

## COMPARATIVE STUDY OF ICE HOCKEY PLAYERS, FROM RUSSIAN AND ROMANIAN TEAMS

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### Abstract

In 1954, at the first participation in a World Ice hockey championship, the representative team of the Soviet Union becomes the world champion. That year, the Soviet domination begins in international hockey in the second half of the twentieth century. One of the factors that determined the success of these teams is the scientific basis on which the training programs were founded and which differentiated and customized the Soviet athletes and teams. The laboratory study of the factors influencing the sports performance, the morpho-functional characteristics, the study of the game techniques of major teams determined the elaboration of innovative training programs, adapted to the environmental conditions and to athletes, become, in the light of the athletes' success, the object of study and reference for coaches in the rest of the world.

**Keywords:** creativity, tactics, strategy, differentiation

### 1. Introduction

Achieving performance in any field of activity is determined by various factors that are favorable, which include precursors (such as native abilities, body conformation, mental and psychomotor skills), the environment where activities take place and individual or team effort. In search of determinants of sports success, Joyce and Lewindon show that "an elite athlete must possess a combination of technical and tactical skills, physical capacities and a large reserve of psychological and emotional strength, in a variable structure, determined by social culture. (Joyce and Lewindon, 2014, p. ix)

In the history of ice hockey, the middle of the twentieth century is marked by the newly established Soviet Union team, which has become a champion ever since its first participation in world competitions: 1954 World Champion and Olympic Champion in 1956, the team that was one of the most powerful international teams until 1990, when the Soviet Union was dissolved, depriving the Canadian team from world supremacy.

Romania, a member of the International Ice hockey Federation since 1924 (Crihan, 1982, pag. 9), participates for the first time in an international competition in 1931, at the 5th edition of the World Ice hockey championship in Krynica, Poland, where it loses all matches, including the match with the experienced United States team by a historical score of 0-15 and ranked the last out of ten participating teams. Romania's ice hockey team participated in four editions of the Winter Olympics, the best ranking being in Innsbruck, 7th out of 12 teams and winning the second group (Official Report, 1976, p. 145), in the same year being first in group B at the world Championship, obtaining a gold medal and advancing in the first group, in which it played in the 1977 season.

In November 2017, according to the International Ice Hockey Federation, in Romania 1282 athletes are registered, representing 5.93% of the total population (220 seniors, 953 juniors, 109 seniors) and 9 ice skating rinks (3 outdoors, 6 covered), and in Russia 105059 players are registered, representing 7.38% of the total population (14241 seniors, 88442 juniors, 2376 seniors) and 3143 skating rinks are equipped (2583 outdoors, 560 covered). At the end of the 2016-2017 season, the senior team of Romania's Hockey Nationale was ranked 29th of 48 in the world rankings, and that of the seniors ranked 36th of 38 teams, while Russia's teams are ranked at the top: the senior men's team in 2nd place and the senior women's team in fourth place.

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The **purpose** of this research is to identify and highlight the similarities and differences between the game style of the Romanian ice hockey team and the Russian team, the one that had a unique ascent in the history of this sport.

## 2. Research Methods

The study of specialized literature and the pedagogical observation were the methods we used in this study.

## 3. Results and Discussions

It is already known that one of the factors which transformed the former Soviet Union into a dominant nation in world sport is the scientific basis on which training programs were based and which differentiated and customized athletes and teams. Bourne states that "coaches have spent hundreds of hours learning about the general theory of sport and the fundamentals of sports training, and scientists there have worked in tandem with coaches and athletes to put their research into practice." (Bourne, 2008, p. 358)

The present Russia is the heir to a different and innovative sports training system for the hockey players, the Soviet one. Coaches from the former socialist countries would work together with researchers, who, instead of only looking at physiological responses during the physical programs, had a holistic approach. As the discoveries made in the research laboratories in the Eastern Bloc became known, they determined the revolution of sports training around the world, individualizing and consolidating a school of athletic training. Technical training is a factor of success in sports training, specific to the former Eastern Bloc countries, supported by the identification of basic, core technique, which progressively built superior techniques. (Mackenzie, 2004)

Unlike the Canadian hockey, considered by Europeans as extremely brutal, in the Soviet hockey, there is much less violence. Tarasov incorporated elements from the Russian football, ballet and science, with the team's cohesion as the main quality demanded by Russian coaches, developed through training. Anatoli Tarasov sought to achieve harmony, the effort of the players being a means to attain perfection of the gesture, through endless repetition. The notion of "block of five" was thus cultivated, making it similar to the five fingers of the hand, aiming at collective progress. All players of the same line should possess similar qualities, they must play at the same pace and therefore skate at comparable speeds, including defenders.

Ice hockey is a sport played at high speed, with tremendous intensity, in which the collaboration of teammates is compulsory for the success of the game, any personality surplus or selfishness resulting in individual actions doomed to failure, both in attack and in defense. During the game, on the field, there are three forwards, two fullbacks and one goalie. Exchanges are very short, characterized by accelerations in two seconds and decelerations in approx. 2.1 seconds, players running, depending on their position, up to five kilometers each game. In general, the fullbacks actually play about 50% of the match in time span and the attackers only approx. 35%. (Donskov, 2016, p. 3) Acting in synergy, players valorize their individual abilities by engaging in team play situations, generating both team and individual success, teamwork, as an "absolutely essential to success" factor, being recommended since 1911 by Claude H. Miller. (Miller, 1911; Teodorescu, 1972, p. 115; Kovka, 1975, p. 8; Bertagna, 2016, p. 89)

In the *Ice Hockey and Ice Polo Guide*, in 1898, features of ice hockey players, that are still valid today were presented: "An ice hockey player must be very energetic while standing, fast-handed, agile with his eyes and with all its capacities on the alert "to be" an expert on skates [...] for easy turns and sudden stops, "they can" start quickly and play fast and slow, thereby avoiding to be put to the ground by an opponent by pushing, locking or interfering, " to be able to twist and avoid fast obstacles, to overcome an opponent who blocks the path to the gate ", to be an athlete" with exceptional endurance and to have much strength of character and boldness. " (Tuthill, 1898, p. 9-11)

**Forwards** are the most mobile players on the ground, being subjected to a very large anaerobic lactic effort, which is why an exchange lasts a maximum of 90 seconds of actual play. They must be extremely precise and swift in passing the puck, constantly seeking to capture the opponent. The success of the game is determined by the players' ability to capture their opponents and exploit the little defensive breaches. The forward center must be very fast, with a great game capacity and an overview of the entire game, so as to decide in fractions of a second which are the effective actions at that time of the game, moment which in reality is a continuous time. He is the team's coordinator, with the task of synchronizing his attack actions, with a highly developed sense of responsibility and superior technical and tactical training. Alexandru Teodorescu considers that "the profile of this type of player imposes a series of qualities that, taken separately, do not represent high level values, but which put together show a special creative force, which finds its most favorable circumstance in the complex situations of the game". (Teodorescu, 1972, p. 114) The distributive attention and peripheral visual acuity help to collect information from the sources that surround him so that he can be in the place where he anticipates the presence of the puck, to pass the puck at the best possible place at that moment, without putting his teammates in offside. The extremes are, in the opinion of Vladimir Kosta, the fastest and most skilled skaters on the ground. They are players who master the best

feints and hand-to-hand fighting with opponents as well as all the procedures to shoot at the gate, often being in very good positions to score. (Teodorescu, 1972, p. 114-117; Kosta, 1975, p. 78-82; Gliga, 2010; Bertagna, 2016, p. 89)

**Fullbacks** are taller and heavier than the forwards, representing, according to Jack Parker (Bertagna, 2016, p. 78), "the cornerstone of a successful team". They also need to be strong and agile at the same time, with good coordination of movements and the ability to skate both forwards and backwards with high travel speed, especially on short distances. Being responsible for protecting the gate and blocking the opponents' attacks, the fullbacks must have an appropriate weight and a special physical strength, which allows them to stop the opponent's attack and be able to win in direct combat with him. They have to be skilled in the game with the club, being able to start an offensive action, sending the puck to a teammate who can control it in the direction of the opponent. The fullbacks collaborate with the goalkeeper to prevent the opponent from scoring, being well prepared mentally, calm, showing self-restraint to maintain concentration. Given that there is a need to remain in the field longer periods of time in the hardest situations, the fullbacks must have a general endurance, otherwise specific to all hockey players. (Teodorescu, 1972, p. 117-118; Kosta, 1975, p. 88; Gliga, 2010; Bertagna, 2016, p. 78)

**The goalkeeper** stays on ice for the entire game. Alexandru Teodorescu considers that this is the most important player. The goalkeeper's mistakes are usually more obvious and result in the scoring of goals by the opponents. In addition to the special qualities in terms of reaction speed, skating technique, skill and precision of movements, the goalkeepers must also have a great deal of self-confidence and exceptional concentration. In order to achieve his highest level of competence and performance, a goalkeeper must understand the game and the situations in the field, what opponents do, with or without the puck and anticipate their actions, where they are placed and what his teammates do. By his role in the coordination of defence, he can be considered, to some extent, the replacement of the coach on ice. (Teodorescu, 1972, p. 120-121; Kosta, 1975, p. 62; Crihan, 1982 p. 239; Gliga, 2010; Bertagna, 2016, p. 104)

In 1980, the Romanian Ice Hockey Federation, analyzing the anthropomorphic characteristics of the players from the Romanian Olympic group in 1980, compared them to the USSR, the world champion of 1979 and to the second team in the same year, Czechoslovakia ( Table No. 1), developed a *unified method for training and game*, by which it also set selection criteria for ice hockey players.

Table No. 1. Average values of hockey players in 1979-1980 (unitary method, 1980, p. 1-2)

Positions	Age			Height			Weight		
	ROU	URS	CZE	ROU	URS	CZE	ROU	URS	CZE
2 goalkeepers	26	25,5	29	175,5	176,5	178	73,5	80	83,5
7 fullbacks	24	25,8	27,3	180,6	180,6	180	82,7	88	82
12 forwards	25	27,8	25,1	174,7	179,4	179,8	78,4	83,9	82

NOTE: An international abbreviation was used: ROU-Romania; URS-Union of Soviet Socialist Republics; CZE-Czechoslovakia

In 1981, S.Y. Deryabin, from the Central Institute of Physical Culture, presented to coaches the fact that the Soviet juniors should put emphasis on "... speed, acceleration and extremely fast direction change, on the ability to drive the puck and especially on endurance, specific to hockey; In the Soviet hockey, everything builds on sudden sprints and speed returns. " (Blatherwick, 1994, p. 10)

Platonov notes that "the level of performance in today's sport is so high that, in order to overcome it, the athlete must possess some rare morpho-functional data, a unique blend of skills and driving qualities and mental abilities." (Platonov, 2015, p. 279)

Researchers are still trying to identify the factors of success in sports among the morpho-functional characteristics. Thus, through a retrospective study with data for three consecutive years (2001-2003), using the values obtained at the Combine test and the performance of the athletes, Jason D. Vescovi and colleagues (2006) sought to identify through the analysis of covariation, the extent to which sports performance can be foreseen and at what stage of the player's development, without reaching relevant conclusions on the accurate prediction of performance capability. (Vescovi, 2006) Through a study conducted in 2009 and 2010, on 23 players, participating in the selection for the United States representative team at the Olympics in Vancouver, Lynda B. Ransdell and Teena Murray identified a set of values of the anthropomorphic parameter of high-performance hockey players in the United States compared to other Canadian hockey players, students. (Ransdell, 2011)

Roczniok, R and colleagues (2016) identified, through a study conducted in the period 2012-2013, that the main factors that differentiated the selected players were: the percentage of body fat, the time needed to achieve peak power, the relative strength, VO<sub>2</sub>max and specific physical training on ice, with the exception of the 30 m

sprinting back, factors that the authors consider to be "the best predictors" of the hockey players' success. (Roczniok, R and colleagues, 2016)

The success of the Soviet hockey players was attributed to the contribution of coaches Arkady Chernishev, the one who led the team to the World Championships in 1954, and Anatoli Tarasov, a coach promoting a military, but innovative and highly analytical method. Tarasov refused to invite Canadian coaches, arguing that "the original is always better than a copy" and created what became the "Soviet system" of the game: a game of speed, endurance and with a strong desire to win. Differentiation was one way to beat the Canadians at their own game. Tarasov calculated and analyzed everything: the percentage of entries in the attack area; the percentage of lost pucks; the percentage of the lost counterattacks, etc., proposing new combinations of attack and defense, enriching the tactics of the game.

Creativity is one of the factors that differentiated the Soviet hockey from the rest of the teams, the creativity of coaches reflecting on their game. Anatoli Tarasov, on being asked which would be the biggest failure or mistake of his players, replied: "To play without creativity". The new training programs in Canada included among the objectives of the sports training the development of creativity: The execution with creativity of some exercises (handling the puck, 1 against 1; 3 against 2 etc.), encouraging the hockey players to be their own opponents, to compete with themselves, to use the entire surface of the rink. Former NHL player Wayne Gretzky remarked that: "It is too much focus on the system and not enough on creativity." (<https://www.hockeycanada.ca>) For a sportsman like Michael Jordan, "the art of creativity means that sometimes you surprise yourself." (Blatherwick, 1994, p. 59)

The national training program for the Russian hockey players relies on those elements that provide them with success factors: team training, so that the team can act on ice as a whole; the practice for reaching the highest level of sport mastery in management and passage of the puck and the execution of shots in speed and from any position; Encourage the creative decisions of players in competitions, the mistakes being highlighted by omission and not by commission. (Kovka, 1975; Blatherwick, 1994; Soares, 2008; Bourne, 2008; Bertagna, 2016; Branchu, <https://ruskiyhockey.wordpress.com>)

The Soviet Union developed a radically different game, a hockey on the "horizontal" (compared to the "vertical" one, played in Canada), a game of possession, in which the player seems to make a perpetual ballet, controlling the puck and advancing through passages, always on the move, without sending the puck to the attack zone and go after it. "Tick-Tac-Toc" evokes the sound of the puck that comes directly from the constant movement of the stick and the puck kicks, the Canadians describing this way the game of the Russian team. When a Russian striker approaches the opposing defenses, his feet fly, his stick does not stop moving on the inside and outside and his head and shoulders sway, from one side to the other, suddenly surpassing the opposing defense and heading towards the gate. The passes are given and received in curves while skating at high speed. It uses the tactics of the player's stringing to create breaches in the defensive team.

#### 4. Conclusions and Perspectives

The success of the national team of the Soviet Union can be attributed to both the Soviet players' development system and Coach Anatolie Tarasov's methods, which created a characteristic style of Soviet hockey, defined by agility and speed, and through a system of early recruitment and training of young athletes. (Encyclopædia Britannica)

Although, as Bompá said and demonstrated, as for the Soviet system for the preparation of the hockey players, "the training system must not be imported, even if this serves to study in advance other systems before developing its own system," because in "the creation or development of a good system one must take into account the cultural and social conditions of a country" (Bompá, 2002, p. 8), the adaptation of successful models and their systemic integration can be a stage in the creation of a national program. As Mike McNamee observes, "in some cases, it is not necessary to reinvent the wheel [...] Simply adopting what others are already doing successfully can be quite effective." (McNamee, 2008, p. 34)

Currently, the effectiveness of the sports training process is not only given by the results of a competition, but also by the use of control tools, which allow the evaluation of the level of stage preparation, offering guiding marks to both athletes and their coaches, necessary in making possible corrections to the training plan and optimizing the process. The evaluation can be done by comparing a set of reference indices, specific to each sport. The evaluation of the competitive results is done by comparing to the planned results and by specific indicators similar to those in the preparation period. (Platonov, 2001, p. 507, p. 546)

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