

INVESTIGATING REPRESENTATIONS, OPINIONS AND ATTITUDES STUDENTS ON THE NATURAL ENVIRONMENT

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ABSTRACT. This paper provides a theoretical, methodological and applicative, integrative nature, starting from a comprehensive summary of relevant studies on environmental social representations, opinions and attitudes toward the natural environment.

In this research we started from the idea that environmental attitudes can be formed by *environmental ecological education*, which aims to achieve three major objectives are closely interrelated, that targets cognitive, affective and practical attitude and action. This is done gradually through the educational process and school and extracurricular activities with specific environmental content.

The study refers to highlight the spectrum of representations, opinions and attitudes of students green. It had, as a first objective assessment of *NEP Scale* (New Environmental Paradigm Scale) fidelity by calculating *coefficient Alpha* (α) Cronbach and found Alpha Cronbach global index of NEP Scale, the 15 items is *acceptable*, is over 0.75 and statistical analysis showed a satisfactory internal consistency of subscales / items of the NEP.

The second objective of the study aimed at highlighting the relationship between the representations, opinions and attitudes about the natural environment and locus of control. The research hypothesis makes the prediction that the level of consciousness and ecological values, identified by social representations, pro-environmental views and attitudes of students is high. The assumption that, *in an increased level of pro-environmental views and attitudes students have a sense of internal control more frequently than students* was confirmed.

Keywords: *social representations, opinions, attitudes, pro-environmental attitudes, locus of control, environmental behavior, New Ecological Paradigm.*

1. Introduction

Different authors in the field of *Social Psychology* and *Environmental Psychology* have focused on social actors intent to act, which is being faced with a multitude of social dilemmas such as the group's social norms, peer judgments, cultural norms, all constituting into genuine social obstacles, not losing sight the influence of others, or social desirability phenomenon of imitation (Preda, 1987; Moser, 2009; Steg, Sievers, 2000; Vaske, Kobrin, 2001).

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In addition to environmental knowledge were desire vehicle and other factors with potential positive impact on environmentally responsible behavior. Hwang, Kim and Jeng (2000) and Vaske and Kobrin (2001) did the classification of these factors into three categories: *affective factors*, *cognitive and situational*. *Cognitive factors* relate to the individual's awareness on environmental and ecological knowledge, including knowledge regarding action strategies. *Affective factors* relate to emotions and feelings associated with environmental issues and environmental phenomena and include attitudes, instead of control, sense of personal responsibility, and others. There are evoked personality factors related conditions such as intention to act, personality traits, rewards envisioned, individual priorities, habits. Finally, *situational factors* are related to the position of an individual or group constraints include economic and demographic (age, income, occupation, education, place of origin and resident etc.), sociocultural and political context, the pressure of social norms, opportunities to see environmental problems live and act (Abric, J.-C., 1994). Independent of situation, all these factors can have a stimulating or inhibitory effect on cognitive and affective factors that encourage environmentally responsible behavior (Caillaud, 2010).

Locus of control is another variable that may impact on environmentally responsible behavior (Allen, Ferrand, 1999).

2. The hypotheses of the research

The specific hypotheses were as follows: a) social representations related to the natural ecological influence opinions and attitudes, b) people have opinions and attitudes internaliste green with an index higher frequency than those externaliste, c) score obtained from the NEP items highlighting the views and pro-environmental attitudes positively correlated with internalism (I) highlighted the scale Levenson, d) score obtained from the NEP items highlighting non-environmental opinions and positively correlated with externalism (feeling controlled by others - (P) or chance (s) - highlighted the scale Levenson).

3. The instruments of investigation

a) NEP (New Environmental Paradigm Scale) - Dunlap, R.E., Van Liere, K.D., Merling, A.G., Jones, R.E. (2000).

NEP scale allows a quantitative and qualitative analysis of the results on attitudes based on new ecological paradigm, connected to the basic principles of sustainable design and sustainable development through individual and group behaviors pro-environment and the outcome of the social responsibility industrial enterprises and, in general, economic institutions (Dunlap, Van Liere, 1978).

NEP scale include the following (Dunlap, Van Liere, Merling, Jones, (2000): *Anti-exceptionalism* (assuming human people dislike this idea one based on the view man is above the laws of nature), *Anti-anthropocentrism* (rejecting the idea

that the nature exist only to serve interests and human needs, so it does not have any eigenvalue), *Growth restriction* (concern about issues of ethics and natural resources by limiting human interference and limiting population growth ability not to sustainability of the land of), *Natural balance* (affirming a natural balance which human intervention is threatening) *Ecological crisis* (increased human dependence on natural resources and the disastrous consequences of human interference with nature).

Alpha Cronbach global index of NEP Scale, the 15 items is acceptable, is over 0.75 and statistical analysis showed a satisfactory internal consistency of subscales / items of the NEP.

b) Levenson Control Scale (“The Internal, Powerful Other and Chance Scales” (apud Dubois, N. (1984).

Levenson scale (CPI) is a self-assessment questionnaire developed by Levenson in 1972. IPC evaluates that person's causal relationship established between obtaining a certain appreciation / reinforcements and their conduct, that what Rotter (1966) conceptualized in terms of internal control versus external control. Scale I (internal control) indicate whether the person establishes links between its behavior and events. P and S scales assessing the person's sense of determination from the outside, other people - (P) or chance (s).

4. The participants of the research:

To investigate the spectrum of social representations, opinions and attitudes, and paradigm environmental determinants of their scale were applied NEP (New Environmental Paradigm) and Levenson control scale (“*The Internal, Powerful Other and Chance Scales*” - IPC) at a batch of **210 students aged from 18 to 30 years**, of which 75.5% female subjects and 24.5%, the masculine gender.

5. Results

The spectrum analysis and interpretation of representations, opinions and attitudes of students shows that the average green overall **NEP scale** scores obtained by students is 3.93, maximum score of 5 points. Therefore, *the spectrum of representations, pro-environmental views and attitudes of the participants in this study is average.*

Analysis of the subscales highlights some aspects interesting. At the subscale *Anti-exceptionalism*, the idea of human exceptionality is rejected, one based on the view of which the man is above the laws of nature, yielding an average score of 4.19. The idea of “human exceptionalism” dominant position of supporting human natural world, on the one hand, and the economy of nature, on the other hand, is rejected by the paradigm students investigated.

The Anti-anthropocentrism subscale the students reluctant the idea of dominance over nature, giving an average score of 3.88, proving that they have internalized social representations ecological and opinions are in line with New Ecological Paradigm.

The growth restriction subscale students get an average score of 3.64, which means that young people tend to adhere to investigate New Ecological Paradigm, being concerned with ethical issues and natural resources by limiting human interference and limiting growth is not the land of sustainability capacity.

The natural balance subscale students obtained an average score of 4.08, being aware of the fragile ecological balance under the irrational exploitation of natural resources and pollution. Being aware of the negative consequences of human intrusion and vulnerability natural world, students expressed their views that reject the dominant socio-economic vision of western industrialized countries, according natural balance would be powerful enough to make front modern industry.

An average score of 4.18 was obtained from subscale *ecological crisis*, showing that students are aware of the possibility of investigating ecological crisis due to the disastrous consequences of human interference with nature. New ecological paradigm human dependence on natural resources and insists their rational exploitation, so that man should live in harmony with the natural environment.

The hypothesis from which we started this investigation was confirmed in that the environmental awareness and ecological values is high, as evidenced by relatively high percentages (80%) of subjects investigated the expression of total or partial agreement on opinions and attitudes revealed by the new green ecological paradigm (NEP), aimed at pro-environmental and social representations.

The analysis of data obtained by applying control Scale Levenson (“The Internal, Powerful Other and Chance Scales - IPC”) and NEP Scale, indicate that participants with common views, pro-environmental attitudes and behaviors relevant NEP scale, is characterized largely by a sense of *internal control* of events and situations, such as environmental problems.

Instead, people who show less frequently and / or fewer views, pro-environmental attitudes and behaviors are characterized by feeling greater control external events and situations, such as environmental problems. These research participants obtained higher scores on *scale P (control by others)* and the scale and the *locus of control* (feeling of chance intervention).

Table I.

Correlations (r) between pro-environmental views and attitudes and “locus of control”

	Locus of internal control (“I”)	Locus of control extern “P” (control through other person)	Locus of external control “S” (belief in chance)
Opinions / attitudes ecological pro high index of expression (5, 4)	.75 **	-.51 **	- .47 *
Opinions / attitudes ecological pro low expression index (1, 2)	-.51 **	.69 **	.65 **

* p<.002; ** p<.001

From the table above that there is positive correlation, highly significant (at $p < 0.001$) between the opinions / attitudes pro-environment index and internal control over expression. However, between opinions / attitudes pro-environment index decreased expression and internal control correlations are negative. So, highly significant differences (at threshold < 0.001) between students participating in the study expressed common views, pro-environmental attitudes and behaviors in relation to those who expressed less often and / or fewer views, pro-environmental attitudes and behaviors in the locus of control, i.e. control of how different events or situations, such as environmental problems.

Next, there were analyzed the relationship between the opinions and attitudes of pro-environment and feeling female control subjects compared with male subjects.

Based on Pearson Chi-Square statistical test (χ^2), Kendall and Gamma, one can say that there are significant differences ($p < 0.005$) effect on sense of control over environmental opinions and attitudes for female students with a greater percentage of their frequency as average, compared with students who have a lower percentage of their average frequency. So, it follows that there is a strong association between the percentage of opinions and attitudes expressed by students and ecological sense internal or external control.

In case of a level of pro-environmental attitudes, opinions and values higher than average, students have a sense of internal control in a percentage of 65.7% and feeling external control of 50%. With a below average level of pro-environmental views and attitudes students have a sense of internal control at a rate of 34.3% and feeling external control rate of 50.0%.

That both students and students often have a sense of internal control, but is characterized by external control, Astel that other people believe in intervention or chance to solve environmental problems. It may be noted that if students are not statistically significant differences in the association level and pro-environmental views (above the average or below average) with the sense control ("locus of control").

Table II.

Extent of the opinions and attitudes of pro-ecological control students feeling Environmental-Control (males gender Students)

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by	Kendall's tau-b	.157	.109	1.441	.150
Ordinal	Kendall's tau-c	.154	.107	1.441	.150
	Gamma	.314	.208	1.441	.150
N of Valid Cases		81			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Table III.***Extent of the opinions and attitudes of pro-ecological control students feeling Ecologic– Control (female genderStudents)*****Symmetric Measures**

		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.224	.079	2.837	.005
	Kendall's tau-c	.218	.077	2.837	.005
	Gamma	.435	.137	2.837	.005
N of Valid Cases		155			

a Not assuming the null hypothesis.

b Using the asymptotic standard error assuming the null hypothesis.

As it follows from the data given that students (female) and students (males) have an “internal locus of control” (feeling internal control), their environmental views and above average values are expressed in a percentage higher relative. Thus, the internal control of students is 65.7% and only 51 students, 4%.

6. Discussion and conclusions

Relative to environmental issues, *locus of control* is defined as a belief that the individual is that his actions can / can not improve the environmental situation. Thus, instead of *internal control* reflects a person's belief that his actions will be beneficial and help to change a situation, while *external control* location refers to the belief that the situation changes occur randomly or because of interference of other more potent agents, more competent, better educated, such as governments or large companies. The consequence of ground control is that a person with *internal control* will engage in specific actions while a person with *external control* will be less inclined to participate in such actions. Many studies have focused on the development of *internal control* instead, considered by many researchers as an important variable that strongly influences the intention to act, the latter being an indicator of environmentally responsible behavior (Allen, Ferrand, 1999; Kilbourne, Beckmenn, Lewis, Van Dam, 2001).

The assumption that, *in an increased level of pro-environmental views and attitudes students have a sense of internal control more frequently than students* was confirmed.

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