

Tell me your environmental epistemology and I will tell you your methodology: What surveys and in-depth interviews can and cannot tell us about shifts to sustainability

Abstract

This article begins by addressing the various social and economic theoretical proposals that have been given as a solution to the ecological crisis. In the second part, we propose that adhering to one of these proposals involves using a determinate methodology. In this sense, surveys have a conservative bias that tends to reproduce the dominant ideology based on 'sustainable development', which affirms the compatibility of capitalist economic growth and nature conservation. However, researchers who follow the theoretical proposal of political ecology tend to use qualitative methodologies and tend to find the capitalist economy unsustainable. The third part focuses on illustrating this issue. We present research in which we compare the results of a survey on the environment in Spain with the results of a qualitative study conducted in two protected areas: the Albufera Natural Park and the Ebro Delta Natural Park. Our conclusion tries to emphasize that the surveys revealed citizen profiles with coherent environmental behaviors reflected in social practices, designed to mitigate the effects of consumption (such as recycling) but not seeking to live more in tune with the environment.

Keywords: qualitative research, political ecology, sustainable development, quantitative research, ecological prevention, environmental awareness

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Introduction (Productive confidence and ecological prevention: two sides of the same coin)

Since the end of the last century, the empirical evidence that the natural limits to growth were being overstepped supposed an increase in environmental awareness and led to a search for answers of different kinds.¹ Following Garcia², the discussion that occurs, at least in Europe, can be summed up in general by two opposing scenarios (Figure 1).

One of the positions—sustainable development or productive confidence (Figure 1)—tends to argue four main points.

- The demographic transition will stabilize world population before its size becomes unsustainable.
- The demands that exert more direct pressure on water, soil, and habitats will stabilise as food and paper needs, among others, are saturated.
- The decoupling between economic growth and resource consumption will intensify as a result of the shift of economic activity towards services and information.
- A series of reforms and adjustments in existing institutions will allow the management of the sharpest tensions, with the current situation being the initial phase of the transition to a sustainable economy.

But this transition must end before the carrying capacity of the Earth will be exceeded. If the capacity of the earth is already exceeded, the description of the present situation must be different. Under the second premise (Figure 1), resource use is already beyond the capacity of the earth, the dematerialization of economic growth is still pending,

and the balance between society and nature could recover to a level substantially lower than the current situation, after a reduction in economy growth and resource use.² From this position, it is assumed that if existing trends are not reversed in a substantial way, the effects of excessive resource use will worsen to the point of causing serious conflicts of disorganization and social disintegration, which will be more difficult to deal with as long as the carrying capacity of the earth is being reduced. This current of thought is part of a broader movement of reflection on the bioeconomy and post-development, which would imply a radical change of system and lifestyles. This change would be made by applying more appropriate principles to a situation of limited resources: small-scale, relocation (revival of the local), efficiency, cooperation, self-production (and exchange), durability, and sobriety. If we do not decrease consumption, under a rational, measured, and conscious project, we will end up decreasing by the collapse of global capitalism.³ Following Rodríguez,⁴ we can create Table 1 in which we explain the main currents of thought in the intersection between social science and the environment (Table 1).^{5,6}

Deconstructing the term 'sustainable development'

The restructuring of the capitalist system that began in the 1980s revived, with a new image, the myth of progress through economic growth under the name of sustainable development, a new oxymoron, which as shown in this rhetorical phrase is characterized as a definition that juxtaposes two contradictory terms.⁷ As Naredo and Riechmann⁸ explained, the term sustainable development generalized the use of an ideological formula, a kind of magic spell with which leaders, technocrats, and industrialists hope to continue their capitalist production after making ecological corrections to the industrial system seen to be essential, which they hope to minimize. The success of this term has to do with its calculated ambiguity designed to please everyone, bridging the gap created in 1971 in the debate

between development economists and conservationist economists.⁴ The term sustainable development pleased both perspectives. On the one hand, the economists were able to update the old concept of sustainable development—used to propose a development crisis and not altered by economic imbalances—with the new idea of environmentalism, without transforming their views. On the other hand, the conservationists saw the adjective ‘sustainable’ as fulfilling their expectations on the conservation of natural heritage. Its

continual invocation, in the words of Naredo,⁹ had two objectives: to sustain the myth of economic growth, which had faltered with criticism of the seventies, and to reassure the population, implying that their ecological and environmental claims were being taken into consideration. Meanwhile, economic growth has continued being measured exactly as before it was challenged in the early seventies: by the simple addition of the product or income.

Table I The main currents of thought in the intersection between social science and the environment.

Denominations of the theoretical proposals and authors linked to the current of thought	Basic arguments	Methodology	Proposals for political and cultural actions	The ideological proposal
<p>Environmental sociology or psychology, sustainable development, productive confidence. Postmaterialism⁵</p>	<p>It is possible a transition to a sustainable economy and that the carrying capacity of the Earth has not been exceeded. They propose that we should change some habits and have environmental education but set aside our consumerist lifestyle.</p>	<p>Privileging the quantifier objectivism of the research technique of the statistical survey. But it is a reaction to the objectivist model and quantifier of ‘social physics’. It also uses qualitative methods but reduce the social world to simple representations that agents make. This perspective forgets the structural determinations of social position of subjects.</p>	<p>We must distinguish between implicit actions expressed in cultural terms (environmental education) and explicit actions expressed in political terms (social regulation that considers the environment but is not in opposition to the economic system).</p>	<p>It works as scientific knowledge that reproduces the dominant ideology of sustainable development and believes that increasing economic growth is the way to solve environmental degradation.</p>
<p>Political Ecology, Postdevelopment, Ecological prevention, Degrowth, Buen Vivir...</p> <p>Put in doubt economic growth is a fundamental feature of political ecology. Infinite growth is not possible on a finite planet⁶</p>	<p>It is constructed as a radical critique to the industrial civilisation and its concept of social change based on social modernisation and development. The limits to development are its point of departure. Notes the structural contradiction between the ecosystem of planet earth being finite and the tendency to accumulate capital that is potentially infinite. From this perspective, it is politically necessary to work to overcome the current model of the relationship with nature, which presupposes a global transformation of modes of production and global learning in Western societies.</p>	<p>Qualitative approach that seeks to combine the realistic knowledge of the distribution of the exchange of energy flows between society and nature with the social research of representations and perceptions that social agents make of them. An approach that tends to complete the quantitative approach with a qualitative one. It is part of a dialectical perspective in which the researcher is an instrument for social transformation. The methodologies of participatory action research and ethnography are the privileged instruments.</p>	<p>Develops an alternative culture that assumes ecological problems as a misdirection of industrial civilisation. In cultural terms, the ways to solve environmental problems go through the construction of a new productive and political rationality; in terms of knowledge, a new reworking of knowledge that integrates different epistemologies. In political terms, proponents state that the only chance to stop the ecological crisis and social inequality is through a confrontation with capitalism and a change of lifestyle.</p>	<p>Its basic core focuses on the physical and social sustainability of industrial civilisation. It presents the ecological problem as political and social problems, in that order. Proponents criticise the other trends of thought and claim that ecology has no place in the theoretical discourse of sustainable development. Sustainable development is seen as a corrective technique of environmental imbalances that serves to politically legitimise current production and consumption processes.</p>

Now the concept of sustainable development is the core of the current dominant ideology—that is, the ideology of the ruling class on the environment. The political and media effectiveness of the use of this term and its discursive connotations have been very profitable. The semantic polysemy of this term makes it a universally useful concept from any political option. And it is because the success of the term sustainable development is due to its ambiguity as economic development has traditionally been identified with economic growth.¹⁰ And it is not that sustainable development manages to overcome

environmental problems and/or sustain the current level of production or consumption with its magical form of economic and environmental rationalization. Rather, the concept masks the inherent environmental conflict. We cannot talk about environmental problems that represent risks for humanity as these problems represent profits for many investors and countries. We must talk about environmental conflicts that the ideology of sustainable development tries to neutralise and take shape as ‘doxa’ (speech) dominant. Historically, the prospect of sustainable development was a kind of doxa affirming the field of

environmental issues to the extent that it manages to exclude dissenting views. Until the mid-1980s, it was just one of the heterodox visions against the hegemonic developer orthodoxy, eventually becoming the orthodoxy of the field of conflict over natural conditions.¹¹ This ideology has greened capitalism to the extent that it does not challenge its production bases. So it clearly acts as an ideological state apparatus,¹² which is essential in order to reproduce the relations of

production and reproduction of the conditions of production, albeit in an ideological and discursive plane for a limited period of time and not in a sustainable way. To sum up, the notion of ‘sustainable development’ is merely a means of making the notion of development sustainable, although it really should have already been sent to the idea-recycling plant. There is no such thing as a sustainable capitalist economy.¹³

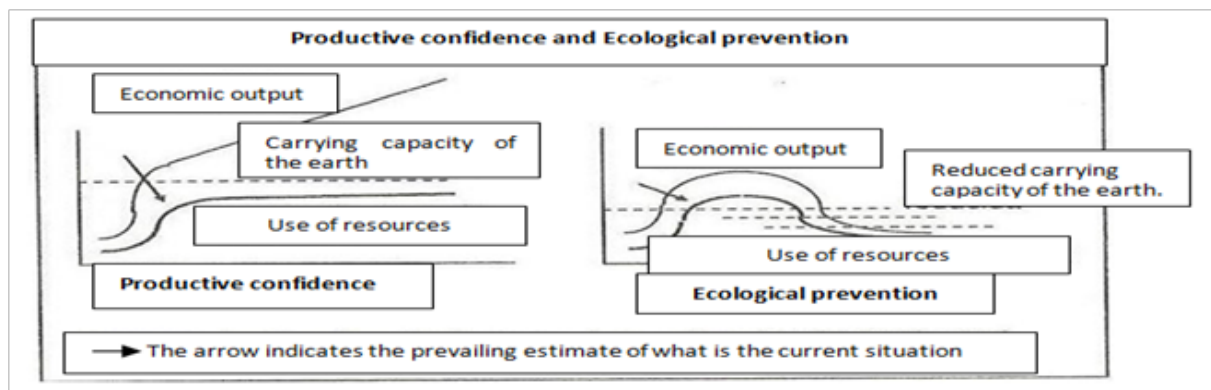


Figure 1 Productive confidence and ecological prevention.

The extent of environmental awareness: the dominant discourse as a measure of everything

Since the second half of the last century, environmental issues began to be established as a relevant object of study on the list of research topics in the social sciences. Throughout this process, the substantive categories of the ‘problem’ were defined and the predominant methodological approaches to these strategies were defined. In sociological research, the ‘quantitative’ perspective was the predominant orientation, through statistical opinion polls. Obviously, this choice involves an explicit methodological simplification and an implicit ideological imprint.¹⁴ In terms of theory, the quantification of environmental issues imposes a definition that we could characterise as ‘abstract environmentalism’, understood as a perspective that tends to separate the ‘environmental problems’ of historical relations from the social and political conflicts where these problems occur. In turn, this quantification considers ‘environmental awareness’ as the sum of individual opinions. Consequently, in the interpretations of environmental behaviors, this perspective overused the models of rationalist— methodological individualism— or behavioral psychology. As Cerrillo¹⁵ has highlighted, the theoretical hegemony of the New Environmental Paradigm in environmental sociology is a key element in understanding this bias.¹⁶

As for methodology, the hegemony of methodological conservatism identified as valid knowledge the production patron with quantitative and experimental design and imposed the technique of statistical survey as the privileged strategy for investigation. The quantification of environmental problems shows the frequencies of perception but hides the social meaning of the questions and the different responsibilities of each social sector involved in environmental degradation. It has also prevented knowing the strategies of different social groups to transform the situation. In the praxeological dimension, quantitative research on the environment has helped shape representations of environmental awareness. As Bourdieu¹⁷ noted,

surveys form public opinion from the mass media disseminating and amplifying the results of these surveys. The message transmitted can be summarized as follows: there are environmental problems and people are concerned or very concerned about them (Figure 2).

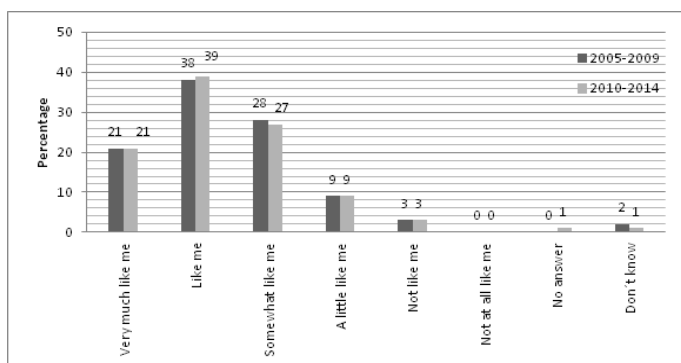


Figure 2 Looking after the environment is important to this person; to care for nature and save life resources (Spanish State 2005-2014).

Although opinion surveys show a broad environmental consensus, we should establish certain methodological precautions. First, it should be noted that asking about concern for the environment involves seeking a tautological confirmation. It is a ‘politically correct’ issue that is very difficult to disagree with (as with other values such as solidarity—equality between sexes and between ethnic groups). Secondly, it should be clear that the opinion surveys on the environment are an inadequate instrument for measuring environmental performance. Since the 1970s, Western citizens know, because the mass media made us know that the environment is a major social problem. The definition of the environment and its problems is determined in each particular investigation. This definition is what the researchers used on the questions of the surveys. A different question, which is impossible to know by quantitative methodology, is the significance and the meaning of the environment for survey respondents. This remains true even in cases in which respondents are asked to choose which items on a finite list constitute

the environment for them. However, there is a growing awareness of the methodological failure of this quantitative perspective that seeks to go beyond the 'rationalized' description of the behaviors that neutralize and hide conflicts' backgrounds. That is why some researchers are aware of the limitation of the quantitative perspective and are claiming the use of the use of qualitative methodology in environmental research.¹⁸ This was a theoretical and methodological demand but also an epistemological and political one. Qualitative methodology can capture the symbolic, ambivalent, and contradictory content of social phenomena. It allows us to understand and interpret the system of representations and attitudes that face environmental problems. Finally, we can meet the specific context of social and political relations where environmental problems occur.

But we must explain the ideological function—the politically correct function—that quantitative investigations comply. According to Orti,¹⁹ the items of a survey make up what he calls a 'system of rationalizations'—that is, explanations or stereotyped patterns of various models of behavior that seek to achieve social legitimacy—so the interviewees can 'vote' for or accede to the alternative that they believe enjoys greater legitimacy in their own social environment. In this sense, the answers are more than an expression of their own positions and personal conflicts, but are conditioned by the cyclical state of public opinion and constitute an index of it. Thus, guided by an adaptive to the 'just means' trend, the selection of items is installed in the intermediate area of the 'moderation' and tends to coincide with the current social consensus on an issue. In the end, the interviewees reproduce in their responses the dominant ideology. Thus, the stereotypes that have previously been imposed by the dominant ideology (through the media, networks of influence, diffuse pressures...), and marked on individual consciences, are now reproduced by them and returned to the ideological movement of the social system established through reflected data from surveys of opinions and attitudes. And it closes a self-reflective system in the communication circuit, in which the 'opinions' have been reduced to 'stereotyped verbal behaviors' and are statements that have been imposed on the word of respondents. To sum up, the quantitative perspective of opinion polls on the perception of the environment tends to be homogeneous. In this sense, opinion polls have a conservative bias that tends to reproduce the dominant ideology on the question investigated—in this case, the concept of sustainable development that affirms the compatibility of capitalist economic growth and nature conservation. However, statistical surveys are very useful for taking a kind of snapshot of the cyclical state of public opinion. We could say that the qualitative and quantitative perspectives look with one eye the reality and therefore give us one-eyed images of social reality. Both perspectives must be complementary. In this sense, we should consider the social research process as a communication process that involves the necessary interpretation of the symbolic dimensions of social reality (social discourses) in parallel with the analysis of the surveys. Statistics are useful for quantifying social facts (such as the incidence of flu in Spain, unemployment, births ...). It allows us to measure the frequencies and correlations between social facts.¹⁹

In our case, in order to understand the evolution of attitudes toward the environment, qualitative analysis allows us to define the significant structure and internal dialectic of ideological positions. But only by empirical statistical survey we can analyze the structural elements or factors - sex, age, social status ...- correlative to each attitude or ideological position. It allows us to determine the social forces that are behind these attitudes. As well as its relative demographic weight,

location, party affiliation, age, etc. The problem in our research, as we shall see, is not produced by the survey technique. The problem comes with the content of these surveys. What is required to respond in environmental surveys?

Methodology: surveys and social discourses in a complementary way

Our research was carried out by a sociological analysis built on a qualitative methodology, using the techniques of discussion groups, semi-structured interviews, and ethnography. The field work took place in the towns surrounding the natural parks of the Albufera and the Ebro Delta. In order to develop the structural sample first, we took into account the fact that with the intention of shaping the experience with the environment, the position in the social structure—which forms the matrix and discursive positions of social actors, "the habitus"²⁰—is crossed by the habitat. The class culture overlaps the relationship with the means of production. Following these social variables, between December 2009 and June 2014, 58 in-depth interviews were conducted with different social actors: municipal officials; environmental technicians; members of environmental organizations; academics; industrial workers; domestic workers; self-employed entrepreneurs, and representatives of the traditional sectors (farmers, hunters, and fishers). The empirical material, which was used to capture the social meaning of environment, was completed by an analysis of two discussion groups. One discussion was with individuals in social sectors that develop traditional or modern activities in the surroundings of the natural parks studied whereas the other was with members of social sectors linked to conservation of natural parks. Based on analysis and interpretation of the data, the research contextualizes opinions, attitudes, and evaluations as well as discursive reconstructions of the experiences of the subjects. The analysis of the discourses was supplemented with the data mining of different surveys conducted by The Centro de Investigaciones Sociológicas.

Turn of the screw on the environmental opinions: surveys and social discourses on protected areas (spanish state)

Environmental sociology has undergone considerable development since the 1970s. This sociology is based mainly on the findings of the New Environmental Paradigm (NEP), following Riley E. Dunlap. The success of this model lies in the ability of Dunlap and his collaborators to operationalise its theoretical items that confront the values applicable to one of the defined cultural paradigms: the NEP or the Dominant Social Paradigm (DSP). These paradigms would represent the ideas of the preferential right of mankind over nature. The result is the famous NEP Scale, a theoretical and empirical apparatus capable of reliably measuring the degree of adhesion of the population to pro-environmental values. Its contributions, contrasting synchronic and diachronic, have shown some characteristics of environmentalism as a social phenomenon:

- A. it focuses on a minority of the population (around 20%) that tends to identify with young, urban, politically to the left, and a high level of education;
- B. another 20% of the population adheres to the classic productivism of modernity

C. the bulk of the population remains in intermediate positions with small nuances between them (Jones and Dunlap 1992)

The work of Dunlap and his followers inspired much empirical research on the perception of the environment. In Spain, where environmental sociology has undergone considerable development over the past three decades, the work of Navarro Yáñez (1998; 2000), Chuliá Rodrigo (1995), García Ferrando (1991), Gómez and Paniagua (1996), Gómez, Noya and Paniagua (1999) and Moyano

and Jimenez (2005), are among the most important contributions in this regard.²¹ However, this methodology has found a real headache in the so-called environmental gap, pro-environmental inconsistency between declared values and behaviors. That is why, for our study and analysis, we construct an indicator of environmental performance based on individual behaviors (Table 2) instead of pro-environmental values. We found the following environmental friendly actions in questionnaire number 2954 of CIS (which have revolved around environmental issues) (Table 2).

Table 2 Environmental performance as a constructed variable with the following variables.

Frequency of behaviour respectful to the environment in buying habits
1. Look for products with packaging that can be reused
2. Try to buy products with minimal packaging
3. When buying appliances choose those with efficient energy use
Frequency of recycle centre use
4. Are you using recycling centres or call the council to get rid of appliances that no longer serve?
Frequency separating glass, plastic, and metal, as well as paper and cardboard waste
5. How often glass jars and bottles are separated from the trash
6. How often cans and cartons are separated from the plastic garbage containers
7. How often paper and cardboard are separated from the trash

The current social profile of citizens acting with the environment in mind in Spain is not far from the one that has been described by Dunlap. As we can see in Figure 3, the social profile responds to a person with a high educational level, living in a big city or metropolitan area, belonging to the middle or upper class, with an ideology skewed leftward, and with an occupation probably related to something technical and scientific. The survey results of skilled agricultural workers and fishers show the lowest amount of environmentally friendly behavior (Figure 3).

The big difference in Dunlap's studies can be seen in the age. In the survey that we analysed, the age of persons who do more environmental friendly actions would be between 45 and 50 years. However, as in Dunlap's studies, we have to say that the socio-demographic variables maintain a very low statistical relation to environmental performance, except for the educational level. Environmental concerns and the tracking of environmental news are the variables that maintain a higher level of association with environmental performance. The low correlation of socio-demographic variables led Van Liere and Dunlap²² to suggest that environmental awareness was widespread among the general population. This fact could indicate the need for more statistical samples in specific populations and the replacement of socio-demographic variables, as independent variables, for other cognitive variables (such as lifestyles).

Nevertheless, as we can see in Table 2, the environmental performance derived from surveys is based on a behavior that only seeks to mitigate the effects of consumption (for example, by recycling or by purchasing products with reusable packaging) but does not seek practices for living more in tune with the environment. Of course, practices such as growing one's own fruit or vegetables, buying from local suppliers, reusing things, making one's own

clothes, making preserves, consuming less energy, planting trees, or not having a mobile phone were not canvassed in the surveys. Moreover, as Brand²³ has argued, quantitative data show that the population claiming to be in favor of environmental protection have a lifestyles less 'green' than other segments of society theoretically more conservative. This is the case of retirees, with a tendency to environmentalism less pronounced than younger people, but having a lifestyle far less wasteful of energy.²³ Because data on environmental awareness do not vary depending on economic variables or depending on different social situations, Brand argues that the different ways of representing and interpreting environmental problems depending on the context and the lifestyles they produce are more important when explaining environmental behavior.

According to Christensen²⁴ traditionally, policies attempt to influence the output from the production processes (waste streams) or the impacts from the products during their entire life cycle. This concept reduces the environmental problem to only two sources, production processes and products, and ignores the impacts of lifestyles. The reduction of pollution is, of course, also an effect of better production processes and the use of more environmentally friendly raw materials, but this will not in itself lead to a sustainable society. Consumption patterns must be changed so that consumption decreases and shifts from more polluting products and services to those which are less polluting. This probably implies a shift in lifestyle for the entire population. The success of environmental economic policies has been in those areas where there is no tension with rationalism but where there is continuing confrontation with nature. These are reducing the environmental impact of buildings, environmental education, energy saving of production processes, recycling of materials,²⁵ the proliferation of protected areas, and the purchase of low-energy domestic appliances. All these aspects feature

in surveys of environmental values. Moreover, all these issues are treatable within the current paradigm (sustainable development), easily understandable, and politically laudable. But they are far removed from the pressing issue of the planet's ecological crisis—that is, overcoming the dualism that separates people and divides the landscape and nature. The rationalist's environmental policies are limited to addressing a change of perspective that allows a better

understanding of the global environmental problem. In the course of carrying out the fieldwork, we clearly observed the consistency between discourse and practice and discerned that having an environmentally consistent behavior was something also related to the aspiration for developing a holistic lifestyle that was only partially reproduced in the villages and among older people.

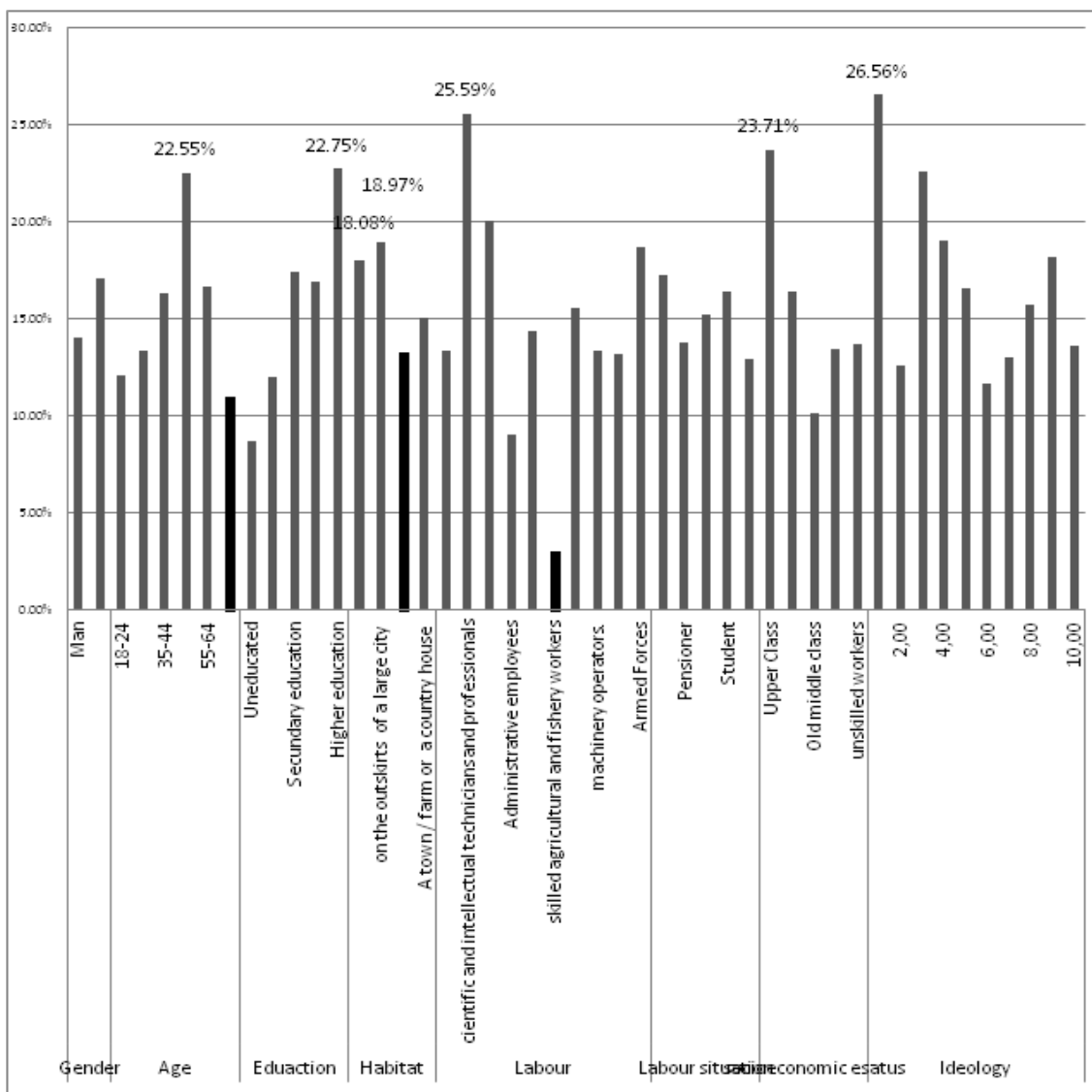


Figure 3 Bivariate analysis of environmental performance socio-demographic variables (Spanish State, 2012).

In an interview with a farmer, we talked about his concern for the environment. I asked him if he did something for the environment, mentioning as an example recycling. He replied that he did nothing. I looked around and the house was almost dark inside. He had an old gas stove that had not been turned on even though it was winter, so the house was freezing. Moreover, in the hall of the house, I could see an old bicycle with wheels full of fresh mud. So I realised that the bicycle was the farmer's transport Figure 4. Then I went out into the street, and observed people going to shop at the local market, where there were local food crops Figure 5; in addition, they brought their own shopping carts. In another interview with a housewife, the

interviewee was using a sewing machine and making her own clothes and the clothes of her family. In addition, the 'garden' was an orchard in which she grew some vegetables and in which a goat wandered around (Figures 4) (Figures 5).

The epistemology and ontology that researchers have about the concept of the environment is essential for social studies of environmental concerns. How researchers perceive and think about the environment affects their research and their research methodology. I realised that caring for the environment did not only entail carrying out the proposed activities in the surveys. Taking care of the environment was related to developing a less consumerist

and less material lifestyle. This is not done to mitigate the effects of consumption but to consume less and consume things locally made. And, even though we also found that lifestyles in the villages were associated with the modern economy, “for which nature [was] just a resource to be exploited”, such lifestyles were now reproducing a less wasteful behavior related to dematerialization. Elderly people living in rural areas had a process of socialization which created a social order for the community and its way of life, according to the ecosystem where they had their habitat.²⁵ According to this author, when the environment resonates in the body and consciousness, as in ancient cultures, the relationship with the ecosystem is a community relationship; the territory is part of the community. There is a symbiotic relationship between the two—culture and territory—and this link necessarily merit an attitude of esteem.



Figures 4 Farmer with his bicycle.



Figure 5 local market.

So these people could perceive that the process of modernization destroyed their traditional way of life, their habitual way of working—because of the subsumption of agriculture under capital—and also the natural surroundings in which they were accustomed to working (as farmers). As Polanyi²⁶ explained in 1944, in social discourses it was perceived how “the growth of the capitalist market impaired or destroyed its own social and environmental conditions”.²⁷ Economic modernization, “involved the destruction of family life, the devastation of the environment, forest clearance, pollution of rivers, professional disqualification, breaking the popular traditions and the general degradation of human existence”.²⁶ At the beginning, we planted rice by hand and it was arranged in tables with horses, then the machinery began. That is not good either when the herbicides started out. I risked my ass by washing it with water coming from the canal and it really stung in the Citroën [his car at that time] I could not load the eels that were dead and from that day forward I have not seen more eels (retired farmhand, interview, Amposta)

At the same time, in every discourse, the idea surfaced that environmental degradation was accelerated by a process of capitalist development and an unprecedented rise in population that began in the 1960s. Furthermore, this process of capitalist development was accompanied by a process of modernisation that was referred to in every discourse and which affected daily practices as well as, in general, the way people lived. The discourses were clear in this sense and the interviewees assumed that they had taken part in this process. Nevertheless, they also accepted that their way of life was harmful to the environment. From the 60s, when factories were built and when the crush of people began ... is when ... the population of Catarroja was less than a quarter of what it is now ... then we had the cesspools ... the lagoon was not as polluted.... and before that time (meaning before the 1960s) we did not use a lot of water, or washing machines, or things like that. Since the world began to evolve is when all the mess came. (Farmer, interview, Catarroja)

I think progress ... we want to progress so much that we are ending it all [referring to natural resources] [...] We used to use sailboats for fishing, for going to work at the Albufera and for going to the sea, we had no engines. Now we use motorboats, and I was the first who used one! [...] I'm not going to take three hours sailing while the others go in 10 minutes (self-employed construction worker and hunter, interview, Catarroja). Vicens²⁵ argues that the loss of the experience of diversity in modern society has meant the beginning of a more serious ecological crisis in the history of mankind. Development ideologies, liberal economic models, and the myth of progress have been the most effective catalysts in this crisis. When the symbolic world (not so typical of modern cultures) is missing, when there is no direct relationship between what people do and the significance they attach to the things they do, there emerges a disengagement of identity. This identity crumbles and social cohesion is diluted. For cultures that have been founded on a joint social order of the community and a way of life, according to the ecosystem where they have their habitats, the dismantling of social systems has been accompanied by the loss of the environment. Vicens²⁵ has concluded that cultures (with the exception of modern ones) have handled diversity as a contingent of social life and the environment. They identify themselves with dual thinking that separates reason from experience, or identify with rationalizing policies which actually reduce the environmental regulations to the crime of pollution but neglects lifestyle; nonetheless, it is a fragmented identity. The human ability to create identities is wide and deep, and is rooted in myths and cultural references.

According to Kay Milton,²⁸ conventional opposition between emotion and rationality in Western culture is a myth. The effect of this myth has been to support a market economy that systematically destroys nature and to exclude from public decision-making the kinds of emotional attachments that support more environmentally sensitive ways of living. A better understanding of ourselves as fundamentally emotional beings could give such ways of living the respect they need. Smith and Wishnie²⁹ propose that to qualify as a conservationist, one's actions or practices must not only avoid or mitigate overexploitation of resources or damage to the environment, but one must also be socialised to do so. The conditions under which conservation will be adaptive are stringent, involving temporal discounting, economic demand, information feedback, and collective action. Thus, according to these authors, the theory predicts, and evidence suggests, that voluntary conservation is a common theme in Western societies. However, the use and management of resources and habitats by small-scale societies is widespread and may often indirectly result in biodiversity preservation or may indirectly influence environmental

behaviour. In contrast, as Martínez Alier³⁰ has claimed, large cities have “ecological footprints” much larger than their own territories. In the social discourses of the inhabitants of rural places (that did not participate in an aggressive process of modernisation) respondents talked about this phenomenon. They explained that their environmental consciousness was a type of ‘habitus’:²⁰ It seems that environmentalism we carry within, you know? The people who live here ... I mean, I think if you are going to ask, few people will tell you that they are an environmentalist, okay? But instead we are ... we act as if we were, you know? But you do it because you have always lived it. (public administration worker, interview, Sant Jaume d’Enveja)

You live with it ... [referring to the environment] [...] the hunters put some woods in the water channels because there are some channels that have been made with cement and if animals fall into the channels they cannot leave because the cement is high and animals are small and cannot get out of there [...] And people who are living in the delta have already this environmental consciousness. And now, depending on which campaign, which project ... depending on what Charter of Sustainability, we have to change our consciousness ... To me ... it makes me laugh because we already know all about the environment so I do not know what they want to invent. (fisher, interview, Sant Jaume d’Enveja)

On the other hand, as we have already explained, the rural or semi-rural towns in the study are also inside protected areas. Decisions in relation to the natural parks were perceived by local people as an implementation of a model dictated by a policy imposed top-down, legitimised on the basis of available technical and scientific knowledge as to what should be preserved and how it must be preserved. The result was conflict and resistance by local people to a vertical management model that was perceived as an expropriation of their space and contempt for their traditional knowledge. In response to this method of decision-making, the traditional sectors showed disdain for the technical knowledge informing the process. The relationship between people and nature, “in the context of protected areas, is highly political, embracing issues of rights and access to land and resources, the role of the state (and increasingly non-state actors in NGOs and the private sector), and the power of scientific and other understandings of nature”.³¹

Furthermore, an excessive emphasis on enclosed parks may facilitate, perversely, the creation of polarised landscapes that are predominantly hostile to the sort of nature that this is intended to preserve.³² In that way, Adams³³ has claimed that there is a tension between what is considered wild and what is defined as manmade that contributes to the fundamental dynamic of conservation. For Adams, conservation has degenerated into protecting nature in specific places while destroying it in others. Instead he suggests that, because of the problems associated with fragmentation of nature represented by isolated protected areas, conservation should be developed to embrace the whole landscape. In this sense, social discourses on the zones clearly explain the reality of living at the bottom of polluted rivers. In the case of the Ebro River, there are three nuclear power plants and there was a very big company which polluted the river and, by extension, their territory. In some ways, we can talk about what Martínez Alier³⁰ has called ‘the environmentalism of the poor’

Of course we are concerned because we see that the river itself is running out ... the water does not come as it came before [...] Now only rubbish comes ... because here there is a lot of cancer [...] between the nuclear plant of Asco and Vandellos we are surrounded (Housewife,

interview, Amposta). If [you ask me] the river is contaminated or not? Then most likely yes ... There are a percentage of cancer cases per population [...] The truth is that this area suffers enough of it (Small business owner, interview, Amposta).

As Sachs³⁴ has argued, environmental disruption is the poor man’s concern as he is the one most severely hit. The issues so widely discussed to-day are not at all new and the working class has been exposed to all kinds of environmental hazards since the beginning of the Industrial Revolution. Moreover, if pertinent questions are asked about the way in which social costs arise and are treated in different socio-economic systems, environmental concern may act as a powerful eye-opener. As an anarchist theoretician put it, ecology is by its nature a science critical on a scale that the most radical systems of political economy failed to attain. Finally, environmental concern, far from pushing people away from other burning issues, may act as a powerful lever for mass action, which will challenge at the same time all the evil aspects of the existing social organisation.³⁴ Amposta and Sueca are the towns situated at “the last stretch of the river” [Ebro and Xúquer Rivers, respectively] and because of that, according to a self-employed worker from Sueca, “the water coming is the meanest, the most polluted water ... [laughs] here comes the most polluted water”. Moreover, the closest towns to the Albufera perceive that pollution has become a radical threat to the ecosystem. Social discourses on the zone are unanimous in pointing out that the Albufera, in the words of the same self-employed worker from Sueca, “was dying”.

However, these populations do not generate so much pollution: The quality of life here ... is better than other places ... for a lot of reasons [...] There is not much industry or population ... there is not a lot of pollution generated here ... so everything comes from other places (small business owner, interview, Amposta). But they suffer the effects of unemployment and joblessness and explain how their children should leave the territory because “there is nothing here” (self-employed worker, interview, Sueca) it is “work, industrial ... nothing ... nothing ...” (housewife interview, Sueca) that is why “our towns are completely unemployed ... we only have two or three factories” (housewife, interview, Amposta).

Social discourses express regret and fatalism about the environmental impact of the modernisation process that has only left them ‘rubbish’. In this sense, according to Ibanez,³⁵ we can say that the relationship between the rural and urban world is regulated in the class struggle: those who live in the villages are the oppressed class, and those living in the city are the ruling class. The city is a crap factory: get food and emit excrement. Countryside, by contrast, is the emitter of food and the recipient of excrement. Environmental preservation and protection have been understood as desires which can develop only after the material necessities of life are already abundantly covered. The environmental movement of the poor has bankrupted this view, which was prevalent until recently. The clash between the economy and the environment does not manifest itself only in the attacks on nature remaining pristine but also in the increasing demands for raw materials and for disposal sites for waste in the large parts of the planet inhabited by humans, and in the planet as a whole. The fact that raw materials are cheap and that garbage dumps have a zero price is not a sign of abundance but a result of a given distribution of property rights, power, and income. The environmental load of the economy, driven by consumption and by population growth, is growing all the time even when the economy is based on the service sector. The case for a general ‘win-win’ solution,

which consists of environmental protection together with economic growth, is far from proven. On the contrary, “since the economy is not ‘dematerialising’ in per capita terms, there are increasing local and global conflicts on the sharing of the burdens of pollution, and on the access to natural resources. Therefore, the ecologist of the poor differs from the mainstream ‘eco-efficiency’ approach.”²⁹

What does ‘environment’ mean in social discourses? Give subjects back their own words

Social discourses—as made through the mass media—express that macro-ecological problem can be a real threat not so much for themselves but for the future generations. It is a problem of intergenerational distribution in which current generations; in order to satisfy their needs, jeopardize the needs and interest of future generations.

I am very concerned because these days is so evident that the earth is rejecting us somehow the damage we are doing to it [...] I am very concerned about the planet that I’m leaving to my grandchildren. [...] the glaciers that are pulling away and the warming of the atmosphere [...]. All this I think is bringing us back the damage we have done, the carelessness we have had in our way of life (Housewife, interview, Catarroja). However, they do not think it is too late to find a solution to the environmental crisis. Science and new technologies are the antidotes that limit their perception of risk. These antidotes make economic progress and environmental conservation compatible, if it’s too late to solve the problem of ecological crisis? I think not, because it could be arranged somehow [...]. I do not know by what, but there are more educated people who could give some opinions to stop all this [...] earthquakes, tsunamis, we never knew of their existence [...]. Now scientists tell us why these things are happening (housewife, interview, Catarroja).

Although social discourses appeal to science as an antidote to threats that produce the ecological crisis, respondents also expressed the need for a collective consciousness in order to protect the environment because “it is ours” (housewife, interview, Amposta) and “we all have to take care of it” (housewife, interview, Amposta)—“from young people to elderly people” (public administration worker, interview, Sant Jaume d’Enveja). Otherwise, “we face the debacle if people are not aware of the environmental problems [...]. I do not know where we are going to arrive” (housewife, interview, Amposta). People also feel guilty and recognize that they have a way of life that destroys the environment. So discourses use the possessive plural point of view: “the damage we are doing [to the planet]” (housewife, interview, Catarroja). They feel that they are victims and accomplices of the state of the Earth, putting hope in the younger generation “because young people have an environmental education [...]. Now we have to educate older people who have not gone through this education (housewife, interview, Amposta).

However, in social discourses we found dissonance and contradictory thoughts. Interviewees expressed these ideas: “past generations lived more in line with nature but young people are the ones who are more environmentally conscious”. This cognitive dissonance³⁶ is given by the fact of having a polysemic and fragmented view of what the environment means. On the one hand, interviewees described their ancestors’ way of life as sustainable against their current unsustainable lifestyle. They describe how their parents had

a way of socialising in harmony with the environment. It was not, therefore, only to mitigate the effects of consumer society. Before the 60s it was all ... was all different ... was all made manually ... it’s not like ... it was all made by hands and when you went outside ... we caught purer air ... it was more natural (self-employed worker, interview, Sueca). My grandparents have told me, “We took baskets with sand and we made the parcel of arable land because it was all stone” [...]. That period of time was nice ... I liked and I lived this way of life when everything was made by hands ... and now I think we are abusing too much of everything. [...] and therefore this crisis has come. (housewife, interview, Amposta)

It was a lifestyle in which they have also been socialised and therefore they inherit some practices: “... my whole life has eaten fish the day before and I have not died” (housewife, interview, Amposta). They remember this way of life in a nostalgic way although it has left them a bittersweet feeling as a result of the harsh conditions of this kind of missed way of life. The second acceptance of what environment means is linked to the thought that the younger generation are more environmentally friendly. This idea is associated with the environmental care to avoid or mitigate overexploitation of resources.²⁹ Thus, in their descriptions of the environment, interviewees mentioned actions such as recycling. And when describing natural parks, respondents made a point of explaining how the most polluting practices that threaten ecosystems have been ‘controlled’ but not stopped. From this is derived a semantic field in social discourse related to power: control, law, regulation, reporting, and, of course, punishment and sanction. Hence, “we actually reduce environmental legislation which pursues the crime of pollution”.²⁵ However, “nature is anything but natural has become a concept, a standard, a memory, a utopia, a counterproposal”.³⁷ In this sense, the discourses also describe how the parks were before the 1960’s, describing them as a lost paradise. The image transmitted is a zone that is crossed by the contradiction between the natural and historical terrain and pollution of the territory in the present time. These two views about what the environment means have similarities with the differences between the theoretical positions that we have discussed at the beginning of the paper. While the position of ‘ecological prevention’ would be associated with the conception of the environment and lifestyle of their ancestors (less materialised), ‘sustainable development’ would come to relate to the meaning of the environment that sustains the idea that younger generations are more environmentally concerned. It is the sense of the environment that understands environmental concerns by reducing the effects of overexploitation of resources but neglects lifestyle. However, this fragmented view of what environment means, and the cognitive dissonance associated with it, is produced because discourses on ecological destruction are caught in a double bind³⁸ arising from two conflicting mandates that cannot be obeyed simultaneously: “Live as if the environment does not matter because, otherwise, you are threatened by poverty and unemployment” and “protect nature because, otherwise, you are threatened by catastrophe and extinction”.³⁹

Social discourses on the environment are temporally bound within the present time. The discourse of the different social sectors involved in eco-social conflict shifts responsibility for the problem to the past and projects its resolution into the future. They describe an idealised future in which scientific knowledge, new technologies, progressive environmental awareness, and education of citizens converge to produce a creative solution. In this vision, progress—understood as capitalist economic growth—is safe in social discourse.

Environmental concern is consequentially eclipsed, subordinated to the exigencies of economic progress, and prudent initiatives to solve ecological and social problems are deferred to the far-off future. The centre of gravity of actors is in the here and now, and the task of solving ecological and social problems is deferred to the future. Nevertheless, in the description of what the environment means, it sets out something important that is evidenced by the expression “[if we continue in the current way of life] we face the debacle” (housewife, interview, Amposta).

Conclusion: back to the origin in order to rebalance the environment and society

As Martínez Alier³⁰ has pointed out, production may become less intensive in terms of energy and materials, but the environmental load of the economy is driven by consumption. Rich citizens may choose to satisfy their needs or wants by new patterns of consumption that are themselves highly resource-intensive. The approach of ecological economics, as pointed out by Gowdy in 1992, builds upon Georgescu-Roegen’s ‘principle of irreducibility of needs’. But what is most lacking in the Western mind, in the myth of progress, is the sense of balance and relative weighting between the biochemical complexity of the land and the lifestyle of human societies. With modern countries in the lead, a change in direction is required to rebalance the environment and society, which means rebalancing a lifestyle.²⁵ And, on this subject, our past generation has something to say. In ideological terms, environmental sociology through surveys works as scientific knowledge that reproduces the dominant ideology of ‘sustainable development’. And, in particular, the way of thought that this ideology transmits could be summed up in this argument: increased economic growth is the way to solve environmental degradation and social inequality.

In this sense, it is encouraging to note the contributions of Tabara,¹⁸ in defence of the usefulness of qualitative methodology and samples of specific populations in understanding environmental awareness in its context. From our research, we have seen that environmental performance is related to an identity type which stems from being socialized in line with the ecosystem in which the habitat is located. In villages, that we have studied—in which rurality was important—some of these behaviors were a legacy from another way of life. In this regard, the argument of Smith and Wishnie²⁹ is the key. According to these authors, to qualify as a conservationist, one’s actions or practices must not only avoid or mitigate overexploitation of resources or damage the environment, but one must also be socialised to do so. Voluntary conservation is a common thing in Western societies. However, the use and management of resources in sustainable habitats of small-scale societies may indirectly influence environmental behaviour.

In this sense, we should analyse the remnants of these lifestyles and socialisation processes that can lead us to rebalance the environment and society. We wish to pursue further research on traditional knowledge, ‘the common good’, and environmental protection, without mythologising or losing sight of the harsh conditions that were associated with these lifestyles, and without forgetting how these lifestyles succumbed to capital. Nevertheless, the problem arises because, as we can observe in social discourses, the hierarchy of capitalist modernisation has imposed the primacy of scientific and technological knowledge over sensitive and traditional knowledge. The possible resolution of the eco-social conflicts requires a careful

consideration of this fact, for the purpose of translation between the different ‘epistemics’ and ‘talks’.³⁹ According to West,⁴⁰ as environmental social scientists, we have to think carefully about how we translate socioecological lives, and we need to locate the politics of translation, value, and spatial production at the heart of an engaged environmental social science

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Conflict of interest

None.

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