “Citizenship”, *Stanford Encyclopedia University*, retrieved October 2014 from <http://plato.stanford.edu/entries/citizenship/>

¹⁰⁵ Id.

¹⁰⁶ See Pocock John G. A., (1995), “The Ideal of Citizenship since Classical Times”, in Beiner Ronald (ed.), *Theorizing Citizenship*, Albany (NY): State University of New York Press, pp. 29–53.

the models expanded in the history and modern democracies adopted especially the liberal one, carrying with it the problematic point of the lack of political activity of the community's members. It must be noticed that participating in the politics in today's heterogeneous, cosmopolitan and complex world is not possible like it was in the past. The modern condition sees, however, the combination of both models, that are complementary, with the alternation of passivity and involvement in politics by the citizens, as keeping the passive enjoyment requires political participation and vice versa.

Not everyone agrees with the possibility to conceive a kind of citizenship/membership on a global level, but the definition of citizenship today must definitely be revised in the light of the globalisation and the world dimension into which we live. Expressions like "Global Village" or global population identify the modern perspective through which political and social subjects establish connections. In such context we can think to citizenship at different levels and of different size, regional, national or global. The idea of a world citizenship appears with the processes of globalisation of the economy in the last century that enlarges the number, the size and the borders of the national one. The members are potentially all the humans on earth, located in every territory and the borders of their connections in terms of physical mobility and knowledge access are extremely reduced. The passage from the national to the global dimension and the break of the traditional national borders has taken a mixture of different cultures, nationalities and citizenships in the same space, a large space without limits anymore that used to keep the distance between different social subjects. With this premise the implication of the education is automatic. Shaping people endowed with the skills and the mind required to live democratically and peacefully in a global society is a responsibility of the education, like we will see later on. Not just should these people be capable to respect other cultures, but they should develop a mind responsible, politically active and able to deal with problems that are not of small or national domain but that are "global problems", such as the climate change, the inequality, the risk of war, the overpopulation and so on. Therefore, the identification of a dimension of the citizenship's definition that is global, is essential to be recognised in this context, because this kind of subject will be the political actor dealing with the environmental problematic. One of the way through which the Global Citizenship is politically active is the engagement into Civil Society Organisations (CSO).

¹⁰⁷"Citizenship", *Stanford Encyclopedia University*, retrieved October 2014 from <http://plato.stanford.edu/entries/citizenship/>

Political Activism from bottom: Global Civil Society and its role

As previously said, a phenomenon that took us towards the global dimension is the technological progress. The advent of the Internet and of the communication technologies from the 70s revolutionized the way of sharing and communicating, creating a horizontal platform of nets where the access to the knowledge is supposed to be free instead of depended on the traditional vertical scheme of transmission of the culture through institutions and authorities. Bauman used to say that we substituted the traditional terms *structures*, *system*, *society* and *community* with the modern *net* to reflect the growing loss of clear borders of the totality and their fluidity.¹⁰⁸ These conditions created a new freedom and, with more or less control, access to information and possibility to develop free critical points of view on the reality. This has taken to the formation of groups sharing the same ideas, opinions and critics beyond the geographic borders. Many cross-national social movements unify people belonging to different nationalities under same aims and play today a big role. Lobbies, associations, NGOs and groups of common people are so relevant into the political process that they have been identified as a political subject, under the name of Civil Society.

*Global democracy becomes thinkable once we focus on the development of transnational civil society rather than on the transposing of representative institutions at the global level. In response, it should be noted that such networks coalesce around a common ideology or conception of the good (e.g. the environment, rights of indigenous peoples, critique of neo-liberal forms of globalisation, etc.), which serves as a functional equivalent to a common vernacular.*¹⁰⁹

Using again the Dictionary of Politics¹¹⁰, ‘Civil Society’ is defined in base of the historical context. The original meaning of it, into the doctrine of natural law, was of “Political Society”, deriving from *polis* and *civis*, so the “society of the state”, in contraposition to the “Natural Society”, in agreement with Hobbes’ theory of the opposition between *civil state* and *state of nature*. With the centuries, passing especially through Marx, the meaning of Civil Society tends to be opposed to the

¹⁰⁸ See Bauman Zygmunt (2009), *L’etica in un modo di consumatori*, Bari: Laterza, p. 13: “La metafora della rete riflette la crescente presa di coscienza che le ‘totalità sociali’ hanno margini incerti, rimangono in uno stato di flusso costante, sono in divenire più che in essere e raramente sono fatte durare.”

¹⁰⁹ See “Citizenship”, *Stanford Encyclopedia University*, retrieved October 2014 from <http://plato.stanford.edu/entries/citizenship/>

¹¹⁰ Bobbio-Matteucci-Pasquino, *Dizionario di Politica*, Utet.

State, where the first is the sphere of relationships among individuals, groups, social classes, that take place outside the power relations of the institutions. It is the stage for economic, ideological, social, religious conflicts that the state is supposed to solve or manage. So it is the place for mobilisation, association, common organisation. Quoting Weber, the Civil Society is the place of the *factual power*, while the State is the place of the *legitimate power*.¹¹¹

Until one hundred years ago we wouldn't have talked about Civil Society as a political actor. The main actors in the political arena were basically States. International Organisations and Institutions rose in the last century, especially after the World War II and they became the other main actor next to the nations. Beside them we can talk today of Civil Society as third actor but that is of a deeply different nature from the traditional ones. Civil Society indicates the civilians, the population. It is not an institutionalised subject but it is a generic category to define the many ways through which citizens started to play a relevant role in the political and economic dynamics, thus not belonging to institutional bodies. These ways are mostly represented by organisations, non-governmental and non-profit, transnational advocacy networks, regional bodies, academics, foundations, social movements, consumer organisations, volunteer and independent realities that aim to pursue some public interests and to give voice to their members.

Quoting Walzer¹¹²:

Citizenship, taken by itself, is today mostly a passive role: citizens are spectators who vote. Between elections they are served, well or badly, by the civil service. However, in the associational networks of civil society – in unions, parties, movements, interests groups, and so on- these same people make many smaller decisions of state and economy. And in a more densely organized, more egalitarian civil society, they might do these things to greater effect.

Although these organisations don't have usually a decision-making role in the global governance dynamics, they actually influence such processes indirectly, creating networks of information, spread of knowledge and mobilisation that involve great numbers of civilians into campaigns and activism. Transnational Advocacy Networks can indirectly influence discursive positions of states and international organizations, institutional procedures, policy change and state behavior. The

¹¹¹See "Società Civile", in Bobbio-Matteucci-Pasquino, *Dizionario di Politica*, Utet: p. 1065 " Nella contrapposizione S. civile-stato per S. civile si intende la sfera dei rapporti tra individui, tra gruppi, tra classi sociali, che si svolgono al di fuori dei rapporti di potere che caratterizzano le istituzioni statali. In altre parole, la S. civile viene rappresentata come il terreno dei conflitti economici, ideologici, sociali, religiosi, che lo stato ha il compito di risolvere o mediandoli o sopprimendoli."

¹¹²See Walzer Michael (1995), p.18.

main feature is that this happens transnationally, under the so called *Boomerang effect*¹¹³: when there is no receptiveness about an issue into domestic stages, they refer to international connections and allies to pressure their government or attract the attention. This creates a complex and transversal net all over the world among subjects from every country.

In these phenomena citizens usually voiceless take the possibility of being represented and expose issues that remain outside the political agenda. All this has become possible in the last decades thanks to the progress of the communication technologies that allow to be in contact and create links all over the world, and so to involve people across countries in the same issue. In this way it has been showed how many kinds of political problems today are of global domain and not anymore of local or national.

Civil Society Organisations have met annually since 2001 at the World Social Forum to share strategies, information about movements and coordination about campaigns. Through their mobilisation about specific topics like human rights, gender equality, peacebuilding, economic inequality, environmental protection, the human population has created strong frames of awareness and activism that shape also a new sense of community, not just national, but global. People from different countries feel united under certain issues and perceive themselves as one subject beyond specific cultural differences with one global public opinion. This fact provoked, as Marchetti notes, the growth of *solidarity among civil society organisations, and for contestation of the socio-economic consequences of globalisation*. Relating for example to the financial crisis, many forces found themselves united against the status quo and *for the first time, a number of ad hoc coalitions and campaigns have been organised on a trans-ideological basis, going beyond the traditional political barriers of previous forms of mobilisation, and targeting a number of controversial (mainly economic) aspects of globalisation*¹¹⁴.

Principles or ideas raised in specific geographical zones can be shared with others in every other part of the world and create a connection. One famous case of global mobilisation was the Occupy movement started in USA. The movement spread in more than 80 countries in few months and each population organised events and demonstrations coordinated with the others. Also the Arab Spring in 2010 resulted from civilians mobilisation and was an example of boomerang effect (beyond the relative results that it had politically), where a large activism raised through social networks' spread

¹¹³ See Keck Margaret E. and Sikkink Kathryn (1998), *Activists beyond borders*, Ithaca (NY): Cornell University Press.

¹¹⁴ See Marchetti Raffaele (2011), "The role of Civil Society in Global Governance", in EU Institute for Security Studies published by (EUISS), De Vasconcelos Alvaro edited by (2011), *Global Governance. Building on the Civil Society Agenda*, Condé-sur-Noireau: Corlet Imprimeur .
http://www.iss.europa.eu/uploads/media/Global_Governance_Building_on_the_civil_society_agenda.pdf

of information across several countries. Last September 21st (2014) Environmental organisations organized the first Global March for the Climate Change, involving more than 150 countries whose cities hosted thousands of people walking together to demonstrate their care and interest into the problematic¹¹⁵. The impact that such events can have on public authorities are relevant. These connections determine consequences also from a social and epistemological point of view, because they are experiences that put in confrontation different cultural realities creating new conceptualisations, analysis and envisages of the reality. They have so an effect in terms of knowledge and arising of awareness.

*A viable civil society as a kind of third force between the state and economy, on the one hand, and the private sphere on the other, seems to require some effective sense of community and of there actually being a community to which people are committed.*¹¹⁶

For these reasons the activities of Civil Society are considered as new ways through which the deficiency and gap of the representative democracy can be a little reduced. Civil Society Organisations don't substitute the traditional ways of political representation but they play an important role in diffusing and giving attention to needs and problems that are usually ignored or undervalued. In this sense, besides being an instrument of representation they are recognised as 'problem generators' because they present problems that were before unnoticed. In some ways the CSOs are closer to the real conditions of the people than political institutions.¹¹⁷

So far, it is legitimate to conceive a global community because of economic structures, political freedom of moving, cultural integration, free access to knowledge, existential recognition and power of mass political action, and the definition of a 'global subject' is important to conceive an effective strategy to deal with global problems. Environmental degradation and climate change are one of the biggest challenges that we are going to face in the future decades and that

¹¹⁵ See *People's Climate Mobilisation*, <http://peoplesclimate.org/global/>, November 2014.

¹¹⁶ See Kai Nielson, "Reconceptualising Civil Society for Now", in Walzer Michael (1995), p. 56.

¹¹⁷ One delicate point about CSOs, is that most part of them have western origins, they arise from democratic western countries and this can be a thorny point in terms of cultural partiality. It is argued that the fact that most part of this mobilisation starts in the West, it imposes a partial vision of the things and a certain way to proceed. However the abundance of CSOs in the West part of the world is the direct consequence of some conditions that made this possible. Democratic countries give indeed much more space to this type of political activism than other kinds of governments. Also the availability of knowledge and of the technology to spread it is higher in western countries that are also the more developed ones. See Walzer Michael (1995): "Only a democratic state can create a democratic civil society; only a democratic civil society can sustain a democratic state.[...] Civil Society requires men and women actively engaged in state, economy and nation, and also in churches, neighbourhoods, families and other settings too. It is a project of projects; it requires many organising strategies and new forms of state action".

the humans have ever met in the history. To approach a problematic of such proportion requires the involvement of every singular person on the planet. Not just political authorities and institutions have responsibilities, but all the human population.

The need of involving and shape citizens to the sense of responsibility for the community they live in, and therefore for the environment, the integration, the justice and so on, is at this point a priority recognised by almost every political orientation that is based on democratic principles. Citizens must have an active political role in their everyday life and reconcile themselves with moral purposes. Thinking and acting as a global citizenship is extremely important in the context of globalization.

*Wolfe calls for a third perspective on moral agency different from those of the market and the state, "one that allows us to view moral obligations as a socially constructed practice negotiated between learning agents capable of growth on the one hand and change on the other". Similar to Hollenbach, social and institutional change is not only inevitable but needed 'if all persons are to become active participants in the common good, politically, economically and culturally.'*¹¹⁸

The identification of the Global Citizenship as one only actor that includes all human beings united, and the definition of its possibility of political action through Civil Society activism, are important in order to answer the questions "Who must deal with the environmental problems?" and "How this must be done?".

If we identify the ecological problem as a global problem, that involves and affects every individual, we need pathways that involve as well each individual in acting to solve it and adapt to it. The stress on the global dimension of the actions regarding environmental issues is determinant, if we want to deal with it appropriately. The Global Citizenship is the subject that must promote or develop the cultural change that is needed, next to the technical solutions. If political and economic authorities engage mostly in producing technical strategies, the civil society must be charged of inventing cultural responses. This happens already, as we will see in the next chapters, and it does through the education to sustainability and through bottom-up mobilisation and proposal of alternative social innovations.

¹¹⁸See BethkeElshtain Jean, "In common together", in Walzer Michael (1995), p. 94.

Chapter IV – Towards Cultural approaches: reflecting on the relationship between Humankind and Nature

Once I have defined the actors involved, the domain of the environmental crisis, the technical approach and the alternative of the cultural response, I have to specify in what a cultural response should consist and what education and social activism are supposed to do for that. A cultural approach to the environmental issues should first of all invite people to reflect on their impact on the nature, to increase knowledge and awareness and to meditate about their role in the world and their relationship with the nature. The relationship between humankind and nature is a delicate and important focus, because the tendency to exploit natural assets without ethical responsibility is a consequence also of the anthropocentric attitude that our modern history favoured.

In this chapter I will touch this point, mentioning 4 authors who expressed the need of a new consciousness towards the nature, challenging the modern anthropocentrism, and develop similar philosophies.

Anthropocentrism and learning to love the nature

People are losing the connection to the natural world. We seem schizophrenic: we've got this amazing intelligence, but we seem to have lost the power of working in harmony with nature.

Jane Goodall

In her speeches about environment, Jane Goodall used to start wondering how is it possible that the humans, the most intellectual and evolved species in the world, are capable to destroy its own home, the Planet Earth. Many elements remember us every day that the humans are just a 'drop' in the stream of life', using Rachel Carson's expression. We belong to the nature as a whole and shouldn't have any privilege in it at the expense of other lives. Unfortunately the human history, particularly the western history, has insisted violently on the opposite attitude towards the environment in the last centuries. Nature is not seen as a home to belong to and take care of. Rather has it been conceived as a heap of unlimited material to exploit for our commodities, like if we are owner of it and we can do whatever we want. This pathway leads to the destruction of the planet and it is quite paradoxical how, in the run to progress, we end up with self-destructing ourselves. The idea that we are above the nature and that nature is something external to us, that we can control and change, made the humanity arrogant and insensitive towards the intrinsic existential value of it and we enter metaphorically in war with it. Properly the environment doesn't fight against us. Simply its inner

mechanisms and instruments are activated to survive, like the resilience and adaptation to changes. Yet, the prominence of these automatic processes in the last centuries are being freakish; it has never happened, in the history of the planet, that the ecosystem should adapt to such enormous changes in such short time. On the other side of this anthropocentrism we can observe how the human species is just one among millions and millions forms of life, each one with a precise role in the evolution chain and the same right to life as we. We can realise how the time that the humans have inhabited the planet is incredibly short comparing with its history (comparing the life of the planet with one solar year, the human species appears around 11 h 56 p.m. of the 31st December...that means in a time of 365 days we exist just in the last 4 minutes).

Nonetheless we are the only life form *capable of understanding and appreciating its relations with all other life forms and to the Earth as a whole.*¹¹⁹ Some opinions tend to judge the value of the human species higher than the others on the base of the evolution place, or on the intellectual capacities or on the spiritual capacity of consciousness, but those opinions are incorrectly thought to base on scientific foundation. Without entering this kind of topic, from a biophysical point of view the human being, although unique in many ways, the most intellectual and conscious living creature, has no superiority or more importance than other living beings. He's simply one of the possible results of the evolution, as any other creature. We belong the same way to what Naess calls "ecosphere belonging"¹²⁰ and should try to form a togetherness where everyone doesn't just act in order to benefit himself but in a whole perspective, where what is good for the individual should not damage the other components, but instead should be done taking everyone the responsibility of his conduct towards the others. This doesn't mean that human needs should not have priority on non-human needs, but that we should responsibly distinguish between what we need to do for necessity and with responsibility and what we do for unnecessary reasons inflicting sufferance and violence on other creatures and endangering the natural functioning of the ecosystem.

¹¹⁹ See Naess Arne (1990), p. 166.

¹²⁰ Id., p. 168.

The need of a cultural revolution in the relationship between human and nature: four inspiring voices.

A cultural approach should plan to work for a deep inner change in people's attitudes towards the environment. It should approach the problem deeply, acting on the deep core of social beliefs, values and attitudes. It should act on the shared culture, first of all conceiving and teaching a new relationship between humans and nature, where we are not anymore identified as "owners" of it, but as part of the whole, therefore responsible for it. The next paragraphs introduce the thought of four thinkers (one chemist and three philosophers), who, in this sense of renovating the conception of humans-nature relationship, develop perspectives that are similar in many ways. They have in common a holistic idea of the planet, where nature, humanity, environment are one whole only, whose balance depends on the inner relations among the parts. The first author calls this system *Gaya* and describes it in biophysical and also spiritual terms. The other three adopt a same term to identify this perspective that is the word "*Ecosophy*". They develop the concept differently and from diverse perspectives, but keep in common the idea of a new culture and a new attitude towards the natural environment, that should develop in and from the people. From the *Ecosophy*, the last author, Arne Naess, goes forward in defining a new ecological orientation, deeper than the traditional one, called "Deep Ecology", which will become an important environmental philosophy in our time, distinguished from the "shallow" environmentalism for the *eco-centric* approach, in contrast with the *anthropocentric* one.

➤ **James Lovelock and the *Gaya hypothesis*¹²¹**

Although the environmental crisis is omnipresent and regards every sector of our life, the common sense still has a partial or absent knowledge about it. Mass media and Politics speak about environment as one of the many problems we have to deal with, but not one of the most important and urgent. Environmentalism is still perceived as one small topic of the political debate, ecology is mostly reduced to the image of groups of specialists in natural sciences or of people loving the nature.

Nevertheless, nowadays the dimension of the ecology needs to be perceived and conceived in a deeply different sense. Already in the 70s the chemist James Lovelock developed the so called

¹²¹ See Lovelock James (1979), *Gaya: a new Look at Life on Earth*, Oxford: Oxford University Press.

“Gaya hypothesis”¹²², a conception of the natural system according to which the Planet Earth (Gaya) is a self-regulated, homeostatic and complex system into which organic and inorganic creatures interact, that adopts mechanisms of adaptation and resilience to keep the best environmental biochemical conditions for its own survival. All the organisms on the Earth evolve with it and influence the composition of its parts. Basically, as soon as a threat menaces the inner harmony that Gaya should keep, feedbacks and consequential mechanisms enter in action, in order to re-establish the balance. In this balance it is not the human being that has to survive, but the Earth as a whole, the Nature as big organism. From this approach derives the assumption that Gaya can probably deal with the challenges that climate change is imposing to the natural ecosystems, but the danger is at this point in what will happen to the human species if the mechanisms of readjustment don’t keep the specific conditions of survival that humans need. Despite the Gaya theory is not completely accepted by the science, because it can be seen close to religious or spiritualistic orientations, it focuses on the important aspect of the relation between the humankind and the nature. The anthropocentric history of the humanity in the last centuries didn’t perceive natural richness as value itself, neither was ‘Nature’ meaning something bigger than the humans, previous or integrated with them, but it was mostly seen as resources to exploit to produce goods and commodities. The Gaya theory recalls a conception of the reality that is old in the History of Philosophy and that puts the humankind in a much weaker and dependent position on the natural system. Humankind is part of an integrated system and actually a very insignificant part if we think to the history of the Planet.

➤ **Felix Guattari and *The three ecologies***

One decade after Lovelock, others authors defined conceptions of the planet that can be considered somehow close to the Gaya-hypothesis, like Felix Guattari, who published in 1989 "*The three ecologies*". Guattari describes a conception of ecology which is holistic and interests several spheres of the human condition. It is not only about natural environment but it is about the environment in which the human activity takes place as dimension where the individual subjectivity, the community and the natural space interact and must integrate. In this dimension the ethical approach to the otherness, to the alterity, which can be human, animal, vegetal, spiritual, has to change in the direction of the cohabitation of different subjectivities and a balanced reciprocal support. In practical terms, the crisis that we still tend to conceive just in terms of scarcity of natural resources is for him a general social crisis where the relationship with the Self and the Other has

¹²² The Gaya hypothesis is famous today for the publications of the scientist James Lovelock in the 70s. However the idea of the Nature as integrated balanced system, into which, among all the others organisms, also the human species interacts, goes back already to the Greek tradition, from which Lovelock takes the name ‘Gaia’.

been deteriorated by the consumerism and the mass-media type of information and education. The slow impairment of the sociality and the relation in the community, the transformation in the family structure, the education to material consumption and civil de-responsibility changed the way how we relate to ourselves and to the self of others. The other is not recognised as richness to host and with whom re-create the sense of the common, but as diversity to be conformed to the big existent and homogenous identity. So are the dynamics of the immigration, where integration is so difficult; so are the dynamics towards the environment that we continue to treat as an external dimension to be used for our needs. The technocratic and economic approach to it keeps trying to find better and more efficient ways to use resources, not realising that this attitude towards the nature is totally counter-productive. Ecology today is not about saving a green park or respecting the standards put on greenhouse gases emission. It is about changing the ethical orientation towards a system depending on natural conditions, where the role of the humankind is to create intelligent communities, responsible for the whole system and aware of the limits and the duty towards other living organisms. This kind of ecology regards many spheres of decision and requires a cultural revolution. It needs a mind capable to conceive a mature, responsible orientation abandoning the logic of profit, growth, power and consumption that are the leitmotiv of our time. These models are responsible for catastrophic ecological consequences and a simple reductive treatment of the problems will be poor and ineffective. Guattari's Ecology is conceived as a mental and social platform to reinvent and re-educate this new mentality.

Non si avrà alcuna risposta alla crisi ecologica se non su scala planetaria e a condizione che si operi un'autentica rivoluzione politica, sociale e culturale che sappia riorientare gli obiettivi della produzione dei beni materiali e immateriali. Le nostre società si accontentano di affrontare il terreno delle nocività industriali in una prospettiva tecnocratica, mentre soltanto un'articolazione etico-politica dell'ambiente, quello dei rapporti sociali e quello della soggettività umana, sarebbe capace di far adeguata luce su questi problemi.¹²³

*Ecosophy*¹²⁴ is for Guattari a subject that can drive us to readdress our attitude towards these spheres, the human, the nature, the subjectivity and the community. Such study should interest three stages, the social, the mental and the environmental. What Guattari calls 'social ecosophy' consists in developing philosophical practices in order to modify and re-invent the way of living into couple, family, urban context, work and so forth, to reconstruct the human relationships in transversal fields.

¹²³ See Guattari Félix (1991), *Le tre ecologie: l'umanità e il suo destino*, Milano: Ed. Sonda, p. 14.

¹²⁴ The term *Ecosophy* is used by the next three authors each in his own personal way. The meanings have some elements in common but they result from different elaborations and therefore cannot be overlapped like one only concept.

It is supposed to build a new way of togetherness on institutional and private level. The *'mental ecosophy'* consists in the daily life attitudes and creative personal ethic of every individual, in his domestic, neighbourhood, familiar dimension. It should drive to new relations with the own body, the spirituality, the time, the life and the death, a new attitude towards the self, that has to find defence against the manipulation of the mass media and the modes and marketing, being an artist *in divenire* in realizing the person who does not only conform to the consumeristic ideology. The *'environmental ecosophy'* has to deal especially with the mechanization and the use of the technology to handle problems like the demographic overpopulation. It will have to consider the human purpose of the scientific progress and calibrate the human intervention on the natural balances and limits. The relation and interconnectedness among nature, *psyche* and sociality are being deteriorated because we keep being passive and indifferent in front of big questions that are at this point crucial. Instead these three elements cannot be separated. The individual needs to recover the harmony with the nature and with the community and shape an ethical attitude towards the reality. The interactions among ecosystems, social and psychological universes must be recovered addressing the human interventions towards proper human purposes. We cannot just delegate governments and technocrats to control the evolutions of things in base of criteria such as economic profit. Each local subjectivity must engage to propose effective and original practices, not homologated to others but keeping their diversity and specific alternative solutions. So should the ecological movements intervene in the social frame, not just remaining some among many modes or temporary and partial focus of the politics. New systems of values, like the solidarity, the equality, the aesthetics, the spirituality, instead of the profit, should be the line leading these processes. As Franco La Cecla¹²⁵ states, there is no technical solution to the ecological problem, but every attempt to increase the economic efficiency will fail. Solutions are not the drop of pollution by industries or a more rational use of resources. Things like nuclear energy are not to refuse just because it is dangerous. These are attempts to escape again the limits of the human condition and of the nature, desperately inventing technical tries. This attitude indeed won't work because it keeps valid the same logic of the utilitarianism and exploitation of the planet as a pile of resources to be consumed to satisfy the unlimited needs of the *homo oeconomicus*.

É necessaria un'immensa ricostruzione degli ingranaggi sociali per far fronte ai danni prodotti dal Capitalismo Mondiale Integrato. Questa ricostruzione non passa tanto per delle riforme di vertice, attraverso leggi, decreti, programmi burocratici quanto piuttosto attraverso la promozione di pratiche innovative, il proliferare di esperienze alternative,

¹²⁵ See Franco La Cecla, Postfazione to Guattari Fèlix (1991).

*centrate sul rispetto della singolarità e sul lavoro permanente di produzione di soggettività, che si autonomizza per articolarsi congruamente con il resto della società.*¹²⁶

➤ **Raimon Panikkar, *Ecosophy and Earth's spirituality***

Sharing the same attitude towards the ecology the Spanish philosopher Raimon Panikkar¹²⁷ elaborates a conception of the relationship between human and nature that tends to a more spiritual meaning. It refuses the distinction between them and inserts them in an animistic system of harmony with the totality of the cosmos, in which man, nature and God are one only thing. The relevant point for the ecology is in this case the idea of promoting the development of a new mentality and a cultural revolution to save the planet from the ecological catastrophe. We must learn to relate to nature not as something external to us, but as part of it in an interdependent and homeostatic balance, where the action of the humans have to respect the time and pace of the nature. He insists on the need of a balanced relationship and a feeling of love and respect for the environment because we are one thing with it and loving ourselves means also loving the nature. Panikkar tries to define a sense of spirituality in the reality that we have lost because of the scientific knowledge that tends to mechanise and sectorize it in many divided fields, violating the natural rhythms and losing the sense of the whole. So as Guattari, he identifies the need of a new orientation of the humanity that has to start from the role of the singular individual, that is political and who can realise himself into the *polis*, the political community. Such participation is different from the modern political action that consists in the technocratic management by the few. He speaks about participation into the community with which everyone can realise his own artistic potential, through the art, the creativity, the togetherness, as a dimension of every being, and not a subject for specialists in the parliament. The political engagement regarding the ecology should be therefore something different from the usual reaction of political technicians who find mechanical solutions to treat the nature with more diplomacy and avoid the worst effects, but still keeping the purpose of exploiting it. In this sense P. uses the term '*ecosofia*', to indicate an idea of ecology that goes beyond the traditional and partial meaning of the term and defines a deeper and spiritual conception of it. Having a harmonic relation with the nature means, for him, taking care of it as we take care of ourselves, promoting cooperation, synergy and awareness, respecting the homeostatic operation and the resilience capability of natural systems. We should find a connection with the environment,

¹²⁶ See Guattari Felix (1991), p. 37.

¹²⁷ See Panikkar Raimon (1993), *Ecosofia: la nuova saggezza. Per una spiritualità della terra*, Assisi: Cittadella Editrice.

being able to listen to it and intervene in the best ways it requires to keep its inner homeostatic balance.

Quando l'uomo segue la natura, non sfrutta ma cresce ed evolve. La pace con la terra esclude la vittoria sulla terra, la sua sottomissione e il suo sfruttamento a nostro uso e consumo. Richiede invece collaborazione, sinergia e consapevolezza. Ma la reazione normale del pensiero tecnologico al problema ecologico è di trovare una soluzione tecnologica, non di ricercarne le cause. Il rimedio non può però venire da nessuno di noi preso isolatamente, ma soltanto da tutti noi insieme¹²⁸.

From that comes the need to consider the educative task of the ecology nowadays. Every alternative social practice has the role to propose and educate to another possibility of development for new generations, in order to shape them to be prepared to the effects that this crisis will show in the next future. Educating to sustainability is a necessity to address the future citizenship towards this new mentality.

Ritengo che l'azione ecologista abbia essenzialmente il significato educativo di preparare le persone che possono intuire già adesso i possibili effetti a essere pronte a un modello di sviluppo alternativo a quello che noi viviamo dalla rivoluzione industriale. Tutte le nostre piccole azioni sono una strada soprattutto educativa, di ricerca e di studio.¹²⁹

➤ **Arne Naess's ecosophy and the Deep Ecology**

We simply have to admit that we as humans have to try to act as integrated persons, and societies must be integrated societies, even if they are to be pluralistic. A philosophy is presupposed. I have proposed as example Ecosophy T.¹³⁰

A common question to philosophers involved in environmental issues is about the link between the two fields, environmental and philosophical. The relation between ecology and philosophy is not always clear. If we try to emancipate our thought from the reductive fragmentation and sectorizing of the modern sciences, ecologic issues relate to philosophy, since philosophy investigates the place

¹²⁸ See Panikkar Raimon (1993), p. 115.

¹²⁹ Id., p. 125.

¹³⁰ See Arne Naess (1990), p. 120.

of the human in the world and the relation with the nature is the first level to reconsider with a philosophical and systemic perspective. Especially, it will be required a constructive cooperation and reciprocal listening between economy and environmental studies. They usually dislike or are hostile towards each other. The ones lack the necessary knowledge of the others to integrate the subjects and they usually oppose their argumentation without understanding each other and collaborating towards a common end. Yet there are some approaches that are becoming environmentally involved among economists and with them should environmentalism engage to promote teamwork. As we will see later, a trans-disciplinarity approach into the research about sustainability is necessary and determinant. To this end Naess identifies a term, to give a status to this affirmation, *Ecophilosophy*. With this term he indicates a field of study to be collocated in the university. However from *Ecophilosophy* he distinguished the second term '*ecosophy*', which regards instead a certain philosophy of life, a point of view, a mentality that is part of our own personal life style, our approach to practical situations.

His *ecosophy* is, analogously to the previous scholars, a mental perspective that aims to reveal the harmonic interrelation existing between human being and nature, but Naess' *ecosophy* relates more to a personal philosophy of life that everyone can freely develop. There's no one only solution, each is personal and specific, but it can agree on some general issues like about the environment. Four processes in his *ecosophy* are to be considered. The first is the '*self-realization*' as expansion of the self not in the self-centred solitude, but conceived as part of the whole, including others and nature. It is not the realization of the singular one but of a large inclusive Self. The second concept is the '*Derivation*', through which he identifies the process of interconnectedness with which the parts are linked into the reality adapting to each other, and the intuition to see how they make sense in the larger structure because of their gestalt¹³¹ relations. Organisms, parts of the nature, are not a different thing from the *milieu*, the environment, but they are in relational junction with the total field (*the 'self' grows towards the 'Self'*¹³²). This sense of the small into the relational whole is something to be grasped by individuals. To mention the Indian philosophy, "*He whose self is harmonised by Yoga he sees the Self abiding in all beings and all beings in the Self*"¹³³. The third process is the '*Identification*' that consists in identifying ourselves with the natural ecosystem, whose interests are our interests. The intrinsic value of the nature must be an imperative and a

¹³¹ The term is used in relation to the meaning that the psychology of perception gave to it as ontology and conception of the life. As the most famous slogan of it is 'the whole is more than the sum of its parts', in the same way the human-nature system is conceived as integrated and interconnected among its parts, not mechanical sum of divided elements.

¹³² See Naess Arne (1990), p. 56.

¹³³ See *Srimad Bhagavad Gita*, Ch. 6, verse 29, mentioned in Naess Arne (1990), p. 194.

source of respect and love. We can identify ourselves with animals or plants and we do this in many ways since our childhood, through the ‘personification’ or ‘anthropomorphising’ of objects and creatures as a game, or simply experiencing our natural empathic capacity, that makes us feel what another sentient feels. When we feel sorry for hurting a living being we are identifying ourselves with him thanks to our empathy.¹³⁴ *The greater our comprehension of our togetherness with other beings, the greater the identification, the greater care we will take.*

Comparing with the traditional ecology Naess’ *ecosophy* requires what is said to be a ‘deep’ approach to environmentalism. His attitude is first of all a not anthropocentric approach to the environmental problems. The consequent ‘Deep Ecology’ movement that developed from Naess, is centred on the ecosphere and oriented to ‘eco-centric’ solutions to environmental problems. The human being is seen in intrinsic relation with others organisms and in the milieu that excludes the exploitation, suppression or use of other parts of the system. Every human or non-human life has, in the Deep Ecology perspective, an inner value that condemns damage or exploitation for human purposes unless it is for vital needs. In this sense, humans are required to diminish or manage their interference with non-human beings in a balanced and harmonic way, in order to preserve the richness and diversity of life forms and their habitat. Our presence on the planet is indeed massive and our interference is too excessive. This perspective is placed in contrast with the traditional ecology movement, called by him “shallow” and similar to the “Weak Sustainability” perspective, still inspired by the anthropocentric and utilitarian culture of materialistic accumulation and profit’s growth. More than the lack of ethical implication, what the ‘shallow’ ecology misses, for Naess, is an *explicit concern with ultimate aims, goals and norms.*¹³⁵

New consciousness, new culture: Aesthetics, Spirituality and “Deep Ecology”

*Averting the environmental disasters ask for a revocation of the whole life-style, even of the very principle of the advanced industrial societies, and will hurt an endless number of interests.*¹³⁶

Promoting a culture of sustainability will mean creating long-term strategies that are practised by the people in their daily life. The daily routine will have to follow sustainable principles and

¹³⁴ See Naess Arne (1990), p.175

¹³⁵ See Naess Arne (1990), p. 33.

¹³⁶ See Jonas Hans (1984), *The Imperative Responsibility. In search of an Ethics for the technological Age*, Chicago: University of Chicago Press, p. 202

pathways, but before realising these concrete outcomes a new deep consciousness must be developed, one of awareness, engagement and responsibility.

The role of Aesthetics in reawakening Spirituality

All the four voices mentioned above strive for a deep radical change in the cultural assets and in the mentality and perception of the environment. All of them, in different ways and more or less profoundly, refer to the need of recovering a spiritual dimension in the perception of itself by the humanity and its intention towards the world. This spirituality, that doesn't need to be conceived necessarily in religious terms, implies a turn from the anthropocentric conception of the humankind to an intuition of harmonic belonging to the whole reality, according to which there is no antagonism or fronts between us and the nature, but all the elements are part of the same totality and not taking care of the environment corresponds to not taking care of ourselves. Many scholars from literature, poetry and arts' fields¹³⁷ have been denouncing in the last decades the dangerous degeneration of the modern prototype of social subject and life-style, condemned to consumerism, technological progress, mechanisation and monetization of the life. They condemn the separation between the self and the nature outside, product of an historical development typical of the western society, in which our inner essence is disconnected from the totality of the world and we perceive ourselves as isolated, self-referenced, self-absorbed and in competition with each other and with the rest of the world.

*Our Western ontology of separation of human from world has resulted in a state of narcissism and anaesthesia, the opposite of aesthesis; a disconnection "between what is thought, said and written and what the senses see, the heart feels and the world suffers".*¹³⁸

According to them, our perception of the reality is dominated by hyper-rational analysis, technics and utilitarian action and we can't perceive our deeper sense of being in the world, a world that is "over humanised"¹³⁹. We are alienated from the aesthetics, the intrinsic capability to feel the beauty and to conceive us in harmony with nature. To limit this alienation we need to recover the aesthetic experience of the reality and of the nature that can re-educate the soul and the heart to

¹³⁷ See Bergmann Sigurd, Blindoc Irmgard and Ott Konrad. (2013), *Aesth/Ethics in Environmental Change, Hiking through the arts, ecology, religion and ethics of the environment, Studies in Religion and the Environment* (Vol. 7), Berlin: LIT Verlag, p. 85.

¹³⁸ See Carruthers Beth, "Call and Response", in Bergmann S., Blindoc I. and Ott K. (2013) , p. 133-136, referring to James Hillman's aesthetics.

¹³⁹ See Clingerman Forrest, "Working within the Frame, Breaking Outside the Borders: Intersections in the theological Experience of Art and Place", in Bergmann S., Blindoc I. and Ott K. (2013), p. 85.

the beauty, to respect and feel part of it and to strength therefore an ethical attitude of responsibility towards it, not imposed by moral norms, but felt through wonder and spontaneous intuition. They call for

*An adequate spiritual vision for our ecological era. [...] Such awareness leads to a profound spiritual and ethical awakening, to a new way of perceiving and insightful political actions. Wonder can galvanise this human energy, imagination, wisdom, insight, to learn the Earth's dynamics and educate an ethical imagination and sensitiveness.*¹⁴⁰

Through the aesthetic contemplation of the beauty and of the nature we can educate our sensitiveness to fill active part of the reality and therefore responsible for it, stimulating a sense of engagement. This should allow on a first stage to reconcile the soul and the emotions with the mind and the rational thinking, and on a second stage our self with the world that we usually perceive as external, separated and detached.

The prospect of Deep Ecology and the controversies of the movement

*For the shallow ecological movement the task is essentially one of 'social engineering', modifying human behaviour through laws and regulations posed by ministries and departments of the environment – for the short-term well-being of humans. Those political questions are significantly different from those of the deep movement.*¹⁴¹

This claim to recover a sense of unification and respect of the nature has been pursued by the “Deep Ecology” movement, based on Naess’ thought. N. conies this expression in 1973 and initially aimed just to describe theoretically the sense given to the “deep” questioning of his “ecology” in comparison with the superficial “shallow ecology”. In order to state the perspective of the Deep Ecology he elaborates eight principles:

- 1- The well-being and flourishing of human and nonhuman life on Earth have value in themselves. These values are independent of the usefulness of the nonhuman world for human purposes.
- 2- Richness and diversity of life forms contribute to the realization of these values and are also values in themselves.
- 3- Humans have no right to reduce this richness and diversity except to satisfy vital human needs.

¹⁴⁰ See Heather Eaton, “Forces of Nature”, in Bergmann S., Blindoc I. and Ott K. (2013), pp. 120-123.

¹⁴¹ See Naess Arne (1990), p. 162.

- 4- The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.
- 5- Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.
- 6- Policies must therefore be changed. These policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.
- 7- The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent value) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great.
- 8- Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.

The conception of the world of deep ecologists is characterised by the metaphysics of interconnectedness and interrelation. The core values are taken from Naess *ecosophy* and re-elaborated in the context of the movement that the Deep Ecology will develop. Every element of the reality is seen as interrelated to the others and no one has higher value than the others. All beings, as the principle of “biospherical egalitarianism” indicates, share the same right to life and oppression or exploitation of any of them by others is not admitted unless for extreme justified reasons such as survive. It derives that the humans cannot exploit the environment, but they should take from nature the indispensable to satisfy basic needs. Beyond that, we should develop a different awareness towards the nature, where we are not external consumers, but we are part of it and we realise ourselves in it through the process of identification with it and self-realization. Naess proposes a new paradigm where the individual selfhood is conceived in the large and holistic identification with the environment. We shouldn’t conceive ourselves as singular bodies isolated from the rest, but as identified with the large rest of life. If we see it this way it becomes consequential that defending and taking care of the nature means also taking care of ourselves, as part of it. It is in this sense that he speaks about self-realization, as an enlargement of our self-love towards the entire environment and, in doing so, as the “actualization of our greatest potentiality for being”.¹⁴²

Feeling responsible for the nature shouldn’t come, for Naess, from moral duty or legal imposition, but, in the prospect of the Deep Ecology, as inner inclination and spontaneous deliberation. This inclination is supposed to fight the instrumental attitude that the humans adopt towards non-humans,

¹⁴² See Freya Mathews, “Deep Ecology”, in Dale Jamieson edited by (2001), *A companion to Environmental Philosophy*, Malden (Mass): Blackwell Publishers Inc., p. 252.

in the name of an “intrinsic value” proper to every being. Recognising an “intrinsic value” in ethics means that every element in nature has its own *raison to be*, its own value and end in itself, independently of the utility that it may have for humans. Hence the interference of human activities in the environment, where non-humans live and have the same ethical value, should be reduced as much as possible, to allow the natural processes to happen freely and adjust themselves. The attempt to which deep ecologists point is obviously to turn the anthropocentric outlook of modern western culture into a non-anthropocentric one and they try to do it through equalising the ethical value of living beings. This position opens to several controversial points that, together with other weaknesses, provoked the raise of many critics to the movement.

From the first definitions of “deep questioning” of Naess’ ecology, the idea of a deeper approach to environmental problems developed in an activist movement in the 80s, when the principles mentioned above have been presented as representative platform in the book “Deep Ecology: Living as if Nature matters”, by Naess in cooperation with George Sessions and Bill Devall. At that point, as Freya Mathews states, Deep Ecology shifted from philosophical paradigm to activist movement and it has been useful to inspire the environmental mobilization of the 70s and 80s.

Although the Deep Ecology perspective has had an important role in the political dynamics concerning environmental activism and awareness of the last decades, the theory generated with the time many weak points and levities that attracted critics from several sides of the academics, like the social environmentalism or the ecofeminism. It has been criticised the tendency of deep ecologists to remain strict and absolute in their definitions and intolerant towards positions that didn’t accept totally their principles. The invitation to agree with their non-anthropocentric view of the reality seemed to require the total subscription of its delineations, even though they are problematic.

The reason that deep ecologists mention for the modern anthropocentrism is the western historical development (in particular the role played by religion in this) of the dichotomy between human and nature. However, this explanation of the detachment of the mind from the external world misses, according to Ecofeminists and Social ecologists¹⁴³, the determinant factor of the domination as intrinsic tendency in the human nature. Domination is a tendency that humans have always shown in many contexts and it simply apply to the nature as it has applied to other humans from humans or to woman from men. Humans tend to establish relationships of dominance and this doesn’t depend on the geography or on the culture, but it is an essential factor to consider when understanding

¹⁴³ See Dale Jamieson (2001).

anthropocentrism and the ways to change it. Most part of the social dimensions is indeed hierarchical, in consequence of this tendency, and the same happens when we consider humans and non-humans.

Also deep ecologists stress the importance of wilderness conservation and the reduction of human interference as much as possible. In this sense nature should be let doing alone, excluding the humans in it. They justify human utilitarian intervention only in case of valid extreme reasons or to fulfil basic needs. Yet, what means basic needs? Are they simply feeding and clothing like indigenous groups still do? This definition is impossible to apply to the modern western society. How to define basic needs in a time of waste and consumerism? It remains unclear. Deep Ecology doesn't provide practical strategies about how to behave more ethically in our modern capitalistic society and in our daily life in urban metropolises, where the idealistic aspiration to recover wilderness is impossible and it seems an irrational hope to escape reality. The eco-centric idea of wilderness, taken at the extremes, would lead the human species to self-destruction. If humans wouldn't intervene in the environment they wouldn't survive. In order to survive we do destroy life continuously (if we wouldn't destroy viruses or bacteria we would be probably already extinct), but the principle of egalitarian biocentrism doesn't admit to use this power of destruction at the expense of other beings, because they have the same right to life. There is an inner contradiction laying in the attempt to recover the unity between humans and non-humans that Deep Ecology pursues, and the risk of misanthropy in the moment when non-human nature has even priority on humans. The consequences of the concept, if considered in absolute terms, are controversial and they can arrive to the extreme try of sacrificing humanity or individuals' interests for non-humans' ones. It risks generating in what is called "Ecofascism".

The idealisation of the wilderness seems, on the contrary of the initial intentions of Deep Ecology, emphasising even more the detachment between humanity and nature, aspiring to a separation and independence of both, rather than integration. This idea of the wild with minimum artificial interference lacks also a broad and deep knowledge of the environment and the relation that indigenous populations have with it. Deep ecologists consider hunter-gatherer populations as acting in harmony with the nature, but instead they are also interventionists and they exploit natural resources as well, even if with minor gravity. Who instead kept a good harmony although intervening in the environment to satisfy human needs, are many subsistence gardening cultures leaded by women, as the Ecofeminists remember, but Deep Ecology doesn't consider them at all in its argumentations. This omission links to a broader blindness in the Deep Ecology analysis, denounced for example by Ramachandra Guha, that consists in considering the environment from a

western perspective, but asking to change attitude to non-western countries, to which, some of Deep Ecology concepts are stranger, beyond being unjust. The concept of wilderness in the sense conceived by Deep Ecology is unknown to many indigenous ethnicities and populations of the South of the world, that didn't experience the development of consumeristic and capitalistic societies. Requiring the global south to reduce pollution is another form of *ecofascism* for him, given that global South countries are not actually responsible for the environmental crisis, mostly due to the western overexploitation of natural assets.

The concept of self-realization is complex as well. In a certain sense, taking care of the nature as a way to take care of ourselves because we are a part of it, therefore defence of the environment corresponds to self-defence, has been defined as simply another form of anthropocentrism, enlarged to the whole environment instead of just to the individual self. So it doesn't really change the attitude towards the environment, but it simply enlarges the depth of it.

In general, it has been criticised that Deep Ecology remains pretty dogmatic and less elastic and tolerant towards other perspectives. Many theoretical argumentations remain also problematic and too less consistent. However, Naess opened, through spreading the Deep Ecology paradigm and philosophy, an important platform of discussion and challenge when the concerns about the environment started to arise. He contributed to the theorisation of a different paradigm and began to doubt deeply and criticise strongly the current mentality that we had (and we still have) towards the nature. Many argumentations that he inserted into a precise thought and movement are today shared wildly by many people, without necessarily belonging to an activist group or to the Deep Ecology movement.

In the end deep ecologists have the same purpose and hope of the scholars that call for a return of spirituality. Their hope is the same shared by Panikkar, Felix and others. It's the try to stimulate for a turn of mentality in order to avoid the collapse of our species.

Beyond the specific differences among each author, through their argumentations they all try to educate people to different mind-sets, more ethical, harmonic with the reality, reasonable and simply more human. Cultivating spirituality, harmony with the reality, sensitiveness and responsibility is part of the education to a culture of sustainability that would contain deeper conceptualisations of the reality and innovative strategies of thought.

In order to promote this, two of the main tools of a cultural approach to the environmental crisis are Education and Trans-disciplinarity perspectives in the research. The first to shape future people to sustainability, the second to improve the knowledge and the paradigms that we adopt, in order to understand the situation and to define the strategies. Education prepares the actors to participate in the solutions, Transdisciplinarity perspectives in the research address better and more complete standpoints and comprehension to conceive the solutions. In the next two chapters I will describe both the tools.

Chapter V - Education to sustainability

When Jane Goodall talks to the large audience of her conferences around the world, she points especially to young and children. She talks directly to them and she asks to meet the children taking part to environmental projects in the local communities. She declares in her book “Raisons for Hope”¹⁴⁴ and in her public talks, that, although the dramatic environmental crisis that we are experiencing, she still believes that we can change the things, and this hope is mostly inspired by the youth. The message that she spreads is that we can all make a different impact on the planet and that it will be especially up to the future generations the capability to deal with the future challenges. The only way to prepare them is educating them both in institutional and informal stages, transmitting them and letting them interiorizing a new way to consider themselves into the natural world and new mental skills to approach problems. To this end, beyond speaking in public meetings about environmental awareness, she promoted the foundation of educational programs and projects.¹⁴⁵

The most immediate place where this kind of education can be addressed is obviously the school. Educational programs have started to focus more on sustainability and environment, and in some cases they also introduced new goals and methodologies, like the insertion of gardening in some schools and the direct management of the gardens by the kids. However, education doesn't depend only on schools and institutions. There are many agencies that shape, formally or informally, and they include also mass media. Every occasion of confrontation and experience that can enrich the sensitiveness and knowledge towards the environment is precious for young persons and these occasions are many. Civil Society movements and sustainable habits diffused among citizens are growing, and this happens mostly without control of authority or political management. It comes spontaneously from the bottom and divulges alternative ways to participate in the community, to consume and to choose.

In this chapter I will first describe the consumeristic lifestyle as determinant element to fight against and to change thanks to the education, in order to promote sustainable modes of living. I will explain how consumerism works as one necessary aspect of the capitalistic economic model,

¹⁴⁴ See Jane Goodall and Phillip Berman (2000), *Raison for Hope: a Spiritual Journey*, New York: Grand Central Publishing, and *Jane's Journey* (2010), documentary directed by Lorenz Knauer, Germany.

¹⁴⁵ See *Jane Goodall Institute*, a global non-profit organisation, supporting the youth program *Roots and Shoots*, a project to *nurture values of civic responsibility, environmental stewardship, and peace, in order to create community-based solutions* to big challenges run by young people. <http://www.rootsandshoots.org/about>

quoting Bauman and his point of view about it. Then I will delineate the two channels through which education to sustainability can be socially promoted: the institutional pathways defined by the international frameworks and the informal channels through the Civil Society bottom activism.

Consumerism and its unsustainable education to “consume” the Nature.

No one, declares the Pope John Paul II, who understands the aesthetic and moral dimensions of human life can accept either the social inequalities that disfigure world society or the specific form of alienation inherent in consumerism.¹⁴⁶

The first issue to consider to promote a culture of sustainability is the consumeristic life style. Consumerism is part of the engine of the economic model founded on exploitation of natural assets and waste release, and that drove us towards the ecological disasters.

Every society consumes in order to survive. ‘Consumption’ means using things to satisfy needs and desires and it is properly part of every living organism, as the organic processes take place through transformation and consumption of energy and matter, like it happens in the metabolic cycle. In this sense consuming is normal. The news of the industrial society was the introduction of money to intermediate the action of taking goods to satisfy needs, so that the good (and beyond the desire) started to be bought. The process of monetisation and materialization of the human desires was followed by the growth of production, availability and choice of goods (with the industrial and mass production). In our society the action of consuming assumes a different meaning, far from the natural one. Consuming commodities, that we wouldn’t naturally need, in the modern world, becomes a social pattern after the “consumerist revolution”. Consuming excesses of goods and indulging the desire to own them has become a “purpose of existence”¹⁴⁷. According to Bauman¹⁴⁸ our post-modern society of consumerism differs from the previous one because, while before people were occupied mostly to produce, it was a society of producers, today we are occupied to consume as much as possible, to keep going a system based on this. Before entering the society of consumers, producers’ purpose was ensuring security, reliability and durability in the time. The wish of producers was to appropriate and possess goods that were time-resistant, to gain comfort and esteem. Consumers, on the contrary, wish the “gratification of needs” researching more volume and intensity of the desires, that are actually induced by the availability to have them, and not because

¹⁴⁶ See Norman Birnbaum, *After the Disappointment of the Epoch*, in Walser Michael (1995), p. 263.

¹⁴⁷ See Bauman Zygmunt (2007), *Consuming life*, Hoboken (NJ): John Wiley & Sons, p. 26.

¹⁴⁸ See Bauman Zygmunt (2009), “Dall’etica del lavoro all’estetica del consumismo”, in *Lavoro, Consumismo e nuove povertà*, Troina: Ed. Città Aperta.

they are real needs. The speed to live these induced desires is high: they are instantaneous and the possession of something needs to be immediately replaced with something new, as soon as the satisfactory power of the owned disappears. The possess of new goods generates new desires and new desires aim to possess new goods, in a vicious circle of dependence: new needs need new commodities; new commodities need new needs and desires; the advent of consumerism augurs the era of 'inbuilt obsolescence' of goods offered on the market and signals a spectacular rise in the waste-disposal industry.¹⁴⁹ The consumerist satisfaction of needs is illusory and instantaneous. It lasts short time, it's an instant and this instant remains isolated with other many instants of the daily happening. B. describes the time dimension of the consumeristic society as "pointillistic", not linear nor circular, but interrupted and inconsistent, without continuity and integrity in its parts. So it is the way how we enjoy consumeristic desires, like "eternal instants" and self-enclosed monads, each of which is a potential chance project, that remains however wasted, not developed, not realised, as it is just an isolated point, unlinked by causal logic with previous and next moments. Consumers are induced to jump from one good to the other, from one instant to the other, as long as they provoke pleasure. When their satisfactory effect ends, they must move to the next point, in a continuous turnover of commodities to be appropriated and then thrown away. The circle is based on psychological compulsion and addiction; actions are not made after a critical reflection and analysis, but following the categorical impulse of desiring. The hidden aim of consumerism is the illusion of gratification, but that never completes itself. Consumers buy trying to satisfy their desire, but the desire remains always partly unsatisfied. It is in the inner nature of the compulsory dependency to own commodities the impossibility to satisfy individuals' desires, because the entire economic system is based on this. Capitalistic and consumeristic economy survives thanks to the flow of goods that are consumed. When consumers stop consuming the economy collapses, therefore it developed a functioning that implies a vicious dependency, the more we try to satisfy the desire to own things, the more the desire augments.

The promise of satisfaction remains seductive only as long as the desire stays ungratified and the client is not completely satisfied...[...] Consumer society thrives as long as it manages to render the non-satisfaction of its members perpetual. The method of achieving such an effect is to denigrate and devalue consumer products shortly after they have been hyped into the universe of the consumers' desires.¹⁵⁰

¹⁴⁹ See Bauman Zygmunt (2007), p 31.

¹⁵⁰ Id., p.46.

As many intellectuals already explained, the culture of consumerism requires the recognition of a high value given to the material things and possession. Social esteem depends on the material property that is shown and that identifies the status of consumer. Social recognition is externalized in the show of the owned that any individual can support. Consumerism is based on materialization and on the alienation that comes from the reduction of the reality to mere objects of manipulation that our technologies provoke: “Consumers’ subjectivity is made out of shopping choices made by the subject; its description takes the form of the shopping list. What is assumed to be the materialization of the inner truth of the self is in fact an idealization of the material-objectified-traces of consumer choices”¹⁵¹. To obtain adaptation to such culture the individuals are being educated since their early childhood to consume. They learn to accumulate many objects without particular value and to receive ready things to be used and wasted. The activity of “doing it yourself”, of playing through building something, training the own fantasy, reaching an aim through personal engagement and patience, cooperating with peers, is often substituted by the consumption of a ready object that is enjoyed alone. The value given to things is different from the one given to something that is the result of personal creativity and activity, while the impulse to possess the thing seduces the egoistic tendency to isolate the self and being jealous of what one has got. Consumerism induces to enjoy the pleasure of commodities in solitude, but expects every individual to be part of the big group of the consumeristic society. It doesn’t favour the shaping of groups of people that share interests and company, but it induces to stand together united by the consumeristic behaviour, but mentally and emotionally isolated. Even when women go shopping together, their enjoyment of things bought is individual. B. describes this way of togetherness as being part of ‘swarms’. Swarms of individuals move without any real form of union typical of ‘groups’. This attitude weakens progressively the meaning of belonging to the community. The sense of community made by the sharing and the reciprocal solidarity is destroyed by the materialization and the individualism of the consumption.¹⁵² On the contrary, the value of the community, lays in the availability to restrict every own possibility of satisfaction, for the health of the group¹⁵³: “the replacement of the power of the individual by the power of community constitutes the decisive step of civilization. The essence of it lies in the fact that the members of the community restrict themselves in their possibilities of satisfaction, whereas the individual knew no

¹⁵¹ See Bauman Zygmunt (2007), p. 15

¹⁵² Id. , p. 78: “What bonded the dinners into a group was the cooperation, accomplished or expected, in the preceding process that started in the kitchen and even beyond, in the family field or workshop, of productive labour and sharing consumption of what derived from that. The ‘unintended consequence’ of ‘fast food’, ‘take away’ or ‘TV dinners’ is to make the gatherings around the family table redundant and putting an end to shared consumption. ‘Fast food’ is there to protect the solitude of the consumers”.

¹⁵³ See Freud Zygmunt (2002), *Civilisation and its Discontents*, London: Penguin.

such restriction". Everyone, in the consumeristic society, is free to buy and enjoy his materiality alone, but the important is that he takes part in the economic process. Who doesn't fit with this model, who is not able to consume because he's poor or rejects the conformist way of living, is excluded and emarginated. This is the destiny of every poor, according to Bauman, or socially deviant and problematic individual (grouped by him into the category 'underclass'), who is incapable to make himself an attractive product to be caught by the market. People who remain unemployed because they don't possess the 'qualities and skills required' from the market, are considered problems and blamed as failed consumers. They are guilty of the fault of not being 'saleable' in the labour market. Not by chance a common sentence used in the labour market is "Be able to sell yourself" showing to own the qualities that the system needs to reproduce itself, that is being a good consumer and help in improving the processes of the system. Being member of the consumeristic society implies respecting those conditions.

'To consume' therefore means to invest in one's own social membership, which in a society of consumers translates as 'saleability': obtaining qualities for which there is already a market demand, or recycling the qualities already possessed into commodities for which demand can go on to be created¹⁵⁴

Consumerism and isolation of the self are in this sense a menace for the ethics of the society. Ethical feelings like solidarity, communion, trust and responsibility towards the other people and the environment are values that need to be trained and socially reinforced. The consumeristic culture instead deteriorates them. The responsibility towards the Other taken in the community, refers here just to the self and his benefits as individual and consumer: "The concept of responsibility and responsible choice, which resides before in the semantic field of ethical duty and moral concern of the Other, have moved to the realm of self-fulfilment and calculation of risks".¹⁵⁵ Lack of social ethics doesn't just erode the human capacity of living together, sharing and being sympathetic with one another, but it also promotes an attitude to the reality that is totally irresponsible. Since we can find everything ready to consume, since the welfare state system is set in the way to make citizens dependent on its services, since the market wants us to act compulsively and without criticism and information, our role as citizens is banished to a passive consumption also of politics and a detachment from any argument that requires to take responsibility and act. The political life of the passive consumer citizen is relegated to the elections' vote and to the uninterested listening of flow of information from the media. This cultural lack of criticism and

¹⁵⁴ Bauman Zygmunt (2007), p.56.

¹⁵⁵ Id., p. 92.

responsibility is the first thing to fight if we will want to deal with global problems such as the environmental crisis.

The environmental disaster that we experience nowadays is a product also of the consumeristic economy. The lack of responsibility lays in the dramatic blindness (and in fact wanted blindness) towards the phenomenon. Consumerism is based on excess and waste. The accumulation and disposal of commodities doesn't take into any account the limits of the natural ecosystems to support it.

Finding a way to reconcile freedom with responsibility is one of the central challenges of living in a consumer society. The more that consumer society encourages choice, updating, newness, waste and the superfluity of outdated technology, the more the link between freedom and responsibility weakens.¹⁵⁶

Consumerism is definitely an unsustainable model to which we are shaped to adapt. However this model is not tolerated anymore by the ecosystem, therefore all institutions, educational agencies, media, have to be readdressed in their perspectives, purposes and tools.

Institutional pathway of education to sustainability: the goals according to the international frameworks

Already twenty years ago it was common to have in the primary schools some parts of programs devoted to environmental projects. Nowadays it is possible at school to participate in activities that have to do with the nature and they are likely to be given a big importance. Beyond the projects of gardening, there are guided visits in factories¹⁵⁷, hand-made production of food and objects, there are even schools entirely located in the woods¹⁵⁸ where children from 3 to 6 years live their "kindergarten" totally in the wild nature.¹⁵⁹ All of these initiatives contribute to shape a citizenship capable to support sustainable patterns of development and consumption.

The global citizenship that will grow in the next decades should develop some skills, competencies, receptiveness and knowledge, that define a kind of intelligence that is compatible with the new patterns that the environmental challenge requires. We are right now not able to deal properly with

¹⁵⁶ Id. , p. 92.

¹⁵⁷ See the project "Fattorie didattiche", that establishes a cooperation between local farms and schools, in order to guest children and practically live with them "farm's days", doing practical activities, visiting the farms, having contact with plants and animals and learn about nutrition, nature and community. <http://www.fattoriedidattiche.biz/>

¹⁵⁸ See the Italian project "Asilo nel Bosco" <http://www.asilonelbosco.it/>

¹⁵⁹ It's interesting to reflect on the fact that these new trends often bring back up some of the ways of life and education that were normal just 40-50 years ago in every land area far from metropolises and big cities.

the ecological problems. We are on the way to define the strategies to become so, but we proceed very slowly and much hope is directly put in the new generations that are both the victims and must be also partly the solvers of what we, previous inhabitants, will not have managed. This means that these future citizens will have to grow internalising different models and mentalities from ours, if we want them to be part of the cultural change needed. They won't just need to learn the respect and sensitiveness for the nature, but they will experiment new ways of thinking and new paradigms, more appropriate and effective than the ones to which we are still used, to approach new global problems. They will be capable of an intelligence that is adequate to the challenges that will come. I will call this kind of intelligence 'sustainable mentality'.

*A society of this kind would be a learning society, one able to respond to new exigencies because the persons who constitute it are capable of replacing, after critical reflection together, acquired and accustomed ideas and habits with new ones. It would be a society in which presently intangible achievements in humane skills are made more tangible, in which leadership would be exemplary and pedagogic rather than narcissistic and solitary.*¹⁶⁰

To develop a sustainable mentality it is essential to start to familiarise with certain models of learning and practices since the early childhood. The job of shaping future generations to sustainable patterns is of the education. Education is the engine of the change towards sustainability and the instrument to produce long-term responses.

Quoting the DESD Implementation Scheme 2005- 2014, education has the key role for the change:

Education must inspire the belief that each of us has both the power and the responsibility to effect positive change on a global scale.

It is the primary agent of transformation towards sustainable development, increasing people's capacities to transform their visions for society into reality.

It fosters the values, behaviour and lifestyles required for a sustainable future.

Education for sustainable development is a process of learning how to make decisions that consider the long-term future of the equity, economy and ecology of all communities.

*Education builds the capacity for such futures-oriented thinking*¹⁶¹.

¹⁶⁰ See Birnbaum Norman, *After the Disappointment of the Epoch*, in Walzer Michael (1995), p. 291.

¹⁶¹ See UNESCO and DESD (2005), *DESD IIS Draft International Implementation Scheme (2005-2014)*, http://portal.unesco.org/education/es/file_download.php/e13265d9b948898339314b001d91fd01draftFinal+IIS.pdf

Readdressing education systems in base of the concept of sustainable development means modifying social and political structures and changing the focus to which the civil society is committed. The future education will not have to educate to the culture of the growth and consumption, but, on the contrary, it will have to focus on some principles that are universally shared by all and will contribute to inspire values that will characterise a global community of belonging, and common goals towards which to work.

In order to define the values that we should share to be part of a global citizenship committed to embrace peacefully the future global challenges, it has been created the Earth Charter¹⁶², an international Declaration of principles useful to build a sustainable, just society. The Charter describes an ethical perspective based on environmental protection, human rights, equitable human development and peace, and it declares them as interrelated and universal principles. The proposal that the charter encourages is the building of a global peaceful and effective partnership that will enable us to work together and avoid destroying ourselves and our planet. It seeks to develop a shared vision of new paradigms to adopt at individual, community, business and institutional level, in order to pursue fundamental changes in “our values, institutions and ways of living”. As the premise of the Charter tells:

We must realise that when basic needs are met, human development is primarily about being more, not having more. (...) The emergence of global civil society is creating new opportunities to build a democratic and human world. Our environmental, economic, political, social and spiritual challenges are interconnected, and together we can forge inclusive solutions.

Having defined the large aim, the Charter lists 16 principles, divided in 4 sections, and they are:

I. RESPECT AND CARE FOR THE COMMUNITY OF LIFE

1. Respect Earth and life in all its diversity.
2. Care for the community of life with understanding, compassion, and love.
3. Build democratic societies that are just, participatory, sustainable, and peaceful.
4. Secure Earth's bounty and beauty for present and future generations.

II. ECOLOGICAL INTEGRITY

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

¹⁶² See *The Earth Charter* website, <http://www.earthcharterinaction.org/content/pages/Read-the-Charter.html> January 2015.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.
7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.
8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.

III. SOCIAL AND ECONOMIC JUSTICE

9. Eradicate poverty as an ethical, social, and environmental imperative.
10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.
11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.
12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

13. Strengthen democratic institutions at all levels and provide transparency and accountability in governance, inclusive participation in decision making and access to justice.
14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.
15. Treat all living beings with respect and consideration.
16. Promote a culture of tolerance, nonviolence, and peace.

To realise a world community able to observe those values we need a “change of mind and heart”. We must learn to live sustainably at local, national and international level, sharing the responsibility to prepare a better world for our children.

In the wake of the Earth Charter principles, the ESD (Education for Sustainable Development) program has been created in 1992, through the declaration of Agenda 21, result of the Rio Summit, in order to provide a framework as reference to readdress and re-think the education systems towards these aims. Through the ESD governments and the international community offer a trace to address sustainability, by identifying knowledge, issues, perspectives, skills, and values in each of the four components of sustainability: Environment, Society, and Economy, with Culture as cross dimension. The concept of sustainable development is not static, but it evolves and changes

continuously. Its definition is related to the areas indicated, according to the Unesco Associated Schools Project Network (ASPnet)¹⁶³:

- Society: an understanding of social institutions and their role in change and development, as well as democratic and participatory systems
- Environment: an awareness of the resources and fragility of the physical environment and the effects on it of human activity and decisions
- Economy: a sensitivity to the limits and potential of economic growth and their impact on society and on the environment, with a commitment to assess personal and societal levels of consumption out of concern for the environment and for social justice.
- Culture: an understanding of the values that influence and shape individual choices and societies, faiths and philosophies; the ways in which relationships with others and the natural world are formed, changed and maintained, and the creative means to express these values and relationships.

The ESD is considered a main focus towards sustainability and the Agenda 21 mentions it in each of the 40 chapters. In order to give more centrality to it and strengthen the role of education, training and public awareness in sustainable development initiatives, in 2002 the United Nations General Assembly at the Johannesburg World Summit on Sustainable Development (WSSD) opened the Decade of Education for Sustainable Development 2005- 2014 (DESD), that identifies education as *heart of approaches to sustainable development*.¹⁶⁴

*The goals of it are to provide an opportunity for refining and promoting the vision of, and transition to, sustainable development – through all forms of education, public awareness and training; and to give an enhanced profile to the important role of education and learning in sustainable development.*¹⁶⁵

¹⁶³ See UNESCO Associated Schools (2009), *Education for Sustainable Development, Second Collection of Good Practices*. <http://unesdoc.unesco.org/images/0018/001812/181270e.pdf>

¹⁶⁴ See UNESCO and DESD (2005), *DESD IIS Draft International Implementation Scheme (2005-2014)*, http://portal.unesco.org/education/es/file_download.php/e13265d9b948898339314b001d91fd01draftFinal+IIS.pdf

¹⁶⁵ Id.

The Decade engaged in creating synergy with other initiatives like the Millennium Development Goals (MDGs)¹⁶⁶, that focuses on reduction of poverty, the Education for all (EFA)¹⁶⁷ for the universal access to education, the United Nations Literacy Decade (UNLD)¹⁶⁸, aiming to provide adults education and the Global Citizenship Education (GCE)¹⁶⁹, the area of work for UNESCO's Education Programme (2014-2017). Together with other institutions and initiatives they seek to:

- Promoting and improving quality of basic education
- Reorienting educational programmes towards sustainable paradigms
- Building public understanding and awareness, that means an active, informed and responsible population
- Providing practical training, which means understanding, accepting and adopting sustainable practices and policies.

This doesn't mean just developing appropriate education programmes, but also leading young and future adults to adopt sustainable and responsible lifestyles (particularly in the Western countries)¹⁷⁰

¹⁶⁶ See UNDP website, <http://www.undp.org/mdg/> The Millennium Development Goals (MDGs) lists eight international development goals established in base of the Millennium Summit of the United Nations in 2000. All 189 United Nations member states at the time and at least 23 international organizations, committed to help achieve the following Millennium Development Goals by 2015: 1-To eradicate extreme poverty and hunger; 2-To achieve universal primary education; 3- To promote gender equality and empower women; 4-To reduce child mortality; 5- To improve maternal health; 6-To combat HIV/AIDS, malaria, and other diseases; 7- To ensure environmental sustainability; 8- To develop a global partnership for development.

¹⁶⁷ The Education for All (EFA) movement is a global commitment to provide quality basic education for all children, youth and adults. It was created by the engagement of 164 governments at the World Education Forum (Dakar, 2000), and identified six goals to meet learning needs of all children to be met by 2015 through the cooperation of governments, development agencies, civil society and private sector. As the leading agency, UNESCO focuses its activities on five key areas: policy dialogue, monitoring, advocacy, mobilisation of funding, and capacity development. <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/>

¹⁶⁸ The United Nations Literacy Decade (UNLD), ended on 31 December 2012, was a UN initiative launched in 2003 to provide an impetus for achieving the six Education for All (EFA) goals and developing literate environments, essential for eradicating poverty, reducing child mortality, curbing population growth, achieving gender equality and ensuring sustainable development, peace and democracy. The slogan of the Decade, "Literacy as Freedom" recognized literacy as a human right to be actively promoted and defended.

<http://www.unesco.org/new/en/education/themes/education-building-blocks/literacy/un-literacy-decade/>

¹⁶⁹ Global citizenship education (GCE) is one of the strategic areas of work for UNESCO's Education Programme (2014-2017) and one of the three priorities of the UN Secretary-General's Global Education First Initiative (GEFI) launched in September 2012. The purposes are equipping learners with values, knowledge and skills that are based on and instil respect for human rights, social justice, diversity, gender equality and environmental sustainability and that empower learners to be responsible global citizens. The three-pronged approach includes: policy dialogue in connection with the post-2015 education agenda, providing technical guidance on GCE and promoting transformative pedagogies, Clearing-house function. <http://www.unesco.org/new/en/global-citizenship-education>

¹⁷⁰ See the YouthXchange web site, developed to address sustainable behaviours and ways of life. <http://www.youthxchange.net/main/home.asp>

and enhancing the commitment of cities to favour sustainability, given that half of the world population lives in urban areas.

On a broader level, The Report of the UNESCO Commission on Education in the Twenty-first Century *Learning: The Treasure Within*¹⁷¹, claims the need to manage and balance through the education several tensions and challenges of our historical time. They include:

- *The tension between the global and the local*: Education should shape to be both world citizens and local community members
- *The tension between the universal and the individual*: Education should teach recognise the risks and opportunities of globalisation and to promote the realization of each member in his own culture
- *The tension between tradition and modernity*: Education should teach to valorise history and cultural traditions, balancing these with the ethical discernment about change and innovation when they are necessary and worthwhile
- *The tension between long-term and short-term considerations*: Education should give the tools to balance short- and long-term goals, and to train patience and wisdom necessary to find solutions to the problems of the future
- *The tension between competition and cooperation*: Education should promote competition just in a positive way, as engine of incentives and improvement, and it should foster cooperation and solidarity, sources of unity
- *The tension between the spiritual and the material*: Education should shape people in harmony with their spiritual and cultural traditions and values, aware and critical about the increasingly materialistic and consumeristic tendency of our modern society
- *The tension between the existing curriculum and important new areas of knowledge*: Readdressing education towards those goals must happen balancing the best of traditional curriculum content with important new areas of learning

The training of balanced persons who are capable to live in harmony and peace with others and with the environment around us depends on all these “tensions” to balance. The aspiration is high and the challenges accepted are deeply engaging. The success or failure in dealing with future global problems will depend also on how we will globally respond to these challenges.

¹⁷¹ UNESCO Education for Sustainable Development in Action (2010), *ESD Lens: A Policy and Practice Review Tool, Learning & Training Tools no.2*. <http://unesdoc.unesco.org/images/0019/001908/190898e.pdf>

Education for Sustainable Development.

*Education for sustainable development must share the characteristics of any high-quality learning experience, with the additional criterion that the process of learning/teaching must model the values of sustainable development itself.*¹⁷²

According to Unesco, ESD programmes should base on 5 pillars in order to shape people in the perspective of sustainability, global stability and resilient societies. They should provide people capable of:

- Learning to know
- Learning to do
- Learning to live together
- Learning to be
- Learning to transform oneself and the society

The process of learning is considered as life-long and investing in those pillars should equip people to continue their learning travel also after school and to adapt to sustainable ways of leaving, being flexible and opened to the change.

To put in practice these principles ESD and DESD developed some frameworks and programmes useful to address the changes at the practical level of schools and institutions.

Combining the elements of the Unesco Sourcebook¹⁷³ for ESD, the ESD Development Lens¹⁷⁴ and the ESD Toolkit¹⁷⁵, a framework of Perspectives, Values and Skills to pursue has been defined through innovative pedagogies and educational models.

The reference values of ESD coincide mostly with the ones listed by the Earth Charter and they invite to conceive a society where individuals engage to ensure respect of human rights, equity,

¹⁷²See UNESCO and DESD (2005), *DESD IIS Draft International Implementation Scheme (2005-2014)*, http://portal.unesco.org/education/es/file_download.php/e13265d9b948898339314b001d91fd01draftFinal+IIS.pdf

¹⁷³ See UNESCO Education for Sustainable Development in Action (2012), *ESD Sourcebook, Learning and Training Tools N. 4.* <http://unesdoc.unesco.org/images/0021/002163/216383e.pdf>

¹⁷⁴ UNESCO Education for Sustainable Development in Action (2010), *ESD Lens: A Policy and Practice Review Tool, Learning & Training Tools no.2.* <http://unesdoc.unesco.org/images/0019/001908/190898e.pdf>

¹⁷⁵ UNESCO Education for Sustainable Development in Action (2006), *ESD Toolkit, Learning & Training Tools N°1.* <http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf>

peace, tolerance, cultural integration, poverty reduction, health, gender equality, environmental protection and social justice.

With the “Perspectives” the following statements are recognised:

- Environmental protection and human-centred development are considered together, not separately.
- There must be a balance and integration of environment, society, and economy.
- States have a right to development, but must respect geographic boundaries.
- Partnerships can achieve more than solitary action.
- Social and environmental problems change through time and have both a history and a future.
- Contemporary global environmental issues are linked and interrelated.
- Systems thinking or a whole-systems approach should be used in problem solving rather than looking at problems in isolation.
- Humans have universal attributes.
- Local issues must be understood in a global context and we should realize that solutions to local problems can have global consequences.
- Individual consumer decisions and other actions affect and give rise to resource extraction and manufacturing in distant places.
- Differing views should be considered before reaching a decision or judgement.
- Economic values, religious values, and societal values compete for importance as people with different interests and backgrounds interact.
- Technology and science alone cannot solve all of our problems.
- Individuals are global citizens in addition to being citizens of the local community.
- Communities are built for all people regardless of income, ethnicity, status, etc.
- Community and governmental decision-making must include public participation. People whose lives will be affected by decisions must be involved in the process leading to the decisions.
- Transparency and accountability in governmental decision-making are essential.
- The decentralization of governmental decision-making allows people to find solutions that fit local environmental, social, and economic contexts.
- Employing the precautionary principle – taking action to avoid the possibility of serious or irreversible environmental or social harm, especially when scientific knowledge is

incomplete or inconclusive – is necessary for the long-term well-being of a community and our planet.

So as the challenges and tensions to balance have been defined, the same challenges become opportunity of promoting appropriate perspectives when structuring educational curriculums and pathways in the primary, secondary levels and the university level of education.

Implementation of ESD

According to UNITWIN/UNESCO Chair on Reorienting Teacher Education¹⁷⁶, educational systems should be reoriented considering the five components of the framework: knowledge, issues, skills, perspectives, and values and their interrelationship. To realise this, programmes, curriculums, practices and policies must be developed and rethought. Some examples of implementation programmes realised in some of the institutions involved in the international network¹⁷⁷ associated with the Chair,¹⁷⁸ established to identify the ways to achieve ESD goals, are: graduate programs at Masters' and PhD levels in ESD, compulsory ESD courses for Masters' programs in Geography and Environmental Education, Advanced Certificate programs in ESD, distance education courses in ESD, Environmental Education in College and education's Masters' Degree, ESD projects using literature and language arts at the secondary school, reviewed and revised existing courses to address sustainability, Infusion of ESD into all Math, Science, Geography, and Technology courses, and into other disciplines at undergraduate and graduate level programs such as agriculture, population education, consumer education, according to the principle that ESD is not a specific subject, but a cross element to be integrated into all aspects and subjects of learning and that is enriched and expanded by every field of study.

¹⁷⁶ In 1998, the Commission on Sustainable Development called for UNESCO to develop guidelines for reorienting teacher training to address sustainability. In turn, UNESCO created a UNITWIN/UNESCO Chair on Reorienting Teacher Education to Address Sustainability at York University in Toronto, Canada. The Chair established at the time an International Network of 30 teacher-education institutions in 28 countries to address this issue.

¹⁷⁷ See UNESCO Education Sector website, *Chair in Reorienting Teacher Education to address Sustainability: International Network*. January 2015. <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/partners/educators/teacher-education/> The International Network of Teacher Education Institutions met the first time in October 2000 and began planning strategies and methods for moving forward. It is associated with the UNESCO Chair on Reorienting Teacher Education to Address Sustainability at York University in Toronto, Canada, and it is today comprised of teacher education institutions from about 60 nations around the world. The member institutions work to incorporate sustainability into their programmes, practices and policies. Each member institution addresses environmental, social, and economic contexts to create locally relevant and culturally appropriate teacher education programmes for both pre-service and in-service teachers.

¹⁷⁸ See UNESCO Education for Sustainable Development in Action (2005), *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability*.

<http://unesdoc.unesco.org/images/0014/001433/143370E.pdf>

Education must be readdressed at local, regional, national and transnational level, involving organisations, individual practitioners and society stakeholders. This means that it has to be the result of the cooperation among Governmental and intergovernmental bodies (through policy-making and framework-setting, promoting public consultation and input, public campaigns, embedding and operationalising ESD in educational systems), Civil society and non-governmental organisations (through public awareness-raising, advocacy, campaigns and lobbying , consultancy and input into policy formulation, delivering ESD in non-formal settings, participatory learning and action, mediation between government and people), and Private sector (through entrepreneurial initiatives and training , management models and approaches , implementation and evaluation, development and sharing of practices of sustainable production and consumption).¹⁷⁹

The subjects involved will be, among others, Education Departments and Ministries, Departments engaged in sustainability topics like the Ministry of the Environment and Agriculture, structures and agencies providing services or committed with ESD, International Organisations and agencies working with governments and national policies, staff and members of the school community like principals, teachers, students, parents.

Local stakeholders, national governments and departments, together with international corps will have to implement and concretely realise the readdressing of the educational systems, adopting specific solutions and arrangements in base of the specific context. The implementation of ESD doesn't provide the conformation of every system to one universal plan, but it emphasises the importance of creating local solutions, integrated in the cultural and environmental context, through studying local issues and preserving local culture and peculiarities. Every educational system will have to refer to the general principles, skills and values recognised by the ESD, but it will be in charge to readdress curriculums and strategies in the most convenient and suitable way for the specific community and environment. In accordance with the principle of “think globally, act locally”, respecting the specificities of every context is an essential condition to resist to the risks and contain the forces of the globalisation.

To promote a quality education towards sustainability, educational models and pedagogies need to be critically revisited. Traditional methods and assets are not suitable anymore to address complex understandings and critical intelligence. Strategies like the teacher-centred method where the teacher is the provider of information and the student the passive consumer; the multiple-choice

¹⁷⁹ See UNESCO and DESD (2005), *DESD IIS Draft International Implementation Scheme (2005- 2014)*, http://portal.unesco.org/education/es/file_download.php/e13265d9b948898339314b001d91fd01draftFinal+IIS.pdf

text and other simplistic measurements; the structural dichotomy of wrong and right answers to problems; the conformed methods of transmitting knowledge reducing it to reading, counting and writing. Those assets must be overcome in favour of: individualised techniques of teaching, as guaranty of social equity, given that every individual learns in a different way; student-centred lessons and mutually searching strategies of understanding between pupil and teacher, who dresses often more the role of facilitator than of leader; real and local-issues based, participatory and complex learning, deep and creative thinking pedagogies.

In order to promote such orientation, the school cannot operate alone and isolated, but it must develop cooperation and coordination with society practitioners, according to a trans-disciplinarity principle and in the way to create a liquid dimension of learning, that is not reduced to the walls of the school, but it is a continuous process, everywhere and every time. Transdisciplinary means not reducing the perspective to the disciplinary divisions of the knowledge, but integrating it in a holistic and systemic view of the reality, where disciplines are not isolated and in contrast with each other, but they go beyond their borders. Transdisciplinarity, as I will explain later on, means cooperation between academic environments and society stakeholders. In this sense ESD can promote Outdoor Education projects, find material and topics of investigation outside the institutional building, establish missions and initiatives and make use of the resources of the community of belonging (e.g. NGOs, institutions, clubs, religious organisations, governments agencies, businesses, etc.). The implementation of ESD requires indeed the cooperation of all Formal, Nonformal and Informal sectors of education:

For a community or a nation, implementing ESD is a huge task. Fortunately, formal education does not carry this educational responsibility alone. The Nonformal educational sector (e.g., nature centres, nongovernmental organizations, public health educators, and agricultural extension agents) and the informal educational sector (e.g., local television, newspaper, and radio) of the educational community must work cooperatively with the formal educational sector for the education of people in all generations and walks of life¹⁸⁰

Schools and educational programmes should not just be theoretical sources of sustainability education. They will have to practice sustainability also in their concrete organisation and management, coherently with what is being transmitted to the pupils. This duty is resumed by the “whole-school approach” and it is realised when:

¹⁸⁰ See UNESCO and DESD (2005), *Promotion of a global partnership for the UN Decade of Education for Sustainable Development (2005-2014), The international Implementation Scheme for the Decade in brief* <http://unesdoc.unesco.org/images/0014/001473/147361E.pdf>

- ✓ The formal curriculum contains knowledge, skills, perspectives and values related to sustainability.
- ✓ Learning includes real-life issues to enhance pupils' motivation and learning.
- ✓ The school has a sustainability ethos which can be seen in the treatment of others, school property, and the environment.
- ✓ School management practices reflect sustainability (e.g. procurement, water and energy use, and waste management).
- ✓ School policies reflect environmental, social, and economic sustainability
- ✓ Interactions between the school and the community are fostered.
- ✓ Special events and extra-curricular activities apply and enhance classroom learning about sustainability.
- ✓ Pupils engage in decision-making affecting school life.

Relating instead to the pedagogic techniques and models of teaching, the Unesco toolkit gives central role to: simulations of real problematic cases, better if locally based; class discussions and team work; issues analysis techniques to learn to deal with complex questions; storytelling, useful to give life to theoretical understanding, improve the memory of situations and stimulate creativity; cross-disciplinary combination of different disciplinary elements in approaching specific topics (choosing one issue and exploring it through visual analysis, photography and text, autobiography, travel narrative, scientific documentary and so forth, integrating the sources); extracurricular activities involving environmental engagement (such as gardening, special events, community monitoring, arts, drama, music and dance events) and outdoor initiatives, that can provide a direct contact and interaction with the nature and stimulate curiosity and sensitiveness towards it.

The implementation of ESD is an engaging task for every country. Many are the factors that obstacle this process, starting from the lack of awareness and knowledge about the environmental crisis, to the economic implications of a change in the traditional system, lack of funding and policies adequate to it and lack of availability of people and communities to accept the risk of a change. For these and other reasons the transition to educational systems that give a focus to sustainability are very slow to emerge.

In order to simplify the understanding and description of a re-orientation of the school systems the "Chair on Reorienting Teacher Education to Address Sustainability" defined some basic design criteria that can be a reference point for agencies engaged in readdressing the programmes. The points are:

- ❖ ESD is locally relevant and culturally appropriate.
- ❖ ESD is based on local needs, perceptions, and conditions, but recognizes that fulfilling local needs often has global effects and consequences.
- ❖ ESD engages formal, non-formal, and informal education.
- ❖ ESD is a life-long endeavour.
- ❖ ESD accommodates the evolving nature of the concept of sustainability.
- ❖ ESD addresses content, context, pedagogy, global issues, and local priorities.
- ❖ ESD deals with the well-being of all three realms of sustainability – environment, society, and economy.
- ❖ ESD is not imported from another cultural, economic, or geographic region.
- ❖ ESD is not “one size fits all,” but must be created to account for regional differences.

The skills of a Sustainable Mentality

The implementation of ESD is a huge engagement because it requires moving entire structures at political, economic, social level. When planning programmes and pathways considering ESD much impediment is due to practical and bureaucratic reasons. Beyond the practical implications of such a process there is a theoretical core that aims to shape people capable of what I called upper “sustainable mentality”. With this expression I indicate a mentality suitable to future possible conditions of life. A *forma mentis* capable to deal with the challenges that the future will propose and in accordance with the principles of sustainability described above.

Which skills should a “sustainable mentality” provide?

Among the many capacities that ESD should train there are:

- Envisioning, that means being able to imagine a better future, in the perspective of knowing where we want to go, to be better able to work out how to get there.
- Critical thinking and reflection, that means learning to question our current belief systems, assumptions, perspectives and opinions. Critical thinking skills help people learn to examine economic, environmental, social and cultural structures.
- Systemic thinking, that means acknowledging complexities and looking for links and synergies when trying to find solutions to problems.

- Building partnerships, which means promoting dialogue and negotiation, learning to work together.
- Participation in decision-making, that means empowering people and encouraging active civic participation
- Transformative perspective, that means being flexible and ready to adapt to fast change and new challenges.
- World mindedness, that refers to understanding the world as one unified system and the responsibility to view the interests of individual nations with the overall needs of the planet in mind.
- Holistic Understanding, which means understanding the self in relation to a global community and to an integrated reality.
- Ability to communicate effectively (both orally and in writing), express themselves clearly and listen to others responsively.
- Capacity of thinking in time, to forecast, to think ahead, and to plan.
- Capacity to move from awareness to knowledge to action.
- Capacity to research, inquiring, questioning, investigating, and judging, preliminary passages for problem-solving, complex planning and decision-making processes
- Capacity to develop aesthetic appreciation and creativity, to be *sensitive to the aesthetic dimension of the natural and human world, to train imaginative ways of thinking, and participate in creative activity and expression*¹⁸¹.
- Capacity of collaboration and team-work with others to achieve mutual understanding of common goals.
- Information Management, that refers to the capacity to *find meaning in our world's vast information resources, identify needs, conduct research and seek solutions using a variety of sources, strategies and technologies.*¹⁸²
- Responsible Citizenship, that means respecting the diversity of cultures, engaging for the common good and understanding the importance of an active participation in the community and of responsible behaviours in order to promote equity, justice, peace, democracy and protection of the environment

¹⁸¹See UNESCO Education for Sustainable Development in Action (2006), *ESD Toolkit, Learning & Training Tools N°1*, p. 38, about the case study at Toronto, Board of education Curriculum Revision and Reorientation.

<http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf>

¹⁸² Id.

- Capacity of personal care, that means taking care *about the physical, emotional and spiritual health of themselves and others, pursuing healthy, hopeful, purposeful lives and meaningful relationships, good work habits and balance to make wise choices for a sustainable future*¹⁸³.
- Capacity of self-regulated learning, that means *that learners are meta-cognitively, motivationally, and behaviourally active participants in their own learning process and self-generate thoughts, feelings, and actions to attain their learning goals. They are in a position where they are forced to recognize the consequences of their own actions, and they can see themselves as owners of their behaviour. This concept empowers them to take their learning into their own hands and to have the most active role.*¹⁸⁴

Promoting “sustainable mentalities” is not an easy job, especially when starting from a structural scheme in the school system that usually pursues opposite goals, compatible with the culture that led to the overexploitation of the natural resources. It means often fighting the roots of a system that has shaped entire generations in base of the ideals of competition, profit, monetisation and accumulation. Those ideals, we have seen, are pervasive in the marketing that invades our daily lives, and also the school in some ways contributed to keep them strong and untouchable. If from one side our schools shape people to become the promoters and the makers of such ideals and system, from the other side the same school system is required nowadays to radically change directions and perspectives. The educational system suffers of an inner contradiction between the resistance to the change and the urgent need of it, and this is the main obstacle to the implementation of ESD.

There is an urgent need to re-examine the nature and structure of schooling in a more critical way to address ESD in its broadest context (i.e., school organizational principles, operational practices, school grounds management, and curriculum content). We are faced with a paradox: Is education the problem or the solution in working toward a sustainable future? At current levels of unsustainable practice and overconsumption it could be concluded that education is part of the problem. If education is the solution then it requires a deeper critique and a broader vision for the future. Thus, whole systems redesign needs to

¹⁸³ See UNESCO Education for Sustainable Development in Action (2006), *ESD Toolkit , Learning & Training Tools N°1*, p. 38, about the case study at Toronto, Board of education Curriculum Revision and Reorientation.

<http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf>

¹⁸⁴ See Steiner Gerald and Alfred Posch (2006), “Higher education for sustainability by means of transdisciplinary case studies: an innovative approach for solving complex, real-world problems”. *Journal of Cleaner Production* 14(9), pp. 877-890.

*be considered to challenge existing frameworks and shift our thinking beyond current practice and toward a sustainable future.*¹⁸⁵

Focus on Philosophy as strategic instrument towards sustainability: the potential of “Philosophy for Children”

Philosophy is one of the elements with a big potential in helping to educate people to a “sustainable mentality”. Many of the skills expected from such education are normally provided and trained by the study of philosophy and the practice of it. Matthew Lipman realized it in the 70s and decided to promote curriculums and educational programs for young children giving an important space to philosophy. He opened the initiatives of Philosophy for Children, founding also the Institute for Advancement of Philosophy for Children in the US (IAPC)¹⁸⁶ and developed material, in the form of novels, to work at school. His conviction was that practicing philosophy since the early age aligns the natural tendency of children to question and wonder about things. Philosophising children’s “thinking skills” are improved. They show to be able to discuss, argument, question and evaluate philosophically much more and better than adults expect. The dialogic strategy of practicing philosophy in P4C encourages the critical thinking, logic and argumentation skills¹⁸⁷, it favours open mindedness, clarity in language expression, precision in thinking and confrontation of points of view. Practicing philosophy already with 6, 7 years allows children to give meaning to their process of learning, because they become aware of the sense, through reasoning and discussing it. They develop a more integrated outlook of the knowledge, establishing links and relationships among elements, into a reality that assumes continuity and a structure of interrelation and reciprocal interdependence among things. They learn to associate things and link them in a more coherent framework, where meaningful and foundational issues start to be explored, such as justice, love, friendship, equality, responsibility, right and wrong, freedom. All of this happens especially through reading material and discussing in a learning community, where the kids become part of a group in development and they internalise the importance of participating, belonging and respecting their peers. They assume an active role in the learning process, they are not told what to learn or what to

¹⁸⁵ See UNESCO Education for Sustainable Development in Action (2005), *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability*.
<http://unesdoc.unesco.org/images/0014/001433/143370E.pdf>

¹⁸⁶ See *Montclair State University* website, Institute for the Advancement of Philosophy for Children
<http://www.montclair.edu/cehs/academics/centers-and-institutes/iapc/>

¹⁸⁷ See *The P4C Co-operative*, <http://p4c.com/history-p4c>, November 2014.

think, but they create their pathway step by step. They learn to think for themselves and give their own meaning to things and deliberate it, but also to respect others' points of view in the community. They remain independent in shaping their own thought, without repeating or imitating models provided by the teachers, rather confronting themselves with the peers.

After Lipman developed the P4C program in the 70s, the idea spread also in Europe and many countries developed their own programs of Philosophy for Children. They refer generally to the ICPIC (International Council for Philosophical Inquiry with Children)¹⁸⁸ as international coordinator, while the official centres in Italy are the CRIF¹⁸⁹ in Rome and the CIREP¹⁹⁰ in Rovigo.

With those premises, I consider the activities of P4C pretty promising to the end of educating to sustainability. Philosophy is a great instrument to learn to think critically, question and judge wisely. Practicing philosophy teaches to doubt about things, to understand them inserted in a system of knowledge, considering different perspectives and factors involved and to take a position or an opinion supported by an argumentation. It stimulates to think differently, to promote alternative understanding and to be open to new paradigms. It keeps the brain elastic and flexible and it usually shapes to a strong social and ethical commitment, because it educates to be responsible for oneself and for the community of belonging. All those aspects, cultivated and strengthened since the early age, are the roots of a culture of sustainability. For these reasons the role of Philosophy in the educational programs devoted to sustainability may be quite relevant.

Education and awareness from bottom: civil society movements.

Education to sustainability passes through, as we have seen, Formal, Nonformal and Informal channels. Next to the institutional frameworks, a big role is played nowadays by civil society dynamics, which are informal sources of education.

The introduction of policies needs to be accompanied by the civil society's cultural change

National civil society and non-governmental organisations and networks will play a central role in linking local groups with policy-making fora, undertaking advocacy and lobbying and

¹⁸⁸ See ICPIC website, <http://icpic.org/>, January 2015.

¹⁸⁹ See CRIF *Centro di Ricerca sull'Indagine Filosofica*, <http://win.filosofare.org/>, January 2015.

¹⁹⁰ See CIREP *Centro Interdisciplinare di Ricerca Educativa sul Pensiero*, <http://www.cirep.it/>, January 2015.

*providing a conduit for bringing small, local and innovative experiences to the attention of government and a larger public.*¹⁹¹

The description of the civil society as political actor gave us the elements to recognise the huge potential of social activism. Investing on this kind of engagement can be another important possibility of change in the future decades. Social movement alone cannot go very far, if its energy is not canalised into bureaucratic and political systems. On the other side, we have seen that the only intervention of technical approaches is not likely to deal appropriately with the ecological crisis. Technologic progress, among the limits and dangers described in the previous part, is also not affordable for every country and technics cannot be exported from place to place ignoring the local context. Exporting technology without cultural and systemic considerations can lead to the dissolution of local ethos. As Naess says, *technic has to be culturally tested*¹⁹².

Political reforms must address their orientation and values in order to favour a culture of sustainability, but this is almost impossible to do if most part of the social agencies pushes against this change and pressure to maintain the *status-quo*. Beyond the consumeristic life-style there is the interest of keeping the inequality and injustice of the global economy thanks to which powerful and richer elites can keep their position and privileges. Market institutions and multinational corporations are not interested in diminishing the consumption and deterioration of the environment, rather this is their biggest fear. On the other side, the effort to maintain the *status-quo* is not just matter of interests of the few. The globalised economy is a complex system of interrelated factors and variables. Acting suddenly against production and consumption for environmental reasons would provoke massive problems; in the immediate term even worse than the environmental ones, such as unemployment. For this reason certain reforms shouldn't arrive suddenly from top-down, imposed without a background that is ready for that. As Wagner affirms: "A combination of "good governance" models (top-down) and the commitment and participation of civil society (bottom-up) is necessary". Beyond this, "science and research can act as a facilitator and a catalyst by conducting interdisciplinary and transdisciplinary transformation research."¹⁹³

To promote environmental policy we need to conceive a systemic functioning of the reality, which considers all the variables included and requires not just one change in one part on the system, but

¹⁹¹ See IIS (2005), DESD International Implementation Scheme (2005- 2014)
http://portal.unesco.org/education/es/file_download.php/e13265d9b948898339314b001d91fd01draftFinal+IIS.pdf

¹⁹² See Naess Arne (1990), p. 94.

¹⁹³ Wagner Felix, " A culture of Sustainability", in "Realizing Utopia: Ecovillage Endeavours and Academic Approaches", ed. by Marcus Andreas and Felix Wagner, *RCC Perspective*, 2012, no 8.

many changes interrelated and linked with each other. Every political proposal must be based on an integrated knowledge of the reality and should relate to all the fields involved. If one part of the system is modified without being related to the others, that change will be a failure and damage the singular part. If any change is seen in a holistic and systemic perspective it will provoke many other changes and the whole will develop in a new form. If, for instance, we want to promote the choice of electric cars that pollute less, incentivising the car industry to prefer electric cars may mean the failure of it if we don't intervene in the other fields of the system, that are for example the infrastructures to be prepared to electric cars (point to fill them, space to park them, streets to drive them...) and all these issues that must be integrated in the already complex architecture of every urban centre. It implicates acting on many fields. Promoting systemic actions into a prepared background requires the involvement of the citizenship. That is why political reforms alone don't work unless they are supported by social will and engagement. Just if these issues are understood by the citizenship that takes the responsibility of changing its lifestyle, norms can be followed in a long-run and intrinsic value perspective.

*Attempts at a change in lifestyle cannot wait for the implementation of policies which render such change more or less required. The demand for a 'new system' first is misguided and can lead to passivity. The same applies to personal lifestyle change and its possible consequent isolation from political action. These two changes must proceed simultaneously. Changes have to be from the inside and from the outside, all in one, [...] and can only be developed among the people and politicians through increased awareness of the unreasonability of the present state of affairs.*¹⁹⁴

To this end the role of citizens, of individuals as part of a global citizenship is crucial. There are many pathways emerging from local contexts that propose alternative lifestyles, and they are precious examples to be valorised and spread, although keeping their originality and specific characterisation. Alternative life-styles, if supported and diffused can help politicians to promote healthier policies that are understood and spontaneously chosen, thanks to the information, the reciprocal influence, the awareness that these proposals can spread around. They usually encounter a strong opposition from the dominant way of life of our industrial society, but still the potential of the civil society is strong and if it will keep the network of mutual support and will gain more and more space in the media they could be, step by step, appreciated and valorised for their innovative elements. So they could be an inspiring start-point for large-scale cultural transformations. Those

¹⁹⁴ See Naess Arne (1990), p. 89.

examples of activism and mobilization from the bottom may be important tools of informal education. They are not traditionally institutionalised, but they propose an alternative consciousness and orientation of action and can inspire many and raise sensitiveness about environmental issues.

The main point here is that we need a change in mentality such that many of the regulations will be unnecessary. [...] How are we doing this? We engage people who have internalised the deep ecological norms, even if a small minority, and make them more central in the day-to-day dealings of communities. Here such 'naturalists', by their very example, can get people aware of things that they never thought before and will thus help with internalising of norms in the larger populace.¹⁹⁵

Social movements: mainstream environmentalism and grassroots social innovations

Social movements, that is mobilization and activism from the bottom of the society in the forms of institutionalised organisations (like NGOs) or informal grassroots movements, are an important and precious element of democracy in the modern dynamics of global governance. The involvement of civil society through this activism promotes emancipation and social change, but especially resistance to the global “hegemonic form of environmental governance”¹⁹⁶. Global environmental governance tends to privilege the discourse of technical-rational knowledge and technocratic solutions to ecological problems and in these context social movements promote counter-hegemonic orientation that provides a cultural approach to the issues, denouncing the irrationality of the modern patterns of consumption, distribution and production in the global economy. They claim the need of an engagement for structural changes in the societies, criticising the reduction to technical and normative treatments, ineffective for long-term changes. Using the words of Lucy H. Ford, social movements “have the potential to challenge global hegemony through a variety of strategies that aim to reject the only dominance of technical discourse”.

The cultural approach towards environmental issues start from the premise that the interest that we have in protecting and respecting the environment is linked with the system of values, norms, models that orientate the human action through shaping a certain conception of the world. The first level to consider to protect the environment, so Paul Wapner in “In defence of Banner Hangers: the

¹⁹⁵ See Naess Arne (1990), p. 160.

¹⁹⁶ See Ford Lucy H. (2003), “Challenging Global Environmental Governance: Social Movement Agency and Global Civil Society”. *Global Environmental Politics* Vol. 3, No. 2, pp. 120-134.

dark green politics of Greenpeace”¹⁹⁷, is the “way vast numbers of people understand it”. According to him Greenpeace, like other organisations, have the job and the merit to do this, to create an image of the ecological destruction that can be caught by the media and extended at the largest audience possible to inform people and show what is going on.

We are nowadays used to the action of NGOs and transnational organisations that lead the mainstream environmentalism. Mainstream activism is engaged in a large broad conception of social change on the masses: “Ultimately is the masses, through public consciousness raising, that will ensure long-term solutions to environmental destruction by demanding changes in economic practices”¹⁹⁸. Since the 70s, the so-called environmental decade, the movements of those organisations enriched with legal and scientific expertise and they gained access to processes of implementation of legislation and development of procedures for environmental management. Therefore they started to represent a loud voice against multinationals’ interests and governments’ negligence about environmental issues and have attracted attention on several topics. The kind of activism of Greenpeace, Earth First!, Friends of the Earth and other NGOs is well known thanks to the mass media attention. They act through activities like: lobbying against governments, “undertaking research, influencing diplomacy between nation-states, organising protests and pressure on governments to support environmental legislation”¹⁹⁹. Their activity includes campaigns, letter-writing, petitions, demonstration in loco, spread of knowledge, boycott of industrial processes and so forth. The larger purpose of their activity is, however, both to contribute to denounce some unjust and destructive processes and decisions and to inform the population. They try to give voice to unheard issues and to spread the knowledge and awareness about them among the common people, in order to improve their critical opinions and possibility of participation in the global dynamics. As Paul Wapner insists referring to the activity of Greenpeace, environmental organisations and NGOs try “literally to change the way people think about the natural world and the effects of human actions on it.” They furnish alternative understandings and work on the material circumstances that shape collective values, mores and sensibilities and in doing so they hope to influence the way how people think, choose and behave.

So the movement is not simply about passing environmental protection legislation, but rather it attempts to create a particular ‘cultural drift’, to use Herbert Bumer’s language, a ‘societal mood’ o ‘public orientation’’. Such moods, drifts and orientations pervade the

¹⁹⁷ See Raimond Taylor Bron edited by (1995), *Ecological Resistance Movement: the Global Emergence of Radical and Popular Environmentalism*, New York: State University of New York.

¹⁹⁸ See Kamieniecki Sheldon, Coleman S. Dulaine, Vos Robert O., “ Effectiveness of Radical Environmentalism”, in Raimond Taylor Bron (1995).

¹⁹⁹ Id.

*society and, although they don't gain authority through governmental support per se, they still act as forms of governance which shape the way how vast numbers of people live their lives*²⁰⁰

Identified as representative of the civil society, transnational organisations and NGOs are considered to be a political actor since they are supposed to have influence on the process of policy making: “NGOs can through networking and advocacy both stimulate bottom-up action and mobilise the pressure necessary for the institutional changes which are needed to mainstream strong sustainable consumption”²⁰¹. They can catalyse members and ideas, start pilot-projects, creating networks and motivate mobilisations of people. They increase representation and transparency in the decision and implementation of policies and favour popular legitimacy and support towards them, given their direct impact on the citizens.²⁰² According to Lorek and Spangenberg, the involvement of the civil society is a determinant factor because it can practically re-address the social and cultural structure and the way how our society works, changing models of consumption and participation to the common and pursuing more balanced and ecological lifestyles.

From this perspective it emerges that among the purpose of raising awareness by the environmental activism there is not just the intention to inform people. The hope is that this information is translated in action and social practice. Next to the public uproar made by the organisations, bottom activism takes place through practical experience of people and groups that engage in proposing and experimenting alternative lifestyles in more or less radical ways. Those subjects launch direct and concrete action, a concretisation of what political mobilisation of mainstream environmentalism represent mainly on a theoretical level. Most part of this mobilisation comes from grassroots movements or communities of people that share common aims and decide to challenge the current dominant *modus vivendi* and propose a different one. The values at the core of those actions are especially a sustainable way of living in balance with the environment and with the less impact as possible on it and the valorisation of community life, solidarity and sharing of resources. On a practical level, the direct field where their action occurs and has effects is on the footprint that each

²⁰⁰ See Wapner Paul in “In defence of Banner Hangers: the dark green politics of Greenpeace”, in Raimond Taylor Bron (1995).

²⁰¹ See Lorek Sylvia, Spangenberg Joachim H. (2014), “Sustainable consumption within a sustainable economy – beyond green growth and green economies”, in *Journal of Cleaner Production* 63, pp. 33-44.

²⁰² *Id.*, p. 41. Although according to Mont and Spangenberg the role of NGOs has become controversial in some cases because of their often partial focus just on specific issues, lacking the larger understanding of situations and because of their public or business funding, I'm not entering this problematic in this context.

individual has through the personal consumption, from which it depends how much and how they consume and waste and which kind of interaction they establish with the environment. Mont, Neruvonen and Lahteenoja²⁰³ call these experiments of alternative social practices “social innovations” and they include several kinds of action. They define what a sustainable lifestyle could be in a future prediction related to 2050 and they establish that the footprint of a person per year should not exceed the amount of 8 tonnes, while it is around 40-50 in European countries today.²⁰⁴ Our western excess in the footprint lays mostly on food, drink, meat and dairy consumption, domestic heating, water use and car ownership. All those aspects of the daily life of a person can be changed, reducing the impact on the environment, through modifying the lifestyle.

To this end any social practice that allows wasting less, consuming less and saving energy is an innovation that positively contributes to addressing the society towards sustainable patterns. Social innovations can be more radical, including a total involvement and change in the daily personal life, like it happens in the case of the Ecovillages, or they can have effects on the small scale of the daily routine of citizens living in the mainstream urban society. The possibilities of acting and choosing more sustainable are many and they raise spontaneously from the population, free from institutional command or imposition and create networks and reciprocal support and influence. A more sustainable lifestyle can pass through more efficient individual consumption that implies reducing waste, choosing critically what to buy, consume according to sufficiency criteria (consume what we really need) instead of accumulating the unnecessary. On the collective level consumption can be managed with collaborative organisation, through sharing, swapping and trading, through changing the conception of consuming, shifting from the idea of owning a product to the one of “accessing” to it or of using the service that it gives, that means producing materially less and re-using the existing products. Alternative strategies to consume develop also an active attitude of consumers that can become co-producers of goods and services instead of passive consumers, like it happen in the case of producing own food in the urban farming. Undertaking aware and responsible consumption implies therefore “a re-examination of the way we live”, but this new attention is addressed also to dimensions of the life that are not necessarily environmental, but regard the personal improvement of the quality of life in terms of health, nutrition, interpersonal relationships, well-being, justice and ethical commitment. In this sense many movements are emerging in order to promote a more balanced and harmonic lifestyle, such as Slow Food or Decrescita Felice.

²⁰³ See Mont Oksana, Neuvonen Alesksi, Lahteenoja Satu (2014), “Sustainable Lifestyles 2050: stakeholder visions, emerging practices and future research” by, in *Journal of Cleaner Production* 63, pp. 24- 32.

²⁰⁴ Id., p 25.

Next to critical consumption that impacts partially the daily life of the citizens, many people are experimenting more radical solutions that involve their life completely. The most diffused examples are intentional communities and ecovillages, realities that are growing in number and innovation in the last years in the western countries.

I will explore in the next paragraph some examples of social innovations. What all those experiences have in common is a vision of the future that will have to look different from the current. Those experiments are attempts to propose diverse outlooks on the problems and innovative solutions to them. They all focus on elements like the education and the personal and collective responsibility. They invest in the community and in the will of every member to engage in collaboration towards common good and against the overcoming of materialism and consumerism. Big effort is put on self-development, self-sufficiency and self-organisation, which mean leaving the power of decision on the local level and to every participant. They seek to make the individual feel responsible and part of a bigger whole he has impact on.

Such efforts should be encouraged by the political authority and they could constitute inspirational examples to imitate. Some of those innovations are locally anchored and cannot be transferred to the society at large, but they are valid “social laboratories” with the potential to inspire others, be imitated, stimulating the public debate and educating people. They can, as Geseko von Luepke²⁰⁵ underlines, “slowly create complementary models that can soften the consequences of a crisis”, but especially they show that another future is possible. Such behaviours and choices that they propose and may seem “alternative”, uncommon or even strange to the mainstream consumeristic society, should become normal and diffused in it in the next future. Sustainable solutions and lifestyles should be “normalised” in the everyday life of the mainstream culture, if we want to realise the change in the long-perspective that is needed, because through this integration new worldviews, new self-perceptions, new spirituality and values will be adopted.

Sustainable lifestyles cannot be created in a lab or in a research office. Therefore, action research and experimentation with different policy instruments, economic tools, business models and community initiatives is needed. Innovation policy has a role to play in encouraging and advancing society-wide experimentation targeting sustainable lifestyles. The premise is that new behaviours sometimes precede attitude and value change, so the

²⁰⁵ See “Ecovillages: Islands of the Future?” in Andreas, Marcus, and Felix Wagner (eds.), "Realizing Utopia: Ecovillage Endeavours and Academic Approaches," *RCC Perspectives*, 2012, no 8, p. 75.

*engagement of people in experimentation, testing and evaluations might enable and facilitate behavioural and value changes that are of high importance for sustainable lifestyles.*²⁰⁶

Focus on Social Innovations: four levels of actions and some examples for each

Social Innovation and alternative ways of consuming, living and producing develop at different levels of the society and into different dimensions. Many actions relate to the singular individual and his choices in the daily life, but others regard entire communities that adopt a totalising alternative lifestyle. Some derive from concrete and improvised practices and then develop a clear understanding and framework of what they do and why. Others start from theoretical analysis, description of problems and research of solutions and then they are translated into practise.

Most part of those realities don't use the conventional channels of information to diffuse their ideas, like the television, rather they are connected in the internet and are inserted in large nets where other experiments and realities inspired by the same values are present. That means that it's difficult to hear from the television-news talking about an ecovillage, but once we identify the channels of it in internet it is very easy to connect to other realities of critic consumption and social commitment in line with the principles by which the ecovillage is inspired. Often the communication and diffusion of those realities happen through word of mouth among people, feature confirming the centrality of the relational and collective aspect that is common generally to all of them. With the time the contact with alternative ways of life and consumption became more common and they are starting to be accepted by the mainstream society as a wanted choice by informed and responsible citizens. They refer often to alternative conceptions of the economy, therefore the space of action is not reduced to the specific issues to which they are dedicated, but it implies a will of engaging to promote a different model on the large scale, rejecting the current consumeristic one. They relate to conceptions like the Social Solidarity Economy²⁰⁷, the Economy for the Common Good²⁰⁸, the

²⁰⁶ Mont Oksana, Neuvonen Alesksi, Laehteenoja Satu (2014), "Sustainable Lifestyles 2050: stakeholder visions, emerging practices and future research" by, in *Journal of Cleaner Production* 63, pp. 24- 32.

²⁰⁷ See *RIPES Intercontinental Network for the promotion of Social Solidarity Economy* website, <http://www.ripess.org/about-us/?lang=en>, January 2015 : "Social Solidarity Economy (SSE) takes into account the social and ethical dimension in all its economic activities. Thus the SSE aims to produce, exchange and consume goods and services that answer the economic and social needs of the local and international communities. This social and solidarity economy values work over capital. It aims at satisfying the needs of individuals and communities rather than seeking to maximize profit or financial gains. Solidarity-based economic units rest upon a model of democratic decision-making and a participatory and transparent management system, which aims at ensuring collective ownership and responsibility for the outcomes of economic activities, as well as ongoing mobilisation and contributions to ensure their success."

Shared Economy, the Degrowth²⁰⁹ or the Ethical Banking²¹⁰. Common points to those models are the values at the roots: ethics in the economic processes and rejection of private profit, social commitment, equity and justice of distribution, valorisation of communality, respect for the environment and perspective of sustainable consumption and production. The internalization of these values gave rise to the need of conceiving other forms and pace of living, where also the quality of life represents a core factor.

²⁰⁸ See *Economy for the Common Good* website, <https://www.ecogood.org/en>, January 2015 : “The current ecological, social and economic crisis requires a bold and strong vision and people who actively participate in developing a sustainable future. In that sense, the Economy for the Common Good (ECG) movement understands itself as an initiator and inspirational force for far-reaching change. In a democratic and participatory process, the ECG works towards an economic system which places the Common Good at the center of all economic activity.” ECG is another social movement encouraging an alternative economic model to neoliberalism that fosters human values and ethics, through the focus on common good and cooperation, sustainability, justice, equity and solidarity instead of profit, competition, individualism and unlimited growth. The concept was formally coined by Christian Felber with the publication of *Die Gemeinwohl-Ökonomie - Das Wirtschaftsmodell der Zukunft*, in 2010.

²⁰⁹ See *Research and Degrowth* website <http://www.degrowth.org/>. Degrowth indicates an economic critic that became political and social movement led by several authors, starting with the analysis of Georgescu-Roegen and then developed by many, like Serge Latouche, especially in France, Italy and Spain, and then Europe and Latin-America. It fights overconsumption and capitalistic economy that led to the environmental crisis and the global inequality, through dealing with the problem of the limits to growth and promoting the increasing of well-being and quality of life through reducing consumption and focusing on human values, culture and commonality. The definition from the website <http://www.degrowth.org/definition-2> (January 2015) says: “Sustainable degrowth is a downscaling of production and consumption that increases human well-being and enhances ecological conditions and equity on the planet. It calls for a future where societies live within their ecological means, with open, localized economies and resources more equally distributed through new forms of democratic institutions. Such societies will no longer have to “grow or die.” Material accumulation will no longer hold a prime position in the population’s cultural imaginary. The primacy of efficiency will be substituted by a focus on sufficiency, and innovation will no longer focus on technology for technology’s sake but will concentrate on new social and technical arrangements that will enable us to live convivially and frugally. Degrowth does not only challenge the centrality of GDP as an overarching policy objective but proposes a framework for transformation to a lower and sustainable level of production and consumption, a shrinking of the economic system to leave more space for human cooperation and ecosystems.”

²¹⁰ See *FEBEA European Federation of Ethical and Alternative Banks and Financiers* website <http://www.ethicalbankingeurope.com/febea/legal/febea> and the article “What really differentiates Ethical banks from modern banks?”, 17 April 2012, http://www.ethicalbankingeurope.com/sites/default/files/definition_ethical_bank-en.pdf : “Ethical banks have the objective of achieving a positive impact in the collection and in the use of money. They invest in new activities such as organic farming, renewable energies, the Third sector (or not-for-profit sector), Fair Trade. They respond more and more to the needs of those who are excluded from the banking system, and to the needs of savers and investors who are increasingly interested in the way their savings are used. Thanks to ethical banks, the “bank” institution returns to a path stopped at the beginning of the twentieth century, and it returns to be an instrument of development for the territory and for new social and environmental initiatives. This path goes in the opposite direction respect to the one of commercial banks, which are increasingly oriented to use the financial leverage to build more and more profits, contributing to the financiarisation of the economy and creating the conditions for a series of financial crises that continue even today to weigh on the lives of millions of citizens. The role of an ethical bank is to work for the common good and ensure the right to receive credit through a bank activity consisting in raising funds and reallocating them in the form of credits for cultural, social and environmental projects. Through their activity, ethical banks promote social inclusion, sustainable development, development of social economy and social entrepreneurship. Ethical banks also have a role to raise public awareness on the role of money and the failure of the economy based on short-term and profit as the only objective.”

I individuate 5 levels of action and diffusion of alternative models. The first is the individual, the space of the singular consumer, the second is the collective, the group, the space where many individuals cooperate together and promote alternative solutions of consumption. The third is the level of the movement, when the practice becomes officialised in a movement or philosophy and is identified widely with precise names and core values. The fourth is the level of the big communities, like cities, that decide to adopt sustainable local solutions integrated with the mainstream society and lifestyle and inaugurate so a slow adaptation and transformation of the city through small changes. The fifth is again the level of big communities, but in this case that don't remain integrated in the mainstream society but form their realities outside, distinguished from it and clearly identified. For every level I will mention one example of social innovation: Critical Consumption in the first, Collaborative Consumption of GAS in the second, Slow Food and Decrescita Felice movements in the third, the Transition Towns in the fourth and Ecovillages and Intentional Communities in the fifth.

They challenge the consumeristic culture in different ways and from different domains, some more some less integrated in the conventional social dimension. All of them offer interesting examples and spread a new knowledge about the environment and the relationship between it and the inhabitants.

The contemporary adaption of climate change in politics and economics clearly proves, for example, that technocratic and socioeconomic reactions can only produce short term, unsustainable and cosmetic responses; at the same time the convergence of worldviews, values, lifestyles and designs of alternative life-worlds, demanded for over forty years, still dwells on the late-modern margins. These margins, nevertheless, offer fertile soil for a surprisingly broad and creative flourishing of alternatives, as seen for example, in the World Social Forum²¹¹.

- **First level: the individual and the Critic Consumption**

Every person who has access to the modern communication platforms, or who is simply interested in what to buys and eat, can find several ways to change the way of consuming in a healthier one. The platforms where nets of associations, organizations, and groups of people diffuse knowledge

²¹¹ Bergmann S., Blindoc I. and Ott K. (2013), p. 39.

and operate in this sense are many. Critical Consumption is a general expression to indicate a way of shopping and consuming that considers the impact of the products in social and environmental terms. Thanks to Eco-labels and Green Stickers²¹² the consumer has the possibility to know the origin of most part of the products that he finds in the markets, the way how they are produced and the raw material used. The range of choice between different products and brands are large in western countries, but thanks to labelling and informing ourselves autonomously we can catch data about them and choose which one is morally better to buy when we go shopping. *Fare Trade* is, for instance, a guaranty of respect of acceptable working conditions and environmentally friendly production. The movement seeks, through labelling the products, to help developing countries to promote sustainable production and to achieve better trading conditions and more equity in the international partnerships. It invites us to consider the impact that a product produced in the Global South has in terms of unjust distribution of resources, exploitation of labour and damage to the environment, and it offers us an alternative to this and a way not to contribute to those processes.

Local consumption and Short Supply Chain are a way to reduce the impact of transports and to support local economies against the Big Distribution that challenges the survival of small, particular and localised productions. A short chain is characterised by the short distance and the limitation of as few as possible intermediaries between producers and consumers. Local farmers or producers sell directly to consumers in the same regions and develop autonomous strategies of marketing that ensures a personal relationship between the two and information about the way of production, quality and provenance of the product.

Sharing Economy is literally “a socio-economic system built around the sharing of human and physical resources. It includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organisations and takes a variety of forms, often leveraging information technology to empower individuals, corporations, non-profits and government with information that enables distribution, sharing and reuse of excess capacity in goods and services”²¹³. Shared economy systems work often without money

²¹² See *Global Ecolabelling Network* website, http://www.globalecolabelling.net/what_is ecolabelling/index.htm January 2015: While Green Stickers are mandatory by law labelling systems, "Ecolabelling is a voluntary method of environmental performance certification and labelling that is practised around the world. An "ecolabel" is a label which identifies overall, proven environmental preference of a product or service within a specific product/service category. In contrast to "green" symbols, or claim statements developed by manufacturers and service providers, the most credible labels are based on life cycle considerations; they are awarded by an impartial third-party in relation to certain products or services that are independently determined to meet transparent environmental leadership criteria." An example of international eco-labelling program is the application of the ISO 14000 standards, already mentioned in the first chapter.

²¹³ See “Sharing Economy”, *Wikipedia*, retrieved December 2014, from http://en.wikipedia.org/wiki/Sharing_economy

transaction and intervention of third authorities. Everything taken or used includes having shared it with somebody else and the exchanges happen directly person-to-person. It consists of many services to share objects, transports, solutions of inhabiting and travelling. Examples are car-pooling and car-sharing for sharing transports. One example of consuming reducing waste is the barter of objects in transitions without money and where second-hand or used things are reutilised. Examples of sustainable ways of tourism are peer-to-peer accommodation, exchange of hospitality or the payment of it through work in the place, like Couch-surfing, Woofing or Work-away. Shared Economy includes also the exchange of work without money payment, but in the form of time-banking, where hours of work are bartered. Those services allow economic saving, reduction of our impact on the environment and promote sociality, relation and collaboration among people.

- **Second Level: Cooperative consumption in groups, the example of GAS.**

If on the individual level consuming critically can be a daily action, when more individuals unite in groups and together organise critical consumption the level of action from individual becomes collective. People access to so called “alternative food networks” not as singular but as group, cooperative, association, organization, and establish nets of relationship and make communities through the action of shopping. One such example diffused in north Italy, where the critical consumption from the individual level shifts to the collective are the GAS- Gruppi di acquisto Solidale, literally Ethical Purchasing Groups, a system of collective purchasing goods.

In the definition by the Tavolo per la Rete Italiana dell’Economia Solidale, GAS are “*gruppi di persone che acquistano con una funzione collettiva di consumo, solidali, cioè che ambiscono a superare il modello del mercato come meccanismo in cui offerta e domanda s’influenzano a vicenda tramite reciproci aggiustamenti di prezzo*”.²¹⁴

They manage to organise collectively the distribution and the logistic administration of products bought from a net of producers that have cooperation with them. Most of the people who engage in GAS are generally well informed and critical consumers who decide to associate motivated by strong democratic principles but with no trust anymore in the

²¹⁴ See Tavolo per la rete italiana di economia solidale (ed. by) (2013), *Un’economia nuova: dai GAS alla zeta*, Milano: Altra Economia Edizioni, p. 13.

traditional political institutions. They search for new forms of direct participation and involvement in the social life.²¹⁵ Among the most shared motivations to participate in a GAS are the wish to support local production and small regional activities, the will to act concretely and have a real impact in the social life, the wish to build new relationships and the worry for the environmental problems. Their larger purpose is naturally that of stimulating alternative lifestyles and ways of consumption, more responsible, participated, active and ethical and the shopping becomes occasion and instrument to realise it. GAS members are often engaged in other activities in associations, therefore the circulation of information and opportunities diffuse easily in the community, that doesn't remain isolated and closed in itself. They try to spread knowledge about topics like Sustainable Agriculture, common goods, renewable energy resources, fare-trade, self-sufficiency and ethical banking. They are considered for this reason source of self-education, because they educate the members to sustainability but they also contribute to diffuse an alternative way of consumption outside. In the book "Un'economia nuova: dai GAS alla zeta" a survey conducted among more than 400 GAS shows how the attitudes and behaviours of the members changed thanks to the experience of belonging to it: they declare to increase the consumption of organic food and vegetables and fruits, local and season products, to the expense of meat, exotic and gross distribution products. They become aware of their lifestyle and make it more healthy and responsible, they become more careful to recycling practices and they reduce the usage of energy and water. They become more collaborative with other people and more interested in politics and social issues. With those results GAS are definitely a source of education from the bottom that empowers the individual in the collective context towards common aims. Interpersonal trust, cooperation, civic engagement and solidarity are strongly enforced.

*I GAS si confermerebbero quindi non solo come nuove scuole di partecipazione e democrazia, ma soprattutto come laboratori auto-educanti di cittadinanza attiva e sostenibile e di corresponsabilità sociale, cioè di ri-produzione di capitale sociale, spirito di cooperazione, solidarietà e impegno civico.*²¹⁶

- **Third Level: recognition of Practices as official Movements, the examples of Slow Food and Decrescita Felice**

²¹⁵ Id., p. 22.

²¹⁶ Id., p. 58.

The Degrowth²¹⁷, as mentioned above, is an alternative conception of the economy in opposition to the consumeristic and materialistic model of the modern society and of the call for the unlimited growth intrinsic to it. After the publications of *The Entropy Law and the Economic Process* in 1971 by Nicholas Georgescu-Roegen, other authors, among which Serge Latouche, developed his critic of the neoclassical economic model into a movement with practical translation. In Italy this process has been led among others by Maurizio Pallante who founded the Movimento per la Decrescita Felice (MDF). The movement bases on the put in discussion of principles like the positive correlation between GDP, progress and growth (as intended in the neoclassical model) and well-being.²¹⁸ The western ideology of the growth determines the consumeristic and materialistic behaviour of the society, which is not tolerable by the planet and by the humans in terms of quality of life. The argument of the Degrowth is simply that the progress intended as increase of consumerism and production of merchandise doesn't correspond to a higher level of life, rather it lowers the quality of it by destroying the main social and relational foundations of the human being.²¹⁹ According to them we have to realise a 'Degrowth' in the sense of stopping to pursue the goals of producing more and consuming more, working more to have more money to buy more, but rather we should reconsider and focus on real values such as sobriety, sufficiency and wisdom in the consumption, reduction of waste, self-sufficiency and self-production of goods and exchange through not-money transactions, based on the gift and the reciprocity. These values include a revalorisation of human relationship and feelings, solidarity and spiritual sensitiveness and they

²¹⁷ Degrowth is considered distinguished if not opposed to sustainable development principles, because it is more radical in the rejection of the economic trend of growth and progress. While sustainable development, green growth and green economy theories keep economic growth as positive factor of well-being, the Degrowth movement encourages a stop of this kind of progress, proposing a different paradigm that focuses on values such as the quality of life.

²¹⁸ See Demaria F., Schneider F., Sekulova F. J. M. (2013), "What is Degrowth? From an Activist Slogan to a Social Movement". *Environmental Values* 22, pp. 191-215. <http://www.degrowth.org/wp-content/uploads/2014/08/What-is-degrowth.pdf> : "Generally degrowth challenges the hegemony of growth and calls for a democratically led redistributive downscaling of production and consumption in industrialised countries as a means to achieve environmental sustainability, social justice and well-being."

²¹⁹ Id. : "One face of the degrowth movement is the critique of *homo economicus*, against utility-maximisation as the ultimate driving force of human behaviour. The conception of human beings as economic agents driven by self-interest and utility maximisation is one representation of the world, or one historic social construct which has been meticulously nested in the minds of many generations of economics students. Degrowth in that sense calls for more ample visions giving importance to economic relations based on sharing, gifts and reciprocity, where social relations and conviviality are central. The focus here is on the change in the structure of values and the change in value-articulating institutions. Degrowth is thus a way to bring forward a new imaginary which implies a change of culture and a rediscovery of human identity which is disentangled from economic representations "

fight the ideology of monetization of the human.²²⁰ The GDP is the symbol of how the market economy monopolises the life of the people by valuing in money everything and excluding everything that doesn't increase the profitability. Anything that is not monetary measurable and doesn't produce an increase of the GDP is not considered as factor of well-being and progress, because it doesn't increment the productivity. Instead, the well-being of a person lies especially in all those things that don't have any effect on the GDP, like donating, exchanging, self-producing. All of them activities independent from the logic of money and profit. The levels on which those value-oriented attitudes would produce effective changes are especially on the energy supply and on the nutrition, which are the main future problems that an overpopulated planet will have to face. Through a shift towards vegetarian diets, self-production of food (by gardening or by shared economy practices) and energy; by becoming wise consumers , reducing at the minimum rate the consumption of resources and the waste produced; by extending the durability of products and recycling materials, transmitting traditional knowledge to preserve and re-use; by diminishing the ecological impact thanks to technological innovation...through these changes in the daily life a mass of people with a big impact can reduce its footprint very much in a relative short time.

Any consideration of degrowth is mostly referred to Western countries. It depends, indeed, on the change in the attitudes of Western societies, if also the Global South will be able to undertake a sustainable pathway of development, which doesn't have to be like the one followed by industrialised countries. This implies a commitment of just distribution of resources, technologies and knowledge. With these premises the problem of the overpopulation of the planet could be solved, as just distribution and extirpation of poorness provokes automatically a diminishing of birth-rate.

The Degrowth movement has been translated in Italy in an association with federal status and it acts in many regions through clubs, groups, and networks of consumption and organisations of critical consumers. Through their social commitment they promote and diffuse an alternative worldview and educate entire communities to live with wisdom and responsibility.

The same considerations can be applied to the "Slow Food" movement, that focuses on the food and gastronomic sector but it diffuses a culture of quality and sustainability through it.

The nutrition is one of the factors that will be determinant when promoting cultural changes towards sustainable lifestyles. Feeding an expected world population of 9 billion of people in

²²⁰ Id. : "The major idea is: if less time is spent on formal work and consumption, more time can be dedicated to other activities which are fundamental to one's well-being, such as social relations, political participation, physical exercise, spirituality and contemplation. Such a shift will potentially be less environmentally harmful."

2050, I already said, will be one of the biggest challenges that we are going to meet and the success or failure in doing it will depend on what and the way how we will eat. Slow Food is an international cultural movement founded by Carlo Petrini in 1986 that promotes a culture of food that educates to the rights of taste and pleasure of the gastronomy as a cultural value and focuses on the quality of it. The quality of what we eat depends on what we choose and how we do it, that means more broadly, from the lifestyle that we conduct. This shouldn't be the fast, stressing and frenetic one that our society proposes as model. Quality and responsibility in the nutrition depend on the respect of culinary traditions, the valorisation of the identity and culture of local populations, and of the respect of the environment and the nature, in terms of protecting biodiversity and practicing sustainable agriculture that follows the natural rhythms of the earth and doesn't alter the ecosystems. Slow Food fights especially the spread of fast food and junk food culture, and in general it promotes a healthier, slower and more harmonic way of life treating food as cultural good.

Both those movements developed from theoretical knowledge into formal and official activism through recognised associations, financed public events and educational projects. They are internationally recognised, started to spread from the bottom through the engagement of common people in their daily life and they contribute to diffuse alternative practices to improve the lifestyle of everyone and reduce the ecological impact of it.

Basic social structures must be rapidly changed by social movements. This may be possible because analogous changes have occurred in history without large-scale violence. In such a process of social change, abandoning consumer society may turn out to be surprisingly painless, because modern consumption is inherently dissatisfying. Hence, there is a chance that out of the transformation, in addition to a rescued climate, an equitable economy and a genuinely democratic polity would also emerge. ²²¹

- **Fourth Level: Alternative Communities integrated in the society. Transition Towns**

There is awareness that action must be taken on all levels. Most activities take place at the local scale, and are often articulated through informal and formal networks. Transition towns

²²¹ See Olli Tammilehto (2012) : "On the Prospect of Preventing Global Climate Catastrophe due to Rapid Social Change", in *Capitalism Nature Socialism* 23:1, pp. 79-92. <http://dx.doi.org/10.1080/10455752.2011.648842>

(UK), Rete del Nuovo Municipio (Italy) and Comuni Virtuosi (Italy) are good examples of urban-focus approaches²²²

Continuing to enlarge the dimension where environmental social innovations take place, from the individual and small group level we can find several experiments of new lifestyles that consider as platform for the action large communities into the city. At this level of action it is not anymore the individual or a limited group of people sharing interests that engage in living sustainable and responsible, but the attempt can interest quarters of cities or entire towns, like it happens with the eco-neighbourhood and with the Transition Towns. The goal of those examples is to promote a change into the city, integrating the innovation into the traditional mainstream culture and structures and try to transform step by step the urban context. The commitment to propose alternatives into the urban context is due to the evidence that more than half of the world population lives nowadays in cities. The urbanization has touched rates of irreversibility that will continue to grow. Social innovations that remain outside the urban contexts as isolated laboratories, like intentional communities, are extremely important and precious, in the role of inspirational examples and pioneers, hoping that their proposals or parts of them will “infect” the mainstream modes of living. However they are relatively likely to modify the cultural orientation and behaviours of the masses that live in the city, where the dominant model of lifestyle is the consumeristic one. Initiatives like the eco-neighbourhoods aim, instead, to propose an effective alternative already into the city context, by valorising the community of the district and promoting policies of direct democracy and relationship, self-sufficiency of energy production, waste management and shared economy. One of the main aspects that those experiments take care of is the recovery of the relational element and the community affiliation. Recovering those values means fighting modern materialism and individualism and automatically encouraging sustainable and virtuous behaviours.

The movement of Transition Towns is maybe the most successful example of the integration of alternative sustainable lifestyle into the mainstream society. A Transition Town is a town that undertakes the project of managing the community according to democratic and sustainable solutions in order to respond effectively to the problems of the depletion of oil for the production of energy, the climate change and the economic instability. The broader purpose of the transition movement is to promote awareness about sustainable living, build ecological resilience and develop strategies to promote a gradual transition, a change from the current unsustainable trends of the societal masses to models, practices and worldviews that enable us to preserve our future and to

²²² See F. Demaria, F. Schneider, F. Sekulova, J. M. “What is Degrowth? From an Activist Slogan to a Social Movement”, <http://www.degrowth.org/wp-content/uploads/2014/08/What-is-degrowth.pdf>

react and adapt in the best way to the possible challenges that the environmental forces will impose us.

To deal with the depletion of fossil fuels and the crisis of the energy supply the town learns to be independent from those resources and to rely on sufficiency and self-production of energy. The community adopts planes to save, reduce the use and produce energy, and reallocate the basic resources for producing food, goods and services. Public transportation systems are incentivised and private car use is deeply reduced. Practices of recycling, exchange and shared economy are promoted and alternative economic arrangements are developed, mostly locally based, like critical consumption, local production through permaculture and sustainable agriculture and use of land, short supply chains and urban gardening. This has the scope to reduce pollution due to trade transportation systems and to maintain a good level of self-management and self-reliance in the community. However it doesn't mean that a transition town is isolated from global economic dynamics and international trade, but it takes part to it in a wiser and more reasonable way. The community promotes the active participation of the members who discuss and decide about inner problems. The processes of decision-making are democratically managed by them: it is the community in transition that visions, plans and implements the strategies of the change, having as starting reference point the handbook of the transition movement, which individuates 12 indicative steps²²³ to follow, in order to begin a project. Transition Towns become therefore also opportunity of rebuilding and revalorisation of the system of relationship among humans and between humankind and environment, beyond the primary elements of promoting resilience and independency from oil.

One important element of the transition is the aim to cooperate with the local existing institutions and political authorities. A town in transition doesn't conceive its action as antagonist or alternative to the mainstream management of the administrations, but it seeks to promote the integration with it and the support necessary to address the gradual change. Also, as the premise to the functioning of a transition community is an aware and open participation and cooperation, the transition of a group implies an inner individual transition of every singular member, in the sense of embracing a psychological shift from conventional life-styles and standards, generally dependent on oil and consumeristic habits, to sustainable ones in terms of spiritual values, attitude towards other persons

²²³ The 12 steps indicated by the transition movement are a guide useful to begin a project and build a first leading group. They consist in organising a group of action, informing, exchange knowledge and communicate information outside the project, imagine practices and planes, building contact and cooperation with local administrations, valorising the knowledge of the old generations, keeping openness and flexibility in the creative development of the project, creating a plan of energy reduction (Energy Descent Action Plan). See *Transition International* and *Transition Italia* websites: <https://www.transitionnetwork.org/support/12-ingredients> and <http://transitionitalia.wordpress.com/cose-la-transizione-2/i-12-passi/>

and entanglement for the environment. The educative implication of grassroots transition practices are therefore strong and with a big potential of having an immediate impact on urban populations. The first “transition” started in 2005 in the town Totnes in England, where Robert Hopkins, expert of permaculture and then main founder of the movement, decided to imagine a project with his students, of a town that wouldn’t be any more dependent on oil, but would address the community towards resilience promoting solutions. The example has been repeated by more than one thousand towns nowadays and has spread successfully and in continuous flexible evolution in all Europe.

- **Fifth Level: Alternative Communities outside the mainstream society. Ecovillages and intentional communities**

It is obvious that a different world cannot be built without new cultural, ethical, and spiritual values. In this sense ecovillages are pioneers for cultural transformation, because they establish a different consciousness. They are change agents that show under which conditions sustainable and environmentally just lifestyles can be established, while increasing quality of life.²²⁴

In the review “Ecovillages. Realizing Utopia: Ecovillages Endeavours and Academic Approaches” edited by Marcus Andreas and Felix Wagner,²²⁵ an ecovillage is defined as an “intentional community where environmental sustainability is sought, along with social justice, equality, peace and so forth.” Next to the definition of ecovillage also the one of intentional community is explained, that is “Five or more people, drawn from more than one family or kinship group, who have voluntarily come together for the purpose of ameliorating perceived social problems and inadequacies. They seek to live beyond the bounds of mainstream society by adopting a consciously devised and usually well thought-out social and cultural alternative.” To do this they share many aspects of the daily life and conceive themselves as a group rather than divided individuals, distinct from the rest conventional society. There can be several levels of sharing in such communities. Some, like the Cohousing communities, provide families with private houses or flats, usually built with sustainable material and design, but sharing common areas and services, like parks, children’s halls and baby-sitting, dining-rooms and so on. Some other ecovillages engage on deeper and larger commonality.

²²⁴ See Geseko von Luepke (2012), “Ecovillages: Islands of the Future?”, in Andreas, Marcus, and Felix Wagner (eds.), “Realizing Utopia: Ecovillage Endeavours and Academic Approaches”, *RCC Perspectives* No. 8, p. 77.

²²⁵ Id.

The realities of ecovillages and intentional communities have existed since long ago, already appeared when the Christianity spread in Europe, with groups of people united by the same religious or spiritual values that lived together in distinct communities from the mainstream society. The element characterising the modern development of ecovillages is the attempt to live sustainable and communally. Those communities are increasing in number since the economic and the ecological crises worsened and just in Europe there are several hundred experiments located mostly in western and northern countries.²²⁶

Some of them are inspired by religious or spiritual commitments, but many others are secular and are simply motivated by the will to live in an alternative and more balanced way, in accordance with the environment and with a sustainable future perspective.

Part of the sustainability of the lifestyles in ecovillages implies a communality of activities, space and decision-making process. Every member is directly responsible for the community and united to the group by solidarity and relational links. It is not the interest of the singular to have priority but the well of all in the community, therefore values of democracy, freedom of expression and sense of belonging are strongly felt. Ecovillages members aim to have the lowest footprint possible on the environment and they organise their life in base of this principle. They build houses using low impact material and technics; they try to generate locally renewable energy and to produce locally organic food to pursue self-efficiency for feeding. They use sustainable transports and share many elements that are commonly owned (e. g. like land, but also objects, instruments, cars...). Every singular ecovillage is a different specific experiment. There are no general rules or instructions to develop it, rather every experience is born into a specific local context with certain people, and therefore it will grow with its specific features, as a social laboratory.

Yet all of them can say to have the elements and values mentioned above in common, and they generate a unique solution in base of the specific interpretation and elaboration. In general the alternative life conducted in ecovillages claims the urgent need of recovering elements of communality and solidarity among individuals, if we want to produce the social change that is needed. They strongly fight the individualistic and materialistic culture of modern consumerism and do it choosing to live differently and showing that another way of living is possible. Beyond the daily routine of ecovillagers, that generally is integrated pretty well with the mainstream society “outside”, they often organise events, laboratories, work-shops, seminars opened to the outsiders, where they can learn and experience sustainable activities that they can practice daily also outside

²²⁶ See Meijering Louise(2012), “Ideals and Practices of European Ecovillages”, in Marcus Andreas and Felix Wagner edited by, “Realizing Utopia : Ecovillage Endeavors and Academic Approaches”, *RCC Perspective* No. 8, pp. 36- 40.

the ecovillage itself (organic gardening, permaculture, recycling, meditation...) and that can improve the quality of the life and diminish the impact on the environment.

Ecovillages represent one of the most radical social innovations that are being experienced in order to propose a cultural and practical approach to the ecological crisis with real long-term efficacy.

Their contribution in terms of raising awareness and educating people to sustainable patterns is very precious and they should be encouraged and politically or legally supported. The specific solution that every “laboratory” produces is generally not extensible to the masses of mainstream society in its entirety as radical totalising lifestyle, but all the singular proposals and strategies that they promote could be easily imitated and repeated on a large scale by every citizen. The only condition necessary for that is a strong awareness, a good knowledge and the internalisation of certain values, including the understanding of the urgency, inevitability and importance of addressing our lives towards sustainable styles. Ecovillages, offering examples of possible practices and opening their doors to the mainstream society, offer a valuable occasion to learn and be inspired. They represent a potential rich occasion of education towards sustainability by presenting worldviews and practices that will have to become common in few decades to the most part of the conventional society. In this sense they can be conceived as pioneers of a cultural revolution to which we will have to adapt if we want to respond to the crisis in an appropriate way.

I believe ecovillages are important because they offer another way to understand what we must do to transform our world into a saner, healthier, more human and more liveable place for humans and all the world's creatures. They practice the advice: To change something, build a new model that makes the existing model obsolete. They show how it might be like to leap from the dominant paradigm of materialism and environmental callousness to that imagined future paradigm in which people live simple, satisfying, cooperative lives in balance with the natural world, harming no thing and no one.²²⁷

All the social innovations mentioned challenge the consumeristic culture in different ways and from different domains, some more some less integrated in the conventional social dimension. All of them offer interesting examples and spread a new knowledge about the environment and the relationship between it and the inhabitants, and are therefore sources of education.

²²⁷ See Leafé Diana Christian (2012), “We never lock our Doors”, in Andreas Marcus and Wagner Felix edited by, “Realizing Utopia : Ecovillage Endeavours and Academic Approaches”, *RCC Perspective* No. 8, p.19.

Education to sustainability, both through the formal and the informal pathways described, is the main strategy to promote the cultural response to the ecological crisis that the technical approach tends to neglect. However, a wise cultural approach that acts on the social tissues and shapes to sustainable values and assets needs also an appropriate knowledge and paradigm to understand the situation where actions will take place. An appropriate, integrated and faithful knowledge about the environmental crisis is necessary in order to comprehend the challenges that we are going to meet. To this purpose, I argue, the paradigm of our knowledge must be addressed towards a transdisciplinary perspective, otherwise any consideration or proposal may risk being partial, inadequate and reductionist, as Vandana Shiva has denounced about the modern science.

Chapter VI - Transdisciplinarity and the role of Humanities in Environmental Studies

In the next pages I'm going to describe the other element that we need to deal better with environmental problems: a different orientation in the research academy. As first point in the academic field, the humanities should be reconsidered for their potential. Secondly the different disciplines should embrace a Transdisciplinary approach, in order to produce valid knowledge. I will describe why the humanities play such an important role in our attempt to face the environmental crises and how they try to contribute through the field of environmental humanities, an integrative perspective aiming to overcome the traditional split between hard and soft sciences of our culture. After defining the position of the humanities I will clarify the Transdisciplinarity paradigm and its practical perspective.

The theoretical division between hard and soft sciences that I mention doesn't take into consideration the local and national differences. I'm aware that the gap and the definitions vary in base of the place, but I keep a general theoretical position without going in detail, according to which there is a border dividing natural sciences and economics using hard and empirical methods of investigation, from the human, that generally include Arts, Philosophy, Literature, History and neighbouring.

The need of an integrated paradigm

*The (environmental) question as a whole lies in the domain of ecology, biology, agronomy, chemistry, and so forth. In addition, it also ropes in the economy, engineering, city planning and so forth. Only the interdisciplinary pooling and integration of all these will lead to the global environmental science that is needed.*²²⁸

One way not to leave the monopoly of the management of environmental problems to technocracy is, we saw upper, educating future generations to sustainable patterns and involving the civil society at global level, giving value to the mobilisation and the arise of awareness from the bottom. Another way to enrich the overlook about sustainable development and environmental sensitiveness is to promote a more integrated approach in the academic research, between economics, natural sciences

²²⁸ See Hans Jonas (1985), p. 189.

and the humanities. Environmental problematics remain still not enough treated by the 'human section' of the academy, although things started to change in the last years. Sciences like History, Anthropology, Arts, and Philosophy give still a partial contribution and are not so much perceived as relevant sources. The stages where this side of the academics flows together or cooperate with Economics, Politics and Natural sciences are still limited and the way how the humanities can approach the environmental matters seem not interesting for the "technicians". On the contrary, the potential that the humanities contain for enriching the topic is precious. The humanities have the instruments to describe how the humankind acts, thinks and changes in the history and so they can say much about the relationship with the nature and the environment. Technical analysis promoting reforms and models, without the cultural knowledge and preparation for them, is like building an instrument and not having the hand able to use it. The hand, that is the people with their mind and capability to think critically, should be aware of the aims, the implications, the responsibility, the history, the larger context that the instrument implies.

Environmental issues, even posed by economy, directly involve socio-philosophical questions: What do we need to be happy?, Does material wealth make citizens happier?, Does greater productivity and richness lower the global inequality? Does the market structure allow preserving the environment? All this regards ethics, sociology, anthropology, philosophy, beyond the immediate call for economy and politics. The 'shallow ecology', that intervenes through money and market-based instruments and economic incentives systems, tends still to miss a substantial dialogue with those subjects, that could give a different form of understanding and knowledge to the issues. An organic perspective among different academic studies towards the environmental challenge is urgently needed, and the cross-disciplinary orientations - as inter-, multi-, but especially trans-disciplinary - have a strategic and big potential.

Dealing with environmental questions, I repeat, is not just matter of finding practical solutions to numerical problems such as the excessive percentage of greenhouse gases concentration. It is, by now, a more holistic and large matter, that has to do with the mentality, the life-style, the culture and attitude that we have towards the natural environment. Who or what, better than studies concerned with the human, can address this kind of orientation?

*Environmental problems are not only related to the physical environment; they are also inextricably tied to the sociocultural environment. The key to understanding them is to understand that they are as much physical as they are a social issue.*²²⁹

The role of the Humanities and the relation with the Nature in the Western cultural history towards the Anthropocene²³⁰

The relation that the western culture has today with the environment is deeply different from the one that it had in the antiquity. It is impossible to comprehend how we developed towards the Anthropocene without re-walking back the historical evolution of our society. To understand this, and to understand our current position, humanities are essential.

According to Ecofeminists, the reason why we approach to nature in an external dominating way has the roots in the framework of *dualistic thinking that serves to naturalize and legitimate political oppression generally: the domination of nature is ideologically inextricable from the domination of human by human, particularly of women by man*²³¹. It is the core of dichotomies part of the dualistic thinking of Western culture that drove us towards this attitude of anthropocentric exploitation and domination.

At some point of the European history the Nature as subject of knowledge encountered a process of debasement on behalf of human artificial creation and of an inner soul speculation. The capability of humans to build mechanic disposals not existent in nature was a first source of power that could be perceived in opposition to the natural creations. With the spread of the Platonic philosophy and later the Christianity, the world was divided in two dimensions, the physical and the metaphysical, immanent and transcendent. The physical, corresponding to the natural world, lost in a certain way value, because the ‘Truth’, purpose of the human knowledge and research, was in the Ideas, in the

²²⁹ See Kreutz Angela (2014), “Reconciling theory and practice: Transdisciplinary Insights from an Indigenous Case Study”, in Emmett Rob and Frank Zelko (eds.), "Minding the Gap: Working Across Disciplines in Environmental Studies". *RCC Perspectives* No. 2, p. 27.

²³⁰ With the term *Anthropocene*, recently adopted by the sciences, it is intended the chronological epoch when human activity starts to have global impact on the Earth’s ecosystem. It is the most recent geological period, but opinions about the conventional time of starting still disagree. Some put the start before the Neolithic, when sedentary and farming culture began, some consider the Industrial Revolution as starting point, and some want it to start 2000 years ago, at the end of Holocene, when the big Empires of the history (the Roman, the Chinese...) and large areas’ human management developed.

²³¹ See Freya Mathews, “Deep Ecology”, in Dale Jamieson (2001), p. 227. The dichotomy core identified by Ecofeminists goes forward with: mind/body, spirit/matter, subject/object, human/nature, culture/nature, reason/emotion, science/superstition, civilized/primitive, colonizer/colonized, mental/manual, and so forth.

*Iperurano*²³² and in God, a dimension intangible and superior to the tangible reality. This initial division between physical and spiritual will continue in the Middle age with a proper distinction between the body and the soul, materiality and spirituality. They were two different things, one impeding the spiritual elevation of the other, the body as a cage for the soul that gains freedom in the inner reflection, after the death and after leaving the material condition of life. Material body, analogously to physical natural world, has endured a process of progressive underestimation while the human condition and its spiritual possibility of knowledge have undertaken a strong boost of power and sense of superiority. Next to this dichotomy, Descartes contributes to the further development of a distinction between the human as subject that knows and the reality as object to be known. A proper detachment between our mind and the world, the latter perceived as outside dimension and outside entity from us. With this news the human mind lost the sense of belonging to the reality and to be an inner part of a whole and we became external observers of an existent dimension exterior to us, we have power to act on. According to some scholars, as mentioned in the previous chapters, this detachment of the mind and the self from the world is the reason of the modern lack of integrity and spiritualism and the root of extreme self-referencing individualism and socio-psychological malaise.²³³

Our anthropocentrism has far roots and it passes through several social and cultural revolutions before reaching the extreme attitude of the modern times, when natural assets are considered just in a narrowly utilitarian and external sense that will oblige us to re-think our limits and our position in the world. These processes take place in the history of the humanity through philosophy, history and arts. Who represented the relation that the humans have with the nature in the history were artists, painters, sculptors, poets, scholars... all this simply explains how the humanities impact our reality, because they interpret it and are able to give a sense to the social changes and evolutions and they also shape them. Quoting Scott Slovic²³⁴, humanities and arts *are ideal media for*

²³² The *Iperurano* is the dimension, described by Plato in the *Fedro*, upon the physical world and beyond the sky, where are the perfect and changeless Ideas that can be couched just by the intellect and cannot be reached by temporal beings. It is a metaphysical, perfect, immaterial, timelessness, and totally spiritual dimension.

²³³ See Beth Carruthers, "Call and Response", in Bergmann S., Blindoc I. and Ott K. (2013), p. 134: "Our Western ontology of separation of human from world, has resulted also in (...) a disconnection between what is thought, said and written and what the senses see, the heart feels and the world suffer. In this state we have trained ourselves to see only ourselves, our own interests reflected, projected. We make ourselves profoundly and dangerously alone, locked within the palace of our self-reflexive ontology and its artefacts. The remedy for the separation of self and world and ultimately the suffering of the world is to reawaken the heart, and his prescription for doing so is clear. It is beauty that stirs and opens the heart. That the world is loveless results directly from the repression of beauty, its beauty and our sensitivity to beauty. For love to return to the world, beauty must return, else we love world only as a moral duty."

²³⁴ See Scott Slovic, "Literature", in Dale Jamieson (2001), p. 252.

exploring and communicating systems of values - ethical frameworks- within specific communities and between one culture and another. Humanities change social beliefs, assets, mentality. They are the kind of reflection that can determine how the humanity thinks, acts and perceives itself in a certain context. When we talk of environmental matters we talk about this and the humanities have much to say and they have always done it.

*The humanities are a powerful source of change. We humans are motivated by what we believe, and humanistic thinking is one of the main sources of ideas and narratives that inform social action – for good and for bad.*²³⁵

Humanities and social sciences to avoid the reductionism of the technical approach

We have seen in the first chapter the limits of the technical approach from an economic and political point of view. Policies are not able to promote long perspective change if a cultural approach misses. Another reason why the technical approach doesn't work is its reductionism. I have mentioned above the denouncement of Vandana Shiva about the danger of the reductionism of modern science. Her argumentation about the ontological perspective of the modern science, that reduces the complexity of the nature to division of units, sums of parts and points of investigation that encounter the efficiency aims, is another reason, together with the lack of cultural background for the application of legal frameworks, why the technical strategy cannot work. Technical expertise may miss indeed a faithful and deep comprehension of the environmental problems. Beyond the reductionist perspective in studying natural systems, they miss the social point of view, because social sciences and humanities are not integrated in it. Environmental studies have the core in natural sciences, while arts and humanities are relegated at the margins. This asymmetry is in line with the reductionism and the tendency to prioritise procedural strategies:

Unbalanced development in environmental science has led to an asymmetry of disciplines in which the natural sciences are placed at the forefront while the humanities and arts are resigned to the margins. An increasingly technocratic ideology is creeping into environmental

²³⁵ See Paul Holm (2014), "Can Environmental Humanities help make a better world?", in Emmett Rob and Frank Zelko (eds.), "Minding the Gap: Working Across Disciplines in Environmental Studies", *RCC Perspectives* No. 2.

*science; promises of quick technical fixes are gaining priority and investments over long-term complex processes of knowledge seeking.*²³⁶

Sustainability and environmental matters are natural and social objects. The reality we live in is a complex construction of social and natural interrelated facts and processes and the reduced point of view of one scientific side doesn't enable us to understand the whole. Social, economic and natural dimensions cannot be conceived as independent entities and cannot be studied as separated. If the challenge of sustainable development requires acting especially on long-term perspective, it is essential to work on the social system of institutions, political structures, cultural issues such as beliefs, motivations, and values. Beyond the short-term policy actions and the normative scheme this fundamental core should be driven by humanities and social sciences. Just this integration of different ways of analysing the reality can promote a systemic understanding and a holistic framework.

*The sustainability challenge requires more than technical expertise. It requires us to consider long-term and foundational issues, and it challenges deeply held values and beliefs. Key contributions for this come from 'interdisciplines' such as human ecology and environmental politics, social sciences and humanities such as history and philosophy. The humanities in particular have been marginal to sustainability research to date, which reflects the science-arts divide that has pervaded both the academic world. Yet, to understand the biophysical world requires science; to conceptualise our role within this world requires the humanities; and to reach sustainability requires their integration.*²³⁷

Environmental Humanities

*I believe humanities do change the world and environmental humanities are urgently needed both for intrinsic interest and for their contributions towards a better world.*²³⁸

²³⁶ See Bergmann S., Blindoc I. and Ott K. (2013), p. 1.

²³⁷ See Joern Fischer, Adrian D. Manning, Will Steffen, Deborah B. Rose, Katherine Daniell, Adam Felton, Stephen Garnett, Ben Gilna, Rob Heinsohn, David B. Lindenmayer, Ben MacDonald, Frank Mills, Barry Newell, Julian Reid, Libby Robin, Kate Sherren and Alan Wade, "Mind the sustainability gap", in *TRENDS in Ecology and Evolution* Vol.22 No.12.

²³⁸ Poul Holm (2014), "Can Environmental Humanities help make a better world?" in Emmett Rob and Frank Zelko (eds.), "Minding the Gap: Working Across Disciplines in Environmental Studies", *RCC Perspectives* No. 2, pp. 57-60.

The way how knowledge developed in the western society along the history of the last millennium, in the wake of Descartes, increased in the centuries the sectorization of the subjects and the dichotomy between sciences and humanities. The official definition of the scientific method (passing through Aristotle's logic, the scientific revolution in the Renaissance, the Enlightenment, the Positivism and so forth), as definite procedure of research, made the border line between natural sciences and the rest clearer and tidier. Science could demonstrate and reproduce things and had a clear mechanical pathway to follow. The rationalistic and positivistic tendency of western culture has left often to the humanities a secondary or relatively important status. The utility of not objectively demonstrable knowledge was not very clear in some historical periods and if something didn't fall under the umbrella of the "scientific criteria of validation" was likely to be considered non-scientific or irrelevant. The epistemological excursus about sciences' status is much more complex than this, obviously. However, the dichotomy between *hard sciences* and *soft sciences* remains a feature of our cultural paradigm. Analogously has the dichotomy between nature and culture been bequeathed. Biophysical and social realities were conceived as separated entities, one stage of natural events, one of human action. The usually concerned relation between the two regarded the human's possibility of dominating the natural world for his best survival. Environmental humanities, as new platform for cross-disciplinary studies, propose an approach to the reality that tries to pass this gap and dichotomy, conceiving ecosystems as the place where both human and non-human beings interact and belong. They are parts of a large system where everything is linked and connected and where we act as *participants in lively ecologies of meaning and value, entangled within rich patterns of cultural and historical diversity that shape who we are and the ways in which we are able to 'become with' others*. If the reality is conceived as integrated, holistic and systemic, studying it with sectorial and divided approaches cannot be the right tactic. The best way to approach to an integrated reality is a knowledge not withdrawn into every specific sector, but integrated and trans-border. In this sense, environmental humanities aim to:

*Resituate the human within the environment, and to resituate nonhumans within cultural and ethical domains. Both tasks aim to overcome the nature/culture binary that positions humans outside of nature and thus implicitly posits that we are free to control our own destiny within a broader 'natural' world that is devoid of meaning, values, and ethics.*²³⁹

²³⁹ See Bird Rosea Deborah, van Doorenb Thom, Chrulewb Matthew, Cookec Stuart, Kearnesb Matthew and O'Gormand Emily (2012), "Thinking Through the Environment, Unsettling the Humanities", in *Environmental Humanities* 1, pp. 1-5, citing the thought of Australian philosopher Val Plumwood.

In the last decades several sub-disciplines have raised, providing an interdisciplinary approach. It is important that they don't just overcome the traditional nature-culture dichotomy, but they also include non-western and indigenous paradigms towards the nature, therefore the enlargement of the approach becomes even more precious. Environmental History, Environmental Anthropology, Ecofeminism, Ecocriticism and Cinema, Environmental Philosophy, Ethics, Aesthetics and Sociology, Political Ecology, Ethnography and Geography, they all help to foster this orientation and to conceptualise a new notion of humanity and think better ways for us to conceive ourselves in the world, act and learn. They can give a different outlook from the current prominent technical and scientific one. An aesthetic or visionary comprehension of the reality through the arts, literature and cinema, a spiritual one through religion or philosophy, a contextualised and inclusive through the History, or a practically involved and cross-cultural through Anthropology and cultural studies, and so forth, they can change the disposition and the sensitiveness that we have towards the environment and shape a different scale of cultural values. Humanities (more specifically literature and Ecocriticism), says Luose Westling²⁴⁰, use a *metaphorical* and *connotative* language, differently from the *denotative* language of scientists, to question the place of the human in the world, to enter ethical problems derived from science and technology, to scrutinize their 'invisible' dangers and effects. They can create a different "Social Imaginary", with the words of Hearther Eaton, that is the *complex and relational tapestry of intertwining ideals, beliefs, moral principles, patterns, practices and influences; more simply is the way we imagine life and our lives together.*²⁴¹

Environmental Humanities can contribute to change the current utilitarian and exploitive "social imaginary" in a more ecological one and from those learning we could conceive alternative practical pathways, if these academic studies success in working together with the society practitioners, and the result wouldn't be just an imposition of *top-down bureaucratic, state-sanctioned "management"*.²⁴²

To this end, also integrating academic research and social practices is essential if we want to promote new sustainable patterns. Transdisciplinarity becomes therefore the key factor.

Fragmented Knowledge and Transdisciplinarity

²⁴⁰ See Louse Westling, "Literature and Ecology", in Greg Garrard editor (2012), *Teaching Ecocriticism and green cultural studies*, Basingstoke: Palgrave Macmillan, p. 84.

²⁴¹ See Hearther Eaton, "Forces of Nature", in Bergmann S., Blindoc I. and Ott K. (2013), p. 111.

²⁴² See Rich Hutchings (2014), "Understanding of and Vision for the Environmental Humanities", in *Environmental Humanities* Vol. 4, pp. 213-220.

*The point is that all these studies are fragmentary: they select and isolate relational nets through abstract analysis. One does not ever attempt to study the total net. According to our intuition, though, there is something we call reality which is in some sense a unity and [...] in our interdisciplinary cooperation, we must, somehow, split up considerations of totality.*²⁴³

One of the effects that institutional education has on the mind of young children is to address their perception of the reality divided in sectors. Knowledge in primary and secondary school, is likely to be imagined as many different drawers, each of them containing one discipline with its own outlook on the human, diverse from the outlook of the discipline near. Another image that could metaphorically represent the paradigm of the fragmented human knowledge could be a graph with the form of cake divided in many slides; each of them is one discipline, one slide of psychology, one of physics, one of biology, one of history... The cake is supposed to be the human being, and every slide understands the human from its perspective. It is difficult with such imaginary, to see the cake as one only integrated thing, and therefore the human as a whole. We rather see an entity fragmented in all those parts, each describing the cake in a different way, with different languages, often not comprehensible for the others.

When we then focus more on one of the slides, therefore we potentiate one outlook, one perspective to understand the reality, at the expense of the others, we are likely to enforce a partial perspective and to have a limited view of the world. That happens if we understand the reality just in scientific terms, as chemical or physical processes, without any spiritual, cultural or emotional component. Or on the contrary if we miss scientific knowledge of natural dynamics and tend to evaluate everything mystically. Independently from the personal worldview and philosophy of life, the tendency to sectorize the knowledge, through the fragmentation of disciplines, creates an embarrassment in our mind. The specialisation in one sector may provoke the loss of the whole. This process of sectorization is a common experience for every individual in the modern society. The enormous amount of knowledge that we produce used to be divided and specialised more and more. Expertise levels in every field are extremely high, but although the progress in the specific sectors grows, the cake remains a sum of parts that have difficulty to communicate with each other.

Hans Jonas used to say that:

The 'collective mind' of the society that stores the knowledge has to pay a price for scientific progress, namely the price in the personal quality of the knowledge itself. Its name is

²⁴³ See Naess Arne (1990), p. 79.

*'specialization'. Enforced by the monstrous growth of the contents of knowledge, their proliferating subdivisions, and the differentiated, subtle methods developed for them, it leads to extreme fragmentation of the existing total of knowledge among its adepts.*²⁴⁴

Fragmentation of the knowledge doesn't have just consequences on the individual understanding of the reality, but it creates an amount of specialization that may not really catch the complexity of the reality we live in, that is much more than a sum of drawers.

According to Nicolescu²⁴⁵ the differentiation and division of disciplines that study the external object-reality has led to the loss of the *Subject*, meant to be the whole reality with the human being part of it. The emphasis on the scientificity and objectivity of the knowledge polarized the loss of spirituality and subjective component of the reality. Following his argumentation, on a long-term perspective and on global scale this scientism and *objectivation* of the humanity will take us to the self-destruction.

The disciplinary paradigm is not anymore adequate to comprehend our complex world. N. stresses the urgent need of an approach that goes 'beyond the disciplines', not simply multidisciplinary or interdisciplinary, but transdisciplinary. Transdisciplinarity opens a new way of understanding the reality that can catch a sense of the *Subject*, not possible to conceive for singular disciplines.

As the article 5 of the Charter of Transdisciplinarity²⁴⁶ points:

The transdisciplinary vision is resolutely open insofar as it goes beyond the field of the exact sciences and demands their dialogue and their reconciliation with the humanities and the social sciences as well as with art, literature, poetry and spiritual experience.

Transdisciplinarity in the definition from the article *Methodology of Transdisciplinarity- levels of reality, logic of the included middle and complexity*²⁴⁷, concerns that which is at once between the disciplines, across the different disciplines, and beyond all disciplines. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge.

A new concept of cross of knowledge is introduced, that differs from the multidisciplinary approach, where an object is studied from different subjects in the same time, whose perspective are

²⁴⁴ See Hans Jonas (1985), p. 167.

²⁴⁵ Basarab Nicolescu is a physician and one of the most important contributors to the speech on Transdisciplinarity, president and founder of the International Centre for Transdisciplinary Research and Studies (CIRET).

²⁴⁶ See World Congress of Transdisciplinarity edited by (1994), "Charter of Transdisciplinarity", *Interdisciplinary Encyclopedia of Science and Religion* website, <http://www.inters.org/Freitas-Morin-Nicolescu-Transdisciplinarity>

²⁴⁷ See Nicolescu B. (2010), "Methodology of Transdisciplinarity – levels of reality, logic of the included middle and complexity", in *Transdisciplinary Journal of Engineering & Science* Vol. 1, No.1, pp.19-38.

incorporated but the results remain on a disciplinary level. It differs also from interdisciplinary approach where the methods of different disciplines are transferred to one another but again remaining on the disciplinary level. Transdisciplinary approach concerns a holistic framework 'behind' the singular disciplines that should focus on the common problems, rather than on the intellectual diversity or language and paradigms' divergence.

After explaining his theory of the three axioms of different levels of Reality, Included Middle and Complexity²⁴⁸, N. claims the need of recovering a spirituality of the reality that we've lost because of the technical efficiency, scientific and economic ideology. Transdisciplinarity approach is able to do this because it enables us to represent a 'Big picture' of the reality and to communicate among the different perspectives. In practical terms, as it is exposed in the Charter, the transdisciplinary approach corresponds to a trans-cultural attitude that can allow us to cohabit democratically among different cultures and worldviews and to an education that *must teach contextual, concrete and global approaches*²⁴⁹. It corresponds to a trans-religious and trans-national orientation that stresses the sense of belonging to a totality, rather than the specific differentiation and division. It promotes also a harmonic conception of economy, which must be in the service of the human being and not the contrary, and an ethics based on reciprocal tolerance and respect of individuals and community diversities.²⁵⁰ Transdisciplinarity knowledge should be trans-language and trans-history. All the dimensions of the reality should follow an attitude that aims to recover the human and spiritual sides of the humanity and to redefine the role of the humankind in the world and in the universe.

The attempt to recover this sense of the reality is translated in the re-conciliation between the *Homo Oeconomicus* of the modernity and the *Homo religious* of the tradition. The latter, who was protector of the sense of sacred towards the reality, has been strangled by the first one. The two kinds should recover their integrity reconciling the opposition between subject and object of knowledge and situating them into the reality as an integrated whole. This whole is moving and changing continuously and we have to learn to move with it following its own flows and not perturbing, resisting to it or dominating it. Just if we learn to act in harmony with it we can imagine sustainable futures.

²⁴⁸ Id.

²⁴⁹ See World Congress of Transdisciplinarity edited by (1994) , "Charter of Transdisciplinarity", *Interdisciplinary Encyclopedia of Science and Religion* website, <http://www.inters.org/Freitas-Morin-Nicolescu-Transdisciplinarity>

²⁵⁰ See Dincà Irina (2011), "Stages in the configuration of the transdisciplinarity project of Basarab Nicolescu", in *Transdisciplinary Studies: Science- Spirituality- Society*, No. 2. http://basarab-nicolescu.fr/Docs_Notice/Irina_Dinca.pdf

Nicolescu starts to diffuse the concept of “Transdisciplinarity” in the 90s, although Jean Piaget has used the term already in 1970. From this first conception it developed an idea of transdisciplinarity that adds to the element of holistic understanding ‘beyond the disciplines’ also the interaction of the academic achievements with the society practitioners.

Researchers in the academy should establish cooperative relationships with involved actors in the society to address real social understanding and change, on the institutional, behavioural and cultural level. In this way the knowledge from the academics enters in contact with social contexts, policy makers, cultural patterns of values and norms and institutional structures, and confronts and develops together with them. The academic expertise opens itself to the outside active community and its stakeholders that have practical role in the social processes. That means also going closer to the real life of people, the stage social change should come from, if the attempts made are effective. Working “on the field” addressing a more appropriate interpretation of the reality, drives to the promotion of active engagements and clearer awareness of needs, obstacles and aims in every social actor of a community. The community is in this way directly called to participate in understanding the complex issues they are involved in and in promoting future alternative solutions. Obviously, one of the obstacles to overcome in this form of knowledge production is the compatibility of communication. The several ‘levels of the reality’, from the academics to every social or institutional environment, should be capable of reciprocal understanding adopting a common language and a multidirectional communication (that is already one of the biggest problems just remaining in the academics and at the stage of research).

In the context of sustainable development, addressing the knowledge towards the elastic cooperation between academics and society means opening to the complexity of the reality we live in and its problems, which cannot be understood just in theoretical terms. A pure theoretical comprehension doesn’t drive to practical achievements and changes if it doesn’t affect the processes that it investigates, in their institutional and physical reality. The sharing of the perspective of practitioners and the interpretation and theory of the research can create, together, a fertile field to produce mutual learning, new integrated and more systemic understandings, with a practical attempt to realise outcomes. As sustainability requires social change, the research should develop into the social processes in order to comprehend and address them differently.

Transdisciplinarity leads to a move from science on/ about society towards science for/with society. With this interaction, the stakeholders in the specific organization or region are confronted with new ideas and insights. This helps them to develop new orientations towards sustainable development and to better understand the options available for innovative

activities. More and more within the currently emerging network society, scientists are expected to help stakeholders to define common ground for action and for the sharing of individual problem-solving capacities. Academic expertise needs to be viewed as being on the same level as the more practical experience and values of non-scientists.

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Conclusion

The environmental crisis is one of the biggest challenges the humanity will have to deal with in the next decades. Many elements define the “crisis” and the human activity of the last two centuries is the main cause of them. The domain of the ecological issue is global, since it regards everyone and it depends on the dynamics of the globalised economy and of the globalization. In order to deal appropriately with such situation it is important to enter the dynamics of the global village as an interconnected system and to identify who is involved in finding the strategies to deal with it. My opinion is that only conceiving every individual in the world responsible for it we can address effective pathways. Just if we act at global level, the environmental problematic can be embraced. Therefore I identify the Global Citizenship, meaning the whole humanity, as player in charge of the problem. The actors involved in such issue are not just authorities, but every citizen of the world. Global Civil Society engagement is essential to promote cultural responses to the crisis, which are, in my opinion, the only possibility to endorse effective and long-term change. I argue that the technical approach of current responses, based mostly on technological innovations and introduction of technical legal and political frameworks, is inappropriate and reductive. If next to those adjustments we don't develop a culture of sustainability that will address radically different lifestyles and worldviews in a long-run perspective, the solutions will be ineffective. Technical strategies, indeed, remain into the logic of profit, growth and accumulation, that are the core of the economic system based on consumerism and exploitation of natural assets that led to the crisis.

We need cultural approaches in order to shape future generations to new mentalities, ready and apt to confront with the challenges that will come and to think and live sustainable. To promote all this Education, in institutional and informal stages, is determinant. The international community defined already the purposes, models and implementation schemes of an education to sustainability, but every context needs to engage personally and locally to rethink school systems in this sense. Important sources of education are nowadays also the social innovations proposed by the Civil Society, through bottom-up engagement. They represent precious laboratories of sustainable solutions that can inspire, spread and raise awareness.

Beyond Education, I consider important the adoption of Transdisciplinary approaches and paradigms into the research about sustainability, in the sense of the systemic integration of

disciplines to understand more deeply and properly the situation and conceive solutions, and to establish platforms of easier cooperation between the academics and the society practitioners.

Those elements could furnish to the future generations a more faithful comprehension of the reality and a kind of intelligence that presents the right resources to deal with coming conditions and challenges. Technical tools simply postpone problems, just a deep cultural reorientation at global level can be effective if we really want to avoid the worst consequences of the ecological crisis.

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