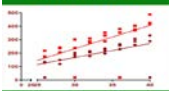


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Relation of attitudes toward environment and animals with social and criminal-aggressive profile of adult inmates in school classes of a correctional facility

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ABSTRACT

Aim of this research is to detect determinants and effects of environmental and animal-related attitudes of inmates. A sample of correctional facility inmates in the prison secondary school was collected in 2015 (class A=23 inmates, average 36 years, and B=12 inmates, average 33 years old, all male). Standardized questionnaires were answered and analytic statistics (Spearman test) was used. Preference for socialization or loneliness in nature or urban environment, aggression to animals, vegetarianism and susceptibility to environmental practices are correlated with the inmates criminal and behavioral profile as well as with their advancement in the education program of the prison school. Their education in prison seems to have positive environmental education effects. Positive attitudes of inmates toward animals is related with their family background, susceptibility of loneliness in nature, no hunting, involvement in environmental or cultural organization, susceptibility to impulsively impose protective values and norms, minimal aggressiveness, no crimes committed under angry circumstances or cyber-crimes, socializing in prison. Thereby, there is a noticeable accordance of vegetarianism, nature- and animal- attitudes of the inmates.

Keywords: environment, animals, criminal-aggressive profile, inmates, education

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Introduction

It has already been supported that there is a positive relation between animal cruelty and violence (DeGue & DiLillo, 2009; Arluke & Madfis, 2014; Volant et al, 2008; Flynn, 2011; McPhedran, 2009). Relevant hypotheses are that strong aggression against human society is supposed to take place on animals or that a single violence is addressed to human beings and animals. Nevertheless, these research results focus only on violence. Issues concerning possible relation between animal cruelty or nature antipathy and aggression, or inversely, between positive attitudes to animals or nature and lack of aggression still constitute a little explored field of research. Miller and Knutson (1997) have focused on animal cruelty considering inmates milieu. Duncan and Miller (2002) have discussed the relation between animal cruelty and adult violence while Ireland (2002) has explored "bullying" among prisoners. Billstedt et al (2017) have analyzed violent offenders status following psychiatric approach. Previous papers have explored aggressiveness, in part based on inmates samples (Bekiari, Deliligka & Koustelios, 2017; Bekiari & Pachi, 2017; Bekiari & Spyropoulou, 2016; Bekiari, et al, 2015; Theoharis & Bekiari, 2016a,b; 2017a,b; Hasanagas & Bekiari, 2015; 2017). A similar research has been conducted focusing on verbal aggressiveness as main variable (Hasanagas, Bekiari & Vasilos, 2017). However, the present paper focuses on a wider range of non-network parameters.

Aim and innovation

This research aims at analyzing the relation between environment- and animal-related attitudes of inmates and their personal, criminal-aggressive and behavioral profile in the adult education secondary school of a correctional facility.

The expected scientific added value lies in:

- exploring a school structure of a correctional facility which is reasonably supposed to be an appropriate setting for

exploring such a research issue, as it constitutes a group of particular criminal-aggressive and prison-related profile. Thus, concrete relations are expected to be detected between these parameters and their attitudes toward environment and animals.

- more specific insights into criminological approach to environmental and animal-related attitudes

The expected practical added value consists in:

- exploring effects of prison school education on the environmental awareness
- detecting the extent to which a criminal or particular personal profile can be generalized on or correlated with environmental and animal-related attitudes.

Method

Sampling

A sample of correctional facility inmates was collected in April 2015. These consist of two adult education secondary school (particularly, class A=23 inmates and B=12 inmates). All were male. Class A inmates were from 22 to 64 years old (average 36) and class B inmates from 25 to 43 years old (average 33). They presented a wide variety of professions (e.g. farmer, technician, carpenter, driver, builder, blacksmith, electrician etc). 13 inmates had graduated from primary school. Also, 18 had graduated from secondary school, 2 from high school and 1 from higher education as free citizens. The particular facility was selected not randomly but because it was the only accessible one. It is an ethical commitment of the researchers to be discrete not only with the identity of inmates but even the identity of the facility and the country where it was. This commitment was demanded by the inmates a prerequisite for their participation in the research. The non-randomness of sampling and this secrecy is reasonably not supposed to restrict the reliability or the results content, as the goal is to detect correlations and not to

make descriptive statistics which should be generalizable for a particular country or social milieus.

Questionnaire formulation and data process

The conventional part of a previous research questionnaire was used (Bekiari & Hasanagas, 2015; 2016). The questionnaires were based on in-depth interviews conducted with correctional and educational staff. Afterwards, they were enriched with environment- and animal-related questions. Dimensioning the whole possible behavioral patterns and attitudes toward animals and environmental values and issues was also in part based on these interviews and literature. Additional in-depth interviews were conducted with correctional and education staff for finalizing the questionnaire content.

The correlation (Spearman test) was conducted between variables in order to detect effects or determinants using SPSS 16. Spearman test is a non-parametric one and efface the outliers effect. It provides an overview on all relations. Thus, it could be preferable to multivariate analysis for such an explorative research. Spearman test was implemented for similar analysis in previous research (Bekiari, Deliligka & Hasanagas, 2017; Bekiari, Nikolaidou & Hasanagas, 2017; Bekiari, Pachi & Hasanagas, 2017; Theoharis, Bekiari & Koustelios, 2017). In-depth interviews were conducted also with the inmates after answering the standardized questionnaire so as to acquire insights and deeper understanding of their attitudes.

Results and discussion

In table 1, various elements of inmates profile appear to be correlated with nature-related preferences, vegetarianism, animal-related attitudes and environmentalism. Socialization in nature tends to be a preference of those who still are at a lower class of the prison school. This is understandable as those who belong to a higher class are more engaged with urban environment, as this offers opportunities of satisfying intellectual interests (e.g. discussion

at cafeterias, commenting a wide variety of everyday incidents, products appearing in shops etc). Inmates characterized by recidivism present a preference not for socializing in nature but in urban environment, as this offers a much wider range for committing offenses.

These who maintain even within prison a companion consisting of as many closest friends as possible, are more susceptible to prefer socializing in nature. The fact that these who are really so sociable prefer a nature-inspired socialization, indicates the appropriateness of the natural environment for developing authentic and harmonic social relations due to its quietness and peacefulness. These conditions enable an undisturbed communication promising a deep-rooted emotional approach. On the contrary, these who tend to spend as many hours as possible alone within prison, tend to prefer to be socialized in urban environment, as this enables a weak socialization by keeping emotional distance within a friendly group.

These who prefer to be in nature not with lovely persons but alone, are these who see natural environment as an opportunity of excursion. Thus, they used to train their legs. Additionally, such inmates are susceptible to train themselves but just for spending their time within prison. In other words, they try to find a way for mental or emotional escape. This need makes also understandable why they prefer to be alone in nature rather than in urban environment; because nature combined with loneliness offers an ideal environment for personal tranquility. The tendency to vegetarianism seems also to be connected with a wide range of profile parameters. These who committed a crime under angry circumstances tend to be vegetarians due to sympathy for animals. This particular sympathy for animals can be explained as an emotional antipode of the angriness induced by hostile relations with the human beings. In other words, they see animals world as a value of emotional justification.

Inmates who were residents of rural areas tend to be vegetarian for reasons of health. This is expectable, as such population normally cultivate garden or buy fresh vegetables and organic agricultural products by other local producers. Thereby, they used to recognize the attribute particular importance to health as a value related to vegetarianism. On the contrary, these who pay no attention to vegetarianism tend also not to train themselves. This can be understand as a result of not attributing any great importance to physical situation at all. It is noticeable that the clear tendency to kill a poisonous animals in forest without reason is not connected with the criminal profile at all. Even the most aggressive offenders who have committed crimes premeditatedly or due to anger or by using knife, truncheon or other means. Thus, there is no systematic and predictable mortal aggressiveness. Nevertheless, inmates of such a criminal profile tends to be really deadly aggressive also against poisonous animals without reason (without being threatened by them), not systematic but spontaneously, depending on their disposition. The intensively spontaneous and not systematic character of this mortal aggressiveness appears to characterize inmates who have committed a crime premeditatedly and/or with an instrument. Thus, inmates with immanent mortal aggressiveness seem to be aware of it as well as of its spontaneous character. In contrast to this, inmates who have committed a crime not premeditatedly but under angry circumstances seem not to realize the spontaneity of aggressiveness (insignificant coefficient 0.133). The fact that they are not aware of the spontaneity of their possible aggressiveness may imply a lack of self-awareness and self-control which may lead them to so uncontrolled angry circumstance that they committed a crime.

In general, inmates who are aware of the spontaneity of their aggressiveness present a significant tendency to particularly train their

legs in prison. This can be attributed to the fact that legs are a quite strong part of the body which can be effectively use for violent action (kicking). It is also noticeable that inmates who are in the class B of the prison secondary school tend to significantly deny the spontaneity of their aggressiveness. This may attributed to the fact that their study leads them to develop self-control or a feeling of better self-control. Inversely, inmates who are characterized by noticeable self-control or by a strong feeling of self-control present an ambition of further education and progress. Concerning their engagement with environmentalist attitudes, the membership in associations with environmental orientation as free citizens seems to be independent of any general, criminal or behavioral profile element. This indicates a capacity of adopting environmental values independently of any normative discrepancy or belonging to marginal social milieus. Thereby, environmental values seem to be characterized by integrativeness and to be adequate for playing a life-defining role.

These who have committed crime by using particular means as well as these who have committed cyber crime tend to be quite defensive against the idea of environmental protection. Refusing the seriousness of environmental protection issues under these circumstances might be attributed either to nihilism or to strong focusing on individualist values or issues. Especially in the case of cyber crime, this defensiveness against the environmental protection ideas might also to be attributed to introversion which makes a deviant individual follow a distance means like internet. For similar reasons cyber offenders, premeditated offenders as well as offenders using particular means tend also to be unwilling to practice recycling especially within prison. On the other hand, it is noticeable that inmates who are in class B of the prison school seem to be willing to practice it. Thus, in the course of their study they seem to adopt the environmental and socio-economic value of recycling.

Table 1. Environmental attitudes and inmates profile

Spearman		Preferring nature to urban environment		Vegetarianism			Aggression to animals		Environmentalism		
		Preferring being with lovely persons in nature rather than in urban environment when getting a permission for going out	Preferring being alone in nature rather than in urban environment when getting a permission for going out	Being vegetarian due to sympathy for animals	Being vegetarian due to health purposes	I am not vegetarian nor I want to be	I would kill poisonous animal in forest even without being threatened by it	I would kill poisonous animal in forest even without being threatened by it depending on my disposition	Membership in environmental organization	I have taken the protection of environment seriously	Would practiced recycling within prison with pleasure
Elements of general profile	Class A (=0) or B (=1)	,425(*)	-,317	-,070	,090	-,012	-,057	-,425(*)	-,178	,211	,361(*)
		,015	,064	,688	,606	,946	,745	,011	,307	,224	,033
	Rural residence when I was free	-,015	-,147	-,285	,435(*)	-,261	,181	-,205	-,159	,013	,147
		,940	,447	,133	,018	,172	,349	,285	,411	,948	,448
	Training mainly my legs outside prison	,160	,393(*)	-,050	,123	-,117	,117	,165	,098	,031	,031
	,382	,020	,777	,481	,504	,504	,344	,574	,861	,861	
Criminal profile	Crime under angry circumstance	-,114	,145	,367(*)	,000	-,240	,103	,133	-,101	-,204	,000
		,536	,406	,030	1,000	,165	,555	,445	,566	,240	1,000
	Premeditated crime	,162	,024	-,110	-,153	,053	-,194	,520(**)	-,075	-,102	-,357(*)
		,377	,891	,529	,380	,761	,265	,001	,667	,560	,035
	Using knife	,112	-,066	-,088	-,123	-,145	-,156	,418(*)	-,061	,123	,123
		,540	,708	,613	,481	,406	,372	,012	,729	,481	,481
	Using trunchon	,112	-,066	-,088	-,123	,137	-,156	,418(*)	-,061	-,185	-,185
		,540	,708	,613	,481	,433	,372	,012	,729	,288	,288
	Using other means (e.g. axe)	,162	,024	,211	-,153	,053	-,194	,520(**)	-,075	-,357(*)	-,357(*)
		,377	,891	,224	,380	,761	,265	,001	,667	,035	,035
	Cyber crime	,112	,132	-,062	-,086	,291	-,108	,291	-,042	-,343(*)	-,343(*)
	,540	,450	,725	,624	,089	,535	,089	,810	,044	,044	
Convicted again for similar crime	,394(*)	-,193	-,147	,000	,133	-,258	-,053	-,101	,000	,204	
	,026	,266	,401	1,000	,445	,134	,761	,566	1,000	,240	
Behavioral profile within prison	How many closest friends in prison	,376(*)	,063	-,258	,274	,070	-,284	-,094	,000	,065	-,129
		,037	,722	,141	,117	,695	,104	,596	1,000	,716	,466
	Hours spent every day alone in prison	,360(*)	-,053	,308	-,174	-,176	-,044	,237	-,080	,043	-,025
		,043	,763	,072	,317	,313	,802	,170	,649	,808	,887
	Training in prison	-,082	,077	-,010	,171	,343(*)	,169	-,084	-,226	,167	,139
	,663	,663	,955	,333	,047	,338	,637	,199	,345	,432	

Training in prison for spending my time	,354	,537(**)	,161	,189	-,033	-,167	,165	-,015	-,043	-,043
	,051	,001	,362	,285	,854	,344	,351	,934	,810	,810
Training mainly my legs in prison	,237	,224	-,028	,000	-,227	,020	,351(*)	,117	,000	,000
	,192	,195	,871	1,000	,189	,909	,038	,504	1,000	1,000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In table 2, the cultural capital in terms of family background and the engagement with nature values are mainly correlated with the attitude toward animals. The higher an inmate's mother's education is, the less he tends to love animals. This is understandable, as a mother of high education level is quite strict with cleanness and connect it also with the social status of the family. Thus, she is neither willing to accept animals in home nor to cultivate love for them to the child. On the other hand, a

father of high education level seems to inspire to the child love for the animals and furthermore a stimulus to intervene, if someone tortures them. Inmates who prefer to experience loneliness in nature and not in urban area are susceptible to keep a fish in home, as it is an animal which is kept within a miniature model of its biotope (aquarium). Simultaneously, he is not indifferent to animals torture. Thus, such inmates seem to have adopted an integrated perception of nature.

Table 2. Animal friendliness and personal elements of inmates

Spearman	Desire a fish	Desire a pet	Love for animals	No reaction, if someone tortures animals
Mother's education level	,149	,284	-,423(*)	-,320
	,439	,136	,022	,091
Father's education level	,098	,427(*)	-,235	-,438(*)
	,612	,021	,220	,017
Preferring being alone in nature rather than in urban environment when getting a permission for going out	,355(*)	-,096	,121	-,355(*)
	,036	,585	,489	,037

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In table 3, the inmates who have been hunters legally (or in part legally) seem to maintain negative attitudes toward animals or indifference. Such an exercise of hunting can be interpreted as an action of human egoism toward animals. Especially inmates who accept

that they have hunted for other reasons than hobby, sport or way of life (e.g. for reasons of aggressiveness) also tend to accept that they have tortured animals but also that they have regretted this action. In other words, they have recognized their destructive impulsiveness.

Table 3. Animal friendliness and hunting attitudes

Spearman	Desire a dog	Love for animals	Being indifferent about animals	Having tortured animals	Regret having tortured animals
Having hunted legally	-,211	-,075	,477(**)	-,129	-,062
	,223	,669	,004	,460	,725
Having hunted legally sometimes	-,343(*)	-,397(*)	-,078	,075	-,078
	,043	,018	,656	,669	,656
Having hunted for other reasons than sport, hobby or life way (e.g. aggressiveness)	,047	-,031	-,070	,623(**)	,420(*)
	,789	,860	,689	,000	,012

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In table 4, the former capacity of membership in any organization with environmental or cultural orientation appears to be connected with regretting attitude toward animals they have tortured. Thus, their choice of organizational involvement seems to be integrative and depicts a life-defining transformation.

Specifically, this choice seems to be in accordance with a transformation of their perception of animal world. Their perception becomes more ecocentric, as they recognize rights to the animals and overcome their egoism or anthropocentrism.

Table 4. Animal friendliness and social activity

Spearman	Regret having tortured animals
Membership in environmental organization	,697(**)
	,000
Membership in cultural organization	,697(**)
	,000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In table 5, the criminal profile of the inmates seems to be extensively relevant to their animal-related attitudes. These who have been imprisoned again in the past cannot remain indifferent to animals torture. This is understandable, because such persons present the tendency to intervene when they see their value system (in this case animals rights) being

violated. Thus, their susceptibility to intervene in order to impose (or to 'save') their own values and norms led them to be implicated in law offenses as well. In other words, the impulsiveness who leads them to react against animals torture led also him to react against other incidents he personally found unfair and thereby to break the law. These who have been

convicted for having committed a crime using fire weapon tends to desire a cat as a pet. This is understandable, as a fire weapon is a distance weapon. Thereby, it indicates a minimal immanent aggressiveness. This minimized aggressiveness is in accordance with keeping a cat as a pet, as this is a kind of pet characterized by calmness, tranquility and easiness (in contrast e.g. to a dog). Inmates

convicted for crimes committed under angry circumstances or cyber crime tend to adopt negative or indifferent attitude toward animals. This can be interpreted as an effect of impulsiveness, egoism or introversion. This led to animals torture or indifference to animals torture.

Table 5. Criminal profile

Spearman	Desire a dog	Desire a cat	Having tortured animals	Being indifferent about tortured animals	No reaction, if someone tortures animals	Being indifferent about having tortured animals
Times of imprisonment in the past	,170	-,299	,229	,100	-,402(*)	-,157
	,328	,081	,186	,567	,017	,367
Using fire weapon	,157	,343(*)	-,062	-,062	-,086	-,062
	,367	,044	,725	,725	,624	,725
Crime under angry circumstance	-,117	,000	,110	,367(*)	,000	,367(*)
	,503	1,000	,529	,030	1,000	,030
Convicted for cyber crime	,157	-,086	,477(**)	,477(**)	-,086	,477(**)
	,367	,624	,004	,004	,624	,004

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In table 6, it is noticeable that inmates who like socializing with many other inmates and regarding them as closest friends would desire to have a dog as a pet. This can be attributed to

the fact that the so sociable inmates would also be susceptible to have such a sociable pet like the dog which emotionally is so similar to the human beings.

Table 6. Everyday life in the correctional facility

Spearman	Desire a dog
How many closest friends in prison	,453(**)
	,007

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Finally, in table 7 two parameters related to nature view prove to be relevant for the animal-related attitudes of the inmates. On the one hand, adopting vegetarianism due to sympathy for animals is negatively connected with the desire for a dog. This is understandable, as dog should be fed with other animals meat. Thereby, there is a noticeable accordance of attitudes: if an inmate is really vegetarian due to sympathy to animals he is also not willing to

feed another human-friendly pet like dog with animals meat. On the other hand, inmates who are susceptible to kill a poisonous animal without any serious reason, is also characterized by a generalized hostility to animals. This practically means that they desire no pets and he even has tortured animals. Thus, a general harmonization can be observed in the nature- and animal-related attitudes of the inmates.

Table 7. Nature-related attitudes

Spearman	Desire a dog	Desire no pet at all	Having tortured animals
Being vegetarian due to sympathy for animals	-,391(*)	,153	,153
	,020	,380	,380
I would kill poisonous animal in forest even without being threatened by it	-,308	,369(*)	,369(*)
	,072	,029	,029

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4. Conclusion

Socialization in nature tends to be a preference of those who still are at a lower class of the prison school, as higher academic engagement is more strongly related with urban environment, which offers more intellectual stimuli. Recidivism is encouraged not in nature but in urban environment.

Many closest friends within prison indicate a general tendency of socializing in nature, as it offers quietness and peacefulness. Loneliness within prison indicates a tendency of socializing in urban environment, which assures emotional distance. Training particular body parts (e.g. legs) or just training for spending time in prison is connected with loneliness in nature and subsequently with a view of nature as a place of mental or emotional escaping. However, training these body parts is also connected with aggressiveness. Regarding animals world as a value of emotional justification tends to be a

characteristic of those committed a crime under angry circumstance induced by hostile relations with human beings. Rural origin is related with vegetarianism for health reasons due to garden- and nature-related way of life. The independence of killing a poisonous animals without reason is not connected with the criminal profile and aggressiveness at all. This means inexistence of systematic and predictable aggressiveness. Inmates with immanent mortal aggressiveness seem to be aware of its spontaneity, in contrast to inmates motivated by angriness to commit a crime. Thus, they may have committed a crime due to lack of self-awareness and self-control. High self-control (or feeling of high self-control) is related with ambition of further education and progress. The independence of membership in environmental associations of any profile (general, criminal etc) indicates the

integrativeness of environmental values. Refusing the seriousness of environmental protection or recycling by offenders using particular means, premeditated or cyber offenders may be interpreted as a reaction of nihilism or individualism and introversion. On the contrary, inmates of advanced class in the prison school are more susceptible to accept the value of recycling. Positive attitudes of inmates toward animals is related with family background (negatively with mother's and positively with father's education), loneliness in nature, no hunting, involvement in environmental or cultural organization, susceptibility to impulsively impose protective values and norms, minimal aggressiveness, no

crimes committed under angry circumstances or cyber-crimes, socializing in prison. Thereby, there is a noticeable accordance of vegetarianism, nature- and animal- attitudes of the inmates.

Questions and points for future research could be to extract a typology of inmates characteristics regarding environmental attitudes, to try experimental environmental projects within prison and to assess their correctional effect. A concentration of a larger sample of inmates and exploration of additional variables (e.g. the environmental-pedagogic role of more specific elements of the educational program in prison, the relevance of biographic profiles etc).

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