

DETERMINANTS OF BENEVOLENCE AROUND WATER RESOURCES IN A PUBLIC UNIVERSITY IN CENTRAL MEXICO

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ABSTRACT

Cultural values are principles that guide people's decisions in the face of crises such as the pandemic and with respect to the use of resources such as water. The objective of this work was to establish the prediction of benevolence, considering it a central value in mitigation policies, as well as in confinement and social distancing strategies. An exploratory, correlational and psychometric work was carried out with a sample of students selected by their affiliation to public health care institutions. The results indicate that openness to change values related to hedonism and self-determination predict benevolence. In relation to the literature consulted, the extension of the model is recommended in order to predict other factors derived from the health crisis and anti-COVID policies.

Keywords; *compliance, performance, availability, supply rate*

INTRODUCTION

The relationship between authorities and users of public services has been a central issue on the agenda of the media (Arieli, Grant & Sagiv, 2014). In the case of water as a strategic resource for local development, quality of life and subjective well-being, in recent years it has been widely reported by the media (Anaya, 2014).

Particularly the print media with national circulation has included reports about the imbalance posed by water scarcity and water shortages associated with the corruption of local authorities and increased rates deregulated (Gomera et al., 2013).

The impact of media coverage regarding the shortage and poor health has been a central issue in the public health agenda (McCombs, 1996). It is estimated that about six million children die from diseases hydro transmitted in countries with high rate of water shortages, but this means not only disseminate information but also associate the performance of the authorities in terms of management (Rad et al., 2019).

Thus, in the suburbs of large cities the problem of water supply has been addressed by a system of tandem in which increasingly restricted water consumption and substantially increase rates (Gudynas, 2010).

Approximately 20% of incomes in vulnerable or water exclusion situation, is assigned to the purchase of water products, but print media rather highlight the lack of infrastructure and attention to contingencies such as drought or frost (Perez and Soler, 2013).

Thus, the media have a particular view of the problem of water scarcity and shortages of attributing responsibility to the authorities and exonerating users who have regular access to drinking water or justifying the soft drink consumption or pharmaceutical industry.

It is a process in which the systematic dissemination of biased information regarding the relationship between availability and management of water resources is known as agenda setting (Carreon et al., 2014).

An agenda is a result of information exchange between the agents involved, but the differences between them generates information biases that are spread in the media and the information is used to justify rate increases by the authorities, waste by users, conflicts among actors or, tandem or policies restricting water (Flores, 2013).

However, the agenda is also historic, as it involves the reaction of organized civil society groups regarding the performance of its authorities on quality public services (García, 2011).

It is power relations that have grown and are activities to the less informative provocation, but in the case of the print media is a process more complex elaboration that this letter sets as an overview of water availability in reference to consumption human (Cowan et al., 2022).

If the media presented the conflict as central themes of water problems because the authorities responsible for the inefficiency of rates and expose closures avenues, boycotts pipe facilities or kidnappings as evidence of ungovernability that inhibit local sustainable development (Bardi & Schwartz, 2003).

However, from the psychometric perspective, the dimensions close to conservatism such as benevolence, conformity, tradition, security and power are distanced from the dimensions close to openness to change such as achievement, hedonism, stimulation and self-direction. In this sense, it is pertinent to establish the dimensions around water problems in order to anticipate scenarios of waste values oriented by openness to change or savings determined by the conservation of uses and customs (see Table 1).

Table 1. State of Knowledge

Author	Definition	Sample	Specification
Gudynas, 2010	<i>Anthropocentrism.</i> "Where nature has own rights, but they reside only in people. Only humans, while cognizant and sentient, are moral agents who can provide these values, and discuss scenarios in political management of the environment. "(P. 48)" a way of being in the world, a world view expresses a kind of relatedness that supports the dual nature and society. The assessments are made according to human benefit or advantage, making the environment objects, to implement them and manipulate them." (P. 54)	38 works that were published during the period from 1972-2009	The Theory of Social Representations (TRS) legal structures for human rights attributed to the detriment of the rights of other species to breed and coexist
Gudynas, 2010	<i>Biocentrism.</i> "Life on Earth has value in itself and that these values are independent of the usefulness of the nonhuman world for human purposes." (P. 50)	38 works that were published during the period from 1972-2009	The TRS is to account for the moral balance, ethics and behaviorally around the imbalance led by utilitarianism
Soto, 2012	<i>Ecofeminism.</i> "He argues that there is a direct correlation between anthropocentrism and patriarchy, which, in the same way that nature has undergone, subjecting women." (P. 12)	50 fonts on the Biocentrism during the period from 1971-2011	The TRS would explore the parallels between the domination of nature and domination of women under patriarchy
Flowers, 2013	<i>Anthropocentrism.</i> "Taking into account the goods and products that benefit humans, relations with the environment to seek satisfaction of their needs." (P. 11)	30 Research conducted in the Brazil and Mexico the period from 1973-2014	The TRS would argue that construction develops useful insights on environmental resources that are common to other groups
Goimera, Villamandos and Vaquero, 2013	<i>Environmental awareness.</i> "A system of experiences knowledge and experience that the individual is actively using in their relationship with the environment." (P. 150)	26 articles related the New Environmental Paradigm during the period from 1973-2012	The TRS cognitively describe the relationship between individuals with respect to their surroundings
Perez and Soler, 2013	"The anthropocentrism is based on dualism nature, while in the ethnocentrism of the modern couple, development / backwardness, human / non-human (or humansub) and androcentrism associated with male / female, public / private, and reason / emotion among others. All these dualisms are constitutive each other and (re)produce a complex matrix of relations of power / domination / resistance to normalized privileges people also favored in the most concrete and everyday life at its symbolic and material dimension." (p. 100)	50 fonts on the dualisms that were included during the period from 1984-2013	The TRS signal that dualisms are tools that facilitate the understanding of reality and position the actors in a group to which they belong or want to belong
Anaya, 2014	<i>Anthropocentrism.</i> "Comes to indicate a naive idea to the reality of things. Not the human species as such in the center of the world to which we belong, but the center is made up only some members of the species (not many) that overlap each other. (...) In the human community as unity, the center of several elements: human beings in our cultural and social diversity, we grouped around a central human-what every one- on unity and not on the unanimously." (p. 7)	15 trials during the period from 1975-2013	The TRS signal that anthropocentrism is a global construction to guide the guilt and responsibility of an elite with respect to environmental degradation and its effects on public health
Carreon, Hemandez Garcia Bustos, and Aguilar Morales, 2014	<i>Anthropocentrism.</i> "The resources are considered an exclusive service for current human needs regardless of the capabilities of the human generations later and the needs of present and future species." (P. 9)	50 fonts on the anthropocentrism during the period from 1995-2013	The TRS warn that the resources to be transformed into public services are not only unique to the human species, but only those who can afford its use value and exchange value

Source: Elaborated with data study

Therefore, the objective of this work was to establish the evaluative dimensions around the conservation or waste of water, as well as its configuration in anthropocentric and ecocentric systems.

Are there significant differences between the theoretical dimensions with respect to the empirical dimensions? Hypothesis. If confinement and distancing policies limited the use and consumption of water, then significant differences are expected between the value structure reported in the literature with respect to the dimensions observed in the present work (Beller, 2021).

METHOD

An exploratory, correlational and psychometric work was carried out with a sample of 100 students (M = 21.2 and SD = 2.4 age and M = 9786 SD 653 monthly income) selected according to their affiliation to public health institutions.

The Values Scale was used which includes dimensions related to benevolence, conformity, tradition, security, power, achievement, hedonism, stimulation and self-direction. The general reliability reached values higher than the subscales that ranged between 0.783 and 0.795. The adequacy and sphericity [$\chi^2 = 234.35$ (234 df) $p = .0001$; KMO = 0.780] suggest the validity analyzes which ranged between 0.356 and 0.657.

Respondents were contacted through personal email and were sent a confidentiality contract. In exchange for sending them the results of the study, the use of their responses to the instrument for academic purposes was guaranteed. They were informed about those responsible for the study and the objectives of the project, as well as the participation guidelines. The concepts were homogenized through focus groups and the Delphi technique. The instruments were applied in public university facilities.

The parameters of reliability, adequacy, validity and regression were used in order to test the hypothesis. values close to unity were assumed as evidence of non-rejection of the hypothesis.

RESULTS

Significant differences are seen between the dependent variable with respect to the independent variables (see Table 2). That is, the sample surveyed seems to distinguish between variables oriented toward conservation and those open to change.

Table 2. ANOVA^a

Modelo		Suma de cuadrados	Gl	Media cuadrática	F	Sig.
1	Regresión	48,224	11	4,384	5,951	,000 ^b
	Residuo	34,624	47	,737		
	Total	82,847	58			

- a. Variable dependiente: Benevolence
- b. Predictores: (Constante), SelfDirection, Age, Security, Income, Stimulation, Tradition, Achievement, Hedonism, Power, Conformity, Sex

The values of openness to change related to hedonism and self-direction are determinants of benevolence as a factor of conservatism values. It means then that the sample surveyed reflects an ambivalent duality in terms of their values regarding the use and consumption of water resources in a situation of confinement and social distancing (see Table 3).

Table 3. Coeficientes^a

Modelo		Coeficientes no estandarizados		Coeficientes estandarizados		
		B	Desv. Error	Beta	t	Sig.
1	(Constante)	7,098	1,600		4,435	,000
	Sex	1,205	,431	,861	2,799	,007
	Age	-,074	,057	-,139	-1,288	,204
	Income	8,434E-5	,000	,092	,882	,382
	Conformity	-,258	,135	-,346	-1,909	,062
	Tradition	,053	,122	,061	,435	,666
	Security	-,026	,120	-,032	-,218	,828
	Power	-,192	,116	-,250	-1,650	,106
	Achievement	-,210	,103	-,267	-2,044	,047
	Hedonism	-,422	,116	-,557	-3,655	,001
	Stimulation	-,219	,168	-,300	-1,301	,200
	SelfDirection	-,552	,136	-,703	-4,057	,000

- a. Variable dependiente: Benevolence

The model explained 48% of the variance. Such a finding indicates the inclusion of other factors not modeled and that the literature reports as ambivalent in Latin cultures such as that of Mexico (see Table 4).

Table 4. Model

Modelo	R	R cuadrado	R cuadrado ajustado	Error estándar de la estimación
1	,763 ^a	,582	,484	,858

- a. Predictores: (Constante), SelfDirection, Age, Security, Income, Stimulation, Tradition, Achievement, Hedonism, Power, Conformity, Sex

DISCUSSION

The contribution of this work to the state of the art lies in the establishment of a simple linear regression model that predicts benevolence as a value for the conservation of water resources and services. The results show that self-determination and hedonism are predictors of the benevolence with which water resources and services are used (Katz-Gerro et al., 2017). Furthermore, the regression coefficient indicates that the model explains half of the variance around the problem of water waste or saving in the sample surveyed. In relation to the reviewed literature, the findings of the present work indicate the inclusion of other factors that the literature reports as ambivalent values in Latin cultures such as that of the Mexican sample (Staub, 2016). Comparison of instruments applied at different latitudes and samples is recommended in order to observe and predict water waste and savings.

CONCLUSION

The objective of this work was to contrast a prediction model of benevolence in a Mexican sample of undergraduate students. The results indicate the non-rejection of the hypothesis related to the significant differences between the values reported in the literature with respect to the values observed in the present work. Furthermore, the inclusion of factors reported in the literature is suggested in order to increase the predictive power of the model and increase the percentage of the total variance.

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