

# Educating to Care

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## **Abstract**

*The root of the ecological crisis lies in an ethic of nature consumption. In order to reconstruct our cultural framework, it is necessary to cultivate another ethical approach, an ethic of care. It is the responsibility of school to encourage students to learn how to care for not only the human world, but also for the natural world. This paper is based on the hypothesis that it is possible to develop the ethical disposition to care for by practising an ethic of care in the first person. In the phenomenological-hermeneutic framework, however, it is not sufficient to practice care; students have to be engaged in pondering and interpreting their experience of caring for in order to construct for themselves the meaning of their lived experience. With this in mind, I organized a yearlong environmental education project for students aged 6 to 10 in a rural school which involved students not only in doing things but also in thinking about their experience. Working from a socio-constructivist perspective, I made use of discussions and reflective writing. This paper presents phenomenological research on this experience.*

## **Résumé**

*L'éthique de la consommation du monde naturel est à la source de la crise écologique. Pour reconstituer notre cadre culturel, nous devons cultiver une autre approche en matière d'éthique, c'est-à-dire, une éthique de soin. Les écoles sont responsables d'encourager les élèves à apprendre comment traiter avec soin tant les humains que la nature. Cet article est fondé sur l'hypothèse qu'il est possible de développer les conditions propices à une éthique de soin en la pratiquant soi-même. Cependant, dans un contexte phénoménologique-herméneutique, ce n'est pas suffisant de pratiquer l'éthique de soin; les élèves doivent réfléchir et interpréter leurs expériences concrètes relatives à l'éthique de soin afin de pouvoir décider pour eux-mêmes le sens des expériences qu'ils ont vécues. C'est dans cette optique que j'ai organisé un projet d'éducation environnementale d'un an dans une école rurale. Les élèves de 6 à 10 ans devaient non seulement effectuer des tâches assignées mais aussi réfléchir à l'expérience vécue. J'ai examiné des discussions et des écrits de réflexion à ce sujet dans une perspective socio-constructiviste. Cet article présente les résultats de ces recherches phénoménologiques.*

A necessary condition for overcoming the ecological crisis is identifying and individuating its causes and its possible solutions. There are many diverse analyses available. I am interested in that branch of ecological thought that argues that the lack of an adequate ethic for dealing with the problems raised by the relationship between human beings and nature is among the fundamental causes of the ecological crisis, if not the decisive one. Traditional ethics are considered inadequate because they deal only with relations among human beings (Leopold, 1970; Taylor, 1989) and because they foresee responsibility that is limited in space and time (Jonas, 1984). According to Jonas, because the advent of modern technology altered the very nature of human action by allowing us to affect natural processes, both outside ourselves and within, in ways that are long-range, cumulative and irreversible, traditional ethics are insufficient. We need an ethic of responsibility extended to the rest of nature.

If we accept this presupposition, then it follows that in order to develop a new ecological culture it is first and foremost necessary to work out a new ethical orientation and consequently to evaluate how to educate the young to this new ethic. In this study, research was carried out on just such an educative experience. The project fits within the framework of eco-ethical education, with the scope of developing and fostering an attitude of care and dedication towards other living beings (Fien, 1997; Held, 1993; Noddings, 1986, 1992). This research was a collaborative inquiry between myself, an academic researcher, and a group of teachers who together planned and carried out the project and gathered and analysed the data that emerged from the inquiry. Before discussing this project and research, I present a brief description of current questions in environmental ethics, to give a theoretical backdrop to this research.

## Theoretical Frame

Not all of those who deal with ethical questions agree with the need for a new ethic, an ecological ethic. While agreeing that certain ontological premises of our culture have to be rethought, such as the idea of the human being as an entity separate from the rest of nature, the schism between the human world and natural one, and the idea of nature as material at the disposal of human beings—the hierarchical worldview—some philosophers (Attfield, 1983; Passmore, 1974; Shrader-Frechette, 1993) maintain that traditional ethics are sufficient to regulate the relationship with nature in an ecological direction. They argue that if the ethic has not functioned up to now, it is only because human beings are more concerned with their own interests rather than in developing what they call morally correct behaviour.

Opposed to such human-centred ethics, there are those which are life-centred; here, to develop a moral orientation to the rest of nature, it is necessary

to reformulate ontological presuppositions which lie at the base of Western ethics. Common to the various life-centred ethics is the conviction that in order to lessen the power of the instrumental view, which considers nature as raw material to be used, we need to take on as the foundation of ethical discourse the ontological presuppositions which claim that human beings are also part of nature—the holistic view—and that every being in nature has intrinsic worth—the biocentric view. Within this life-centred ethics, there is a further radical presupposition that talks of “equal worth” among all living things (Taylor, 1989). Philosophers such as Peter Singer (1979) hold that not only do all living things have equal worth, they also have rights. These ontological presuppositions are ecological because they encourage the disposition of *love and admiration for nature* (Leopold, 1970), and the ethical principle of *reverence for life* (Schweitzer, 1990) or *respect for nature* (Taylor, 1989). It would seem that respect is the fundamental characteristic that makes us capable of an ontologically widened responsibility (Jonas, 1984).

Feminist ethics offers a different approach from traditional ethics (Held, 1993; Noddings, 1986, 1992). While sharing a life-centred ethic, it does not reduce the configuration of a new ethic to the construction of new ontological presuppositions. This approach is critical of the traditional modes of male logic which overrates the power of systematic discourse, as manifested in codes and rules. This branch of feminist thought maintains that we must move beyond an ethic of justice and develop an ethic of care. An ecological society must develop a culture of life that respects every life form. This culture of life has its generative matrix not in norms and codes, but in a moral disposition towards caring. In an ethic of justice, moral behaviour is manifested as obedience to norms which our reason recognises as legitimate (Rawls, 1971), whereas in an ethic of care, moral behaviour is manifested in a disposition to care (Gilligan, 1982).

It is necessary to point out that the concept of care in pedagogy is ancient; indeed we find it in Plato. In the *Apology*, Socrates affirms that educating means to orient the young to care for themselves (in the ancient Greek: το εαυτου επιμελεισθαι), that is, searching for “wisdom” (φρονεσις), virtue (αρετη), and truth (αληθεια). To care for oneself is to care for the soul (ψυχη); consequently the task of educators is to help students to learn the right way of care (ορθως επιμελεισθαι). In our time, we find the concept of care in the writings of the German philosopher Martin Heidegger who, in *Being and Time* (1996), states that being-in-the-world is essentially care; care for life is that condition to which human beings belong “for its lifetime” (p. 184-185). Care means not only an “anxious effort” but also “carefulness” and “dedication” (p. 185).

Care is a fundamental way of being because, in order to realize a human life, we need both to be the object of care and to care for others (Gadamer, 1993). If we accept the ontological assumption that being-in-the-world is being together with things at hand and being with others, and if we connect this

assumption to “being reveals itself as care” (Heidegger, 1996, p. 171) and care is not only *to be concerned with*, but also *to dedicate oneself to*, then actualizing in life the essence of the human condition means assuming care as the direction of the existential project. Heidegger (1996) affirms that “the *perfectio* of human being is an accomplishment of care” (p. 185). “To care for” understood as dedication is, in Heideggerian terms, a possible way of being and, as such, must be learned; that is, in order to authenticate existence, people must learn what “to care for” means. If we accept that care is an ontological necessity and that caring for which authenticates human life is a disposition that must be learned, then care must have an important place in the educational field and become a central pedagogical principle.<sup>1</sup> In humanistic approaches to education, learning to care for other humans is already an aim. Now it is necessary to expand learning to include other living beings too.

The education project researched here fits within the framework of “the culture of care” and is based on the premise that all education has a fundamental task in developing a new ecological culture. It emphasizes learning to widen our moral responsibility to include all living beings. Starting from the assumption that an ethical relation of care does not presuppose reciprocity, Noddings (1986) suggests cultivating an ethical relation of care also with animals and plants. The culture of care has one great aim: to preserve and promote a full flourishing of life in those with whom one comes in contact (Noddings, 1986). Thus, she argues for a curriculum organized around “centres of care” in which attention is given to learn to care for ourselves, for intimate others, for associates, but also for the non-human world, that is, animals and plants. On this premise, the learning experience, which is the object of our research, nurtured the extension of the practice of care beyond the human world. Because an ethic of care are not learnt by assimilating norms but by implementing caring behaviour, the experience required the involvement of the students in caring actions.

## The Research

### *Epistemological Framework*

With respect to the thesis that research within environmental education should be compatible with ecophilosophy (Robottom & Hart, 1993), the framework of this research is that of participatory inquiry (Reason, 1988). In participatory inquiry, research is not carried out on subjects, in this case, teachers, but with subjects, starting with the problems that they consider as significant. My presupposition is that practitioners, as reflective practitioners, should identify the object that is the issue of the research and, on this basis, seek collaboration with a researcher, who without lessening the principles of rigor directs it toward promoting better educational practice (Condliffe Lagemann, 2000). My role within the group of teachers was conceived of in

this way. The teachers outlined the need to identify educative experiences that can promote a responsible attitude as the fundamental pedagogical problem. I proposed working on the theme of care and, together, we collaborated on organizing an experience of education to care.

### *The Project*

From the first years of schooling, children need to learn the ethic of care, and to this end it is important to organize the school as a “centre of care” in which the pupils can learn not only to care for themselves and for others with whom they are intimate, but for all other living beings too including plants and animals (Noddings, 1992). Particularly significant is the care for animals given the emotional commitment it arouses in children. The teachers, however, believed it impractical to introduce care of animals into the physical space and time frame of the school, so the care of plants was implemented. Every participating class was involved in caring for plants which were easy to cultivate, even for the youngest children. The plants were annuals, so that the children could follow the entire lifecycle of the plant from its planting as a seed to its flowering. Because the school had a small courtyard, we decided to involve parents and local administration in the construction of a greenhouse, in order to be able to continue the activity in the winter. All the children involved attended a rural primary school with one class per year intake. The participants totalled 97 pupils of ages ranging from 6 to 10 years (Class One: 25; Class Two: 20; Class Three: 19; Class Four: 14, Class Five: 19). The project lasted a whole school year.

Two ideas underlay the project. First, an ethical disposition such as an ethics of care is not learned just intellectually, but through practice, by involving students in an actual caring experience. Second, we must move beyond doing things to think about what we are doing. The experience lived has to be an object of thought in order to understand and construct its meaning. We thus planned activities for intra-subject thought through keeping a diary, and inter-subjective thought through discussions held in small or large groups led by the teacher in a Socratic mode.

The experience was structured in two parts: a questioning phase of conceptual exploration; and an operative phase, during which the children planned, realised and reflected on the activity of caring for plants. The children were then involved in a *thinking activity* and a *practical activity*. The thinking activity involved analyzing the concepts, planning the activity, and thinking about the practice. Each thinking activity was developed in two phases:

- an individual phase in which students wrote down their thoughts in response to specific questions, and
- a phase in which students participated in smaller or larger discussion groups.

In the practical activity, students worked to care for plants.

## *Methods*

There were three methods of data collection:

- 1) participatory observation,
- 2) recording conversational activity, both in small groups and within the class as a whole, and
- 3) analyzing texts written by the children.

Data analysis was partially conducted during the project itself, to allow for any re-defining of data collection procedures, and was completed in the final phase at the end of the program. An inductive procedure of analyzing data was used, in accord with grounded theory principles (Strauss and Corbin, 1990). First, data were analyzed phrase by phrase, and every concept identified was assigned a code. All codes were then analysed and compared to ensure a continual internal dialogue with the data was sustained. It was imperative that the labels identifying the codes matched the concepts expressed by the children, as "fit" is an essential epistemic criterion for grounded theory; thus each label was constantly refitted to the data. Each code was then repeatedly compared with the other codes in order to ensure that they were mutually exclusive. During this process of analysis and comparison some codes were eliminated, others formulated in a new way and still others generated *ex novo*. When I believed the first phase of formulation of the codes was concluded, a list of these codes was made. Using this list, data analysis was repeated in order to make a more sensitive interpretation. On the basis of this new interpretation of data, a new list of codes was developed and excerpts from the texts of the children were identified as a way of clarifying the list of codes.

## *Results and Discussion*

*Preliminary Phase.* Before involving the children in the practice of care, it was necessary to explore what significance they attributed to the word "care." English differs from Italian in that there are two words that signify the act, care and cure, whereas Italian has only one term *cura*, which includes both care and cure. Given that, in our culture, little value is attributed to *cura* as care, while much is said about cure, it was possible to hypothesize that in speaking of care many children would view cure as the principal meaning of the word. If this were the case, then it would have been necessary to introduce some thinking activities aimed at widening the sense of the word.

In order to better clarify what meaning the children gave to the term care, they were asked to identify a person who "cares for" and to specify just "what

his/her caring consisted in." In order to analyze the answers the following criteria were adopted: identify the object of care; and identify the significance attributed to the action of caring. The objects of care generated were plants, animals, people, and things (see Table 1).

	Vegetable	Animal	Person	Things
Age 6	4%	79%	16%	-
Age 7	-	19%	61%	19%
Age 8	-	66%	33%	-
Age 9	-	15%	84%	-
Age 10	-	26%	73%	-

Table 1. The objects of care.

Some of the students conceptualized *cura* as therapy and some students interpreted it as looking after, as cultivating emotional relationships, as educating, as giving something to someone, or as preserving things (See Table 2). Because only 15% of the students assigned a therapeutic value to the term *cura*, we did not feel it necessary to help students redefine this term. It seemed sufficient to present this data to the children as a springboard for discussion of all the possible meanings of "caring for." We did note, however, that plants were not considered as objects of care. The proposed project therefore required work with the students to think about the possibility of extending care to plants. With this aim, in every class, we carried out a conversation based on the question, "Can we care for plants too?" Since the children responded in the affirmative without raising any doubts about the question, we felt that at that point the project for learning to care could begin.

	To Cure		To Care			
	Do Therapy	Look After	Cultivate an Emotional Relationship	Educate	Give	Preserve
Age 6	21%	37%	37%	4%	-	-
Age 7	11%	11%	49%	5%	-	23%
Age 8	33%	44%	22%	-	-	-
Age 9	7%	7%	85%	-	-	-
Age 10	5%	26%	43%	10%	15%	-

Table 2. The meaning of caring.

*Questioning Phase.* Table 3 outlines the structure of the project, outlining activities, the questions asked of students, and the pedagogical rationale for each phase.

	Activity	Generative Question	Pedagogical Meaning Analysis
A	<p>x) Individual reflection by writing an answer in an autonomous fashion without reference to others.</p> <p>y) Conversation in small groups</p>	What does taking care of plants mean?	Involve students in symbolic construction, so that the action of care is not a received view but a view worked out by them.
B	<p>Students were organised in groups, one of children 6 - 7 years old, and three of children 8-10 years old.</p> <p>Each group constructed a conceptual map to summarise ideas generated during group conversation.</p>	Constructing a conceptual map of group ideas	To develop reflective capabilities, ask students to learn to analyze ideas produced by self and others, identify similarities and differences among ideas, and then make a map that connects these together
C	Meeting with an agronomist.	<p>Verifying with the expert the conceptualisation constructed by the group.</p> <p>Each group presents its map to the agronomist, then discusses the significance of the term "cultivate."</p>	<p>To gain awareness of another point of view, through meeting an expert.</p> <p>To articulate their own concepts better, compare the expert's vision with their own.</p>
D	<p>x) Individual reflection by writing an answer in an autonomous fashion without reference to others.</p> <p>y) Conversation in groups.</p>	Why should we take care of plants?	<p>To think for themselves about the value of the project in which they are involved.</p> <p>To increase the capability of discussing others' ideas and gaining awareness of other points of view.</p>
E	<p>y) Conversation in groups to decide together how to practice care for the plants.</p> <p>J) Intergroup conversation.</p>	<p>What to do?</p> <p>Who does it?</p> <p>When?</p> <p>Where?</p> <p>With what?</p> <p>Compare proposals of the groups to find an organizational mode of caring shared by the whole school.</p>	To develop the capability of designing an activity in a rational way and according to a common logic.

Table 3. Project structure.



The questioning phase aimed to clarify concepts among the students, and foresaw two key questions: "What does taking care of plants mean?" and "Why take care of plants?" Each questioning activity began with individual students first and then moved to group discussion; we thus have data from both individual and group reflections. The analysis of this data verified the type of concepts that the children of different age groups had about the practice of care for plants. Three different concepts emerged:

- 1) *Operative concept*. The practice of care is explicated in an objective fashion as a set of practical actions;
- 2) *Participatory concept*. The care of plants is interpreted in an emotionally involved way, indicating that a relationship which ties the humans to the plants is felt;
- 3) *Ethical concept*. The practice of care is conceptualized as a "have to be," that indicates an ethical concept regarding the relationship with plants.

Table 4 illustrates these three different types of concepts and how were distributed over the age groups. The operative concept was prevalent (age 6 = 94 %; age 7 = 53 %; age 8 = 64 %; age 9 = 50 %) and only in the 10 year-olds was it found to be marginal. In this latter age group, an ethical conceptualization instead prevails. Before beginning the research, we hypothesized that children have an emotional relationship with the whole of the living world. The data from this study suggest that only 21 % interpreted their relationships with plants in terms of emotional involvement.

Children	Concepts		
	Operative Concept	Participative Concept	Ethical Concept
Age 6	94 %	5 %	-
Age 7	53 %	23 %	23 %
Age 8	64 %	30 %	5 %
Age 9	50 %	8 %	41 %
Age 10	22 %	35 %	42 %

Table 4. Children's concepts of the practice of care.

If we start from the premise that an ethical disposition has its origins in an empathic attitude toward the object of care, then we must presuppose that it is difficult for children of the age categories included in this study to develop an ethical disposition toward plants. However, the development of a sentiment of shared participation with other life forms is an essential component of a new ethical orientation, because "an ethical relation to land can exist without love, respect and admiration" for the world of life (Leopold, 1970, p. 261). To promote this attitude in dealing with plants it

should be precisely the operative part that commits the children to a direct relation with the object of care, that is, the plants.

In order to facilitate the acquisition of an awareness of the possibility of living in a participatory emotional manner with plants, we felt that we should give space to reflecting on an idea which came from a little girl in class 3, age 8, who said that “plants can keep you company, because you can also talk to your plants.” The conversations held in the work groups demonstrate, however, the question did not seem significant to the children, who showed scarce participation in the discussion. The scarce interest in discussing a possible emotional relationship with plants further confirms the data in the Table 5.

The data collected from the question “Why take care of plants?” were interesting. Different typologies of explicative principles were expressed. They were as follows:

- Aesthetic principle (pA):
  - “Because they make nature more beautiful.” (Giulia, age 6)
  - “They make the town beautiful.” (Andrea, age 6)
- Ontological principle (pO):
  - “Because the plants live too.” (Sara, age 6)
  - “Because they are living beings.” (Elettra, age 10)
- Utilitarian principle (pU):
  - “Because the plants give us fruits.” (Darico, age 6)
  - “Because they give us oxygen.” (Paola, age 9)
- Ethical principle (pE):
  - “Because we must help all the beings.” (Antonio, age 10)
  - “Because we are all brothers.” (Marta, age 10)
- Recreational principle (pR):
  - “Because their shadow is a good thing.” (Glaucio, age 7)
  - “I can play in the green.” (Glaucio, age 10)
- Sentimental principle (pS):
  - “So they become our friends.” (Ilaria, age 6)
  - “Because I love them.” (Maurizio, age 7)
- Necessity principle (pK):
  - “Because if we don’t give them the water they dry up.” (Giovanni, age 6)
  - “In order to make them grow.” (Sara, age 8)

The discourses worked out by the students can be divided into two types:

- *simple discourses* where the argument is founded on one principle; and
- *articulated discourses* where the argument is founded on more principles.

The distribution of these is shown in Table 5. These data are interesting because they denote the presence of a plurality of principles. This indicates

that, at least in the first years of schooling, children are capable of developing a plurality of arguments on which to found the responsibility of care. Moreover, the presence of arguments articulated on more than one principle shows a capacity of thought in children of this age which schools ought to cultivate to avoid the tendency of children to adopt a monological way of reasoning. Because a utilitarian view prevails in our culture, schools should preserve and cultivate this plurality and richness of ideas.

	Explicative Principles														
	Simple Explicative Principles							Articulated Explicative Principles							
	pA	pO	pU	pE	pR	pS	pK	p0 pU	pO pE	pU pE	pU pA	pO pR	pO pK	pA pO pS	pO psU pS
Age 6 <sup>2</sup>	2	1	8	-	-	1	2			-	3	-	-	-	
Age 7	-	-	5	-	1	1	2			-	2	1	1	1	
Age 8	4	5	2	-	-	-	12			-	-				
Age 9	-	2	6	1	-	-	-	3		-	1				
Age 10	-	1	5	1	1	1	0-	7	1	1	-	1			1

Table 5. Different typologies of explicative principles.

*Operative Phase.* Once the questioning phase was terminated, each child received the shoot of a flowering plant to plant in a flowerpot and take to the greenhouse. They then took care of the plant for three months until it flowered. Each time they visited the greenhouse to take care of the tiny plants, they took a diary with them in which they noted down their thoughts about the practice of care. The activity of writing in the diary had two pedagogic motivations. First, to increase the capacity of observation, the students were given the following task: "observe the changes in your plant attentively and describe them." The capacity to pay attention to the most minute details constitutes a fundamental competence in the field of scientific literacy. Second, to reflect on what happens to another living organism in relation to our actions, students were requested to write down their thoughts. At school, many things are "done," but often the capacity to think about what we are doing is not cultivated. At the end of the project, the diaries were collected and transcribed.

The diaries contained few detailed, analytical written descriptions. In general, the children noted the flowering of a bud, the change in colour of a leaf and/or petals. It is the drawings that the children regularly made in their diaries that testify to the attention the children paid to the particulars of their plants. The children's drawings are in fact rich in particulars and are generally beyond the schematisation that we would expect from this age group.

What surprised us further was the fact that almost all the diaries were written in the form of a dialogue with the plant and many show that a relationship of "participative attention" towards the evolution of the life of this being had been established. The descriptions are dense with emotional

annotations that show how, over time, the plant became a being with which to relate in an emotionally involved way. The following are excerpts from some of the children's diaries.

DARICO (age 6)

April 14th: My plant has serrated leaves. Your earth is dry, maybe you are thirsty? Now I'll give you something to drink: I have discovered that you have a red leaf inside you.

April 22nd: Now you've grown, little plant, and I'm very glad. Now, plant, you are flowering. The leaves that are just born are growing too. You have got three withered leaves.

April 29th: Now you are all flowered and you've got lots of flowers. Inside you've got a withered leaf that is half green and you've got lots of new leaves and lots of buds. I'm glad because you've flowered and you've got lots of new leaves. Best wishes from Darico, I hope you grow.

May 6th: Inside you have got eight withered leaves. You've got lots of new leaves and new flowers and lots of flowers already open. You have grown. You are very big and I'm really happy. Bye-bye.

May 20th: You've got eight new branches. You are all flowered and I'm really happy. You've got a blue "mane."

ANDREA (age 7)

April 12th: Today my little plant hasn't grown very much but it has a lot of buds and it was very thirsty because the earth had dried out and the flowers had budded. A little leaf is yellow.

April 22nd: Today my plant has grown a lot, the bud has grown, it's dirty red and there are 31 leaves and the earth is dry again and along the stalk there are little leaves and I was amazed.

April 29th: Today my plant has got three new buds that are being born. The new leaves have been born and a bit of the earth are still damp and the other bit is dry and you have made me feel really good. You have become very straight.

GIACOMO (age 8)

April 15th: The plant has very strange leaves and it has got a flower that is about to come out. My plant has got yellow flowers; I changed its flowerpot and gave it a bigger one because it didn't fit in the little one. My plant's name is Tagete. It is 12cm tall and I changed its pot because it was also a bit dry and there are four withered leaves. Two buds are flowering and there are seven new leaves. My plant is very scented. Now, the leaves, the buds, and the flower have changed a little from before. Now the withered leaves have got smaller.

May 18th: Dear little plant, now you have got 102 leaves and my teacher has put a tape around you and a stick because you had a broken flower. You have got eight buds that you grew today and three that are still quite small, two are already big and three are medium sized. Now I have put some leaves in the pot so you can feed yourself.

Space constraints do not permit me to quote from the documents at length. However the texts produced by the 9 and 10 year olds were very similar to those presented above. They are better articulated and of greater descriptive depth, and also contain dialogues rich in affectionate notes.

## Conclusion

The data presented suggest two things. First, the worldviews of these students present a plurality of arguments (aesthetic, ontological, utilitarian, ethical, recreational, sentimental, necessity) that underlie their discourses about a life-centred ethic. Second, the data illustrate the capacity of these children to articulate discourses based on more than one principle. This shows both a notable argumentative capacity in children of this age and a richness of ideas that the school ought to preserve and cultivate. It would be interesting to determine what happens in successive phases of this school experience.

From the analysis of the children's diaries it emerged that the practice of care produced a significant change in the children's attitude; only two children judged the experience in a negative fashion, indicating that they did not enjoy looking after plants. At the beginning only a few children considered plants as objects for emotional attention and when we proposed discussing the idea expressed by a little girl about the possibility of considering plants as living beings with whom to talk in a particular way, this participatory mode of considering our relationship with the vegetal world aroused little interest. What modified the students' attitudes towards plants was the concrete experience of care in connection with the task of reflecting and writing about their lived experience. This is a sign that being involved in an act of care permits a concrete relationship with other beings to be established. It is from this concrete relationship that significant learning is generated.

It is difficult to evaluate this experience, because when we are dealing with promoting learning that has to do with profound personal dimensions such as ethics, there are no instruments for establishing whether an experience has been effective or not; only time will tell. In organizing this project, we have followed Dewey's (1938) advice to offer the children an experience that is worth living in the present. The task of education is difficult; it is made of hope, in this case the hope that the time dedicated to caring will leave a profound mark on the minds of the children involved.

## Notes

- <sup>1</sup> It is right to affirm that it is necessary "to pursue an approach to environmental education without requiring teachers to deal with the ambiguities and inconsistencies of competing theories in environmental ethics or engage in activities that border on indoctrination" (Hargrove, 1996, p. 20), but it is not our

case because, if we accept both the Socratic and the Heideggerian view, learning to care for is an ontological necessity.

- 2 Four 6 year olds and two 7 year olds were not capable of answering.

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