

**Biophilia as an adaptive approach
to climate change**
**A qualitative study with interviews in North,
Central and Southern Italy**

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BIOPHILIA AS AN ADAPTIVE APPROACH TO CLIMATE CHANGE

A QUALITATIVE STUDY WITH INTERVIEWS IN NORTH, CENTRAL AND SOUTHERN ITALY

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Abstract

Climate change increasingly evident, such as global warming, floods and droughts, but also as new epidemics, affects the entire planet living system. From an anthropocentric approach that is in fact devastating and irreversible on several fronts, humanity must rediscover a synergy, a holistic approach that we can call "biophilic approach" where, starting from every individual aware of his influence, even if minimal but decisive (effect butterfly by Edward Lorenz), the entire human society, in its local and global organizational expressions, must find a proactive adaptation that cannot be delegated to nature itself through the biological mechanisms of the evolution of the species. In fact, the extinction of many animal species shows us that the times of anthropocentric development do not coincide with the biological times of the species' adaptation to climate change. The purpose of this study is to identify a paradigm shift, which involves a subversion of the mechanism of natural adaptation, focusing on what are already the "lost games" with the planet, the non-renewable resources being depleted, the ecosystems compromised, and how much and how a biophilic approach can influence a new synergistic adaptation between the human component and the others, to find a balance on the residual capacities of coexistence and survival of the entire planetary system.

Keywords: Climate change, global warming, floods, droughts, biological mechanism.

1 Introduction

The term "biophilia" was described by Edward O. Wilson as the innate tendency of human beings to be attracted to different forms of life and in some cases to become emotionally affiliated with them (Wilson 1984). The term was then conceptualized in the biophilia hypothesis (Kellert & Wilson 1993) as part of evolutionary psychology. From the beginning of the industrial era to today, environmental pollution has reached unsustainable and, unfortunately, perhaps irreversible levels. The dramatic events caused by climate change led us to urgently rethink our relationship with other living forms and the other elements that make up the planetary system. Behind the push of enlightened scholars, researchers and politicians it is true that far-reaching projects have been undertaken, which involve the large state organizations, which set dates and objectives to be respected, but the common thought is gaining ground that all this is not enough. Authoritative and powerful voices, such as that of Gates for example, affirm their concern by also proposing drastic solutions such as the reduction of greenhouse gas emissions to zero by 2050 (Gates 2021). The importance of "economic thinking" that disengages from twentieth century theories is well underlined in Donut Economics, where seven ways are proposed to rethink the economy of the twenty-first century (Raworth 2022), and still others are undertaking to plan, advise and implement programs that aim at the general objective of restoring human impact on the environment to sustainability. But in this study, I wanted to focus on the individual as the essential protagonist for a change of approach towards life and the environment, who from anthropocentric must be open to consider, to rediscover, a proactive

synergy with nature, a holistic approach that we can call it the “biophilic approach”. “Every individual aware of his influence, even if minimal but decisive, must find a proactive adaptation to the environment.” Thus, the importance of individual action has been described, as an “effect butterfly”: does the flap of a butterfly's wings in Brazil set off a tornado in Texas? (Lorenz 1972) If this is possible, predictable, then every single individual can do something decisive even if it is a small daily action. On these conceptual bases I have elaborated a qualitative study to know the thinking of some known subjects, and who could provide me with useful indications for their vision of the environmental theme, what they do in concrete terms, how they coexist and think of adapting to the climate changes that are already affecting their existence.

2. The qualitative study:

The objective of the study was to know the biophilic approach of some individual subjects. The methodology used was a semi-structured interview with a recorded video call from homes of participants. They were selected following the criteria:

Sample size suggested by the authors of the IPA (Interpretative Phenomenological Analysis) method to conduct a detailed analysis of each case, similarities, and differences across cases. “As a rough guide, we would suggest that between three and six participants can be a reasonable sample size” (Smith, Flowers, and Larkin 2009).

Age 40-65, according to the Generative vs Stagnation phase of psychosocial development theory (Erikson 1982), where in this phase people recognize that life is not just about themselves. Thought their actions, they hope to make a contribution that will become useful for those to come.

Geographic area: number two participants for

South, two for Center, and other two for North Italy, according to climate adaption capacity by Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC 2022). In this recent study, the Climate Adaptation Capacity Index was calculated by combining a set of ten indicators relating to available economic resources, infrastructure, education and technology, and the quality of institutions. Four areas were therefore identified from a very good and good capacity (green and light green) mainly in the North, to an average (light grey) mainly in the Center and finally a poor one in Southern Italy (red areas). (Fig.1).

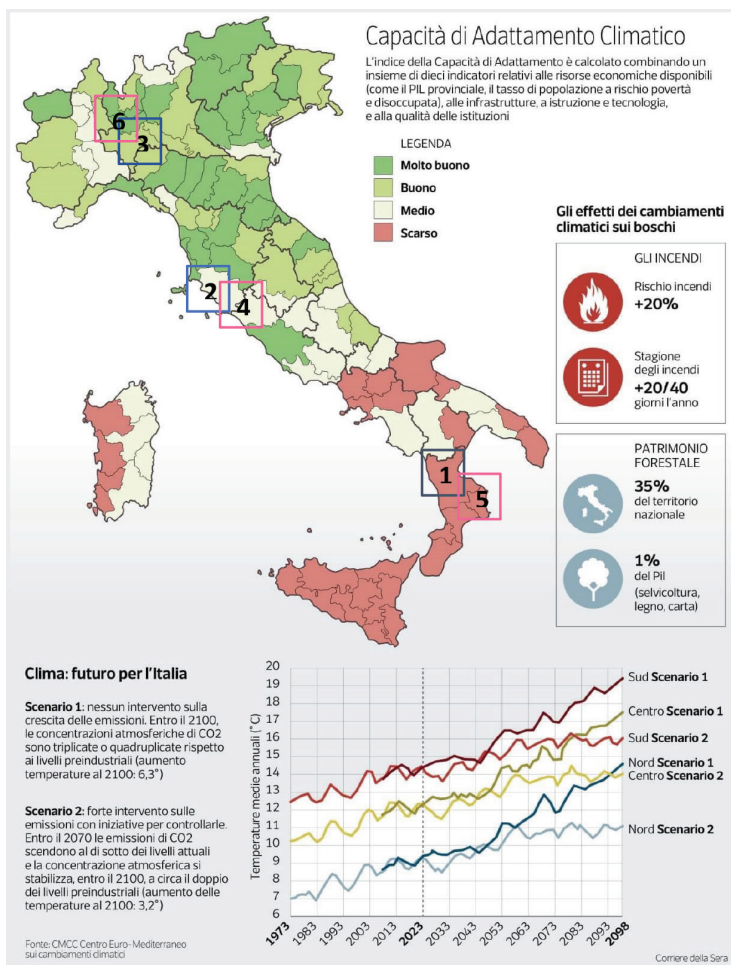


Fig.1. Source: CMCC Euro-Mediterranean Centre on Climate Change

GENDER	PARTICIPANT	AREA
M	1	SOUTH
M	2	CENTER
M	3	NORTH
F	4	CENTER
F	5	SOUTH
F	6	NORTH

Participants: n 6
 Gender: n 3 Female; n 3 Male
 Average Age: 48,8
 Climate adaptation capacity:

- Very good
- Good
- Average
- Poor

Tab.1. Participant selection data

In choosing the participants in the interviews, the two areas "very good and good" were merged with two participants chosen in Northern Italy (n 3 and 6); two (n2 and 4) in Center, and two (n 1 and 5) in Southern. Average age was 48,8 and the gender was three male and three female (Table 1). The objectives and methods of the interview were described in the information letter signed by the participants before the interview, who have given their consent to process the information with a guarantee of anonymity. The following thematic grid with open question was the investigation tool used:

- What do you think about the current state of our planet's health and, in your opinion, are there still things that can be done to improve it? If so, how?

- Do you think you can take care of anything in particular? In the sense of feasible by you daily. If so, what?

- Do you think instead there are "games already lost", that is damages where it is no longer possible to intervene, and if so which ones? And in your specific case, do you think you can still do something to slow down the negative course?

- How do you think you are living with the problems that are already beginning to affect the quality of human life?

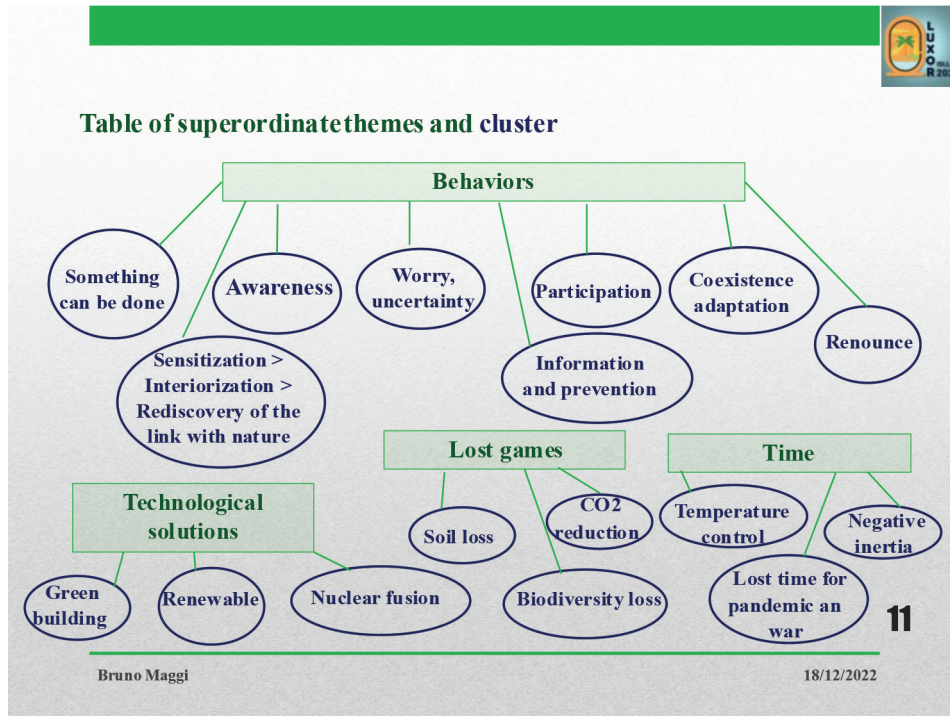
- Now that you have told and reflected on the issues that emerged in this interview, what do you think of biophilia as an individual approach to the problems caused by climate change?

Data analysis was conducted through IPA already mentioned above.

3. Results:

From the analysis of the interviews, the following superordinate themes emerged:

- 1) Behaviors
- 2) Technological solutions
- 3) Lost games
- 4) Time



Schema 1 schematically shows the clusters pertaining to the superordinate themes.

Schema 1. Source: Slide 11 of oral presentation of this study at 5th International Symposium and Field Workshop Living with Climate Change "Consequences and Adaptation" West bank, Luxor, Egypt 8-11 November 2022

Below, for each cluster identified, some significant phrases are taken directly from the interviews,

1) Behaviors: This is the general theme that brings together a series of behavioral clusters such as:

- **Something can be done:** "I reduced by 50% the km by car", says n2.

"I always walk and use the car only when we have to travel far away", says n4.

"Yes, but I don't know either", says n6.

- **Awareness:** ".....becoming aware of the community", says n1.

"It is man who created the problem and therefore must solve it", says n6

- **Worry, uncertainty:** "I don't know how to live with these problems. Implement environmentally friendly behaviors. Don't use the car. Differentiated waste collection", says n1.

- **Participation:** "Biophilia is a form of thinking that forms awareness of environmental issues. It is a helping approach that individuals can provide to organizations to trigger concrete actions.". says n1.

"Revitalize the life of the village as a meeting place for families, making it welcoming", says n5.

- **Coexistence, adaption:** "live with the least possible impact, not so much to solve it, to live

with it, but to not make the problem worse.”, says n2.

“I live nature and let myself be enveloped by the territory”, says n5.

- **Renounce:** “when we bought a house, we found ourselves choosing between two houses, a large one, but in a condominium without a garden, and a much smaller one but with 60 m² of garden and without the slightest doubt we opted for the smaller one”. says n2.

“As long as you resist you stay in your place but when it's gone you can't take it anymore then I decide to live elsewhere”, says n4.

- **Sensitization, Interiorization, Rediscovery of the link with nature:** “...so that awareness is lacking and if it is lacking then it is not internalized this visceral bond that man has with nature, which everyone has and which must be rediscovered.”, says n3.

“We are the places we inhabit”; “If we want to live with the rules of biophilia, we need to activate emotion”, says n5.

- **Information and prevention:** “respect for the environment becomes respect for oneself. Because health care costs are very high and therefore there would also be a certain foresight to intervene, to push to create more and more awareness in that direction.”, says n3.

2) Technological solutions: This theme includes technologies that participants believe can largely solve environmental pollution problems:

- **Green building:** “design according to the criteria of green building”, says n1.

“Better to plant trees than anything else”, says n4.

- **Renewable:** the technological resources are there.....we have to exploit them...make them economical”, says n2.

- **Nuclear fusion:** “In my opinion, nuclear fusion is really decisive”, says n3.

3) Lost games: Below are the resources and challenges that participants highlighted as lost.

- **Soil loss:** “There are games that we want to lose... The Amazon rainforest. There are clear interests in having arable land for agriculture. says n1.

“Land consumption, the impact that human activity has on natural environments”. says n3.

- **Biodiversity loss:** “we lose opportunities”, says n3.

- **CO₂ reduction:** “In the time of man's life it is a lost game”, says n3.

“We are in disaster also because nature is rebelling”, says n6.

4) Time: This last general theme wants to bring back the feeling that the participants have of time. Time understood as a determining factor, as a negative or positive resource for how it is used for or against the improvement of climate change.

- **Temperature control:** “we still have a couple of decades to contain ourselves in these 1.5 °C, let's say because within this temperature there are the effects we know”. says n2.

- **Negative inertia:** “I believe that there is an inertia for what we have done and that it is so great that it is difficult to reverse the course in a short time.” says n3.

“There is time if you move in time and with good ideas.”, says n6.

- **Lost time for pandemic and war:** “In recent years, however, there have been events that have distracted us, which are in the last six months of 2021, the Russian-Ukrainian War and before the pandemic, but it was a direction in which we were going and it was more than anything else the words of association of individuals, but the fact of re-sensitizing everyone to attention to the environment. That is, in my opinion there was first a virtuous path that went in this direction; that is, there were more sources that were increasingly sensitizing man”. says n3.

4. Discussion:

Following the evidence of the conclusions we can highlight some insights about the importance of the individual raising awareness of others and organizations; about social awareness of the environmental climate situation, so that a paradigm shift is needed to bring man back to the rediscovery of his visceral connection with nature. We can see this paradigm shift as a conflict to be resolved. “The biophilic approach versus the anthropocentric approach” represents the challenge of man which has already begun in the individual and in the community, where individuals and organizations must find goals to achieve in the short term. The natural adaptation of many living species was not sufficient for their extinction caused by climate change. The man who is largely responsible for it, at least since the age of industrialization, has a short time to remedy. At this point I would like to close this study with the following directions.

Directions for individuals: Everyone becomes aware of the *environmental problem and help organizations* individually, soliciting concrete actions. So, push from below.

Directions for stakeholders: Listening to people's directions and integrating them with feasible projects, then connect people with organizations.

Directions for governmental and NGO organizations: Commit to achieving shared goals with individuals and organizations. Communicate results step by step, then achieving the paradigm shift.

Considering the study representative of individual cases, even if identified within criteria, it is possible to suggest the development of other research such as for example: compare the results obtained with the views of subjects of other age groups and nationalities, and verify convergences and differences between

suggestions of individuals and the programs of organizations and stakeholders.

5. Conclusions:

From the in-depth analysis of the transcript of the interviews, summarized in the superordinate topics and in the clusters of answers described in the results of the study, we can draw the following conclusions:

a) The biophilic approach is felt by participants in terms of participation, collective awareness and individual behavior.

b) All believe that there are times and methods to do something for the protection of the environment, but some games are already lost.

c) Adaptation to climate change is seen differently by participants, from simple daily practices, to structural changes in living habits.

d) The biophilic individual approach of the participants of this study may be a “paradigm shift” if it manages to sensitize other individuals and so the whole community.

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