

Krzysztof Loranty

ORCID

Janusz Ropski

ORCID

Uniwersytet Pedagogiczny im. KEN w Krakowie

Pedagogical implications of evolutionary explanations concerning interpersonal and intergroup relations

Abstract

Making the world a safe place has been the aim of mankind since time immemorial. Representatives of various sciences have made an appreciable effort to help this dream come true. They have constructed theoretical systems and found practical solutions to problems which are the most significant for people. Unfortunately, in many cases research carried out by representatives of humanistic and social sciences has turned out to be unfruitful. Efforts which improve relations between people are particularly crucial for educationalists, that is they try to constrain or eliminate negative relationships with the view of benefits stemming from positive relations. In spite of considerable successes both in theory as well as in practical activities, we have to constantly face the necessity to answer the question: what should be done to bring together people who are willing to cooperate and love, not to perform diverse forms of aggression and rivalry?

Keywords: aggression, cooperation, education, evolution

Philosophy, sociology or psychology provide educationalists – trainees with a plethora of interesting ideas built up by strong empirical knowledge which describes and explains e.g. phenomena of aggression, processes of forming attitudes and supportive behavior. However, these sciences consider human behavior in the context of its ontogenesis. People are born with certain predispositions, are prone to different impacts of external factors, adjust an environment to their needs, their personality develops, so consequently various behavior may occur in given situations. By and large, this scenario is the essence of contemporary theories which explain human behavior. It does not always allow to satisfactorily explain phenomena such as: aggression or supportive behavior.

Focus on ontogenesis to a large extent leaves beyond exploratory interests of all conditions of human behavior which are formed in the course of phylogenetic development. Researchers draw attention to this aspect when they explain human behavior on the grounds of the evolutionary approach. The starting point for their reflections is the Darwin's theory of evolution. These researchers indicate that throughout the years of evolution as a result of the natural selection the formation of human brains took place in such a way that they could be helpful in solving daily problems of people. These individuals who were capable of adapting to certain conditions achieved a greater reproductive success, as a result of classic or combined adaptation. They used to produce more offspring, from whom we have descended. Throughout phylogenetic development people spent though the longest period living in hunting and gathering communities¹. Evolution adapted people to deal with problems, which occur most frequently in such communities. As Leda Cosmiedes and John Tooby point out, the key to understand how a contemporary brain operates is to realize that initially it was not designed to solve daily problems of contemporary people. Our brains are better at sorting out problems which concerned our ancestors on African savannas, than at solving problems which emerge in a lecture hall or in a modern city.

Present behavior is generated by mechanisms which transfer information that is formed in an environment, in which the human species evolved. In the course of evolution people have formed an abundance of psychical mechanisms because they came into contact with a great deal of adaptation problems. These mechanisms enable substantial flexibility of behavior. Their activation always depends on a contextual contribution on the part of an environment.

The result of evolution of mankind based on the natural selection is possession by all *Homo sapiens* of the specified set of exploratory and emotional abilities. In fact, they determine human nature understood as the system of permanent abilities and features, which are attributed exclusively to people and they are the reason why we can be perceived as a separate species².

If people have their own nature, then the question arises of how based on research supported by intellectual reflections of sociologists and biologists, behavioral geneticists, ethnologists, anthropologists, psychologists and biologists, this nature is presented by evolutionists. It is incredibly significant because

¹ Our species lived in this type of communities 1000 times longer than in any others. The industrial revolution has been present for merely 200 years, agriculture appeared on the Earth 10,000 years ago, and 5,000 years ago hunting and gathering was replaced with this kind of living by half the population. The age of personal computers is about twenty years of history of our species.

² D. M. Buss, *Psychologia ewolucyjna*, Gdańsk 2003, p. 70.

understanding of human nature acknowledged by people has a great impact on our life. It prompts what lies within our capabilities, shows how to solve encountered problems or in what way we should fight with crime. Its assumptions constitute the basis for motivating systems, beliefs and political solutions as well as educational and economical systems³. Previous perceptions of human nature stemmed from a religious tradition, or an intellectual climate of particular ages, and they played such roles. The Judeo-Christian theory, the Lock's *blank slate* theory, the Rousseau's theory of *noble savage* or Hobbes' views presented in *Leviathan*, had an immense influence on interpretations regarding reasons of human behavior as well as on the way of forming attitudes which are socially desirable.

If we agree that the natural selection – a maker of human nature as well as others living beings – is a morally neutral process, which prefers the most effective organisms when it comes to reproduction, emphatically realizing the genetic interest, then products of such a process should be primarily characterized by all adaptation possibilities, excluding moral values. During evolution, benevolence or willingness to cooperate are likely to be formed in the same way as aggression and rivalry. On the grounds of this demeanor, the activity of the so-called selfish genes is always present. In the process of evolution only some genes survived, to be more specific, those which were capable of creating organisms that could achieve reproductive successes⁴.

Research conducted by anthropologists and archaeologists proves that various forms of aggression occur when such a success is achieved. Violence and cannibalism date back at least eight hundred thousand years ago⁵. The evolutionary approach indicates that aggression is an adaptation mechanism formed in the phylogenetic process of human development. Entities manifesting such behavior in certain situations were able to reproduce more easily, in consequence people nowadays are gene carriers of those who were capable of expressing aggression.

The question arises regarding adaptation problems which could be sorted out thanks to aggressive behavior. Evolutionary psychologists most frequently include the following: a takeover of someone else's property, defense against an attack, a fight for a position in a hierarchy, a deterrent of potential aggressors and preventing permanent partners from unfaithfulness. At the same time, they highlight the fact that there is no model of aggressive behavior. Contrary to the theory of instincts, which points out that aggression may be caused automatically due to specified impulses, evolutionists show that such behavior is dependent

³ S. Pinker, *Tabula rasa. Spory o naturę ludzką*, Gdańsk 2005, pp. 17-31.

⁴ R. Dawkins, *Samolubny gen*, Warsaw 1996, pp. 321-362.

⁵ S. Pinker, *Tabula rasa...*, op. cit., p. 433.

on circumstances, and moreover it is a result of their calculation. It occurs in situations similar to those in which our ancestors encountered certain adaptation problems, and their solution with the use of violence used to bring concrete benefits. On the other hand, mechanisms which prompt aggressive behavior may remain not activated throughout an entire life of a person if this person does not face any appropriate situation⁶.

Recognizing the role of psychic mechanisms formed by the natural selection in creating human behavior, we should perceive some theories with great caution, in particular those which try to dominate thinking of the phenomenon of aggression. In particular these views which imply that violence does not have anything in common with human nature and claim that it is a pathological phenomenon caused by negative influences of an environment, and that it is not necessarily a product of human nature, but a product of culture.

Nowadays research undermines certainty of numerous foregoing explanations of aggressive behavior⁷. Within one of the most popular and at the same time „the strongest” theories which is the theory of social learning, it is indicated that the reason for aggression is violence presented in media. For this dependence, as confirmed by representatives of the American Medical Association, the American Psychological Association and the American Academy of Pediatrics in the United States Congress, 3500 empirical research projects have been carried out, out of which only a dozen have not proven this relation. J. Freedman, who is a social psychologist, conducted the meta-analysis of results of this research. He concluded that in point of fact there had been two hundred empirical projects, out of which more than half had not proven any connection of violence presented in media with aggressive behavior. In the rest of instances minor correlations have been confirmed, which may be interpreted in various ways. Other researchers who undertake this problem show the fact that contact with violence in media has a minor impact on the manifestation of aggression by people, or it even might not exist⁸.

Other convictions related to sources of aggression which until recently had not raised any objections also seem to be more like wishes than solid scientific claims, according to social psychologists. The ascertainment that a firearm promotes the use of violence seems to be justifiable because surely this kind of weapon eases killing and other kinds of aggressive behavior. However, research shows that availability of a weapon is not automatically tantamount to an increase in violence in a society. In the US states of Maine and North Dakota weapons are

⁶ D. M. Buss, *Psychologia...*, op. cit., pp. 309-313.

⁷ M. P. Ghiglieri, *Ciemna strona człowieka*, Warsaw 2001, pp. 191-208.

⁸ S. Pinker, *Tabula rasa...*, op. cit., pp. 439-440.

present in almost every house. In these states there is the lowest number of murders in the country. Despite different availability of weapons in societies of Switzerland, Japan or England, similar murder indicators per 100,000 inhabitants are recorded. Additionally, other social factors such as discrimination, poverty, hurting in childhood or alcohol abuse do not have any direct connection with aggression⁹.

R. Tremblay presents interesting conclusions drawn from research, which indicate that violence is a learnt behavioral response, and it stems from human nature. He proved that the most aggressive stage of human development is not the period of juvenescence, but the toddler period. The majority of children at this age tend to beat, bite and kick. "*Small children do not kill because they do not have access to knives or guns*", says the author. Therefore, we should not ask in what way children learn aggression, but we should investigate what causes children to try to resist it. D. Kenrick and D. Buss noted the natural character of aggression. In survey methodology they proved that violence is present in our minds. Over 80% women and 90% men fantasize about killing people who they do not like¹⁰.

Ideas of evolutionists assume that the process of evolution formed a person as an egoistic entity who is prone to manifest aggression, behave selfishly, as well as to cooperate with others in order to achieve personal benefits, for the rationale being that a perspective of own genes may be improved in this way. All our predispositions have genetic bases and evolutionary history. A particular meaning with regard to forming aggressive behavior is attributed to male libido; namely, aggression towards sexual rivals has an adaptation meaning because it encourages a reproductive success of an aggressor. Greater access to sexual partners increases chances to transfer one's genes. Genetic features of aggressors are slowly spread at the expense of individuals who are less aggressive and whose reproductive successes are inferior.

In evolutionary explanations of human inclinations for aggression and cooperation the following theories play a great role: the kin selection, the sexual selection theory and the reciprocal altruism theory.

The kin selection theory indicates that evolution takes place by means of changes that enhance chances to procreate and keep own offspring or relatives' offspring alive. Members of a family improve perspectives of own genes while helping their relatives. Cooperation between family members increases a possibility of a reproductive success and it is encoded in genes. Behavior which superficially seems to be altruistic in fact has an egoistic character because it aims

⁹ M. P. Ghiglieri, *Ciemna strona...*, op. cit., pp. 193-200.

¹⁰ S. Pinker, *Tabula rasa...*, op. cit., p. 448.

at a reproductive benefit. The inclusive fitness is an architect of plenty of human actions. It lies at the basis of chauvinism, nationalism and racism, but also it creates bonds which exist between a mother and a child as well as patriotic attitudes.

The sexual selection theory assumes that evolution takes place by means of a selection of sexual partners. It is based on a rivalry with individuals of the same sex and on actions whose purpose is to achieve appreciation in the eyes of opposite sex. On the grounds of the sexual selection theory psychic mechanisms may be explained, which concern the following instances: a rivalry of individuals of the same sex, murders, undertaking risk, disparate approaches of men and women when it comes to a fight for a social position¹¹.

The reciprocal altruism theory (in literature the term *enlightened egoism* may be found) explains occurrence of a phenomenon related to reciprocal help, friendship, cooperation or faith to the death between unrelated individuals. All cases of social exchange include reciprocal altruism. According to Robert Trivers, who is the creator of this theory, the bases for friendship, gratitude and trust are psychological adaptations formed by the natural selection with the view of maintaining reciprocal altruism¹².

Interpreting human behavior with the help of suggestions included in the kin selection theory, the sexual selection theory and the reciprocal altruism theory, we can understand the essence of phenomena such as brotherhood of men during a war, genocide, mass rapes during a war, patriotism, helping in emergency situations (including sacrificing one's life), instances of aggression in peacetime or functioning of gangs. L. Cosmides and J. Tooby as well as other researchers (who take advantage of evolutionary assumptions in order to explain the phenomenon of a war) point out that an indispensable feature of human nature crucial to lead a war is a human ability to cooperate, which in particular applies to men. At the same time, they highlight that in the course of evolution a plethora of psychic mechanisms have been developed in men, which are useful in leading wars. This way of solving conflicts is present in the human behavior repertoire because it used to be beneficial for achieving a reproductive success.

Reflections of evolutionists over the essence of human nature do not raise doubts that there is a *dark side*, dominated by egoism and a tendency to behave aggressively. A man in this perspective corresponds to the vision of human nature presented by Hobbes. This thinker from the seventeenth century sketched some features of the human species with uncanny similarity to conclusions

¹¹ D. M. Buss, *Psychologia...*, op. cit., p. 407.

¹² M.P. Ghiglieri, *Ciemna strona...*, op. cit., pp. 292-296.

derived from research conducted by evolutionary biologists and contemporary social psychologists. In his reflections, aggression is not a primary instinct or an irrational driver but, above all, it stems from dynamics of interactions which take place among people. He sought three reasons for aggressive behavior in human nature. They are rivalry, distrust and lust for fame. According to Hobbes, people are wild, aggressive and egoistic, but rational. They are aggressive provided that they are provoked by their human rationality. Because of that, an egoistic and aggressive entity may, on the other hand, behave socially and cooperate, since he or she is not only focused on rivalry or on a fight with others. The essence of such behavior is perfectly reflected in the thought presented by Adam Smith: *It is not generosity of a butcher, a brewer or a baker which allows us to eat supper, but it is all about their pursuit to achieve own benefits. Therefore, we count not on their kindness, but on their self-love.* R. Trivers emphasizes the genetic tendency of people to cooperate. As shown by the researcher, it is only related to those whom we can trust and it requires communication and getting to know each other¹³.

What are the consequences of contemporary evolutionism in terms of pedagogical activity, and most importantly with regard to education for safety? Obviously, a considerable number of conclusions could be formulated with different levels of generality. Here are some of them:

A person cannot be treated as “*plastic mass*” which may be formed in any manner. The repertoire of human behavior is to a large extent limited substantially by features of human nature. That is why for example impacts based on shaping attitudes by means of conditioning may turn out to be ineffective in certain situations.

A person will always try to pursue natural behavior for his or her species, e.g. he or she will prefer activities in smaller social groups, male individuals will have a tendency to behave aggressively and will be prone to bear a risk to a much greater degree than women.

Male individuals will be willing to build coalitions in order to solve conflicts through the use of diverse forms of aggression. Groups established in this way are characterized by high consistency and tendencies to aggressive behavior and irrational actions intended to maintain consistency. Male groups will be susceptible to indoctrination that refers to differences between people and cultures, which is based on xenophobia and ethnocentrism. Men rather than women should undergo pedagogical impacts whose purpose is to eliminate and constrain these natural tendencies.

¹³ It is perfectly shown for instance by the Linda R. Caporeal’s experiment. She proved that previous communication helped to constructively solve a conflict (pp. 369-370).

Xenophobia and ethnocentrism are natural instincts of people; therefore, it should be assumed that they will occur in various communities despite undertaken educational actions, especially they may emerge in male groups, in times of conflicts and rivalry for different goods.

The same psychic mechanisms apply to behavior such as chauvinism and patriotism as well as to issues related to identifying with individuals from one's membership group and those stemming from forming an identity of a given person. While forming patriotism it is very difficult to design educational activities in such a way that it is possible to obtain optimal results in terms of patriotism if tendencies to chauvinistic behavior are not aroused at the same time. Forming patriotic attitudes on the grounds of values constituting the essence of community and cultural patriotism, so that they can serve for security of both a country and entities, is a remarkably difficult pedagogical challenge. What makes it so difficult is the fact that it is related to restraint of natural tendencies of entities and groups to identify with the closest social environment as well as it refers to the lack of acceptance for people given the reasons of others. On the other hand, diminishing or omitting ethno-cultural unity while creating patriotic attitudes may weaken natural bonds which connect a given community.

A conflict between individuals and social groups is a natural attribute of a social life. For this rationale, pedagogical activities should be focused on teaching students how to rationally find solutions to interpersonal conflicts and conflicts which occur within a particular group. Dreams of peace in the world will come true if at the level of small social groups, school classes and groups of peers, young people may effectively deal with a *dark side of their nature* and undertake activities which aim at solving emerging problems by means of e.g. negotiations based not on a fight, but on mutual understanding. However, it is vital to acquire knowledge concerning natural inclinations of people to aggression, egoism and xenophobic tendencies, but also concerning natural inborn abilities to cooperate, love and respect others. Furthermore, the repertoire regarding specified abilities is needed, e.g. efficient interpersonal communication, overcoming emotions and behavior in stressful situations. This knowledge and abilities should be acquired by children and teenagers at school, since their possession improves the quality of one's personal life and allows to optimistically perceive prospective deeds of students. Unfortunately, the process of socialization and educating prepares a young generation to fight for a position that enables the best use of benefits of a consumer society. More often than not these processes serve as an activation of natural inclinations, neglecting equally natural instincts to cooperate, love and sympathize with those who are weaker.

The human inclination both to behave aggressively and cooperate as well as to mutually trust indicates that education for safety should be specified *preparing people to fight (war) and work (peace), so as to improve and stabilize life*¹⁴. However, this way of educating does not omit the so called *Hobbes trap*¹⁵. Perhaps its consequences may be neutralized to a certain extent thanks to embodying ideas of intercultural education which form attitudes characterized by mutual understanding and trust, which can enable getting to know one another.

“Thoughts generate feelings, the latter generate rules and procedures,” prominent pedagogue Jan Fryderyk Herbart once wrote. Human history imbued with various forms of violence, including genocide shows how often and how easily this thought generates hostile emotions and aggressive behavior. Is it possible that our aspirations to build up patriotic loyalty within a national community, and then to spread it towards global cooperation between nations will turn out to be the next utopia? This idea seems to be unnatural for communities consisting of people distinguished by individual or domestic egoism, xenophobia, distrust and psychic features which facilitate hurting and killing others. Fortunately, in the human repertoire of activities there are also: cooperation, trust, helping those who are weaker, love and a plethora of socially desirable behaviors. Therefore, pedagogues have to do their best to prevent a natural instinct of love from feeling hatred to others. Additionally, loyalty towards one person should not turn into readiness to aggression against another group, and an ability to cooperate and sacrifice should not ignite any war. To a large extent this work should include teaching students how to be responsible and how to constructively solve conflicts as well as how to form values and update social rules whose purpose is to improve interpersonal relations and relations within a given group.

Conclusions

Reflections of evolutionists over the essence of human nature do not raise doubts that there is a *dark side*, dominated by egoism and a tendency to behave aggressively. A man in this perspective corresponds to the vision of human nature presented by Hobbes. He is aggressive and egoistic but rational. Aggressive

¹⁴ J. Świniarski, *Filozoficzne podstawy edukacji dla bezpieczeństwa*, Warsaw 1999, p. 125.

¹⁵ While preparing for a war we tend to intensify such behavior in neighbors. Undoubtedly, sooner or later it may lead to a confrontation. If we are completely discouraged from military preparation and engage in work for peace, we become vulnerable and moreover we are exposed to an attack of a stronger neighbor.

only when he is provoked by his human rationality. However, because of that, an egoistic and aggressive entity may also behave socially and cooperate, not necessarily compete and fight with others. Therefore, pedagogues have to do their best to prevent a natural instinct of love from feeling hatred to others. Additionally, loyalty towards one person should not turn into readiness to aggression against another group, and an ability to cooperate and sacrifice should not ignite any war. To a large extent this work should include teaching students how to be responsible and how to constructively solve conflicts as well as how to form values and update social rules whose purpose is to improve interpersonal relations and relations within a given group.

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Pedagogiczne implikacje ewolucyjnych wyjaśnień dotyczących relacji międzyludzkich i międzygrupowych

Streszczenie

Uczynienie świata bezpiecznym miejscem było celem ludzkości od niepamiętnych czasów. Przedstawiciele różnych nauk dołożyli znacznych starań, aby to marzenie się spełniło. Skonstruowali systemy teoretyczne i znaleźli praktyczne rozwiązania najważniejszych dla ludzi problemów. Niestety w wielu przypadkach badania przeprowadzone przez przedstawicieli nauk humanistycznych i społecznych okazały się bezowocne. Szczególnie istotne dla pedagogów są działania poprawiające relacje międzyludzkie, czyli próby ograniczania lub eliminowania negatywnych relacji z myślą o korzyściach płynących z relacji pozytywnych. Mimo sporych sukcesów zarówno w teorii, jak i w działaniach praktycznych, musimy nieustannie mierzyć się z koniecznością odpowiedzi na pytanie: co zrobić, aby zjednoczyć ludzi chętnych do współpracy i miłości, aby nie dopuszczać się różnorodnych form agresji i rywalizacja?

Słowa kluczowe: agresja, współpraca, edukacja, ewolucja