

CHARACTERISTICS OF CHESS AND FENCING

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Abstract:

The following article starts with the definition of “combat” after Tadeusz Kotarbiński. It presents the theoretical reflections on the subject of “general combat theory” of the second in history, official world champion in chess – Emanuel Lasker, which refers to chess and fencing. Afterwards it characterizes the goal of playing, relative and unconditional value of chess pieces, debut theory, center and end game. The next section contains the characteristic of fencing, which consists of a short historical description, the sense of this sport discipline, assets increasing health and physical efficiency and factors deciding about the final victory. In the last section of the article the authors placed a justification, why do these two sport disciplines originate from the knight ethos and based on one on one combat. Their intent is to encourage further research of the described sport disciplines.

„ The important thing in life is not victory but combat;
it is not to have vanquished but to have fought well. ”.

Pierre de Coubertin

CHARACTERISTIC OF CHESS AND THEIR DEBUT, MIDDLE AND END GAME THEORY

In 1938 *the general combat theory* was published for the first time and its author was Tadeusz Kotarbiński, who called it *negative cooperation*. From *negative cooperation*, a discipline called *agonology* was born (from Greek *agon* – struggling). *General combat theory* is one of the links of *efficient action theory*, or *prakseologii* – a science, which the mentioned Tadeusz Kotarbiński founded¹.

Tadeusz Kotarbiński defines combat as: “...every at least two subject action (with the assumption, that an assembly can be a subject), where one at least one of the subjects interferes the others action. In specific, simplest, probably most interesting case both subjects will not only impartially strive to non-conforming goals, but more than that know about that and take into account in building their course of action, the plans of the opponent. That is why this case, a case of mutually impartial and that the same time conscious disruption, I consider the most interesting, and then both sides make each other mutually in a peculiar intensive way to overcome hurdles, so indirectly – to improve their technique”². Most general recommendation of *negative cooperation* is to produce hurdles for the opponent and He sure of his own efficiency, will in return create difficult situations for both sides, to make the task harder for the opponent.

¹ R. M. Kalina, *Teoria Sportów walki*, Warszawa 2000, s. 40.

² T. Kotarbiński, *Traktat o dobrej robocie*, Wrocław 1975, s. 221.

Before Tadeusz Kotarbiński the theoretical dispute on the subject of *general combat theory* probably only Emanuel Lasker (Phd in mathematics and philosophy and the second official world champion in chess through twenty seven years) took up the subject in his eighty page book *Kampf* published in German in New York 1907³. For Emanuel Laker chess were a combat of two opposing: ideas, concepts, minds and characters. As He said by himself He tried to choose the courses of action not necessarily the best from an impartial point of view, but the most uncomfortable for the opponent⁴. Chess are a part of strategic alternate board games for two people (white start the game and the pieces are moved by one player and then his opponent, where you cannot renounce making a move with a piece). On a 64 square chess board the strategic, combinatorial, and categorical that is based on a combat of two sets of chess pieces (pawns and pieces), combinations and not on random factors lead to decisive outcomes, where a draw is also a concrete or conventional result. Each opponent has a set of pieces in two different colors. Each set consists of eight pieces: king, queen, two bishops, two knights, two rooks and eight pawns⁵.

The value of chess pieces can be absolute or relative. Assuming, that the absolute value of a pawn is 1, the absolute values of other pieces presents itself accordingly: queen – 9 (9~9,5 acc. J.G.) points, rook – 5 points, bishop, knight – 3 points. However, in chess mathematic laws are not in force, because in a certain situation on the board the relative value is more important than the absolute value⁶. This leads to the conclusion, that in certain cases chess pieces can have different values, e.g. in positions of a closed character the relative value of the knight is higher than the bishops and vice versa – in positions of an open character the relative value of the bishop is higher than the knights (all the more a par of bishops over a par of knights). Similarly, a pawn reaching the promotion square can have a much higher value than the assigned 1 point and often can surpass the value of e.g. a light piece.

If one of the players has piece of a larger point value than his opponent, it is a base to an assumption, that he has a material advantage. However not always does it mean that he will win – sometimes the so call position advantage decides. The debate about the value of a queen and bishop has no greater sense without reference to a certain situation on the chess board. Similarly in a situation where two rooks are against one bishop. Point values of specific pieces have a conventional character and depend on the specific situation on the chess board. They are however, good hints for beginner chess players, especially in deciding on a piece exchange. White pieces always begin the game; this gives them a certain initiative in the initial phase of the game. That is why the black pierces firstly strive to equalize their position and then, to achieve a slight advantage and increase it. The players take turns making moves with their pieces accordingly to the rules of movement for each piece and if it enters a square occupied by the opponents piece, that piece is taken of the board.

Check is a threat of capturing the king⁷, in other words a attack on the square on, which the king is standing (it cannot be captured in classical chess only in blitz plays], which must be staved off by the checked in the next direct move. Checkmate, meaning checking the opponents king in such a manner, that there is no defense against it, which means that the king cannot stand on any other not attacked square, it cannot be covered by another piece and it cannot capture the checking piece. This means the end of the game and the victory of the player, whose piece checked the king. A draw takes place when: the players settled on such a score, a stalemate took place on the board (one of the opponents cannot make a proper move and its king is not checked), none of the opponents possess the means to win (even

³ E. Lasker, *Kampf*, New York 1907.

⁴ W. Litmanowicz, J. Giżycki, *Szachy od A do Z*, t. 1, Warszawa 1986, s. 501-502.

⁵ W. Litmanowicz, J. Giżycki, *Szachy od A do Z*, t. 2, Warszawa 1987, s. 1183.

⁶T. Czarnecki, *ABC Szachisty*, Warszawa 1973, s. 24.

⁷ Ibidem, s.15.

theoretically), a so called dead draw, when neither of the opponents can check the other even with his best game. The game can also come to a draw (on one of the opponent's request) when: an identical position on the board takes place three times, one of the opponents is always under a perpetual check, fifty moves have been done without moving a pawn and capturing a piece⁸.

In the eighties of the XX century chess games were played on long distances using post messages to get the moves to the opponent. Such games were called correspondence chess, but their end was began by the introduction and improvement of computers, more specifically chess programs, because a possibility occurred to change the processing of a human mind to a precisely calculating chess variants electronic machine in ones homestead. That is why in the direct encounter on the board there is absolute ban of any electronic device, which could help in achieving a better result. The behavior of a player during a game is described by the FIDE codecs (Federation Internationale des Echecs) and PZSzach codecs (Polskiego Związku Szachowego): "Article concerning player's behavior:

- During the game it is prohibited for the player to use any notes, take advice and other sources of information as well as analyzing the game on another board.

- Cell phones and other electronic devices unauthorized by the arbiter, are strictly prohibited in the tournament room.

- If a cell phone of a player rings in the tournament room during a game, the player loses the match. In such a case the referee decides the point score of the opponent"⁹.

In the second half of the XX century it was possible to play chess against a computer and later also on the Internet. On August 13 2008 the first chess game between a chess player in outer space and his colleague on Earth was played. The game ended with the victory of the American astronaut Greg Chamitoffa, who was working on the International Space station at the time¹⁰.

Chess are a sport¹¹ and the International Olympic Committee added it to the circle of Olympic sport disciplines in 1999.

Alexander Kotow in his book "Play like a grandmaster" described three pillars of a chess master: position assessment, an eye sensitive to combination and the ability to analyze variants. He claimed that center play has a decisive influence in the majority of cases on the end score of a chess game¹². A different point of view was represented by the Cuban chess world champion Jose Raul Capablanca, who emphasized the role of end play similar to Pole Akib Rubinstein. Another point of view on the subject was represented by FIDE master and author of over a hundred chess books Jerzy Konikowski, who bases his trainers work on developing a good debut repertoire. He justifies this on the example of building a house: "First of all a solid foundation is built, so that the house does not collapse, afterwards the floors are built and at the end a roof"¹³.

As it was mentioned previously, a chess game can be divided into three phases: debut (opening), middle game, end game (commonly called ending). The game begins when the player with the black pieces starts the clock and the first move of the white pieces, but at the same time defining, when the opening ends and the middle game starts or when the middle game ends and the next transition to the end game occurs, occasionally presents severe difficulties. The end of the game is precisely described in the *Chess codex*.

⁸ T. Czarnecki, S. Gawlikowski, S. Wojnarowicz, *Kodeks szachowy*, Warszawa 1952, s. 24-25.

⁹ A. Filipowicz, *Dzieje Polskiego Związku Szachowego do 1956 roku*, Warszawa 2007, s.12.

¹⁰ "Houston, we have checkmate" from the NASA ISS report of August 13 2008.

¹¹ J. Gajewski, J. Konikowski, *Królowe 64 pól*, Sandomierz 2012.

¹² A. Kotow, *Graj jak arcymistrz*, Warszawa 2002, s. 9-10.

¹³ J. Gajewski, J. Konikowski, *Królowe 64 pól*, Sandomierz 2012, s. 167.

The theory of the chess opening uses the traditional nomenclature: *Italian game*, *French defense*, *King's gambit*, and consists of: combat for the center squares of the chess board and gaining space, harmonic piece exit and placing them on squares allowing the possibility to attack and defend, forming a favorable chain of pawns and securing your own king (most commonly by castling). Stanisław Gawlikowski describes the goals of the debut like this: *"The basic rule is to as quick and deliberate mobilization of pieces as possible, combined with securing, usually by castling, your own king and building a strong pawn position, best at the center of the board. It is necessary to rethink each move with a pawn, because a piece placed on the wrong square or under threat can be retreated on a different square, but a move with a pawn, which cannot return to its previous position – changes the situation once and for all. In principle repeating a move with one piece in the debut is not good, because it delays mobilization. A healthy played debut has big and sometimes decisive meaning for the further course of the game. An unprepared attack usually ends with a fiasco, a prepared attack with strong foundations – almost every time leads to victory"*¹⁴.

Summarizing the theory of chess openings, which are the initial phase of a game of chess, also called the debut it can be acknowledged in simplification, that the opening is the first couple to twenty moves in the game. A vast theory on the subject of chess openings exists. It consists of issues like: controlling the center of the field, quick and coherent piece mobilization, developing a proper structure of pawns and ensuring the kings security. The debut traditionally is divided into: open – starting from the move of the white pieces with a pawn to square "e4" and the black respond with a symmetrical move with a pawn to square "e5"; half open – starting from the move of the white pieces with a pawn to square "e4" and the black respond with any other move except a move with a pawn to square "e5"; closed – white start with a different move than with a pawn to square "e4"¹⁵. The theory of openings is based on the experience of many generations of chess players and is an outcome of conducted analysis of millions of chess games. The most eminent grand masters know the chosen openings with their secondary variants even up to thirty moves. This does not mean that it is possible to gain such abilities by simply remembering a sequence of moves, because the number of variant is too large. A master's fluency in playing openings requires years of long studies and gaining experience in games. The theory of chess opening has a five hundred year long tradition. The first chess handbooks written by Luis Lucena and Pedro Damiana from the XV and XVI century contained descriptions of openings used at that time and basic hints concerning playing the initial phase of a game. Manuscripts of Gioachina Greca from the beginning of the XVII century are a broad collection of various openings, which today would be called a review of debut traps. To the end of the XIX century mastery in chess was mainly comprehended as an ability to conduct a swift combination attack, which was reflected in the way the debut was played. In the second half of the XX century an increasing number of chess publications and played games in more and more numerous chess tournaments caused a significant increase in the number of deeply analyzed variants. Contemporary polish chess players do not rely solely on their own analyses and experience, but also on the publications of: Piotr Kaczorowski, Anatol Łokasto, *Współczesna encyclopedia debiutów*; Mark Dworecki, Artur Jusupow, *Sekrety debiutowego przygotowania*; Jerzy Konikowski, *Gram 1.e4! Kompletny repertuar debiutowy białymi*; Jerzy Konikowski, Jan Piński, *Szybki kurs debiutów*; Jerzy Konikowski, *Szybki kurs debiutów w praktyce*. Thoroughly comprehending all of this knowledge by one man became impossible. Today only the most eminent chess virtuosos are capable of compete with computer programs, which utilize the knowledge about openings written in books by generations, copied to digital data. In tournament practice the first moves in a game are usually done quiet fast. Chess players have a prepared set of

¹⁴ S. Gawlikowski, *Teoria debiutów*, Kraków 1947, s. 9.

¹⁵ J. Konikowski, J. Piński, *Szybki kurs debiutów*, Warszawa 2010, s 3-27.

openings and variants, in which they feel fluent and strive to steer the course of the game in a direction well known to them. A set of openings, which chess players use most frequently are called their debut repertoire. Masters on a higher level, knowing the repertoire of their opponent, prepare specific variants against specific opponents. Sometimes they try to surprise their opponent with moves, which previously were not used in play, thoroughly analyzed at their fireside. Such new move, which opens new possibilities in a known opening, is called a *novelty*. Experienced masters have at their disposal a broad variety of debut traps in their repertoire, effective against weaker players. Despite a broad variety of ways to play an opening the main goal of the initial phase of the game stays the same for a various variants. Obviously the basic goal, similarly as in every phase of the game, is not letting the opponent to check our king and avoid material losses. However, assuming that chess players do not make basic errors resulting in a swift ending of the game, four fundamental goals can be specified, which can be accomplished by carrying out in the opening:

1. Swift mobilization of pieces

In the initial phase the pieces are hidden behind a line of pawns and have a very limited possibility to act. Fundamentally all pieces are relatively stronger, when they can operate in the center of the chess board that is why in the initial phase it is necessary to bring them forth as quickly as possible from the first (eight) line. This is called piece development. Firstly light pieces join combat, meaning the knights and bishops. Knights usually are developed to squares f3 and c3 (f6 and c6), rarely to d2 and e2 (d7 and e7). To free the bishops a move with the pawns e and d must be done. Alternatively bishops' can be developed on the main diagonals, e.g. after a move with pawn g3, the white square bishop captures square g2. This maneuver is called the fianchetto.

The queen rarely enters the center in the debut, because as the most valuable piece it is at the threat of being captured by light pieces and pawns of the opponent. Usually the queen takes the position in the second (seventh) line. After castling the rooks support each other and most favorably are to be placed in open or half open columns (such, which do not have pawns in them or have only the pawns of the opponent), eventually in these columns, which the chess player plans to open. The quicker all of the pieces are developed, the more significant force they will represent, therefore in the debut repeated moves with the same piece are avoided.

2. Control of the center of the board ¹⁶

From the first moves in the game a fierce battle goes on between the two sides, over the center of the chess board. An advantage in the center of the board allows placing your pieces there or moving freely on the whole chess board. Placing your own pawns in the center of the board blocks the opponents forces and limits the mobility of his pieces, therefore in the debut it is tried to place the pawns on e4 and d4 (black pieces pawns on e5 and d5) and supporting them with other pieces, so that they can hold their positions. It is a goal of the so called classic openings.

Alternatively you can allow the opponent to take the center squares and attack them with pieces to break the center of the opponent and then take control of it with your own pawns. This concept was proposed by hipermodernists. It leads to modern openings, such as Alechins defense: 1.e4 Sf6 2.e5 Sd5 3.d4 d6 4.c4 Sb6 5.f4 – a diagram besides. The white have temporally a major advantage in the center, however black hope to break the pawn structure in the center and use the exposed position of the white pawns.

3. Security of the king

Initially the position of the king is in the center of the first (eight) line is exposed to the opponents attacks, especially after moving pawns d and e to fight in the center. In the majority

¹⁶T. Czarnecki, *ABC Szachisty*, Warszawa 1973, s. 43-46.

of openings it is tried to do a castling, which places the king in a more secure place, hidden on the wing with behind the pawns and defended by a rook (sometimes also by a bishop). The castling has another advantage – it allows a quick development of the rook and combining of the rooks in the first (eight) line.

4. The correct pawn structure ¹⁷

The previously described three goals of the debut are elementary foundation of the knowledge about chess openings. Chess players with a position style of play expose the fourth aspect of an opening – preserving the correct structure of ones pawns. In the debut one should avoid the creation of position weaknesses such as two pawns in one column, isolated pawns (such that do not have friendly pawns in neighboring columns) or pawns that stayed behind (solitary pawns, whose neighbors moved too far forward). Not always must it be a weakness. In some debuts intentionally the pawns are doubled to open the line of the rook. Sometimes one should bot capture “free” pawns, because of opening the line.

Many opening are based on the idea of an early weakening of opponents the pawn structure. For example, in the Winawer variant in the French defense (1.e4 e6 2.d4 d5 3.Sc3 Gb4 4.e5 c5 5.a3 Gxc3 6.b:c3 –diagram besides) the black willingly exchange their bishop for a knight (a par of bishops by a balanced material situation give a certain advantage in the end game) and give white a bit more space in exchange for creating significant weaknesses in their pawn structure.

The traditional classification of chess openings distinguishes open, half open and closed debuts depending on the first move¹⁸. The names of the different types of debuts are somewhat misleading, because they suggest, that in some debuts the positioning becomes open very quickly, in others it stays closed for a long time (the open position is characteristic for its lack of pawns in the center and open columns for attack). Inasmuch as this statement is true, it does not fit with the traditional classification of openings. In many variants of open debuts it does not come to a quick opening of positions. And vice versa, some of the closed debuts characterize themselves with a quick position opening. For example, in the Scandinavian defense beginning from a move 1. E4 d4 ¹⁹, which nominally belongs to the half open debuts, black from the first move strive to open the position. Therefore debut names should be treated conventional. Because of the increasing number of known variants the traditional classification of openings are not sufficient to precisely systemize them. Encyclopedia of chess openings introduced another, more precise way of coding the types of debuts. The difficulty in coding the chess openings lies in, that sometimes the same position on the chess board can occur after a different sequence of moves. Such a situation is called *transposition of openings*.

The end chess game characterizes itself above all with the increase of the value of each pawn, which has an easier way to the promotion square and the king, transformed from a hidden and defended piece into an attacking on the whole width and length of the chess board, aggressor. In the endings the smallest material advantage has significant meaning. We distinguish *elementary* endings – such in which the stronger side can checkmate in a short period of time, a mostly solitary king of the weaker side, thanks to possessing a significant material advantage. We distinguish checking with: queen and rook, two rook with or without the help of a king; queen and king; rook and king; a par of bishops and a king; a bishop, knight and king. The second types are *complex* endings, where a check cannot be instant because of an even material force on the board. The is why each side strives to gain a sufficient advantage, what leads to a transition to a *elementary* ending. Complex ending can be divided into: pawn; knight; bishop; bishop against knight; light piece; rook; queen; heavy

¹⁷ Ibidem, s. 44,54.

¹⁸ S. Kasprzak, *Wkrainie szachów*, Radom 1990, s. 3.

¹⁹Z. Szulce, *Otwarcia szachowe*, Warszawa 1955, s.190.

piece; rook against light piece; pieces against pawns; queen against rook; queen against light piece and a rook; which was presented by: Stanisław Gawlikowski in his two book about piece-pawn and rook endings, Zygmunt Szulce in the book *Końcowa gra szachowa. Króle i piony* and Jerzy Konikowski in his numerous contemporary books treating about the subject of the end phase of the game.

There are many books dedicated to well analyzed debuts and a lot of books describing the end game, but a serious deficit of analysis and studies about the key elements of the game. The author of this paper is leaning towards the view, that the opening is a mobilization of forces, middle game contains the decisive battle and the ending is the fulfilment of the advantage of one side. Nonetheless it is obvious, that sometimes the settling comes after a few moves, so called *miniatures* as inter alia Jerzy Konikowski²⁰ and after very long games lasting one hundred sixty eight moves (1907 in Karlsbad between Wolf and the defeated Duras²¹).

The middle game distinguishes itself from the other phases of the game with a more complexed theory, which is described belowe after Aleksander Kotow²².

Assumptions of the middle game theory:

1. In chess only the attacker wins.
2. The possibility to attack in at the disposal of that player, which has a better position.
3. The side that has an advantage has not only the right, but responsibility to attack, otherwise it risks losing the advantage.
4. The defender must be ready to defend and to give in.
5. The way to attack in chess is twofold, combination and strategic.
6. The attack must be carried out against the weakest spot of the opponent.

But to state, that a position is better or worse, what conditions the plan of an attack or defense, a chess player must make an analysis and judge the aforementioned position. When conducting an analysis and judging the position it is helpful to take in to consideration such factors (although an absolute lack of unanimity, to these factors between chess theoreticians as:

Constant advantages:

1. Material advantage.
2. Bad position of the opponent's king.
3. Transitive pawns.
4. Weak pawns (opponents).
5. Weak squares (opponents).
6. Weak color complex (opponent).
7. Smaller number of pawn islands.
8. Strong pawn center.
9. Two bishop advantage.
10. Column control.
11. Diagonal control.
12. Horizontal line control.

Temporary advantages:

1. Bad position of opponents pieces.
2. Lack of harmony in the opponent's piece placement.
3. Development advantage.
4. Pressure of piece in the center.

²⁰ J. Konikowski, *Szybkie zwycięstwa*, Warszawa 2013.

²¹ W. Litmanowicz, J. Giżycki, *Szachy od A do Z*, t. 2, Warszawa 1987, s. 759.

²² A. Kotow, *Graj jak arcymistrz*, Warszawa 2002, s. 22-33.

5. Spacious advantage.

The first official world master in the years 1886-1894 - Wilhelm Steinitz²³ presented his own school, characterized by the art of defense, against the old combination school, which existed from ages and characterized itself with romantic attacks intertwined with sacrificing any amount of material, with the only goal to give an effective checkmate²⁴. Wilhelm Steinitz also presented the view, that the condition to win is to have an advantage and an advantage can be one big or a couple small ones. To not lose the advantage one must cumulate small advantages and try to turn temporary to constant advantages.

The first official world master, as the first formulated the following rules in the position game and introduced them into the tournament practice and matches:

1. The right to attack is of that side, which has a position advantage, it is not only a right, but also a responsibility, otherwise there is a risk of losing the advantage. The attack should be carried out against the weakest position in the opponent's camp.
2. The defending side must be ready to defend itself and to submit.
3. In the case of an equal position of both sides carry out maneuvers, trying to pull the balance each to its side. By a correct game from both sides one equal position leads to another equal position.
4. An advantage can consist of a large advantage only in one form or element, or of a couple small advantages. The objective of a player is to cumulate small advantages and try to turn them into a constant advantage.

The rules of Steinitz can be treated as a sort of scheme of thinking, but not treat it as a dogma, because every position requires an individual assessment, which considers the dynamic factors. Rarely all of the seventeen position elements mentioned previously are present in one moment, rather five to seven. That is why the elements were grouped into the ones that in practice of the game are the most useful and if others would exist one should add:

1. Weak squares and pawns.
2. Open lines.
3. Center and space.
4. Position of pieces (kings position, development, harmony of the game and wrong placement of pieces)²⁵.

When a chess player plays a theoretical debut or brings forward and mobilizes his pieces, he ends the debut and begins the middle game; he conducts the first general assessment of the situation. The second comes by transition from middle game to end game or usually after ending a complicated combination. After ending the debut a chess player dedicates his time for a general assessment, to tell who "ranks better", because according to Steinitz this decides about attacking and defending. Next he looks for weak spots in the opponent's camp with the goal to attack it and analyzes and plans a couple of moves in chosen variants²⁶. The analysis in chess consists of an inner dialog of the chess player with himself, e.g. "I'll play on d5 to gain space, and He can block it with his move of a pawn to d6. But if He does not move a pawn to d6 than what other sensible move does He have? Ahh so he can capture it with a pawn on c6. If he moves a pawn on d6 than what will I do? If I capture him with a pawn from c6, than what?" That is how the inside of every chess player on a certain level of constructing a plan and rethinking the subsequent moves, looks like. Time in chess is of significant importance, which can be understood twofold, but not identical. In the first case time is understood in chess as a so called pace, so if we make unnecessary moves or repeat moves in the debut with one piece, than we say that we are losing time. The second

²³ S. Gawlikowski, *Walka o tron szachowy*, Warszawa 1976, s. 52.

²⁴ G. Kasparow, *Moi wielcy poprzednicy*, t. 1, Warszawa 2006, s. 72.

²⁵ A. Kotow, *Graj jak arcymistrz*, Warszawa 2002, s. 26.

²⁶ T. Czarnecki, *ABC Szachisty*, Warszawa 1973, s. 173.

reference is connected to the chess clock counting down the seconds, minutes, hours, for a player when he is analyzing. The chess clock consists of two clocks in one housing and connected with each other, that when one measures the time for white, the black's is stopped and vice versa. Both clocks can be turned off, but there is no possibility for them to work simultaneously. Relating to the second aspect of time in chess the chess players divide time into: "my time" and "his time" and work according to the rule, that by a turned of clock they scrupulously calculate specific variants and on the time of the opponent consider the general aspects of position that is the whole assessment and planning.

CHARACTERISTIC OF FENCING

"The high value of fencing as a sport consist on that it involves the whole physical and psychological attributes of a human being. Here speed combats speed, constitution with constitution, technique against technique, thought against thought, will against will. The leg work of a fencer is as fast as a sprinter, the hand works as by a tennis player, precision and delicacy of leading the weapon, body movement like by an acrobat, concentration of attention and nerve tension like by a driver, considering the combinations a fencer is equivalent to a chess player²⁷.

Under the name of combat sports we find sport disciplines, which sport essence is concentrated around a direct rivalry between two sportsmen. This criterion can be through a mutual agreement called pragmatic (based on a logical relationship between things). The next very essential criteria in identifying martial arts are utilitarian and mental criteria.

As it was described previously, the creator of the general combat theory called agonology was T. Kotarbiński, who used interchangeably the concept of negative cooperation. From the many advantages of agonology it is worth underscoring that its concept apparatus perfectly serves ascertaining on the boundaries of different knowledge disciplines. According to the author "*...combat is a form of action, where people make it hard for other people to achieve a goal, increasing the pressure of forced situations, critical situations, situations with only one possibility and force, therefore participants of negative cooperation to finding new ways of getting things done*". The main element distinguishing combat sports e.g. fencing from other martial arts e.g. karate is rivalry. Experience shows that rivalry within martial arts is conducted, but the matter is not direct combat, but more often training based on self-improvement. It is acknowledged that fencing is a sport and more or less a martial art²⁸. The origin of combat sports reaches to the military traditions and defense practices. Fencing that has an Olympic sport status is assumed as a frame of reference, in which direct combat of two opponents is based on certain actions with a fencing weapon. The regulation criteria of a fencing bout consist of: a bout conducted on the strip, in special clothing, with a distinguished weapon foil, epee, saber, the bout is limited by the time of the rounds with breaks and conducting a specific number of thrusts and cuts with the weapon.

An important change in the long years of fencing came by the end of the of the XIX century with the development of the rivalry trend. From a traditionally styled form of bouts, fencing changed into a modern, versatile and utilitarian sport. In Europe societies, clubs and federations were formed, propagating this form of activity. At the end of the XIX century this till now men's sport was also practiced by women. Women tournaments were organized, in which except of hit accuracy also style and grace of motion was judged. In handbooks we can read "*Fencing for women is different from fencing for men, as in the second the most important is combat and victory, always according to established regulations, in women bouts esthetic should be considered equal and in beginning even most important*"²⁹. Fencing is

²⁷ Z. Ozoray-Schenker, *Szermierka na szable*, Warszawa 1962, s. 62.

²⁸ R. M. Kalina, *Teoria Sportów walki*, Warszawa 2000, s. 20.

²⁹ T. Socha [red.], *Współczesne problemy badawcze w szermierce*, Katowice 2009, s.153.

based on preparation and leading the bout of two opponents equipped in sport weapons accordingly to established regulations. The goal of this rivalry is to hit the opponent as many times as possible within the given time, trying to avoid being hit at all or being hit a smaller number of times. Today we can isolate: sport, recreational, historical, stage fencing, which is subordinate to theater and nation fencing systems e.g. kendo in Japan³⁰.

It is a sport highly swift, it improves sense-motion habits, strengthens and improves body fitness of those, who practice it and improves health and body efficiency. It develops orientation, ability to concentrate, the skill to recognize your opponents intentions. It improves composure, concentration, attention, motivation and the will to win. Bouts with white arms are a wrestle of two opposite tactical systems. Victory in the bout is decided by an early and accurate recognition of the opponent (strengths and weaknesses of his combat style), dictate the opponent your own intents, and utilize the appropriate combat strategy³¹.

In a modern very dynamic fencing bout the general physical fitness, efficiency and endurance are necessary. Speed of movement combined with the speed of orientation and reaction are the skills of first-rate meaning. Subtly efficient way to play out a fencing bout are a proper, technically efficient body and weapon moves, by which only the necessary muscles take part in with the laxity of antagonistic muscles. Increasing the antagonistic muscle tension increases the overcome resistance and largely decreases to the movement speed of a fencer. A fencing bout, in which a variety of techniques can be observed, innovative surprising and brilliant tactical ideas gain features of art, not losing the sport features, the dramatic power and suspense can give the interested viewers emotions. During fencing bouts, both physical and intellectual features of an opponent their will to fight, personality, character and temperament, surface. The basic way of teaching consists of fencing lessons, in which attention is focused on the correctness of movement, exemplary technique and operational thinking. A fencing master with his explanations, words, pose, and movement teaches contestants, handing over information and skills in a practical way. Fencers perfect their technical and tactical abilities, motion rhythm, feel of the element of surprise, chose of action, guessing the opponents intention, speed of concentration and perceptiveness. During individual lessons according to the theory of teaching the fencing master decides about the course of learning e.g.: calmly and systematically in optimal conditions with the use of an example presentation and vivid verbal description. Practically utilizing learning from easy to hard, simple to complex, slow to fast, known to unknown³². Lessons should be interesting, colorful, divers, variable with the usage of the right exercise and methods of carrying them out. In the long term learning we can specify: checking lessons in the initial learning phase, learning lessons to master new skills, lessons perfecting fencing actions, lessons combining repeating, strengthening and perfecting. Additionally warm up lessons before taking part in tournaments and extra tuition for the other side. For coaches methodical and showcase lessons. Based on the lessons content utilized in these lessons we can separate a technical, technical-tactical and tactical course. During the lesson offensive, defensive and offensive-defensive actions are being perfected. Planed actions are being realized in the first intention and the unforeseen and of unknown ending in the second, with actions of an intention change. The teacher takes the role of the opponent and helps to hit. In the leg work exercises attention is paid to doing the moves properly, developing strength, force, speed, endurance, develops motion coordination – combining the moves of an armed hand with leg motion. In the psychological sphere concentration, selectivity, ability to divide and change one's attention, accuracy and speed of perceive is developed.

³⁰ G. Szajna, *Charakterystyka sportu szermierczego*, Rzeszów 2001, Ido Ruch dla Kultury, t. 2, s. 55-62.

³¹ Z. Czajkowski, *Teoria, praktyka i metodyka szermierki wybrane zagadnienia*, Katowice 2001. s. 95.

³² Z. Czajkowski Z., *Taktyka i psychologia w szermierce*, Katowice 1984, s. 155.

During collective lessons a variety of motion games, fitness runs, coordination games with a tennis ball are being utilized. A diversity to the exercise is the change of the exercises conditions e.g. with the utilization of benches, mattress, gymnastic ladders. Today in training, the fencing lesson is the most important element to perfect high fitness and practical abilities.

Women and men combat in 3 weapons – foil, epee, and sabre – according to FIE International Fencing Federation. The goal of the bout – hit not being hit. In fencing a draw is impossible and the tournament system consists firstly of groups and then a trophy system with no repechage. In fencing clubs both genders train together. The ability to transfer the features and habits, information and skills from training to tournament bouts, surprise, orientation in combat and operational thinking, versatile technique synthesis connection in a whole, fitness features, tactical skills, psychological process and features, choice of actions with the use of practical tactical skills, the skills to manage thought process in combat and emotional states, immunity to threat states, conquering fear of combat, skills to adjust to opponent e.g. left handed or right handed is very important for a fencer. Rivalry in fencing is in gender groups, which are divided into age groups: cub – up to nine years, colt – up to twelve years, younger junior – up to seventeen years, junior – up to twenty years, youth – up to twenty three years, senior – from twenty four years and veteran from seventy.

The elements and tasks in an fencing training are: fitness and endurance preparation, technical and tactical preparation, psychological preparation – perfecting of concentration process, ability to divide and change one's attention, perceiving, development of operational thinking and memory, speed of decision making and decision changing, immunity to though and threat situations, shaping motivation, initiative, diligence, independence, composition and accuracy of action and developing of intellectual features, verbalization, knowledge of conventional rules and referee aspects in fencing bouts. Teaching and perfection of feel-motion habits is carried out in for stages:

Familiarize with action, teaching habits, its revision – habit automation and perfection³³. Possible pleasures coming from training fencing:

- A. Spiritual, quasi-religious (in old times taking a stand as the result from adoption with given art of battle sublimation of antagonistic).
- B. Intellectual (related with gaining knowledge from a martial art, which use weapons, tactics, also nomenclature, terminology; from ennoblement relate to behavior of former élite, senses of referring to traditions, ideology, history or romantic mythology).
- C. Narcissistic, (stemming from ease of weapon maneuvering , besting ones motions, learning or perfecting ones abilities, happiness from doing the actions accurately, the feeling of beauty and effectiveness of one's motion, (not only from the bodies appearance as in bodybuilding) and curtain auto-expression of oneself, with expressing one's personality or temperament, as well as presenting oneself e.g. in great armor – such pleasures probably were connected with training in fencing armor in the XIX century, when some currents concentrated on elegance and motion beauty).
- D. Atavistic (stemming from extreme experiences and emotions typical for antagonistic battles, the illusion of surviving a game of life and death, pleasures of contest are present here to and conquering (winning), though in formal fencing they have a rather marginal character – they are not characteristic for fencing and are not achievable directly but by a system of tournaments i.e. arranging, judges, pointing; the pleasure of conquering (winning) is more important for people with a " warrior " personality than for "technique champion " personality; however, victory (as a public fact) often supplies fame and related to it pleasures)³⁴.

³³ Z. Czajkowski, *Nauczanie techniki sportowej*, Warszawa 2004, s. 45.

³⁴ P. Skupniewicz P., *O przyjemnościach uprawiania szermierki*, [w:] Grad J., Mamzer H., *Kultura przyjemności. Rozważania kulturoznawcze*, Poznań 2005,

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