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### **ADOLESCENT AGGRESSION IN CHORNOBYL AREA: SELF-CONTROL, IDENTITY AND MORAL DEVELOPMENT**

Self-reported aggression by adolescents from the Chernobyl area revealed that epistemological course in their constitution of everyday reality finds expression in an Imperial way of knowing and awareness. Control over own needs, desires and priorities as the very essence of self in violent situations is related to a lack of protective frame in consciousness of adolescents. Chernobyl adolescents create something which they avoid and fear or do not make the ordinary meaning of human experience and differentiation from others come before integration and wholeness in their awareness. To young men who are at the delayed stage of consciousness development, aggression most frequently correlated with the experience of pleasant toughness instead the negativistic/conformist pair of metamotivational states, implying that rules are not experienced by individuals as shared reality that are given shape and order. Rather, it was perceived as amorphous, unstable and inherently fluctuating set of moral standards. For the Interpersonal self, the other-oriented mastery state much better corresponds to self-control in fight situations than other metamotivational states do.

**Keywords:** self-control, aggression, Constructive-developmental theory, meaning-making activity, Imperial, Interpersonal stages of identity development, Reversal Theory, metamotivational states, protective frame.

**Хомик В. С. Юнацька агресія в чорнобильській зоні: самоконтроль, розвиток ідентичності та моралі.** Самозвіти про агресію юнаків з Чорнобильської зони виявили, що епістемологічна тенденція в їх конституюванні повсякденної реальності знаходить свій вияв в імперіальному способі її усвідомлення і знання. Контроль над власними потребами, бажаннями і пріорите-

тами як самої суті їх «я» в ситуаціях насильства пов'язані з відсутністю охоронного фрейму у свідомості юнаків. Чорнобильські юнаки творять те, чого уникають і бояться або не творять смислу людського переживання у звичайному розумінні, і диференціація у їх свідомості від інших передуює інтеграції. В юнаків, яким притаманна затримка стадій розвитку свідомості, найбільше узгоджувалися з агресією часті переживання приємно відчутної суровості замість негативістської/конформістської пари метамотиваційних станів у тому значенні, що правила внутрішньо не відчувалися респондентами як спільна з іншими реальність, якій надавалася нормами форма, порядок, але, радше, вона усвідомлювалася аморфною, нестійкою і такою, якій властива флуктуація моральних стандартів. Для юнаків, які мають належність до міжособистісної стадії смислової еволюції свідомості, стан орієнтованої-на-іншого майстерності набагато краще узгоджується із самоконтролем агресії в ситуаціях бійок, ніж інші метамотиваційні стани юнаків.

**Ключові слова:** самоконтроль, агресія, конструктивно-розвивальна теорія, смислотворення, імперіальна та міжособистісні стадії розвитку ідентичності, реверсивна теорія, метамотиваційні стани, охоронний фрейм.

**Хомик В. С. Юношеская агрессия в чернобыльской зоне: самоконтроль, развитие идентичности и морали.** Самоотчеты об агрессии юношей из Чернобыльской зоны выявили, что эпистемологическая тенденция в их конституировании повседневной реальности находит свое выражение в Имперіальном способе ее осознания и знания. Контроль над собственными потребностями, желаниями и приоритетами как самой сути их «я» в ситуациях насилия связаны с отсутствием охранительного фрейма в сознании юношей. Чернобыльские юноши творят то, чего избегают и боятся или создают смысл человеческого переживания в их неординарном понимании, а дифференциация от других в их сознании предшествует интеграции. В юношей, которым присуща задержка стадий развития сознания, с агрессией больше согласовывались частые переживания приятно ощутимой суровости вместо негативистскую/конформистской пары метамотивационных состояний в том значении, что правила внутренне не ощущались респондентами как совместная с другими реальность, которой предоставлялась нормами форма, порядок, но скорее она осознавалась аморфной, неустойчивой и такой, которой свойственна флуктуация моральных стандартов. Для юношей, имеющих принадлежность к интерперсональной стадии смысловой эволюции сознания, состояние ориентированного-на-другого мастерства гораздо лучше согласуется с самоконтролем агрессии в ситуациях «батальи», чем другие метамотивационные состояния юношей.

**Ключевые слова:** самоконтроль, агрессия, конструктивно-развив теория, конструирование смысла, имперіальная и межличностная стадии развития идентичности, реверсивная теория, метамотивационные состояния, охранительный фрейм.

**Statement of the problem and its importance.** In the newly independent state of Ukraine, Chornobyl is a great natural laboratory for

exploring of stress, mastery and meaning-making activity in the dangerous zone. Its people of different ages face continual crisis connected with the constant threat of personal losses, somatic and psychological illnesses. In the contaminated areas the presence of the youngest generation poses a threat because of the long-term consequences of radiation for their health. Age strongly affects the meaning of the event [10]. Environmental conditions following the disaster are ambiguous in relation to the challenge, harm or threat that they pose. This ambiguity increases the role of personality and cognitive factors as one seeks to interpret, control, and deal with the environment.

**Analysis of the latest researches of the problem.** Research over the past years has convincingly demonstrated that there are opposing views with regard to the psychological aftermath of major disaster affecting community and individuals. Some argue that disasters are traumatic life events [Quarantelli, 1985]. Persons who survive technological disaster may be said to have experienced not only a changed sense of self and a changed way of relating to others but a changed world view altogether. Traumatic experiences will alter schematizations of the world, of other people, and of identity. Experiences of disaster are well-known for their potential to shatter world assumptions [Janoff-Bulman, 1992].

The second position holds that some of the effects are positive as well as negative, many of the latter are relatively short in duration [10, 381]. Fighting was reported by the adolescents to have provided temporary relief from ongoing distress after disaster [11, 383]. Hostility, conflict and anxiety are ingredients of the typical picture of adolescents' psychosocial status in Chernobyl area. A report on low tolerance of victims to stressful events and impacts, is mentioned in one of the research of the Chernobyl children [14, 106–107]. Violence was common and anger was directed inward within the community of Centralia, Pennsylvania, which was exposed to the toxic disaster in 1962 [Edelstein, 155].

Another point of view is that chronic danger appear to be associated with development, specifically, «truncated moral development» [7, 273]. Proximity of residence to Chernobyl [within a radius of 150 km] is one of the variables significantly associated with demoralization [1]. Still another opposing position is that adolescents who were exposed to the disaster manifested advanced moral development as compared with their counterparts in the loss affected areas [11, 376].

These contradictions demand research in order to make clear psychological and moral consequences of technological disaster in Chernobyl. It

has given rise to a psychological syndrome. This global catastrophe, along with the collapse of the Soviet Union has sufficiently changed the identity of the inhabitants of these areas. In this context, adolescent development needs careful monitoring and analysis.

Psychological theories of violence have generated a wealth of theoretical approaches and empirical data. Very few, if any, researchers have considered identity as a critical factor in the genesis of violent behavior. And yet identity would appear to be especially crucial for Ukrainian adolescents.

**Definition of the purpose and research assignment.** The purpose of this paper is to explore the psychological antecedents, especially in relation to identity development of violence in adolescents in the Chernobyl area. The research was guided in particular by Kegan's constructive-developmental theory of identity [13], Reversal Theory [2] and cognitive-developmental approach to morality [15]. The questions about relationship between Reversal Theory and other fields of psychology are of a great actuality. So far, Kegan's theory has not thrown comparable light on the microdevelopmental issues of meaning-making that play such a large role in day-to-day clinical work. Kegan's macrodevelopmental stage theory could be combined with elements of Apter's Reversal Theory. We regard moral reasoning as one subdomain, structural indicator of ego functioning and identity. By combining Kegan's stage theory with Kohlberg's moral development and Apter's Reversal Theory, it would be possible to achieve a sophisticated analysis and ensuing in-depth understanding of violent adolescent being studied. These researchers are attending to how individuals interpret their experiences and don't accept the postulate of personal stability. They take into account the way people make meaning of their experience. It is usually possible to identify for any given subject a threshold of mental complexity beyond which one does not pass at that moment, and around which most of one's meaning-organizing takes place, a kind of «central tendency» in one's current reality-constituting [13, 200].

The major research question addressed by this report is as follows: Does a stage of identity development and the certain combination of metamotivational states differentiate adolescent real violence episodes from episodes in which the same subjects resisted the urge to fight? Specifically three hypotheses will be addressed:

[a] Chernobyl-affected adolescents' control over desires and emotions in violence situations is related to a lack of protective frame adolescents;

[b] structural-experiential factors play a significant contributory role in violence. The ramification of **the anxiety-avoidance, negativistic, other-centered mastery states and pleasant felt toughness** differentiates adolescent real violence episodes from episodes in which the same subjects resisted the urge to fight;

[c] if adolescent's identity development is embedded in knowing the world through his own needs, wishes and priorities; if they experience these wishes as the very essence of self, then violence is used as means of achieving "macho" status and reputation in the unsafe surrounding. Identity appears as factor relevant to self-stopping failures and the decline of self-control.

**Methods of the research.** A modified version of the Metamotivational State Interview [8] adapted by the author to deal with situations where there is a temptation for violence and the Ukrainian version of the Subject-Object Interview [17] for obtaining evidence of self-structures were conducted with adolescents of the samples. In addition, subjects filled the next inventories: the arousal-seeking, arousal avoiding and emotionality subscales from the Motivational Style Profile [4], the Buss-Durkee Aggression Inventory [18], Anger Response Inventory: Behavior Scale [12], the Sociomoral Reflection Measure – Short Form [9] for the measurement of moral reasoning competence. Data analysis included the calculation of correlation, crosstabulation and one-way analysis of variance.

**Subjects.** High school senior males [ $n = 66$ ] prone to violence from the areas contaminated by the nuclear explosion in Chernobyl were interviewed and administered questionnaires to explore these effects. 70 male adolescents living in town of Lutsk were also studied, serving as a control group.

**Report of the main material and discussion of research results.** Some of the alternative metamotivational states better correspond to self-control in fight situations than others do. What combination of metamotivational states differentiates the violence episodes from episodes in which an adolescent exerts self-control? The crosstabulation data analysis of observed frequency of metamotivational states, which were used as independent variables, was performed and revealed that being in the self-oriented mastery state (the desire for **pleasant felt toughness**) makes maximal contribution to the differentiation of violent and self-stopping episodes,  $\chi^2(1, N = 66) = 15.60, p = 0,0001$ . An adolescent sees that it is

important to be macho, hardy or, from his perspective, rugged, vigorous and in most cases were urged doing so by means of aggression. It is exemplified by what Nietzsche called «the will to seem» and aims at false or true heroism. They regard the violence as an effort to prove one's strength and dominance. Change occurs not in what one gains or loses in the transaction but in who one is. The adolescent blocked in this aggression state exposes himself to violence.

This empirical result is related to another finding that representatives of **the less developed order of identity** more frequently experienced pleasant felt toughness in violent situations than individuals scoring high on self-structure,  $\chi^2(1, N = 66) = 5.028, p < 0,005$ . It means that adolescents who largely embedded in **the structure of** own needs, desires and priorities as the very essence of self, his «alpha and omega», in violent situations perceived themselves during the process of the fights as wanting to be hardy, tough, strong, rigorous. They were frequently vigilant in their attention to possible failure in attainment of status-enhancing purposes. In the times of identity threat the adolescent demonstrates to others how tough he is or tend to be. Embedded in their own needs and unable to be interpersonal, fighters are concerned about reputational aspects of self-definition through violence. They have no way of knowing that another will suffer by their aggressive actions. For the more epistemologically advanced 3rd stage self-structure in 75 % cases being seen as tough, hard by peers and a reputation management function are not so much important. In the adolescent's organizing of the moral world considerations of the most salient **status or role of person involved, who and what he is**, are frequent justifications of moral choices which demonstrates about his growing concern for sense of identity and protection. If adolescent's identity is such that he is embedded in knowing the world through his own needs, then violence is used as means of status and reputation achieving that is often pertaining to **role** in the unsafe surrounding. Their self resides in getting status power, and not in the development of quality relationships with others. This diminishes social interaction and feelings of solidarity.

Thus this is the **particular kind of mastery**. It comprise the desire for **toughness** and the experience of the positive feeling tone in an aggressive situation, the sense of agency and mastery the Imperial self has and experiences, and referring to a status of person as justification of fairness in moral judgments of Chernobyl adolescents. Young persons who make violence want to be strong, domineering-the-other, powerful in transactions

with others in the danger zone. Results revealed that 47 % of subjects desired and derived satisfaction from violence and 6.1 % experienced negative feelings of weakness, softness – they wanted but actually didn't experience feelings of toughness from controlling others through aggression. Status as a male is to be achieved by being aggressive, and masculinity is perhaps the most basic aspect of a man's identity and aggression satisfies. This is «**toughness culture**», **the power structure** in schools that adolescents share who during certain time are in mastery state to keep others in «their place» or at a distance.

In the moral consciousness of Chernobyl adolescents, as data in their answers to the Sociomoral Reflection Questionnaire suggests, **the value of others' status is salient**. In their reasoning is proposed that to keep a promise, speak the truth or save a life is important in relation to the closest friend, brother, parents but isn't necessary for alien or ordinary human being do because they «did nothing for me». This is a kind of «moral boundary» between self and non-self. The argument for drawing this boundary and for being open or not is the capacity of others to be satisfiers of adolescents' needs (for example, one subject said «I thought more about myself than about her. She was ruining my rep» or «If rescuing foreigner can harm me, than would be better to call the Security Service and let they save his life»).

The Imperial self-definition is concern of power, influence, and control. At this point of meaning-making evolution **the urge for toughness in the mastery state** most often occurs. Some Chernobyl adolescents in **the toughness times** rely on control and manipulation as ways of meeting their need in autonomy rooted in competence. They preoccupied in thoughts and feelings with external world. «The domain of personally recordable subjective experience (“feelings”) is moved from inside the self out onto the social arena of action, performance, manipulation, consequence and control; and it is so ...because her own competing points of view are projected onto others who are then made into antagonistic holders of competing authority. Herself **holding just one point of view, projecting the others, she lacks the self-reflexiveness** that leads to the experience of one's subjective state or “feeling”. Intrapsychically, this leads to the familiar concreteness and “lack of insight”. Interpersonally, it leads to **the lack of mutuality** and need to control the other (since the other part **cannot be “controlled” internally**)» [13, 172]. The combination of intention for toughness in the mastery state with needs in external control,

status and independence at Imperial stage will entail maintaining of distance from some peers and non-peers and orientation toward mastery. In order to maintain a sense of integrity adolescents establish psychological boundary with “antagonistic holders of competing authority”. The ways the Imperial self can differentiate between myself and others is in what I do, can do, what I prefer [N. Popp]. «I didn't win or lose, but put him in his place» – concluded one of Chernobyl subjects, which means «the way I tend to be» and the drawing of demarcation line, maintaining distance from the peer.

Thus, points of view, beliefs, thoughts and feelings of other people appear alien to the adolescent and as not belonging to his self. The boundary differentiates the perceived data belonging to the self from the perceived data referring to non-self. How youth is competent, superior, invincible, confident, masterful in power struggle for obtaining desired status, reputation, matters a lot to him. Adolescent «...engages in aggression and obtains feelings of mastery from controlling the environment and others through aggression. Mastery feelings are predominantly feelings of superiority, toughness, confidence, power, and cockiness» [6, 705]. His categorical self that has properties of preference and ability, exploits the need for toughness.

The next important phenomenological structure for the discrimination of provocative situations is the anxiety-avoidance state,  $\chi^2 = 8.123$ ,  $p = 0,004$ . In order to master **the expectable danger** by «appropriately timed doses of anxiety» [Brody, 1993, p. 52] **in advance of the violent event** some cognitive strategy of the elaboration of plans to cope with perceived attack were used for **self-stopping**. The desire to maintain **self-control** in the anxiety-avoidance state, when was absent the protective confidence frame, was experienced in 35% of cases. Not real harm but probability of harm, not objective danger but awareness of the risk that the danger will occur, not actual trauma but awareness the possibility of trauma that is really matter for Chernobyl adolescents in danger zones when they phenomenologically experienced the relative deficiency of the confidence frame and the sense of protection.

The fusion of **the other-centered mastery state** in the temptation for violence circumstances with **Interpersonal stage** of the meaning-making evolution generates new quality of adolescents' mastery. Taken together «the socialized mind» [13] and other-centered mastery state constitute the



new formation that is able to contain adolescents' intentions to fight. In situations of being at risk in relation to danger adolescents-inhabitants of stage 3 reported about times when they brought to interactions with peoples their own desire to retreat, surrender, humble.

Higher score on the mean of **arousal avoiding** [ $M = 19,2, SD = 4.5$ ] than of arousal seeking style [ $M = 17,2, SD = 4,5, t = 2.246, p < 0,005$ ] was an indication of the relative absence in the adolescent mind of a confidence frame. The anxiety-avoiding dominance of Chernobyl adolescents is evidence of experiencing self as genuinely threatened in stressful situations. States of comfortable alertness and preparedness to what is going to happen to them are not the usual thing for these subjects. In experience and interpretation of motivation Chernobyl youngsters tend to lack a protective frame. This means that they are socialized through anxiety-based processes.

**Summary and avenues for future research.** Taken together, a complicated undertaking all the theories revealed that the data from this study suggest: adolescents are prone to fluctuate in response to daily events. Metamotivational states are the tonic «ground» against which each stimulus has one meaning and different meanings emerge against different grounds [5]. So the metamotivational states and identity of adolescents in aggression provoking situations change the meaning of every stimulus as the ground against which a whole range of events and persons appear. The most frequent ground against which violent actions were committed is that of the preferred high felt toughness in the mastery state (as the phenomenological prototype of violent struggle for role, reputation and identity) and the telic state which makes the adolescent feel more anxious and out of control. When aroused by an attack from another person, the potentially «explosive mix» of states which is likely to lead Chernobyl adolescents to violence consists of the combination of telic and mastery [pleasant felt toughness] modes. Adolescents experience anxious anticipations in the situation of threat to their identity. The adolescent perceives himself as a single self-sufficient entity when no other person is the focus. Then he considers that he should behave aggressively in order to be macho, hardy, tough and strong. There is change not in what one gains or loses in the transaction but in who one is. This empirical result is related to the other finding that representatives of the less developed order of identity more frequently experienced the desire for pleasant felt toughness in violent situations than individuals scoring high on self-structure. In the ado-

lescent's organizing of the moral world, considerations of the most salient status or role of the person involved – who and what he is – are frequent justifications of moral choices proving that he has reputational bias and is concerned about his sense of identity and protection. Heightened felt arousal and toughness during the confrontation with danger lead to violence in accordance with an internal bias towards the high felt toughness and metamotivational states of arousal-avoidance, the Imperial stage of meaning construction and nonmature moral development i.e. play without rules.

The coefficient of adolescent metamotivational stability is low in aggression situations. Self-control largely appears to occur when the other-centered mastery, the felt tenderness, absent protective frame are active in the arousal-avoidance state and the fantasizing ability. This enables the individual to bring about reversal at the time of arousal whereby youth somehow ignores a provocation rather than responding with aggression. The experience of interpretive control begins by trying to accommodate oneself, submit or change the self, abandon some part of himself within a context of violence that it's likely to occur when adolescent has control over own needs at the interpersonal stage of identity development.

There is evidence to support the idea that metamotivational states of adolescent in anger situations, the stage of his identity and moral development may serve as a paradigm for prevention of violence. It is necessary to change the way adolescents prone to violence think about themselves and the world they live in.

Future researches have to give answer to the following question: How can we help to Chernobyl adolescents not only to have the desire for felt toughness but «acquire the toughness needed to manage in a harsh world and yet retain their basic humanity» [16].

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