



## RESEARCH ARTICLE

### ON BEHAVIOR OF PSYCHOPATHS UNDER WAR CONDITIONS

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#### ABSTRACT

By means of sequential application of a taxonomic neural network, in a random sample of 1,730 male respondents aged from 18 to 50 years described as having emotional responding under war conditions typical of psychopaths, a set of 543 (31.4%) respondents was identified as a tax on of subjects with psychopathic emotional reaction pattern predominantly determined by the reaction of anger. 161 (9.3%) of them participated in the war provoked by NATO intervention. With respect to psychological characteristics of psychopaths in general, and especially their response characteristics in frustrating situations, it has been concluded that there is a likelihood, significantly different from zero, that some of them will do acts contrary to the laws and customs of war because, in situations characteristic of civil war, it is objectively impossible to control their behavior.

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## INTRODUCTION

Psychopaths are more likely to commit crimes, especially violent crimes, than any other segment of the human population. As violence is an essential feature of any war, regardless of its causes, motives and nature, there is an obvious connection between the nature of each war and the nature of each psychopath. The aim of this study was to identify, by means of sequential application of a taxonomic neural network, a set of psychopathic individuals in a set of male respondents aged 18 to 50 years described by emotional responding typical of psychopaths under war conditions, and to assess the likelihood of their committing war crimes as direct participants in war.

## MATERIALS AND METHODS

The research was conducted on a sample of 1,730 male respondents aged 18 to 50 years.

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The sample was selected as a two-stage random sampling and was representative of Serbia's population of this age and sex. A team of specially trained psychologists offered the respondents a questionnaire on attitudes and behavior during the NATO intervention against their country, including a number of questions on emotional responding during the intervention, to be completed under completely anonymous conditions. Factor analysis of the results from that part of the questionnaire revealed one emotional response factor characteristic of emotional reactions of psychopaths in frustrating situations. This factor was defined by reactions of anger, contempt, ridicule, defiance, spite and hatred, so these reactions were selected for preliminary detection of subjects with antisocial behavioral disorders. However, in the further course of operations by which the detection of psychopaths was carried out, these reactions were reduced only to anger, contempt and hatred based on the results of the previous operation. Detection of psychopaths was carried out in two sequential operations by a neural network implemented through the INTRUDER program. This program emulates a taxonomic neural network with one hidden layer which classifies objects described by the standardized results on the variables. The program computes the initial classification using a method for transformation of a

fuzzy classification, based on the search for extreme values on the periphery of hyperellipsoid formed by orthoblique transformation of principal components significant according to the PB criterion, into a hard classification. The efficiency of classification by the programs is checked by means of a posteriori classification of respondents performed by Fisher's linear classifiers in the total space. The details of the algorithm and techniques of its implementation can be seen from the symbolic code of the program written in a matrix language so that it can be performed in the standard SPSS environment which is given in the Appendix. The questionnaire registers whether the respondent participated in the war imposed by the North Atlantic Alliance. The resulting variable is coded as variable "warrior" whose symbol of 1 means that the respondent participated in the war in any active way and symbol of 2 indicates that the respondent did not participate in the war. The relationship between belonging to the tax a defined on the basis of emotional responding, described by the variable coded as "psychopath" whose symbol of 1 means "belongs" and symbol of 2 means "does not belong" to the tax on of those whose emotional response is characteristic of psychopaths, and participation in the war is analyzed by canonical correspondence analysis. For this purpose, ACONITE program (Momirovic&Popovic2003) was applied by means of which a correspondence analysis method described by Momirovic (1988), Popovic (1993) was implemented.

**RESULTS**

Excerpts from the results of the first stage of the analysis obtained by the INTRUDER program which converged after 8 iterations are shown in the following tables.

**Table 1. Correlations of input variables**

	Anger	Contempt	Ridicule	Defiance	Spite	Hatred
Anger	1.000	.690	.278	.497	.492	.535
Contempt	.690	1.000	.371	.571	.553	.573
Ridicule	.278	.371	1.000	.500	.472	.297
Defiance	.497	.571	.500	1.000	.835	.507
Spite	.492	.553	.472	.835	1.000	.527
Hatred	.535	.573	.297	.507	.527	1.000

It is obvious that aversive emotional reactions caused by the aggression against this country make quite a coherent set which has no significant predominance of any emotional reaction. However, it is not so from a taxonomic point of view, as seen from the intensity of the signals which propagate from input neurons to the first neuron in the hidden layer.

**Table 2. Axons from input to the hidden layer neurons**

	h1	h2
Anger	-.054	.000
Contempt	-.005	.000
Ridicule	.018	.000
Defiance	-1.203	.000
Spite	-.027	.000
Hatred	-.003	.000

It is clear that the reaction of defiance was absolutely dominant in determining the taxonomic structure of this sample

of respondents. Other emotional reactions were poorly involved, and the reaction of ridicule acted as a weak suppressor.

**Table 3. Axons from hidden to output layer neurons**

	g1	g2
h1	.755	-.656
h2	.656	.755

**Table 4. Centroids of final taxa**

	c1	c2
Anger	-0.502	0.436
Contempt	-0.558	0.485
Ridicule	-0.463	0.402
Defiance	-0.942	0.818
Spite	-0.795	0.691
Hatred	-0.494	0.429

**Table 5. Structure of discriminate functions**

	f1	f2
Anger	-0.533	0.533
Contempt	-0.592	0.592
Ridicule	-0.492	0.492
Defiance	-0.999	0.999
Spite	-0.844	0.844
Hatred	-0.523	0.523

**Table 6. Relations between classification performed by a neural network and a posteriori classification performed by Fisher's linear classifiers**

	k1	k2
g1	804	0
g2	0	926

Accordingly, the classification efficiency coefficient totals 1,000. Of course, all respondents from the second taxon can not be considered psychopaths, because, as it is seen from the configuration of axons that connect the input and hidden layers of the neural network, the dominant generator of this taxon is defiance, which, under the conditions of the aggression against this country, can not be considered psychopathic reaction. Therefore, the program reanalyzed the second taxon of 926 respondents so that it eliminated all the variables except anger, contempt and hatred from the input variables. The results obtained after 8 iterations are shown in the following tables.

**Table 7. Correlations of input variables**

	Anger	Contempt	Hatred
Anger	1	0.538	0.374
Contempt	0.538	1	0.369
Hatred	0.374	0.369	1

**Table 8. Axons from input to the hidden layer neurons**

	h1	h2
Anger	-1.022	0
Contempt	-0.319	0
Hatred	0.009	0

**Table 9. Axons from hidden to output layer neurons**

	g1	g2
h1	-0.576	.817
h2	0.817	.576

**Table 10. Centroids of final taxa**

	g1	g2
Anger	0.686	-0.973
Contempt	0.499	-0.708
Hatred	0.283	-0.402

**Table 11. Structure of discriminant functions**

	g1	g2
Anger	0.976	-.976 .710
Contempt	0.71	0.403
Hatred	0.403	

**Table 12. Relations between classification performed by a neural network and a posteriori classification performed by Fisher's linear classifiers**

	g1	g2
g1	543	0
g2	1	382

Now the neural network efficiency coefficient is 0.999.

The first taxon of 543 respondents obtained in this operation was identified as a taxon of subjects with psychopathic emotional response pattern predominantly determined by the reaction of anger. 161 of them participated in the war. The ACON program found no relationship between belonging to this taxon and participation in the war since the canonical determination coefficient was .000, so other results obtained by this program are not specified. So, it is obtained by the analysis that, in the population of men aged 18 to 50 years, there are probably about 31% of those whose emotional responding to stressful situations is similar to that of a psychopath. Nearly 30% of these participated actively in the military operations. With regard to the characteristics of their emotional reactions in situations fraught with violence, it makes sense to discuss the extent to which their behavior could be contrary to the laws and customs of war as well as the extent to which such behavior could be controlled.

**DISCUSSION**

Two sets of information are required for this discussion. The first refers to those personality traits of psychopaths that have a criminogenic character, and the other refers to the experience gained in the course of many generations, their criminal behavior, especially in wartime. A synthesis of the results on behavioral and neurophysiological characteristics of psychopathic criminals obtained in a number of previous studies, which is presented in a review article (Radulovic, 1998), shows that, in behavioral terms, psychopaths, or at least some types of psychopaths, seem to be charming, adventurous, very intelligent, verbally fluid, nonanxious, stress resistant, egoistic, impulsive, frustration-intolerant and aggressive, nonempathic, manipulative, unpredictable and unreliable, pathologically mendacious persons who are efficient in playing various roles, so that there is a big gap between their words and actions. Criminals with psychopathic personality structure have no sense of guilt for the crimes they committed, in their constant search for stimulants, they are unable to escape the aversive or risky situations and often recidivate.

Neurophysiologically, they show slow brain activity, lowered autonomic nervous system activity, dissonance in the functioning between the left and right brain hemispheres, weak electrodermal reaction and significant presence of delta waves in the electroencephalogram, which correlate with aggressive and impulsive episodes in behavior. It was also found that a psychopathic personality pattern was associated with the hyperkinetic syndrome in infancy. However, some recent experimental studies have raised doubts about at least two findings obtained in earlier, mainly clinically oriented, research.

Thus, a number of studies have shown that the claim resulting from uncritical generalization of clinical experience that psychopaths have above-average intelligence, and even the claim that they have no disorders in the cognitive sphere (Jevtic, 1960), are not correct. Momirovic and Hosek (2000) analyzed, under the biorthogonal model of canonical correlation analysis, relations between the results of 25 tests for assessment of efficiency of perceptual, parallel and serial processors and the results of 4 tests for psychopathy on a representative sample of 640 respondents who were in a relatively stationary phase of cognitive and conative development. A significant canonical correlation (0.57) that could be attributed to the function disorders of the central, perceptual, and particularly serial, processors in individuals with psychopathic personality pattern was found. Essentially similar results were obtained by Radulovic, Radovanovic, Hosek and Momirovic (2000) on a sample of 147 serious criminals diagnosed as psychopaths by applying a taxonomic algorithm to the results of 11 tests for psychopathic personality pattern. These results showed that psychopathic criminals had low values in all the three cognitive processors, especially the processor for perceptual identification, analysis and synthesis, and processor for simultaneous processing of a large number of information flows, in comparison with normal, noncriminal population. Cognitive inferiority of psychopathic criminals was also found in relation to the population of criminals who have no psychopathic personality structure. Momirovic and Hosek (2001) find that psychopathic criminals diagnosed with 6 tests for psychopathy based on the dynamic cloud method differ from other criminals by reduced efficiency of serial and parallel processors. Serious doubts have been raised about the claim, also formed on the basis of uncritical generalization of the results obtained on individual cases, that psychopaths in general and psychopathic criminals in particular have more stable functions of the autonomic nervous system and are more resistant to stressful situations. Momirovic, Hosek and Wolf (2000) analyzed, under biorthogonal model of canonical correlation analysis, relations between the results of 7 tests for evaluation of functional disorders of organic systems which could mostly be attributed to disturbances in regulation and control of the autonomic nervous system and which are typical of people sensitive to stressful situations and 5 tests to assess different modalities of psychopathy on a sample of 640 respondents who were in a relatively stationary phase of cognitive and conative development. A pretty high canonical correlation (0.74) was obtained which could be attributed to disturbance of the excitation and inhibition balance in the nervous system of individuals with psychopathic personality pattern. For the assessment of true characteristics of

psychopaths essential for prediction of their behavior both in war and peace, particularly important is the finding by Hosek, Radovanovic, Radulovic and Momirovic (2001). Relations between intellectual insufficiency, hysteria and psychopathy were analyzed by a factor analysis method which maximized the reliability of latent dimensions on a sample of 647 male respondents to whom 6 tests for intellectual insufficiency, psychosomatic disorders and psychopathic personality pattern modalities were applied. Three very well-defined factors with high coefficients of reliability and generalizability were obtained. The latent dimension of hysteria was almost equally defined by both functional disorders of all organic systems and hypochondriac reaction pattern. The latent dimension of intellectual insufficiency was defined by all the measures of cognitive insufficiency, particularly by measures of inefficiency of serial and parallel processors. The latent dimension of psychopathy was well defined by all the measures of a psychopathic personality pattern, especially by measures of psychopathic aggressiveness, uncontrolled secondary aggressiveness and regressive and psychasthenic dissociation. Dimensions of intellectual insufficiency, hysteria and psychopathy were highly correlated, and they formed a very coherent pattern, which means that probability of the worst possible outcome, that is, probability that a psychopath is both silly and hysterical, is much greater than zero.

And some other findings obtained in recent studies clearly show that psychopaths in general and psychopathic criminals in particular have a personality structure which significantly complicates control over their behavior and makes them resistant to any attempt of socialization or resocialization. In a study conducted by Radovanovic, Radulovic, Hosek and Momirovic (2002), as a subsample of 54 respondents was isolated from a large sample of murderers described by means of 8 tests for psychopathy on the basis of the results of taxonomic analysis performed with Ward's method of hierarchical clustering. Discriminant analysis of this subsample and its complementary subsample in the space of psychopathic, oral and anal aggressiveness, belonging to a subculture of violence, Machiavellianism, hedonism, hyper individualism and pseudo masculinity shows that this subsample can be identified as a subset of psychopathic murderers. Conative characteristics of these murderers defined by a cybernetic model of regulation functions are compared with conative characteristics of the normal, noncriminal population. It was found that psychopathic murderers clearly differed from the normal population by their characteristic conative profile, so it was possible, on the basis of the profile, to identify even 74% of respondents with a personality pattern typical of psychopathic murderers. Disorders of the system for coordination and control of regulatory functions, system for regulation and control of aggressive reactions and system for integration and evaluation of conative functions are dominant in this profile. Disorders of other regulatory systems are not characteristic of psychopathic murderers except for the weak but significant disorders of the system for regulation and control of organic functions. However, the configuration of conative factors of these murderers is such that the discriminant function which separates them from the normal population is defined primarily by dissociation and aggressiveness, while the system that regulates and controls defensive reactions acts as a very strong

suppressor. Psychopathic murderers were also the subject of another similarly conceived research (Radulovic, Radovanovic, Hosek and Momirovic, 2002). A subsample of 54 respondents was isolated from a sample of murderers described by means of 8 tests for psychopathy on the basis of the results of cluster analysis performed with Ward's hierarchical method. Cognitive characteristics of these murderers defined by applying a cybernetic model of cognitive functions were compared with cognitive characteristics of the normal, noncriminal population. It was found that psychopathic murderers were clearly different from the normal population because they had inferior functions of all the three basic cognitive processors, so that it was possible to identify over 70% of respondents with a cognitive pattern typical of psychopathic murderers by means of Fisher's method for a posteriori diagnostics.

Defects of perceptual processor dominated that pattern, but defects of parallel and serial processors were also significant and discriminatively important, so that the average IQ of psychopathic murderers was only 89. However, psychopathic criminals are not a homogeneous group, which further complicates any attempt to control their behavior. This is clear from the results of the analysis conducted by Hosek, Radulovic, Momirovic and Radovanovic (2002). A sample of 166 criminals with evident symptoms of severe psychopathy was classified using Ward's method of hierarchical clustering based on the Euclidean distances of respondents on the standardized results in cognitive and conative factors. Identification of the types was performed based on the results of canonical discriminant analysis and the results of Fisher's method of discriminant analysis. The types of psychopathic criminals were significantly and substantially different both in the space of cognitive and conative factors and the space of discriminant functions derived from these factors, but especially in the space bounded by the first three discriminant functions. The first discriminant function was defined by distinct disorders of regulation and control of all the conative functions and poor functioning of all the cognitive processors. The second was defined by distinct inferiority of cognitive processors, and besides, the level of typical criminogenic factors, such as psychopathic and oral aggressiveness and amorality, were significantly below the average of the criminal population. The third discriminant function was defined by slightly poorer functioning of cognitive processors and below-average anxiety, but a significant level of typical criminogenic factors, that is, psychopathic and oral aggressiveness and amorality. The fourth discriminant function was defined by below-average functions of serial and parallel processors, increased rigidity and hence increased anal aggressiveness. And finally, the fifth discriminant function was defined by below-average functions of perceptual and serial processors and increased impulsiveness. Accordingly, all the discriminant functions had a clear and recognizable psychological sense; so, based on the centroids of the taxa on those functions and their centroids on the cognitive and conative factors, it was easy to identify these types:

Type 1, defined by above-average functions of perceptual and serial processors and a high level of typical criminogenic

factors, such as psychopathic and oral aggressiveness and amorality.

Type 2, defined by above-average functions of all the cognitive processors and normal conative functions, but increased basic aggressiveness.

Type 3, defined by global disorders of both cognitive processors and conative regulators.

Type 4, defined by very efficient functions of all the conative regulators, but slightly weaker cortical control of the activating function of the reticular formation.

Type 5, defined by serious defects in the functioning of all the cognitive processors and a very weak regulation and control of organic functions, but a lack of pronounced aggressiveness and amorality.

Type 6, defined by above-average functions of cognitive processors and a low level of typical criminogenic factors, but very pronounced anxiety.

As these types largely corresponded to the types of psychopathic criminals that could be identified on the basis of analysis of their not necessarily criminal behavior, it was examined to what extent these types could be recognized based on linear classifiers in cognitive and conative spaces. It was found that, based on the results in the measuring instruments for assessment of cognitive and conative functions assumed by cybernetic models of cognitive and conative functioning, types of psychopathic criminals with identification functions corresponding very well to their typical psychic profile could be recognized with very high accuracy. However, it seems that there are not only quantitative but also substantial qualitative, or structural, differences between psychopathic criminals and the rest of the criminal population, as the analysis conducted by Momirovic, Radovanovic, Hosek and Radulovic (2002) shows. Differences of the matrix of correlations of personality traits assumed by a cybernetic model of neural regulatory functions were analyzed based on the data obtained on a sample of 100 psychopathic criminals and 100 non psychopathic criminals by applying the methods of least squares, maximum likelihood, as well as the methods proposed by Schoenemann, Krzanowski, Flury, Momirovic, Lawley and Rippe. The differences of these matrices were significant by all the applied criteria and could be attributed to the fact that in psychopaths, there was much greater correlation between disturbances of the systems for regulation and control of defense and attack, that is, anxiety and aggressiveness, significantly higher correlation of disorders of the systems for regulation and control of organic functions with aggressiveness and disintegration of conative functions, and significantly lower correlation of disorders of the system for integration of conative functions with the systems for activity regulation and coordination and control of regulatory functions. Therefore, criminals with clear psychopathic characteristics differ from other criminals not only by a greater degree of disorders of regulatory functions, but also by interconnections of these disorders, which means that they are in a conative space that is structurally different from the conative space of other

criminals. Therefore, although, the findings of recent studies on the personality structure of psychopaths are not quite in line with some of the claims in the psychological and psychiatric literature, there is almost complete agreement on the characteristics of their criminal behavior both in peacetime and in war.

Singer's statements (1994) from one of the best criminology textbooks ever written are highly instructive:

"The concept of psychopathy is controversial among psychiatrists. Therefore, Taft says that psychopaths are delinquents with whom the psychiatrist does not know what to do. Mergen believes that we could, depending on the definition of the concept of psychopathy, consider almost any delinquent a psychopath to a greater or lesser extent. With regard to the characteristics attributed to psychopaths, they are first of all less morally worthy than sick individuals. In his study on early delinquent returnees, Singer (1994) comes to the conclusion that there is almost no returnee, and especially a habitual delinquent, who is not a psychopath." (Singer, 1994, 67) Singer says about the impact of war on the behavior of psychopaths: "War leads to mental regression whose consequence may be abnormal heroic feeling that, once developed, can turn against the man himself. Singer (1994) points out that this is a problem in psychopathically structured and feeble-minded persons in whom aggression is induced for an extended period of time and the attitudes about worthlessness of human life are permanently fixed." (Singer, 1994, 75) Milovanovic (1998) also expresses a similar opinion: "It can be said that psychopaths commit primarily aggressive offenses which can be of a very serious nature, such as robberies, assaults with a dangerous weapon or other means, etc. Many professional delinquents (and) returnees are from among psychopaths... Besides, they are prone to vagrancy, alcohol and drug abuse, various forms of criminal behavior characterized by a lack of positive emotions." (Milovanovic, 1998, 219). Therefore, individuals with psychopathic personality structure are prone to committing war crimes. Although there are cases when war crimes are committed by those, often situationally motivated, who normally do not show obvious symptoms of antisocial personality disorder (Kostic, 2000), "Individuals characterized by socio-pathological behavior are more likely to commit (war) crimes. War is an opportunity for people from the world of social pathology to treat their victims in accordance with their paranoid-aggressive traits. Such personalities make a quarter of the population, and even more. Organizers of war crimes count on brutality, aggressiveness and violence of such people who exist in any environment.

Paramilitary formations are more prone to aggression than regular armies, not to mention mercenaries, "dogs of war", trained in special methods of killing. Permanent psychological traumas remain in war crime victims, and hatred is developed between nations, which is the most dramatic consequence of war crimes. Hatred makes a man callous, impulsive and revenge oriented." (Pajevic and Kasagic, 2001, 189) And further, in another book by the same authors (Pajevic and Kasagic, 2001): "Psychopathic personalities stand out from other mentally disturbed persons by the following

characteristics: they are antisocial, cannot control their impulses, they are aggressive, do not plan their work and activities, ... they lack conscience and remorse. These types of disturbed personalities may manifest their aggressive impulses freely for the first time probably in war." (Pajevic and Kasagic, 2001; 411; 413) Psychopaths in general and criminal psychopaths in particular are prone to habitual antisocial and criminal behavior, and there are much more recidivists among them than in the population of other criminals (Radovanovic, Radulovic, Hosek and Momirovic, 2001). Accordingly, attempts of resocialization of such criminals are generally unsuccessful, so it is very difficult to control their behavior in peacetime, and especially under war conditions. This is particularly due to the fact that people with a psychopathic configuration of emotional reactions dominated by hatred, contempt, spite, defiance and anger, are more likely than other people to get actively involved in war, especially if the war is caused by unjustified aggression by a superior enemy (Kasagic, Marcek and Kilibarda, 2002). Involved in military operations, such people poorly obey the laws and customs of war, and in many cases it is impossible to prevent them from committing war crimes. Let us now consider the characteristics of emotional responding of 543 respondents that a neural network identified as individuals with a psychopathic type of emotional responding. Table 13 presents a modal value ( $m$ ), an arithmetic mean ( $\mu$ ), a standard deviation ( $\sigma$ ) and distribution of the results of Likert scales on which the respondents registered their emotional reactions on all the variables of aggressive and hostile responding.

**Table 13. Characteristics of emotional responding of subjects with a psychopathic reaction pattern**

Reaction	$m$	$\mu$	$\sigma$	1	2	3	4	5
Anger	5	5	0	0	0	0	0	543
Contempt	5	4.869	0.379	0	0	8	55	480
Ridicule	5	3.549	1.63	120	34	76	54	259
Defiance	5	4.836	0.371	0	0	0	89	454
Spite	5	4.715	0.725	10	2	21	67	443
Hatred	5	4.611	0.892	13	11	40	46	433

It's really hard to expect that it was possible to effectively control these people in every circumstance. 397 (22.95%) of them had maximum response to all the three variables by means of which, in the second stage of the analysis, a neural network identified a set of respondents with a psychopathic emotional reaction pattern. 115 of these respondents, i.e. 6.65% of the entire sample, but 29.22% of those with extreme aggressive and hostile responding, participated in the war. These people could, with a probability higher than zero, commit war crimes, which, of course, does not mean that all of them, or any of them, actually committed those crimes. What is important for this discussion is that the aggression against this country, absolutely unjustified and committed in a cruel and insidious way, according to the opinion and attitudes of the vast majority of its people, had to evoke very aversive emotional reactions in many people and such intensity of these reactions in people with a psychopathic emotional reaction pattern that it got out of cognitive control and hence control by any external factor. Those who planned the conflict in Kosovo and Metohia, and then decided, under any pretext, to commit an aggression against Yugoslavia had to know, if they had

intact intelligence and minimum psychological education, how people, and people with a psychopathic personality pattern, would react to it. Although estimates of the percentage of the latter are different and they range, as it is known, from 7% to 30%, it should not be forgotten that a psychopathic type of emotional responding can also be induced by provoking intense frustration in those who rarely react in an aggressive and hostile manner under normal conditions.

A problem of accountability is not posed with psychopaths, of course; if it were posed, hardly any criminal would be convicted of the offenses he committed. That is why, in most cases, a problem of innocence is not posed as well. Therefore, regardless the fact that their actions were provoked by other criminals' offences, mostly by perpetrators of classic and state terror, there is no doubt that anyone who has committed a war crime must be held accountable for it, regardless of the side in the war and justification or excuse. However, no one can be held accountable for something that could neither be the subject of action, nor the subject of non-action. It would really be high time that those who advocate a different policy toward those who they consider to be responsible for war crimes say clearly and distinctly in what way they would control emotional reactions and hence behavior of psychopaths under war conditions.

## Conclusion

However, psychopathic criminals are not a homogeneous group, which further complicates any attempt to control their behavior. This is clear from the results of the analysis conducted by Hosek, Radulovic, Momirovic and Radovanovic (2002), (Popovic 1993) A sample of 166 criminals with evident symptoms of severe psychopathy was classified using Ward's method of hierarchical clustering based on the Euclidean distances of respondents on the standardized results in cognitive and conative factors. Identification of the types was performed based on the results of canonical discriminant analysis and the results of Fisher's method of discriminant analysis. The types of psychopathic criminals were significantly and substantially different both in the space of cognitive and conative factors and the space of discriminate functions derived from these factors, but especially in the space bounded by the first three discriminant functions. The first discriminant function was defined by distinct disorders of regulation and control of all the conative functions and poor functioning of all the cognitive processors. The second was defined by distinct inferiority of cognitive processors, and besides, the level of typical criminogenic factors, such as psychopathic and oral aggressiveness and amorality, were significantly below the average of the criminal population. The third discriminant function was defined by slightly poorer functioning of cognitive processors and below-average anxiety, but a significant level of typical criminogenic factors, that is, psychopathic and oral aggressiveness and amorality. The fourth discriminant function was defined by below-average functions of serial and parallel processors, increased rigidity and hence increased anal aggressiveness. And finally, the fifth discriminant function was defined by below-average functions of perceptual and serial processors and increased impulsiveness. Accordingly, all the discriminant functions had

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Type 6, defined by above-average functions of cognitive processors and a low level of typical criminogenic factors, but very pronounced anxiety.

As these types largely corresponded to the types of psychopathic criminals that could be identified on the basis of analysis of their not necessarily criminal behavior, it was examined to what extent these types could be recognized based on linear classifiers in cognitive and conative spaces. It was found that, based on the results in the measuring instruments for assessment of cognitive and conative functions assumed by cybernetic models of cognitive and conative functioning, types of psychopathic criminals with identification functions corresponding very well to their typical psychic profile could be recognized with very high accuracy. It's really hard to expect that it was possible to effectively control these people in every circumstance. 397 (22.95%) of them had maximum response to all the three variables by means of which, in the second stage of the analysis, a neural network identified a set of respondents with a psychopathic emotional reaction pattern. 115 of these respondents, i.e. 6.65% of the entire sample, but 29.22% of those with extreme aggressive and hostile responding, participated in the war. These people could, with a probability higher than zero, commit war crimes, which, of course, does not mean that all of them, or any of them, actually committed those crimes. What is important for this discussion is that the aggression against this country, absolutely unjustified and committed in a cruel and insidious way, according to the opinion and attitudes of the vast majority of its people, had to evoke very aversive emotional reactions in many people and such intensity of these reactions in people with a psychopathic emotional reaction pattern that it got out of cognitive control and hence control by any external factor. Those who planned the conflict in Kosovo and Metohia, and then decided, under any pretext, to commit an aggression

against Yugoslavia had to know, if they had intact intelligence and minimum psychological education, how people, and people with a psychopathic personality pattern, would react to it. Although estimates of the percentage of the latter are different and they range, as it is known, from 7% to 30%, it should not be forgotten that a psychopathic type of emotional responding can also be induced by provoking intense frustration in those who rarely react in an aggressive and hostile manner under normal conditions.

A problem of accountability is not posed with psychopaths, of course; if it were posed, hardly any criminal would be convicted of the offenses he committed. That is why, in most cases, a problem of innocence is not posed as well. Therefore, regardless the fact that their actions were provoked by other criminals' offences, mostly by perpetrators of classic and state terror, there is no doubt that anyone who has committed a war crime must be held accountable for it, regardless of the side in the war and justification or excuse. However, no one can be held accountable for something that could neither be the subject of action, nor the subject of non-action. It would really be high time that those who advocate a different policy toward those who they consider to be responsible for war crimes say clearly and distinctly in what way they would control emotional reactions and hence behavior of psychopaths under war conditions.

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