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THEORETICAL PERSPECTIVES ON PRO-ENVIRONMENTAL BEHAVIOURS

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Abstract: *The paper outlines a synthesis of the models (The rationalist models, models based on Theory of Reasoned Action/ Theory of Planned Behavior, prosocial models) and antecedents of pro-environmental behaviors. The values models applicable for the study of pro-environmental behaviours (Rokeach's; Schwartz's; Kollmus and Agyeman synthesis), are presented afterwards, as the results of the studies which confirm the predictive role of values when it comes to pro-environmental behaviour*

Key words: *models of pro-environmental behaviours, antecedents, values, sustainable development.*

1. Introduction

In order to increase everyday comfort, people have irrationally exploited the natural resources, caused the extinction of numerous species of animals and plants, drastically reduced the spread of old-growth forests; they have produced genetically modified organisms in order to increase their nutrition sources, they have polluted the waters and the air in order to build more and more sophisticated technological products.

Since the publishing of the Brundtland report in 1987, which proposed the syntagm 'sustainable development' to describe 'the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (p. 740), it is no longer considered only that natural resources need to be defended, but that their use by our contemporaries also needs to be strictly controlled. From this perspective, it becomes compulsory to reconsider the production technologies and the means of consumption and to reshape the attitudes and behaviours towards the environment.

The consequence of internationally stating the imperative to protect the planet and of the consensus regarding the need to bring efforts together to that aim, result in national policies aiming to reduce water and air pollution, to encourage selective waste disposal, recycling of materials etc. These macro-level measures become truly efficient only when connected to micro-level activities undertaken by ordinary people who adopt, more or less frequently, to a greater or lesser extent, pro-environmental attitudes which could consolidate sustainable development on the long-term. Sustainable development is conditioned by the pro-environmental orientation and the pro-environmental behaviour, which are, in their turn, connected to the friendly attitudes towards the environment.

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The concern for the environment was defined by Parker and McDonough (1999) as the composite result of pro-environmental attitudes and behaviours. The pro-environmental behaviour is 'willingly adopted in order to reduce the negative impact on the natural or artificial environment as much as possible' (Kollmus & Agyeman, 2002, p. 240). During the last decades, pro-environmental behaviour has become more and more frequently an object of study in the humanities field in general and in the psychology field in particular. Bonnes and Bonaiuto (2002) state that the adoption of such behaviour is connected to the concrete behavioural choices, repeated or occasional, in everyday life conditions.

We should note the richness in the concepts used in order to discuss, from a psychological perspective, the preoccupation for the wellness of the planet and of future generations: values, attitudes towards the environment, sensitivity, knowledge, reasons, intentions, behaviour.

2. Models of pro-environmental Behaviours

In time, more explanatory models of the pro-environmental behaviour were designed (Kollmus & Agyeman, 2002; Anable, Lane & Kelay, 2006). From the already stated perspective of Bonnes and Bonaiuto (2002) on this type of behaviour, particular interest is given to the models focused on the processes of individual decision, out of which we mention three:

a) The rationalist models, also called deficitary models by Burgess, Harrison and Filuis (1998), postulate the existence of a strong connection between environmental education and the adoption of a pro-environmental behaviour. The works of Fietkau and Kessel (1981), Hungerford and Volk (1990), Hwang, Kim and Jeng (2000) and Jensen (2002) can be cited.
b) The models which explain the intention to act originate in the Theory of Reasoned Action, proposed by Ajzen and Fishbein (1980) and in the Theory of Planned Behaviour, by Ajzen (1991). The latter model refers both to the subjective norm and to the perception upon one's own behavioural control, proving to be useful both in projecting research in the field of health (Bamberg & Schmidt, 2003), and in the envitonmental field. The research of Kaiser, Hübner and Bogner (2005) illustrate the impact of social norms on the pro-environmental behaviour.
c) The prosocial models in which pro-environmental behaviours as described as having two characteristics: intentionality and the production of benefits for the others (Eisenberg & Miller, 1987). The sources of these models are Schwartz's Norm Activation Theory, 1977 and the Value Belief Norm Theory, by Stern, Dietz and Guagnano (1995).

3. Antecedents of the pro-environmental Behaviour

After stating the imperative of action in the direction of saving the planet, the question arises on the means by which this intention can be transformed into an assumed individual, everyday fact by a large number of people. The research demonstrates an insufficiently strong association relation between the concern for the future of the planet declared by the respondents and its practical transposition in pro-environmental behaviours (Kormos & Gifford, 2014). The difficulty of overcoming the structural barriers, such as low incomes, living on the outskirts of town etc., could be rightfully

claimed, but the psychological barriers which block the transition from intention to action constitute a challenge for every person (Gifford, 2011).

Factors from various categories were identified as antecedents of pro-environmental behaviour. In their punctilious analysis on the studies dedicated to the factors which condition the individual pro-environmental attitudes, Gifford and Nilsson (2014) list more categories of sources of influence on the attitude towards the environment: education, personality characteristics, perceived self-control, values, assumed responsibility, attachment to place/neighbouring with polluted areas, age, gender, social class, religion, place of residence (rural or urban) culture. The antecedents which were discussed in my own research pertaining to the pro-environmentalist spectrum are further discussed subsequently.

The early childhood experiences constitute a strong prediction value variable for the development of environmental preoccupations, irrespective whether we refer to outdoor activities organised by the kindergarten teachers (Palmer, 1993), or to activities encouraged by the parents, such as watching movies related to nature, reading and talking about the protection of the environment (Eagles & Demare, 1999).

Knowledge and education- Contrary to our aspirations we often prove to be very little rational in our personal and group decisions and choices (Tversky & Kahneman, 1974), and the decisions concerning the behaviour towards the future of the planet do not seem to be an exception to the rule. The premise that being informed about the consequences of negative environmental behaviours determines us to avoid such behaviours often proves to be false. Nevertheless, there are numerous arguments to sustain that extensive and correct information on the threats endangering the environment is a valid predictor of pro-environmental behaviour (Bamberg & Moser, 2006; Fielding & Head, 2012; Levine & Strube, 2012). The knowledge on the impact of man on the environment can generate friendly attitudes and behaviours, irrespective whether they are declarative (Ernst & Spada, 1993), procedural (Smith-Sebasto & Fortner, 1994) or social (Schultz, Oskamp & Mainieri, 1995).

The impact of education upon taking part in pro-environmental actions is debatable, researchers coming to contrary results. Arcury and Christianson (1993) and Longhi (2013) demonstrate the usefulness of education in the matter, while Grendstad and Wollebaek (1998) or Kollmuss and Agyeman (2002) did not find arguments to support the stated hypothesis. Nonetheless, there are more proofs in favour of the idea that a high level of education is significantly associated to the knowledge of environmental issues (Gifford, Hay, & Boros, 1982–83) and with undertaking actions in order to prevent its destruction (Reid & Sa'di, 1997). Furthermore, environmental education has a positive impact on the attitudes and knowledge of the students, contributing to raising awareness on the need to preserve and rationally use resources (Meerah, Halim, & Nadeson, 2010). Recent studies sustain that the types of studies which the students are enrolled in is associated to the intensity of the pro-environmental attitudes. Thus, the students in natural science programmes are more informed on environmental issues as compared to their colleagues from other study programmes.

Valuing the findings of Tversky and Kahneman, already cited, Pooley and O'Connor (2000) state that focusing on the emotions and opinions of the people is more effective when trying to change and form pro-environmental attitudes than the simple transfer of information about the field. Even if contradictory, the results of the research concerning education confirm the recommendations of "Agenda 21" (UNCED, 1992) concerning a)

the improvement in the quality of basic education b) the reorientation of existing educational programmes so as to be able to discuss sustainable development c) the development of public conscience and d) the insurance of training for all sectors of the private field and of the civil society.

Gender - The relationship between gender and pro-environmental attitude is not linear either. There are studies which demonstrate that when it comes to preserving the environment, women manifest more intense pro-environmental attitudes and adopt positive attitudes towards preserving energy more often, regardless of their age (Lee, Park & Han, 2013). They participate in pro-environmental actions (Gifford, Hay & Boros, 1982; Zelezny, Chua & Aldrich, 2000) or actions encouraging selective waste diposal (Rioux, Moch & Maramotti, 2009). The possible explanation provided for this inter-gender diference is that primary socialization, with the gender-role prescriptions, structures and calibrates the protective behaviour from an early age, including the behaviour related to the care for the environment (Dietz, Kalof & Stern, 2002; Zelezny, Chua, & Aldrich, 2000). However, there are also arguments in favour of the statement that men are more informed concerning environmental threats (Gambro & Switzky, 1999; Levine & Strube, 2012) and more willing to act pro-environmentally.

Personality – The studies on the relation between the factors of the personality model Big Five of Costa and McCrae and the position towards the environment led to both expected and contrary conclusions. The associations between the preoccupation for environmental issues, expressed via favourable attitudes and pro-environmental behaviours and the openness (Markowitz, Goldberg, Ashton, & Lee, 2012), agreeableness and awareness (Hirsh, 2010) were expected. In return, the relation between a high concern for the environment and emotional instability was unexpected. A possible explanation brought forward by Hirsh is that the people who are less emotionally stable tend to worry more for various reasons and among these reasons could be the preservation of the environment as well.

Locus of control – The feeling of control or perceived control is a general, transdisciplinary and polisemantic notion used mostly in social, organisational and health psychology. Rotter (1966) considers that locus of control, as a personality feature, expresses the individual's belief that the perceived source of reinforcements (of future events) is either inside or outside of him, the locus of control thus becoming the categorisation criteria of individuals as internalists or externalists. The perception on the causes of various events in one's life structures a set of subjective convictions, beliefs and attitudes, which, reinforced by positive or negative sanctions, become vectors of the orientation and adjustment of behaviour. Although Rotter named the proposed concept *generalised beliefs* it is still him who multiplies the levels of approach. Thus, reported to the theories of learning, the generalisation principle allows the consideration of these beliefs as reflecting stable expectations of the individual in any type of activity and in very varied contexts. A certain specificity of the expectations has to be accepted, however, depending on the perceived characteristics of the situation and on the value given by every individual to the reinforcements, as well as on the influence of age and of the defensive attitudes towards the locus of control.

As a factor prone to influence pro-environmental behaviour, internality is associated with the tendency to more frequently adopt pro-environmental behaviours (Ando, et al., 2010; Fielding & Head, 2012), such as reducing the use of the personal car for travels (Abrahamse, et al., 2009) and buying ecological products (Schwepker, & Cornwell,

1991). Independent variables such as the price and availability of the product are also part of the decision to buy organic foods, but the process is mediated by a psychological factor- the familiarity to the product (de Carvalho, Palma-Oloveira & Corral-Verdugo, 2010).

Bamberg and Möser (2007), in a meta-analysis of the psychosocial determinants of pro-environmental behaviour, found out that there is a strong association between the internal attribution of adopted social norms and the feeling of guilt for the alteration or threatening of the environment. During the last 30 years, young people have had the tendency to pass responsibility for the environmental issues to the government institutions, rather than take responsibility personally (Wray-Lake, Flanagan & Osgood, 2010).

It was recently discovered that the impact of values on the pro-environmental behaviour is moderated by the locus of control (Enqvist Jonsson & Nilsson, 2014); to be more precise, the moderating effect is more intense in the case of people who assume transcendence values less.

Chelcea (1994) demonstrating the social superiority of internality, suggested the elaboration of some psychosocial training programmes, in order to change the orientation of the locus of control on long term. Focusing on the domain 'caring for nature', McCarty and Shrum (2001) state that the training of internality would be the easiest manner to foster a pro-environmental behaviour.

Age – Does the pro-environmental behaviour improve with aging? A meta-analysis study which covers 40 years demonstrates that the elderly feel more connected to nature, avoid aggression upon it and act in favour of saving raw materials and natural resources (Brenton, Deniz, & Stephan, 2013). The concordance of conclusions concerning the improvement of pro-environmentalist behaviours is valid, at a distance of 30 years, in the case of consumerist behaviour as well (Hines, Hungerford, & Tomera, 1986-87; Pinto, Nique, Añaña, & Herter, 2011).

There is however also proof of the cohort effect, the contrary effect of the one mentioned above – at the age of 12 the preoccupation for the environment is more intense than at the ages between 15 and 18 (Szagun & Mesenholl, 1993). Besides the age effect, which could be brought under discussion to explain such results, the era effect could also justify the decrease in the interest of environmental preoccupations; if the public policies become more effective in the direction of environment preservation, people can feel safer and less pressurised to act individually (Gifford & Nilsson, 2014).

The chronological age is a demographic variable which is often used in socio-humanities research, considered to be little relevant by many authors (for example Neugarten & Hagestad, 1976; Puijalon, 2007). Other researchers (Birren & Cunningham, 1985; Settersten & Mayer, 1997) state that distinctions should be made between the chronological age (related to the date of birth), the biological age (related to the potential life duration), the social age (related to the social roles which the person undertakes) and the psychological age (related to the theories of the self and more importantly to the subjective age). An interesting perspective on age, which could lead to researching age in relation with pro-environmental attitudes is the one discussing the tendency to rejuvenate or to grow old, a consequence of the perception of one's own age and of the ideal image of the self.

The research concerning the perception of the students on their own age are little numerous (Galambos, Kolaric, Sears & Maggs, 2005; Launeanu, 2008). A study focused

on the relation between age and the status of being a student in Romania (Pavalache-Ilie, Rioux, 2014) found that although there is a significant association between the subjective age as a student in everyday life as well, there is a youthful bias, both as students and in everyday life. The youthful bias is more intense and it is more frequent in the case of students who are older than 25. Contrary to the expectations generated by the literature (Rioux & Mokounkolo, 2013), the subsample of employed participants tends to consider themselves younger as compared to their unemployed colleagues. Maybe these students totally abandon their professional role when they report to their role as students, the quality of being employed not being valued at university.

4. Values as Premises of Sustainable Development

The concept of 'value' expresses the totality of ideals and moral principles, related, at individual level to preferences, needs, motives and attitudes. As an evaluation instance, values orient the behavioural choices of citizens (Schwartz, 1994) and characterise what society appreciates as positive, stimulates, recommends and proposes as an ideal (Rezsohazy, 2006). Schwartz (1994) highlights the fact that values represent a central component of the self, distinct from attitudes, beliefs, norms and personality traits, which possess great motivational force to generate attitudes and behaviours. As socialising, superindividual preferences, values are transmitted and promoted via social mechanisms (Zamfir & Vlăsceanu, 1993).

The opinion that the shaping of values starts at very young age, initially via imprinting and then via modelation and socialization, is largely shared by specialists-anthropologists, sociologists, psychologists. Along the process, the values are selected, given signification and classified in the personal axiological system. The socialisation agents are numerous, the most important proving to be the family, school, mass-media and the group of peers. The young people progressively learn which the social norms and parts that they are expected to embrace are, they acquire knowledge and behavioural rules, learn which the specific expectations of a large number of circumstances and social interactions which they face are (Rioux, 2010). Although the configurations of values insure the functioning of society through their relative stability, they are dynamic in time and characterised by variation inside a certain community. Some values gain acceptance as a new model of thought gains popularity inside large social groups, either under the influence of cultural change, or at the initiative of certain institutions: other values prove to be obsolete and socially inadequate. The causes of these fluctuations can be found in the economic crises, the improvement of access to education and information, citizenship initiatives. Thus, values prove to be not impersonal and fixed, but rather changeable by people and institutions, disseminated via the mass communication processes by axiological vectors or by role models such as scientists, artists, non-governmental organisations etc. Talking about the postmodern age, Inglehart (1990), states that the change of values takes place when the young cohorts replace the old ones. In other words, it is the agents who promote new values who change, rather than the values promoted by the old agents.

4.1. Value Models, as a Premise of pro-environmental Behaviour

In the following lines the models proposed by Rokeach, Schwartz and the synthesis model proposed by Kollmuss and Agyeman will be detailed.

a) The Rokeach Value Model

This theory on the values and their articulation in a personal system was anticipated by Rokeach in the work published in 1968, focusing on beliefs, attitudes and values, which was to be developed in the reference work of 1973. Value is defined by the author as the central belief in the individual system, which guides behaviour or describes the ultimate goal towards the end line of existence. Whether it is a way or a goal of life, value is the result of three components:

- The cognitive component due to which the person knows which is the correct behaviour expected from her.
- The affective component which defines the emotional orientation of attraction, rejection or neutrality.
- The conative component which consists in the probability of production of a type of behaviour to suit the two components above, in a given situation.

Rokeach's inventory consists of 36 values, divided into two categories, based on their association with an existential aim or with a way of conduct. The first category, of terminal values, is reflected in existential ideals (such as a comfortable life), while the second category, of instrumental values, reunites the means which make possible the completion of these objectives (honesty, for example).

Terminal values can be personal, when the objectives are targeted by the individual (interior harmony, redemption) or social, when the objectives target the general interest (equality, world peace). In their turn, instrumental values are connected either to moral (being responsible) or to competence (self-control).

The interest of researchers for this model is justified by its practical and operational character which proved its usefulness in marketing research and transcultural psychology.

b) The Schwartz Value Model

The largely accepted model proposed by Schwartz tends towards the same direction as the Rokeach model, wanting to identify a universal structure of human values, verified through studies conducted in over 80 countries. The circumplex which articulates the ten identified values (autonomy, stimulation, hedonism, self-fulfilment, power, security, conformism, traditionalism, universalism, good will) is based on two polar dimensions: openness to change vs. Conservatism and self-affirmation vs. Concern for the others (transcendence). Schwartz synthetizes the conclusions of researchers who preceded him in discussing the axiological model of personality in six characteristics:

- Values are strictly related to affect. Once a value is activated, its affective colour is felt: the individual for whom power is important feels happy when he can display it and fearful when he feels threatened to lose it.
- Values target desirable aims with motivational potential. Those who consider social justice or altruism as important feel motivated not to break the rights of others and to help them when they are in need.

- Values transcend specific situations and actions, similarly guiding individual behaviour at work, in business or politics, towards both known and unknown people. Consequently, they differ from norms and attitudes, which always manifest themselves in relation to a specific situation.
- Values are a referential which helps the individual select the behaviours considered fit with the values, from a set of behaviours, and to assess the situations in which he is the agent or merely the observer. Most of the time, the adjustment of the decisions to values is a process which is not at all or very little consciously realised.
- The values hold a different hierarchy in the axiological set of every person, fact which again makes them different from norms and attitudes.
- Any attitude or behaviour entails the selective activation of certain values from one's personal system. For example, going to church may be the consequence of activating traditions and conformity, in the detriment of hedonism and of the values related to change and stimulation. Values determine our actions when they are relevant in a given context (thus prone to be activated) and important for the actor.

c) The synthesis model forwarded by Kollmus and Agyeman for the pro-environmental behaviour

Kollmuss and Agyeman (2002) value the efforts of Rokeach and Schwartz to come forward with a pro-environmental behaviour model in which they also integrate the theory of reasoned action (Ajzen & Fishbein, 1980) and the theory of planned behaviour (Ajzen, 1991). The synthesis model presents two types of factors which can influence the behaviours towards the environment: external factors, predominantly cultural, social, political and economic and internal factors. At the level of internal factors the following ones are brought under discussion: personality traits (the perception of the difficulty of the task, the intention to act, the feeling of personal responsibility), the individual system of values and environmental awareness, syntagm which the authors use to define a complex structure in which the knowledge about the environment, the emotional involvement and the attitudes towards environmental behaviours interact.

The model is all the more interesting as it presents the numerous barriers which, acting at the level of different components can also constitute intervention solutions in order to train or consolidate pro-environmental behaviours:

- the absence of relevant knowledge on the issue of the environment and the impact of man upon it;
- the lack of synchronisation between knowledge and environmental values;
- insufficient feedback concerning the new pro-environmental behaviours;
- the emotional block which prevents the assimilation of new knowledge and the embodiment of new environmental values in one's axiological system;
- the held values block the emotional involvement in environmental actions;
- the absence of environmental conscience.
- the lack of reasons to take action;
- external conditions against action, or not in favour of action, as well as the lack of adequate incentives;
- old behaviours, consolidated by repetition in time.

4.2. Values as Predictors of pro-environmental Behaviours

There are numerous researches which demonstrated the adequacy of Schwartz's typology in explaining pro-environmental behaviours (Schultz & Zelezny, 1999*;* Nordlund & Garvill, 2002; De Groot & Steg, 2008). The common conclusion of these studies is that transcendental values are positively associated to pro-environmental behaviour (Karp, 1996; Nordlund & Garvill, 2003; Poortinga, Steg & Vlek, 2004), as opposed to the self-affirmation values, whose association with this type of behaviour is negative (Schultz & Zelezny, 1999; Steg, Dreijerink & Abrahamse, 2005).

The relation between values and environmental conscience is moderated by the cultural characteristics on the East-West axis, marked by major differences at the level of values, assumptions and basic principles related to the self and society (Cushner & Brislin, 1997; Hofstede, 2005). Significant differences were identified between Western coutries and the countries in Asia, as far as environmental values are concerned (Aoyagi-Usui, Vinken, & Kuribayashi, 2003). Thus, the environmental perspective on existence concords with the Asian values of respecting one's parents and ensuring security inside the family. In the Netherlands and the United States, the preoccupations for the preservation of the planet are associated to altruist values (communion with nature, world peace, social justice) seen as opposed to traditional values. In Japan and Bangkok, both categories of values are seen in the people who undertake pro-environmental actions.

A study aimed to identify the values that are good predictors of the pro-environmental and pro-social behaviours – considered by Kaiser, Wolfing, and Fuhrer (1999) as components of the ecological behaviour. The regression analyses identified altruism as a predictor of pro-social behaviour; there are two predictors for the pro-environmental behaviour: environmentalism, and interest for knowledge.

5. Conclusion

The impact of the already analysed variables on the receptivity to the issue of environmental protection and the availability to act carefully towards the environment triggers the conclusion that is difficult to detect the contribution of each of these factors in the shaping of pro-environmental attitudes and behaviours. Consequently, it is justified to develop research which should allow a better knowledge of the contribution of different antecedents, as well as to design and adapt the instruments with which the pro-environmental attitudes and behaviours (Kaiser et al., 1999) and values (Stern et al., 1995) can be accurately investigated on the Romanian population. From a practical point of view, the future actions would be aimed at modifying the attitudes of the young population, pupils and students, in favor of stimulating environmental sensitivity and consequently reducing aggression towards the environment.

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