ECOLOGICAL PERSPECTIVES IN CITIES

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В статье представлена проблематика экологической философии. Посредством анализа феномена города как формы социальной, культурной и экономической интеграции людей рассматриваются условия и возможности достижения экологической гармонии в мире. Согласно автору статьи, такая гармония предполагает не только решение насущных экологических проблем (загрязнение окружающей среды, истощение природных ресурсов, перенаселение), но и утверждение определенной системы ценностей, норм, правил, которые позволят систематизировать многообразие различных практик осуществления человеческой жизни в их вариативности на основе признания принципа взаимной уважительности и равноправия. Достижение этой цели возможно только при условии утверждения новой, интеркультурной философии, противостоящей традиционному европо/германоцентризму и метафизически обосновывающему его дуалистическому мышлению. В аспекте экофилософии это обозначает критику таких предрассудков, как противопоставление природы и социальной жизни, сведение экологии к одному из разделов экономики, рассмотрение разума и его способности к познанию и созданию технологий, обеспечивающих социальный, культурный и технический прогресс, как автономного трансцендентального субъекта, не зависимого от эмпирических данных. Делается вывод, что именно эти предрассудки, получившие философское обоснование во времена промышленной революции, привели все общество и планету к экологическому и социальным кризисам. А значит, решение таких важных и очевидно не связанных с философией проблем, как изоляционизм, бедность, беженцы, глобальное потепление, потеря биоразнообразия, ухудшение состояния экосистем и др., зависит от изменения фундаментальной философской позиции.

Ключевые слова: экологическая философия, феномен города, экологический кризис.

The article presents and discusses some problems of ecological philosophy. By means of analyzing the phenomenon of the city as a form of social, cultural, and economic integration of people, the author considers the conditions and real possibilities of achieving environmental harmony in the world. It is stressed that such a harmony should involve not only the solution of pressing environmental problems (such as the facts of environmental pollution, depletion of natural resources, overpopulation), but also the adoption of the appropriate system of values, norms, rules etc. which will make it possible to systematize, on the principle of mutual respect and equality, the variety of different practices and forms of human life. The author insists that to achieve this goal we need a new, intercultural philosophy which would oppose to the traditional Euro/Germanocentrism, on the one hand, and dualistic metaphysics, its philosophical foundation, on the other. As concerning ecophilosophy, this implies criticism of the following philosophical prejudices: 1) opposition of nature and social life, 2) reduction of ecology to one of the departments of economics, 3) regarding reason as an a priori autonomous transcendental subject capable of cognizing reality and creating technologies leading to social, cultural and technological progress. It is concluded that these prejudices, which became philosophically based during the epoch of industrial revolution, caused global environmental and social crises. Therefore, the solution of such pressing and seemingly not related to philosophy problems as isolationism, poverty, refugees, global warming, loss of biodiversity, deterioration of ecosystems, etc., depends on a transformation of the fundamental philosophical position. Consequently, the urgent task of our contemporary time is learning to think "non-dual", namely: to integrate thinking about nature and people, economy and ecology, cities and environment, etc. As a result, we will become able to contemplate diversities.

Keywords: ecological philosophy, phenomenon of the city, ecological crisis.

Introduction

The term 'ecological' refers to a range of meanings. From being aware of growth limits [38; 39], or the planet's limits [52], to methods of publicity for attracting people who are sensitive to sustainability [58].

Here the term 'ecological' is used as a way of observing the relationship between Nature and Humanity. This reciprocal relationship has become broken over the last two centuries, particularly the last 60 years. The causes of this breakdown are multiple. The analysis of these causes is beyond the scope of this paper. It is worth mentioning them, however, because contemporary society has reached a very dangerous point regarding environmental degradation and social issues; global warming, loss of biodiversity, and an acidification of the oceans [19]. These three phenomena epitomize the breakdown of the relationship between humans and nature.

The notion 'perspective' is a dimension of thought referring to an intellectual ability to see beyond the state of the world. It can run deeper when looking beyond the time of the current ecological crisis which is provoking environmental and social risks. This meaning is the one I will use here, close to the approach of Thomas Berry [7; 8] when he proposed an ecological course in peace with the Earth, as well as close to the approach of David Abram [2] when he unfolded a cosmology integrating living beings. I can name it a 'perspective' for Re-Naturalizing Cities. Modern society can no longer live with the confrontation between Nature and Human beings without the risk of collapse. The former includes all living beings, the latter, communities and cultures [40]. This confrontation is the result of the short-term logic imposed by the capitalist economic system and neoliberalist ideology [47]. The risks of environmental collapses are high and migrations caused by environmental crises and disruptive social conflicts. A perspective with a wider vision can facilitate the transition to a reconciliation of both human beings and nature. A reciprocal re-organisation would maintain them both in a healthy state.

Cities can be the place for this transformation, given that, since 2007, the majority of humanity is living in them. It thus seems appropriate to pose the followings questions: Can the social interactions, governance and culture, of cities' actors lead to sustainability? Is it possible to envision a sustainable city? [21]. Housing, mobility, energy, local infrastructure, urban gardens, and others, are the physical aspects of creating sustainable cities. Economic democracy, distributed leadership, community management, health care, among others, are the social aspects of a sustainable society.

Both physical and social aspects are determinant factors in achieving an ecologically peaceful path, which reconciles humankind and nature. However, in order to facilitate natural components to cities, as well as be in communion with the Earth, something other than the environmental and social dimensions of sustainability is emerging. An important part of it is biodiversity in cities [13; 15; 23; 25; 56]. Another relevant aspect is the experience of 'time' as a phenomenon emergent from life [3]. To experience the rhythms of living beings, which are part of the rhythms of social interaction in cities, is in this emerging perception of biodiversity in cities, of

which people are becoming more aware. I will discuss time and rhythms in the third perspective: the cosmological view.

Three perspectives on ecological issues

I will present three developing perspectives, of greater or lesser intensity, with reference to an ecological viewpoint. The first focuses on the political economy, mainly the transformation of the means of production. A relevant representative trend is the 'circular metabolism' of materials in production processes [32; 59]. The second centres on the cultural dimension, which emphasizes changing ways of living, more in accordance with ecosystem services. A significant social movement representative of this cultural change is 'Voluntary Simplicity' [4], and the meaning, debated nowadays as to what a 'good life' is [48], is based on a culture of sufficiency and through 'slow movements'. The third perspective is directed towards a cosmological view. Here the emphasis is on transforming ways of seeing, changing mind sets, gaining the ability to integrate nature and society within the same vision [33]. An intellectual representation of this thinking is 'non-duality' philosophy - one that understands an integration of polarities that have a vision of reality focused on interrelatedness [34; 68].

In cities, through urban gardens, and free spaces for peoples and neighbourhoods, there is an approach to nature's rhythms through gardening and sometimes socialising. These are closer to an ecological pathway. However, is needed to experience and feel nature within ourselves, in our bodies and minds [8]. To live within those time spans and rhythms, and agree that they are just as profound as social and cultural time spans [20]. A way of seeing the world as a whole: nature, society, human beings, living beings, material structure, keeping at the same time the capacity for discerning things. We will develop these now one by one.

1. *The political economic perspective.* Two concepts are useful for this first perspective: circular metabolism and consistency. The two refer to leaving behind of the conventional economic model that challenges the basis of life on Earth at an accelerated pace.

The excessive use of materials, as currently occurs in industrial production, can cause the whole economic system to collapse in the process. In addition, excessive waste from the production chain can cause the ecosystem services to deteriorate to limits of usefulness. Each step in the production of goods: design, manufacturing, and the end of a product's useful life, is an opportunity to reduce the use of raw materials and to generate less waste. Materials in this circular, metabolic way could be useful for a second, third, or even twentieth time, successively [32]. The 'circular' notion itself changes the mindset of how we use materials and energy.

Reducing the use of materials is this metabolism's first commitment. However, repairing goods rather than considering that the product has finished its life is a second commitment. Goods can be repaired in small premises distributed across a city's neighbourhoods for a second time, or more: bicycles, computers, tables, and whatever else. Reparation is an imperative issue, as sourced new materials from mines are scarce. As a new emergent economic sector providing jobs to many people, it also contributes to pro-

tecting new materials from being extracted from the earth. The recycling of materials is the third commitment, following reparation and reduction. Recycling is a new industrial sector that values materials rather than discarding them, instead re-using them for a further production of goods. These three commitments: reducing, repairing, and recycling, are comprised in the notion of circular metabolism.

In fact, reducing the use of materials and repairing goods is even more necessary than metabolizing those from recycling. This involves a broad cultural shift in methods of production. It requires an awareness of the meaning of sufficiency, as a cultural value and mental approach to sustaining natural resources and ecosystem services, to sustain the earth's capacities. The principle point of circular metabolism is a reduction in the use of materials and energy [64]. The transformation of the political economic perspective of erroneous ecological methods of excess, changing it towards a correct ecological pathway of preservation.

Repairing could also be an aesthetic and artistic means of producing goods. So-called 'fab labs' have appeared in cities: laboratories to experiment on materials that have already been used to construct any kind of product. New tools and processes accessible to the people [17; 66]. This is the culture of 'do it yourself' (DIY).

The theoretical framework for cities, as for example, lefebvrian or Chicago school, can be rethought in an era of global urbanization. Cities can go beyond rural / urban division and integrate both to explore a world where nature (natural resources and ecosystems services) and culture (the dynamics of intercultural relationship in cities) can go hand in hand to avoid the decline of both systems [26; 27]. Cities can be seen as the frontier for co-production of the social and the natural.

The term consistency is the second concept in this first perspective. It is preceded by the question: how can we make a transition from an economy that requires a huge amount of resources to another based on moderate consumption and that's compatible with nature? For the last 3 decades a number of engineers, economists, and entrepreneurs have explored the challenges this transition poses [54]. Here consistency focuses on the reconciliation between nature and technology. The chief principle is that industrial transformation processes must not disturb natural metabolic processes. Natural metabolism and industrial processes should complement and mutually reinforce each other. Material that is harmful to nature must be cast aside. That's what consistency is about, as well as the intelligence inherent in those processes. One phase's waste provides the raw materials for the next. That's how nature works. Those who are receptive to this transition to sustainable methods of production, seek this.

Cities are a kind of territorial organisation where consistency can be promoted. The knowledge is there, socially interactive debates, laboratories to explore and experiment, and neighbourhoods where these can be applied. Smaller scales are also inherent to consistency. Cities and regions could be organised into smaller administrative institutions and to make participation by the communities possible. There is a sufficient concentration of people within cities and regions to develop the culture of consistency whilst involv-

ing them in the process. T. Spiegelhalter and R. Arch present two eco-cycle case studies: Rieselfeld Vauban in Freiburg, and Hammarby Sjŭstad in Stolkhom, where 'circular metabolism' is applied [59]. Where current linear resources move towards a circular cycle, where renewable energy is used and waste is recovered as a resource. These districts are leading in innovation for resource conservation and the reduction of Green House Gases in order to achieve the IPCC target. J. Vicens presents a similar case study in Barcelona, the district 'Sant Martí-la verneda', with the same goals [64]. Something important has started to move in the direction of sustainability to make the transition to low carbon use. In other terms, this is social responsibility, environmental awareness and economic prosperity, together forming three intertwined dimensions of sustainability.

The political economic perspective of ecology in cities is developing with these unfolding concepts: circular metabolism and consistency, based on the value [24] of thinking, in this case around cities, as a system, confronting all the different aspects at play and observing the connections between them. Secondly, to produce durable goods, quite the reverse of obsolescence, for sustaining resources and ecosystem services, innovating new ways of business according to nature and people. Thirdly, to seek people's quality of life, rather than their standard of living. Quality here means, for example, to have time, walk, enjoy a conversation, non-material things, apart from material goods.

2. *The cultural perspective.* To explain the cultural perspective, I will employ three appropriate notions. First, to rethink the meaning of being human and its finiteness; secondly, the constituted perception of space as a locality; third, the meaning of sufficiency when enquiring about ways of being happy. Meaning, perception and sufficiency enable us to detect whether there is a cultural shift in approaches to ecology. In this section I will look at how a cultural perspective on cities and neighborhoods can be applied.

To understand the question as to what a good life is and to look more deeply into this debate, contemporary society needs to rethink the meaning of what human beings are. In the midst of a period of history when humanity has altered Earth's main ecosystems, this reflection becomes a moral imperative. This particular period, the so-called era of 'Anthropocene' [11], has brought the Earth to its limits. The nature of this planet has been drowned by the impact of human activities. What is the sense of a modified planet and the sense of an excluded humanity? A reorientation towards being positive and happy, together give good practical and theoretical ways and ideas to contextualise the above question [6; 48].

Modern society has used fossil fuels as sources of energy and thereby provoked an increase in average global temperatures, caused by concentrations of greenhouse gases. It has also changed the quality of biodiversity levels, causing the loss of a wide range of plant and animal species [31]. In addition, it has altered the acidity of the oceans [57], affecting the oceans' capacity to process chemical pollution. At the same time, other main ecosystem services are being pushed to the limit; water, forests and so on. Society needs to confront our human finitude. To reflect on and discuss both ethical

questions as well as practical points: how does humanity wish to live henceforth, in the face of this ecological alteration? This is the principle question facing us today. It is simple, though unavoidable [40; 47]. Do we really want to extinguish all other life forms on an Earth that was full of them just a few centuries ago?

The ecological approach, proposed at the start of this text, confronts humanity with serious cultural changes. For these changes to be addressed, the world's cultural communities should provide the initiatives, experiences and knowledge, to build a joint parliament and to reach a mindset that considers intercultural discussion to be a rich context for debating the points in question. Openings can be found for reflection. The way we perceive nature shows how we approach the world. We have perceived nature as a store to be conquered and plundered, as happened in Africa, Latin America and in parts of Asia during the colonial era, and still continues. However, in following an ecological approach, the perception of nature can include living beings, complex habitats, ecosystems services and an understanding of their rhythms. In this way, we'll instead approach the world as a mosaic of human experiences and communities.

Industrial time has acted so quickly, creating pollution, greenhouse gases, waste, exhausting natural resources, that the pace of nature and living beings' temporality, has been broken [3]. We can see disruption between locally constituted perceptions of the environment and social communities, caused by the global impacts of industrial society on the entire planet. This separation between perception and impact has been the cause of seriously insufficient political and civil debate concerning putting precautions in place when carrying out further risky industrial experiments. Our perception as human beings have been evolving locally, and humanity needs its cultural community in order to understand and integrate the global environmental and social impacts produced by the industrial dimension of time.

The principle step in this direction is to wonder what our needs are as a human society. Facing the limits of the planet to develop a culture of sufficiency is useful. What then is sufficient? An ecological approach would need to include discussions of this question. What is sufficient for all human beings and communities? What is sufficient for respecting the natural rhythms and time of Earth's ecosystems for them to have a chance of restoring themselves from the damage caused by negative impacts?

In the face of this question a small, quietly relevant movement has emerged, requesting compassionate withdrawal: a withdrawal from using nature as a storehouse to be plundered to supply goods and benefits. This means having an affinity with the Earth, a vision for identifying erroneous presumptions around relationships between human beings and the environment. Stepping back could be a very intelligent move and requires a change of consciousness. One that would re-orientate our perceptions and attitudes towards reciprocity and a respectful relationship with nature. To live in peace. The Earth is a communion of subjects who together make us responsible citizens [1].

Compassionate withdrawal means leaving consumerism behind, reducing the ecological baggage of any goods, and the ecological footprint from

any and all services [41]. It is an opportunity to re-learn ancient wisdoms of proportion and balance [2; 36], liberating us from the tyranny of consumption that we've imposed on ourselves. It also involves humility, obliging us to rethink all that's brought us to this current global warming crisis and the Anthropocene era.

The cultural perspective brings us to compassionately withdraw from continually altering the planet's systems, systems which require centuries or thousands of years to re-balance. It is a course that seeks out how we can make the transition to re-naturalizing society; to choose ways of de-growth in the use of materials; to liberate ecological spaces for those who have no access to them; and finally, to enjoy being in contact with the Earth [21; 22]. The structure of compact cities, instead of sprawling ones, alongside a cultural change deep within the social consciousness are the ingredients for this turning point. Those cities in the world which are very compact, such as we find in Asia and Europe, as well as the slums in developing countries, where the majority of urban people live, are the ones to try this ecological change combining both compactness, and cultural consciousness of the planet [62].

The culture of sufficiency, just how much is enough, brings us to the meaning of plenitude itself (Schor, 2010). What changes are needed to represent a culture of sufficiency? The transition initiatives to a post-carbon and sustainable society [64] integrate simplicity and plenitude. Sufficiency is a kind of culture that develops quality of life, providing time to feel and perceive the movements and signs sent by our environment.

3. *The cosmological view*. This is the most profound ecological perspective. We can find this in some discussion groups; however, it has not yet achieved the broad presence necessary in order to be practiced in cities and neighborhoods. Nevertheless, signs of this perspective are to be found in urban designs that attempt to create spaces for people, facilitating relationships between people and living nature, and promoting different urban experiences of time, closer to living beings' sense of time. In Barcelona, for example, the General Urban Plan proposed creating large spaces for people, called *Superilles*, "the Superblocks, the anti-pollution strategy, the renovation initiatives, opting for the tram and a municipal energy operator, and promoting urban greenery" [69]. It is an interesting way of rescuing space from that taken up by cars. Cars would be eliminated from these. Instead there would be urban gardens, spaces for people to interact, creating an atmosphere based on human rhythms.

To unfold this perspective, I will look at three areas. Firstly, the constituted temporal dimension, the '*natura naturans*' experience of time [3]. This means phenomena's internal time interacting with the environment in which we live. Not the chronometer's time or technological time, instead the time created by human interaction, or the time created by human-nature interactions. Secondly, the life rhythms of renewal, deriving from the passage of days, months, seasons, amongst others. Renewal is the natural way of being continually alive. Some human cultures have used such renewal through rituals as Mircea Eliade explains very well in his writings about myth and religions [18]. It is a cultural form of confronting the imperma-

nence of things [33]. Thirdly, there is the interactive sociability principle. It is the generative and lived temporality originating in relationships through interaction, which are the most natural way for any development to take place, including all living beings in any ecosystem. When interaction is free from domination, something creative emerges. New generations might apply this principle, consciously or unconsciously, in order to innovate [35].

The '*natura naturans*' experience, the emergent force from all phenomena, means having temporal reciprocity with environmental space. It takes into consideration internal aspects, generative time for all phenomena and processes. It constitutes temporality, the force that transforms the Earth into an environment. That is, to be nature itself. To experience nature in ourselves. Through daylight, for example, we can observe how the rhythm of the Earth's movement passes, transpires. The place we live in, and how we live there, can be favorable for us in relation to nature. If cities and neighborhoods are full of cars and cement, we cannot observe, perceive and feel nature, or any temporal reciprocity with the environment. However, when cities and neighborhoods are designed to integrate natural elements: the seashore, open spaces for natural light, soil for urban gardens, biodiverse parks, trees in the streets, and so on, then observation, perception and feeling are all possible. It facilitates the experience of being in tune with the rhythm of nature and living beings.

The interactive sociability principle will be enlarged if we incorporate living beings' rhythms into the temporality of our actions: walking, cycling, having a conversation with a friend, observing what is going on around us, and any other human action in relation to time and space. Time is constitutive of human life in society and also constitutive of human life in nature [35]. When interacting between temporality and the environment, we can reach the '*natura naturans*' experience. Being nature in the process of living life. It is crucial to understand the living, natural rhythms of our actions in our communities, neighborhoods, and cities. This is a mirror for reflecting our understanding of the huge environmental risks that we, humanity, are facing nowadays.

The inner time of phenomena created in interaction with the environment, where we live, is a felt time that orientates the ecological path along which we need to recover society. To 're-naturalise society'. Barbara Adam emphasises that living nature is active and changeable, made up of processes and contexts [3]. Birds nest and migrate in a specific time and place. The landscape changes colour with the seasons. Contemporary society needs to experience those 'processes' and 'contexts' once again in order to re-naturalise human life. The proper place for this is in cities and neighbourhoods, for two reasons. One is the growing urban population in cities. Second is the imbalanced ecosystem of modern cities, due to the eco-social impacts of industrial development on space and time. However, cities can be transformed in a more ecological way, as I try to argue in this paper, to get a balance between human social structure and living beings' ecological structure.

The interactive sociability principle, explains Barbara Adam, makes products produced, nature natured, and life lived. The temporality of na-

ture begins to re-connect the external phenomena within its generative processes, the landscape to its reproduction and the forest to its formation. This is the essence of renewal. Although this renewal is always different, the same processes and contexts remain always. From a human being's viewpoint, rituals have the same renewing function as nature has to landscapes and forests. In sociological terms people renew cities, neighbourhoods, buildings, free spaces, or whatever, by interaction and 'ways of living'. It is a temporal and interconnected environment. The crisis of exceeding the limits of the planet pushes society and its groups, classes, neighbourhoods, cities, all the contexts of social interaction, to rethink, redesign and re-interact, differently to the patterns of on-going liberal capitalism.

In this third ecological perspective: the cosmological view, I consider the profound perspective of having a non-dual relationship between human beings and nature's living beings. Polarities between the two, as we have developed dangerously over the last two centuries, must instead overlap if as a contemporary society we are to take the ecological.

Generating spaces and times where the perspectives wind around each other, in the context of cities

The three perspectives: politico-economic, cultural and cosmological, are intertwined through a winding movement. Changing the production of goods, turning them into more ecological cycles, transforming our ways of life, bringing them closer to sufficiency, and the perception of the '*natura naturans*' experience, for example, are interactions that move outwards and inwards: they are reciprocal. Consciousness is what makes the first a wider social movement. It is easier to be aware of recycling material than the rhythm of daylight in the planet's movement. Nevertheless, they are connected.

Initiatives can be found that apply these ecological perspectives. There are spaces and policies in cities applying these perspectives. In this section, I will develop the possibilities for their application in cities and neighborhoods. We present two proposals where the winding movement can be observed: public spaces, and biodiversity.

1. *Public spaces.* These are the essence of the city's cultural project, whether in ancient Greece, or the European Renaissance. Public spaces are at the heart of interaction, making all kinds of social relations possible. These bring us to cohesive processes for the structure of society. Public spaces are the physical aspect of interaction, whereas temporality is the psychic aspect. Cities are a human settlement, where common energies circulate with social relationships.

The public spaces of industrial and modern cities are mainly occupied by cars. City design is thought through for cars, which take up the greater areas of public space, while skyscrapers fill the city's vertical space. Either one or the other obstruct free and open relationships between people. Modern society is orientated around individuals, yet human nature is configured socially. This doesn't mean that there's no space in human being's psyche for the individualisation process that Jung developed so clearly. We speak

of 'social configuration' as the interaction process that creates a culture. The city project is a cultural project to empower the social aspects of people's lives. Modern designs for cars and large buildings isolate social relations. We can find the same isolation in contemporary slum settlements, most of them existing within the structure of cities, which become exclusion zones. Even though people living in slums are totally interested in social interaction, for example with city hall, to get better urban conditions and eventually be integrated into the whole city [16; 53].

There is a counterbalance to modern city planning. It is the social movements that prioritise social relations, leading especially to a cohesive and integrated community. We can refer to it as an inclusive city [70]. Well-designed urban patterns make it possible for public spaces to serve as meeting places, enabling interaction, functioning as facilitators, connectors and socially mixed areas for diverse ethnic heterogeneous peoples. Social movements aiming for political demonstrations, free days for walking and cycling, cultural and musical events, amongst other examples.

To achieve these objectives, cities must be polycentric. All the residents of a neighborhood must have the chance of living in socially mixed areas. To counteract the trend [70] of rising socio-economic polarization and segregation, that is, privileged and disadvantaged neighborhoods, the ecological pathway to social cohesion is gathering the ability for the city to be seen as a whole, towards integrating people. If polycentric is the physical course for this whole approach, then the participation of civil society and the promotion of horizontal democracy are the social contexts for achieving them. When freedom and equality are valued highly, the quality of democracy is also high. When there is participation in public and common affairs, that society has a good quality of democracy too [42]. The appropriate policies for it are through education, health care, the job market, housing and finance, and making people feel they are members of a society.

Political courage, social flexibility and creative thinking are the signs on this ecological pathway. Cities concentrate so many people together, particularly in Asia and Europe, that these three values can be taught in schools and the media. When politicians open the doors to facilitate a context of taking decisions, then a new democracy emerges in cities. One good example of this emergence was the 'Indignant' movement that took place in Madrid on the 15 May 2011. It was a political experiment on how to take decisions in a more decentralised way and more horizontal one. In many squares' corners, people were holding discussions about common affairs [37].

When social relationships create the space to understand diversity as a rich human contribution, a new culture can emerge [46; 63]. Diversity has to be seen, not only ethnically, but also the gender, age, professions, political ideology and religion. This diversity gives a rich complexity to the political project oriented towards the intention to integrate all the social actors in the democratic process [63]. A new paradigm of thinking has been developed in the second half of the 20th century, which can be summarized as a 'Wholeness' way of seeing [9; 12; 14; 50]. When ways of thinking become broader and more creative for conflict resolution, profound benefits emerge for social cohesion.

These three: horizontal democracy, social diversity and a thinking for all, form part of an ecological pathway. These three takes both the cultural dimension and a cosmological view as references when proposing the use of public spaces for interaction.

To interact in public spaces, the human and sociological experience of time has the quality of liberating us from production time. There are cultures, ancient cultures and indigenous cultures, where time is not linear: past, present, future, rather it is more circular, cyclical, or even oriented to the past. Nowadays the dominant conception and perception of time is the industrial one, transitioning to the new technologies' rhythm. However, this does not mean that there are no other social and human experiences of time, which in an ecological crisis, as we face today, could be a good reference to look at, as we see that the acceleration of time provokes a huge natural rupture.

2. *Biodiversity for re-naturalizing the city*. The interaction of human beings is enriched when there is closer contact with biodiversity, with a wider range of living beings. Parks have been the most usual form of biodiversity to embellish the city. However, here we mention biodiversity in the context of interaction: having a daily or frequent relationship with plants, birds, trees, and the complete living ecosystem, as a way of re-naturalizing oneself. Finding the proper rhythm in this relationship is to realize our potential as living beings [15; 25]. Parks, of course, have an important role in facilitating moments of relaxation and providing the feeling of being in a forest whilst actually in the middle of a city [6].

Another context, that complements parks, would be one that creates small 'green' spaces. These can be either on the rooftops of buildings; on balconies, at home, in offices, or in any free space amongst buildings or the streets. The most common are urban gardens. These have emerged in neighborhoods to provide food supplies, social interaction and innovation. All three contribute towards walking in the direction of re-naturalizing cities. Most of these urban gardens are aimed at people who feel part of a trend that has begun to build a world in which social and natural lives can live together [65]; where eco and urban systems can remain together. A good example is urban agriculture [61] that gives those interactions a political capacity: they are working for a more sustainable city, and they highlight issues of justice as they claim access to food, social benefits and more equal distribution of land in the city. Urban agriculture is a way of redistributing value within a city.

Urban gardens are part of providing a leisure activity for unemployed people or a way for the elderly to fill their time; they are also a movement towards supporting local economies. In addition, urban gardens provide an opportunity to empower city-dwellers, changing the culture and learning how nature relates to various different people. In order to illustrate this reflection, I will consider how direct contact with biodiversity through urban gardens opens up qualities of perception, developing an experience of time. This first point is a hypothesis that needs to be corroborated through interviews or surveys. However, perception as a quality is reinforced when humans have a sense of their own locality. This comes from contact with

plants and trees, even birds when they migrate, as they do in some specific places [25].

The second point, the experience of time, is a common human experience, one that humans share with other living beings. Every living being grows and unfolds its potential in a habitat, which makes it possible, and then declines. This organic experience is the expression of time in living bodies. The human organism, with its embodied mind, has this emergent property called 'consciousness'. The growth of the organism and mind is impermanent, it changes constantly. To interact with living beings, in relationship with biodiversity, gives us this sense of renewal. Impermanence and change make it possible to renew.

The loss of biodiversity in the world is the main extreme ecological problem, with the same level of impact as global warming [52; 60]. Even though the loss of biodiversity [43] and the declining of ecosystem services [30] are not sufficiently rooted in the consciousness of citizens to create the powerful social movement needed for the influencing of public policies, city design can encourage citizens to recognize the importance of this relationship. Parks help, as do urban gardens, herbal and botanical gardens. They promote the importance of draining carbon dioxide, awakening the renaturalization of social life. Ecological systems are fragile and this fragility makes social communities vulnerable [10]. Marginalized neighborhoods are at high risk of losing the supply of eco services.

Research into biodiversity perception and ecosystem services has grown. Some publications show the relationship between human and cultural ties that provide ecosystem services as a *sense of place* [25]. The main experience of inhabiting a territory is in an urban space. Restoring ecological decline is to rescue the experience of place. Other publications relate the importance of biodiversity with the wellbeing factor, understanding that human wellbeing runs parallel with the richness of the species [15]. There are investigations that show the interrelation between social and ecological systems in cities, such as in Finland [67].

Discussion

I wish to highlight three areas of discussion, for their relevance to an ecological perspective. One is the role of transition movements in achieving cultural change. Two, is the capacity of a city to become gentle for a 'good life'. Three, is a society's intelligence in integrating a 'non-dual' perspective into human and nature relationships.

The transition movement started in Devon, England to make a clear case for placing limits on an excessive use of natural resources [28]. This social movement promotes a post-carbon society through using renewable energies for reducing carbon dioxide. I could contextualize this movement as a politico-economic perspective. It is urgently necessary to apply these levels. There are initiatives that favor this perspective. For example, proximity and local economies; energy self-generation; a reduction in inequalities through a participative democracy when taking political decisions; a responsible use of resources, and others [64]. They all focus on the community rather than individual aspects of a society.

There is one aspect that shows the determination of a transition movement to go beyond the economic political perspective. It is the intention to achieve a more profound cultural change that comprises a new vision of society to overturn today's environmental and social risks. One that must focus on the relationship between *Society and Ecology*. There is an imminent need to *Re-Naturalize Society* if we wish to avoid the collapse of ecosystem services and natural resources [51]. It is not enough to have a hundred per cent renewable energy, even though that is extremely necessary; it is not enough to stop the loss of biodiversity, even though that is indisputable, and so on. It is necessary to change our mindset and experience nature within ourselves. When we propose a new relationship between human beings and nature, we state that the balance between our inner side and our outside is fundamental.

Where can we make this change? In cities. This is the second point for discussion. There is currently sufficient knowledge, tools, and policies to change the texture of cities to include spaces for people and biodiversity. There are many kinds of cities in the world. We can at least make a typology of cities depending on incomes: high, middle and low incomes cities. We could also carry out a typology, depending on the process of modernization or cultural roots. However, when we say cities are the place to make deeper cultural changes in order to confront major social and environmental risks, we are conscious that these changes must adapt to each specific city depending on culture and environment. At the same time, the society-ecology relationship is a global challenge [5]. For example, every municipality in the world knows best which kind of urban gardens are needed, and for what purpose. The same could be said about initiatives and experiences contributing to a 'good life', which would be different in New York, Nairobi, Mumbai, or Barcelona. A 'Good life' essentially means favoring a better quality of living. Policies for slums are specifically for clean water, sanitation, food and housing. Policies for a neighborhood in a European city would be to make it inclusive to migration. Both require a profound mental change to create a gentle world for everyone.

However, it is necessary to clarify these two discussions. Our contemporary society needs to change its dual way of thinking. That is, from viewing nature as separate from society, or ecology as a separate aspect of the economy, or considering the mind and its capacity for knowledge and technology as separate from the body and the senses world. These ways of thinking, dominant since the industrial revolution, have brought the whole society and planet to its ecological and social limits. There are many social and ecological risks: exclusion, poverty, refugees, and global warming, loss of biodiversity, declines of ecosystems, and others. The capacity to integrate nature and society, ecosystem services with economic services, technology with living organisms, and so on, changes our direction from destroying habitats, communities, living beings, to restoring them all [44]. In our contemporary times, it is a challenge to look far ahead and think 'non-dual' [33], to create a vision for 2050 or 2100. To go beyond simply doing things for immediate profit. To integrate our thinking about people and nature; economy and ecology; cities and environment.

These three discussions are to promote research using this approach: transition movements for cultural change, a gentle city for a 'good life', and a capacity for 'non-dual' thinking, help us re-direct the path we are walking on this planet. And at the same time, we become able to contemplate the diverse lands of the Earth.

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