Ecological Citizenship and Social Representation of Water: Case Study in Two Argentine Cities

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Abstract

This article examines the social representations of water in urban cultures of Argentina, placing the subject as a matter of academic and practical interest. Some questions have guided this investigation—What is water for the urban dweller? What are the actions that a citizen is willing to exercise?—A qualitative research was conducted (according to Yin’s case analysis methodology) in Gualeguaychú and Buenos Aires. Following the collected data, the authors reconstructed the dominant paradigm in both cities, which was the ecocentric model. However, the acceptance of ecological values and beliefs is not an indicator of the exercise of proecological behavior concerning water. Empirical findings have guided the authors to inquire the degree of relationship between social representations and attributes of Andrew Dobson’s model of ecological citizenship.

Keywords

social representation of water, urban culture, ecocentric paradigm, locus of control, ecological citizenship

Introduction

We will address water issues and the social representation of water in urban cultures, placing the subject as a matter of academic and practical interest, that is, by focusing on central concepts of sociology and social psychology in relation to the environmental field.

The review of relevant previous studies directed us to a major study published in 2003. We refer to a research conducted in six cities with different biophysical and sociocultural environments, which has offered enough evidence to suggest that factors that shape the relationship with water in urban cultures depend on their social representation (De Vanssay, 2003).

According to the results of the international comparative research, two of the most important variables related to the social representation of water are the type of values associated with that resource (functional, affective, aesthetic) and the level of perceived effectiveness of the individual and collective control of water issues.

The first question in our study was to investigate whether water was perceived by the urban dweller as a significant object of their environment and second was to research the criteria by which water was defined and identified by urban cultures. What are the actions that a citizen is willing to exercise?

Water in a spatial perspective is not only a natural resource at stake—as a somewhat abstract input of the economy—but also the live element that runs through a territory, shaping the urban space, and which daily becomes visible in different ways in the eyes of the citizens.

In our article, we review some categories of analysis, then we present the results of a study conducted in two cities of Argentina: Gualeguaychú and Buenos Aires. The first city is an interesting case study of a conflict over a river at risk of pollution in the border between Argentina and Uruguay. The second incorporates the study of the social representation of water in a capital city following an international study in six urban cultures (Biagi, 2010).

In December 2006, a case analysis was conducted in the city of Gualeguaychú (Biagi, 2006). Later, in July 2008, interviews were conducted in Buenos Aires and the study was complemented in early 2009 with further interviews in Gualeguaychú using the same guide of questions.

The appearance of environmental values and their globalization has been one of the main cultural transformations of the past decades and has given rise to a rich institutionalization process that led to the allocation of new meanings or the addition of new rights and obligations which, therefore, influenced citizenship as an institution.

Environmental values opened to such a wide political dimension refer to citizen behaviors of assuming environmental responsibilities. Along these lines, the study of the social representations of water in these urban communities allows researchers to move deeply into the mechanisms of...
social commitments. Within the framework of the green political theory, we have studied Dobson’s approach because it is an original model that breaks with the traditional model of citizenship. Dobson, from Keele University, has researched the relationship between citizenship and the environment in response to the issue of which is the role of citizenship in the construction of environmental sustainability (Dobson, 2005). According to the author, the key lies in the role taken by citizens and in how the environmental conscience translates into specific habits and behaviors toward environmental care. This implies working in two complementary directions: on one hand, greater political participation of citizens and on the other, citizen attitude subordinating private interests to shared assets. The theoretical triangulation between the analysis of the social representations of water and Dobson’s proposal will allow us to extend the discussion on the scope of the idea of ecological citizenship and its possible institutionalization in terms of sustainability policies.

**Method**

Our case study methodology follows Robert Yin’s (1994) approach. We selected a single case study with multiple units of analysis as we were looking for a holistic, in-depth investigation of the potential mechanisms of social commitment. A qualitative research with an exploratory descriptive design was conducted in two cities of Argentina—Gualeguaychú (Entre Ríos Province) and Buenos Aires—to detect the social constructions the inhabitants developed about water.

**Case Design Methodology**

*Design type: Single case study with multiple units of analysis.*

The first step of our study was to determine which design would be appropriate, and following the keys proposed by Yin (1994), we had to consider the type of questions that would guide the research.

*The questions on the problem.* The first interrogation was to consider whether water was part of the inhabitants’ urban environment as a significant object (Brie & Del Acebo Ibáñez, 2001). And a second question inquired about the criteria by which water was defined and identified by the urban cultures under study.

*Theoretical approach.* The third step according to Yin’s (1994) strategy was to determine theoretical statements to guide the study and interpret the empirical data to be collected.

To identify and describe the social representations of water by respondents in the selected urban environments, we checked the relationship with theoretical constructs, such as the paradigms of the human–nature relationship. Beliefs, attitudes, and motives are elements that make up visions of the world and are studied as dispositional variables (Corral Verdugo, 2001).

The authors have called anthropocentric paradigm the system of popular beliefs accepted by Western societies until a few decades ago, which conceives human beings as separate from “nature,” and whose purpose is to dominate it thanks to technology; thus, human progress is constant. This model is recognized as the Dominant Social Paradigm4 (Dunlap & Van Liere, 1978).

It was later replaced by what is recognized as the New Environmental Paradigm (Corral Verdugo, 2001). This model holds that humans are part of nature and that the rules governing the conditions of social life are embedded in a complex ecosystem that includes the interdependence between man and all living things. The belief system of this new paradigm is sustained by the notion of limits to the growth of human activities, the importance of addressing the environmental impact, and the need to maintain a balance between nature and human rights in the environment (Thompson & Barton, 1994). Several researchers have showed that two apparently contradictory positions can coexist in the same person.

Castells (2009) has explained the process of social change and the role played by scientists and social movements as agents of cultural change in an interaction that resulted in a new paradigm of the relationship between science and society. The scientific community has been researching the global warming and its implications since very early, at least since the 1930s. The first report appeared in the 1960s but little attention was given by the press, until the social movements supported and spread the idea that human activities had a negative impact on nature, which in turn demanded more research.

A number of social movements and international nongovernmental organizations (NGOs) have given rise to the emergence of global environmental awareness as well as the appearance of a public opinion increasingly concerned about the preservation of their local and global environment, which added new meanings to the concept of citizenship.

*The unit of analysis.* It is another key component in the case design according to Yin (1994). In our research, we determined multiple units. We selected four units of analysis:

1. Values and conceptual representation of water.
2. Diagnosis of the present and future state of the water resource.
3. Causes and consequences of the current situation.
4. Behavior and expectations of potential changes in the man–water synergy.

*Central hypothesis.* The central hypothesis was that water representation in urban environments shaped under the ecocentric paradigm is reflected on behaviors and the allocation of responsibilities for water conservation.

*Type of respondents.* Key informants were selected and interviewed according to the guide used in the international comparative research we were replicating (De Vanssay,
2003; Moser, Raitu, & De Vanssay, 2005). We adapted the questions to maintain the original protocol, which aimed to reach individual variables, environmental variables, and sociocultural variables.

The type and number of interviewees were also selected according to the profile offered by the original study. The participants were selected following nine profiles: business person, scientist, politician, mother, teacher, environmental activist, physician, water management professional, and employee.

Data were collected from 8 people in Gualeguaychú in 2006, during the first stage of the study, and from 18 people in Buenos Aires in 2007, as a second stage.

In 2009, the third stage consisted of six people of a lower socioeducational profile, interviewed in Gualeguaychú.

Materials and procedure. Interviews were conducted in person, recorded, and transcribed. Duration of the interviews was 60 to 90 min.

Dimensions and variables included in the interview guide were as follows:

- Values associated with water (Unit of Analysis i),
- Conceptualizations relating to water (features, function, circuits; Unit of Analysis i),
- Appropriation of water in daily life (home, city, recreation, vacation; Unit of Analysis i),
- Personal experiences relating to water (quality, memories; Unit of Analysis i),
- Reasons for water care (diagnosis, actions, solutions, type of people involved, recent problems; Unit of Analysis ii),
- Characteristics of domestic water/network/bottled (access, skills, risks, quality, use, treatment, effectiveness of public service; Unit of Analysis ii),
- Identification of conflict areas over water use (ecosystem, industry, agriculture; Unit of Analysis iii),
- Identification of perceived risk and expectation of effective actions/pollution (types of risk, severity of pollution, levels of action, perceived effectiveness; Unit of Analysis iii),
- Identification of sources of information and perceived reliability (Unit of Analysis iii), and
- Expected changes in behavior with reference to the diagnosis of the resource (Unit of Analysis iv). This variable is accessed by logical inference.

Results

From a comparative and inclusive point of view, we will proceed to present some of the most interesting dimensions of our study given the possibility of integration with other empirical findings and some categories of theoretical relevance.

Since the 1970s, in view of the growing environmental degradation and as a phenomenon of cultural diffusion, pro-ecological ideas and beliefs have expanded. Despite this fact, people still maintain some ideas that belong to the old paradigm, mainly, the belief in the power of science and technology to reconstruct nature.

The analysis of the interviews has allowed us to accept that both anthropocentric and ecocentric paradigms appeared in the same person at different times of the conversation.

**Values and Environmental Paradigms**

We define values as ideas that induce people to act and they are part of the process by which social actors define the meaning of their behavior.

The postmaterialist change theory and the theory of biophilia explain a trend found in recent years in Western societies, by which people treasure objects and processes related to their biophysical environment. This situation points to a change in the scale of values (Aledo Tur & Domínguez Gómez, 2001).

In a first broad and spontaneous answer, water was represented in what we called “natural values.” Water was identified as a chemical compound, life, the sea, something pure.

- Water . . . a total symbol of life.
- Ice, snow, river, sea, ocean, mist.
- Essential nutrient.
- Sacred dimension of life.

In a second stage, water was located by the interviewee in the territorial space of the city and “utilitarian values” appeared. They mentioned water as captured by sewerage, described its flow through the network, its use for human consumption.

- What we drink . . . use routinely for bathing.
- Water is one of the most important inputs for the company . . .
- Something useful.
- It’s part of my workplace.

“Social–ethical values” also appeared when the interviewees considered the role of water in modernity or in the world history.

- (It worries me) . . . that people have access or don’t have access to water in the cities.
- Water is present in almost all sacred stories of the world as the first manifestation of reality . . . thus it is something shared by all humanity.
In a third stage, the values associated with water in the spaces closest to the interviewee appeared with “affective and aesthetic” appraisals.

I regret that this city has no places to enjoy water . . .

. . . The city grew giving the back to the river [Río de la Plata].

. . . The river is not appreciated . . . thus it is polluted.

I miss the water, I miss the river.

I have good memories of the river running close to my home [in Gualeguaychú].

It is interesting to analyze the spatial dimension and a sense of belonging that is clearly manifested among the people of Gualeguaychú. Very frequently, these interviewees mentioned the notion of “us versus them,” whenever they referred to people with a more clear proenvironmental awareness, whereas “others” (“porteños,” inhabitants of Buenos Aires) are unaware or do not care enough for water.

Many researchers have noted the close relationship between feelings and values assigned to relevant objects in a society. In this case, the river Gualeguaychú is contextualized in terms of the culture of that region and is full of symbolic meanings.

Social representations act as identifications and the social representation of water in Gualeguaychú, which emerged in a context of conflict and change, has helped strengthen the identity of a town that grew under the influence of the river.

Not surprisingly, a strong environmental social movement emerged in defense of the river, visibly threatened by the installation of a foreign pulp mill on the other bank on the Uruguayan side.

The city of Buenos Aires, despite being on the banks of the River Plate, has not built its identity around it and its inhabitants accepted the contaminated river and the corrupted management of the basin that has prevailed for decades.

We have noted that the inhabitant of Buenos Aires refers to water in a broad and general sense as an element of nature but not really present in the city. Therefore, their answers express neutrality or abstract ethical values not anchored in the space close to the interviewee.

Actions, Norms, and Perceived Control

These other dimensions of analysis allowed us to identify who is perceived with real and effective power to change the situation of environmental deterioration.

Some studies have found that individuals who actively participate in environmental protection activities and have a strong sense of responsibility also show what is called “internal locus of control.” They consider they have power to control their lives and assume that environmental problems can be addressed by their contribution.

We asked about their perception of water availability on local and global levels, perceived threats, and possible solutions. At this point, the respondents mainly showed an external locus of control, mentioning words or phrases such as the need to educate, public policy, legislation, cultural change, political decisions, and public campaigns.

Later in the interview, we directly asked whether the respondent believed in the power of the individual action to preserve water supplies for the future. The prevailing view was that it is possible to produce change from individual rather than from collective actions. Words such as avoid waste, personal awareness were mentioned. However, there is no indication that these people have skills or abilities associated to a specific care of water.

Although most respondents are inclined to individual actions as a way of change, we ask why, however, they appear to prefer an external locus of control.

Allocation of responsibilities showed what is called fundamental attribution error (Kelley, 1973). Generally, the interviewees did not see themselves as someone who could potentially make a change and held others responsible instead.

People do not realize the importance of water.

People do not consider it important.

They do not care.

The paradox that a preference for individual actions coexists together with the external locus of control could be explained within the context of a culture of distrust and individualistic features. Repeated experiences of unpredictable institutional behavior and an anomic culture have contributed to the disbelief in the public sector and to collective actions (Benbenaste, Etchezahar, Costa, & Petit, 2008). Although citizens expect that political institutions undertake the corresponding collective decisions (legislation, policies), at the same time, having experienced discontinuity, if not the absence of public policies in past and recent history, they suppose that change is in their own hands.

The social representation of water also has a regulatory function of behaviors. Having analyzed the dimension of actions, we can now review the normative dimension.

Researchers have reported the presence of two types of representations of the normative system, with different ethical implications for the environment (Corral Verdugo & Frias Armenta, 2005).

On one hand, a representation of the normative system is based on the inner conviction that it is possible to maintain environmentally caring behaviors by self-control. On the other hand, a different social representation believes that the
presence of coercive external factors (formal social control) is required.

Voluntary versus mandatory environmental control patterns should be analyzed dynamically within a cultural context of beliefs in the legitimacy and effectiveness of social norms.

A theory states that people develop normative beliefs from actions and attitudes perceived in other individuals (Corral Verdugo & Frias Armenta, 2005). As a key element in understanding possible proenvironmental behaviors of the respondents, we should mention the results of a quantitative pilot study (Biagi, 2010) that reveals how the “others” are perceived and the confidence levels on which to develop normative beliefs.

Almost one third of the respondents are suspicious and doubt that other people may have conducts oriented to preserving water supplies; 71% have no confidence in the effectiveness of law to control water problems; only 10% have confidence in institutionalized political powers (executive, legislative, judicial power, mayors, governors), and corruption is identified as the main obstacle in the exercise of political power (63%), so we conclude that expectations concerning the social and formal normative systems in Argentina are low.

For the inhabitants of Buenos Aires, water—as described above—is affected by the so-called tragedy of the commons (Hardin, 1968, quoted in Aledo Tur & Domínguez Gómez, 2001). Water is not considered a common good in Buenos Argentina are low.

For the interviewees, pollution is indeed a risk but a risk perceived and the confidence levels on which to develop normative beliefs.

Discussion
The environmental crisis is closely connected to the globalization process. Since 1960, a change in environmental awareness has taken place after levels of pollution were found in remote pristine parts of the planet such as the Antarctic continent. The perception of an environmental crisis is associated with anthropogenic causes. After the United Nations Stockholm Conference in 1972, the environmental crisis was associated with the industrial economic model based on an irrational exploitation of natural resources and the idea that civilization has put itself in danger (United Nations [UN], 1972).

The emergence of global environmental awareness has given rise to a number of social movements and international NGOs as well as the appearance of a public opinion increasingly concerned about the preservation of their local and global environment. In this sense, dissemination, beyond the scientific field, of the concepts of ecosystem and biosphere, which helps to understand the planet Earth as a whole, favored the development of a holistic view of the relationship between environment and society (Beck, 1998).

Ecological citizenship is one of the new concepts that emerged from political ecology as an answer to the need for the theoretical reformulation of democracy in the context of environmental global risks.

Dobson’s proposal is one of the most radical approaches. Ecological citizenship goes beyond the territorial limits and it is characterized as a lifestyle that stresses personal responsibility and personal fulfilment of duties to protect the environment.

How is it possible to think of citizenship without territoriality? This model is based on the concept of ecological footprint created by Wackernagel and Rees (1996), as the area of land (and water) that would be required to maintain indefinitely a specific human population with its material patterns.

When human demands on natural resources exceed the ecological supplies, a global ecological deficit is generated by the asymmetry between human demands and the ecological area (Chambers, Simmons, & Wackernagel, 2000). An ecological space debt that leads to a community of obligation is created.

The empirical study we have developed allowed us to review the main characteristics of Dobson’s model.
According to the results of our research, we have found the following features in the testimonies of the citizens of Gualeguaychú and Buenos Aires:

1. In terms of ideas and beliefs, respondents have an ecocentric representation of water:
   - water is a limited resource,
   - incidence of human activities on water problems (anthropic factor), and
   - balance of nature has a limit which men cannot cross.

In terms of ideas and beliefs, the social representation of water of the respondents in Gualeguaychú and Buenos Aires is consistent with Dobson’s notion of ecological citizenship.

2. In terms of nature, image, and attitudes toward risks, respondents have an anthropocentric representation of water:
   - nature is a space of beauty and/or catastrophes,
   - environmental fatalism, and
   - focused on the present.

Here we have found that the empirical evidence of our case study does not correspond to Dobson’s (2004) model.

In this sense, the data collected seem to move along the same lines of some of the criticism received by Dobson’s (2004) model insofar as these interviewees do not allow us to assume that sustainability can be achieved by the aggregation of individual behaviors and only personal obligations protect the environment.

When respondents represent water in nature as a space separate from human activity, there is no chance of working in terms of ecological footprint, as those citizens do not feel they are part of a community of obligations.

Environmental fatalism as a main attitude toward water seems to prevent the possibility of individual actions as proposed by the model.

And finally, when they appear to be focused on the present, it is clearly an attitude opposite to the notion of sustainability as a responsibility to future generations.

3. Respondents have an anthropocentric representation of water in view of the possible actions, normative system, and perception of control:
   - distrust
   - delegation of responsibilities, and
   - individualism.

In this respect, representations are associated with the predominance of the external over the internal control locus; interviewees do not perceive themselves as subjects of change, there are other subjects responsible for doing this, be them “the others”, governments, companies.

On the contrary, Dobson’s (2004) model is supported by a strong internal control locus, where citizens not only have ecological values but they also translate these values into environmental care behaviors, both from the public sphere and from their private lives at home, embedded in a strong civic meaning. Again, these features are not compatible with Dobson’s ecological citizenship which is based mainly on the personal commitment as part of a community of obligations.

Dobson’s (2004) approach, supported by the moral and ethic responsibilities resulting from the ecological footprint, requires the internalization of ecological values and rules, and it rests more on self-control and informal controls than on normative control.

The sample taken in the two Argentine cities shows the weakness of the citizen self-control, which allows us to conclude that the spreading of environmental values has not been crystallized yet in a stable process of proenvironmental behaviors.

Dobson’s (2004) model is an attractive exercise from the ethical and theoretical points of view and is an answer to the theoretical political spaces that need to conquer new meanings in front of the globalized environmental risks.

The preliminary study conducted in Argentina could help review the empirical dimension of the model, particularly concerning the concept of ecological space debt that leads to a community of obligation. This is a controversial issue in Dobson’s (2004) model as all evidence shows an unequal distribution of environmental goods and services, which means that it is not possible for the ecological debt to be distributed according to responsibilities (Dobson, 2005).

The theory of social representations was a solid starting point because it allowed to account for diagnoses culturally constructed by the communities, to be aware of the causal attributions of water problems and facts, and to recognize the expected consequences. In addition, although the qualitative nature of the research does not allow to extrapolate the results, we have however noticed some interesting findings.

We believe that every possible water management and conservation policy should start with an effective diagnostic test that goes beyond the mere technical examination of the problem. Behaviors are not linear. It is not enough to possess or disseminate information to expect certain consistent conduct. Information will be interpreted in terms of the social representations people have. The perception of threats or water degradation may be maintained at a rhetorical level and may not move to proecological actions. People with similar or dissimilar diagnoses may use different causal attribution of the problems, which affects the possible actions they are expected to undertake.

Water management in cities is a complex issue that should be analyzed from multiple dimensions and that applies not only to public but also to private agencies. Collective and personal memory is involved as a point of reference on which rests the construction of any possible improvement in the use and conservation of water resources.
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Notes
1. The Chilean report noted that the process of project implementation and programs on poverty defeat, undertaken by different governmental institutions, were not getting expected results. In conjunction with government policies aimed at decentralization, an important factor that needed to be changed was to assign territory a priority, which in turn demanded a second action: to jointly work with different actors of the local community. Land management or cross-sector management is the name given to this new way of program implementation (Rozas Ossandón, 1997).
2. As a part of the interdisciplinary research UBACyT D-021 (2008-2011) project on “Sustentabilidad y gobernabilidad del agua en ecosistemas. Análisis de gestión en el Mercosur y Colombia” [Sustainability and governance of water in ecosystems. Management Analysis in Mercosur and Colombia] Dir: Capaldo, G.; University of Buenos Aires.
3. The case study method developed by Yin (1994) proposes four types of possible designs classified according to the number of units of analysis included in the study and according to the number of cases: single or multiple (embedded).
4. Catton and Dunlap called Paradigm of Human Exception the influence of a popular belief system—they name it the Domain Social Paradigm—in social theory. These popular beliefs are visions of the world and the place of man in it. They have changed through history (Arcury, Johnson, & Scollay, 1986; Catton & Dunlap, 1980).
5. Classical authors of cognitive psychology that analyzed social influence processes and motivations to explain how people process social information are Heider, 1958; Weiner, 1980; and Kelley, 1973.
6. According to Gallup Argentina data, the anomic nature of the country is explained not by the absence of rules but by the underestimation of the rule by significant segments in the society. Along the same lines, another research conducted by the University of Lomas de Zamora asserts that every Argentine imagines that the others also have feelings of being individuals in pursuit of satisfaction, generalizing the idea that being an individual is being selfish. Thus, the anomie is perceived as the natural way of living.

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