

# The Evolution of the Table Tennis Racket: From 50 cm Long Handles to Boosters (and Everything in Between)

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While you might not immediately give much thought to the way that table tennis rackets came to be, the story of their development is a significant part of the history of table tennis. In the ITTF Museum of Table Tennis, there are numerous museum exhibits of rackets in a variety of shapes and materials.

The Museum holds pieces that are one hundred years old, but I know about them only from what I read in a number of historical overviews. In the last several decades of the 19th century, ping pong was played with balls made from rubber or cork, while rackets looked like today's badminton rackets – with 50 cm long handles and a hitting surface usually made from parchment paper.



In time, racket handles became considerably shorter, wooden rackets appeared, and eventually, people glued sandpaper, cork, or animal hides to their rackets. Finally, in 1902, Englishman E.C. Goode put rubber on the racket for the first time. In a well-known story, Goode had the idea after seeing a round piece of rubber next to the cash register in a pharmacy, used for coins returned to customers as change. After a stroke of inspiration, he used a similar piece of rubber on his racket.

Along with celluloid balls, wooden rackets covered with rubber actually meant the birth of a new sport – table tennis. Wooden rackets covered with rubber, which later evolved to have a pimped surface and flax base, enabled players to put spin on the ball and to have better control over the racket, essentially turning the game into an entirely new sport.

Rackets covered with pimped rubber ruled the game of table tennis until the early 1950's, when sponge bats appeared. The first player to use a sponge bat was Austrian Waldemar Fritsch at the 1951 World Championships. Use of the first offensive sponge bats began only after the 1952 World Championships in Bombay, when the Japanese players using these rackets proved to be quite a sensation. Hiroy Satoh of Japan, for example, became World Champion in men singles using a racket covered with a sponge.

I began to play table tennis in 1946, back when we used rackets covered with pimped rubber, because sponge bats did not exist at the time. I gladly remember many stories about table tennis rackets, stories that have likely been mostly forgotten. These stories are especially interesting to those dedicated to the game, as a way to understand its development and how it has gotten to where it is today.

In the years immediately after World War II, resources were so scarce that it was difficult to find both rackets and balls for playing table tennis. The first racket I used at my first tournaments had pimped rubber on one side and cork on the other. That was the standard racket; pimped rubber was used for forehands, and cork for backhands!

But "pimped rubber" was actually not an accurate definition, since the material only stayed that way for a short time. The pimples in the middle of the racket would fall off after a certain amount of use, and as it was virtually impossible to obtain replacement rubber, the rubber in the middle was often not pimped at all! This became known as "bald rubber", and it was certainly not ideal for playing conditions!

In time, I began to train and play at tournaments on a more advanced level, and after much trouble, I managed to obtain a "Richard Bergman" racket. This racket was unusually pear-shaped, had red pimples on both sides, and was made from layers of the African okoume tree – it was everyone's dream to have a racket made from that laminated wood at the time! I felt incredibly fortunate to have acquired this racket, and it definitely helped me take my game to the next level.

I played with that racket for years, and it was the pride and joy of my game until eventually it was stolen at a tournament. At its loss, I felt as if my world had collapsed. I had no way to acquire a similar racket, so for a while, I could only succumb to these feelings of devastation and loss.

But as a true lover of the game, I wouldn't be kept down for long. I tried to use several other rackets, finally settling for the "Alex Ehrlich" paddle. While it wasn't made from the okoume tree as my last favourite paddle had been, this was made from a much "faster" type of wood, with an unusually shaped handle cut slantwise at its end.

I began to use that racket around 1955, and still use it when I play table tennis today! So in the end, it turned out for the best that I lost my Bergman racket because the Ehrlich really supported my game for years. I've replaced countless sheets of rubber on that racket – I finished my active career with classic pimples rubber, and later at occasional appearances I used backside on forehand, and on backhand, either backside or antispin or rubber with long pimples ("grass") or rubber with short pimples and sponge ("soft" or "sandwich").

This piece of wood, over a half-century-old, is obviously an object of interest for some veterans of the sport, because on several occasions I received quite lucrative offers for it!

## **Surprising Superstars of Table Tennis**

In the 1950s, there weren't any stores where you could custom-design your ideal racket. The idea of going in to choose wood and rubber to your liking, pay, and have the racket just like you wanted was completely foreign.

First of all, there were no stores where you could buy rubber and wood separately – you could only buy the finished product.

By far the most popular bat at the time was the famous brown "Viktor Barna", manufactured by the Dunlop factory. Decades after pimples rubber had retired from the world of top table tennis, the "Viktor Barna" still remained what was considered a "classic racket", popular in the circles of both veterans and recreational players!

The "Viktor Barna" racket appeared for the last time in the finals of the 1954 World Championships where its namesake, the great champion Viktor Barna, used it in men's doubles. Barna and Hagenauer lost the finals to Wilim Harangozo and Žarko Dolinar, the only player in the finals to use the sponge bat!

Along with "Barna", some other popular rackets were the "Johnny Leach", "Richard Bergman", "Alex Ehrlich", "Guy Amouretti", "Cor du Buy" and many others. In Germany, the most famous bats in the 1960s were the "Conny Freundorfer", "Martin Ness", while the "Eberhard Schöler" racket enjoyed almost cult status for decades.

I used the "Alex Ehrlich" bat for the most part of my playing career, so naturally, I was intrigued by stories about Ehrlich, the triple World Championships finalist, after whom the racket was named.

By a fortunate turn of events, I had an opportunity to meet him in his "old" days, when he lived in Paris. He was an utterly unusual man who would not fit into any mould. As a Polish Jew, Ehrlich had experienced the horrors of Nazi Germany, survived the war in the Dachau camp, and lived to see his family killed in the Holocaust, yet he did not become an embittered man. He lived in Paris, led a Bohemian lifestyle, worked as a coach, and traveled constantly in his old Mercedes.

When pornography first appeared in Denmark, Ehrlich realised that here was an opportunity to earn a lot of money, so he decided to smuggle carloads of pornographic magazines from Denmark into Germany and France, and sell them at high profit. I attended the opening of one of his private training camps, and could not believe my eyes – Alex lined up all participants, held a speech about the importance of the forthcoming training camp, and then gave each one of us an "Alex Ehrlich" racket, saying that at his camp everyone should play with the best racket.

After a brief introduction, he demonstrated his technique. Ehrlich used to be a world-class player, but he had quite a specific backhand. I have never seen any player use this stroke technique with success, but nevertheless, a demonstration of this technique was still one of the first basic lessons in his camp.

## **Sponge Rackets Change the Game**

In the 1950s, big changes took place in the world of table tennis rackets. I witnessed not only various "historical" changes, but also a number of local stories and vignettes concerning rackets.

In 1951, at the Vienna World Championships, Austrian Waldemar Fritz appeared out of nowhere with a black sponge on his racket. With that racket, he made quite a stir in the team events, as this new material changed the game completely.

In his singles events, Fritz played against Ferenc Sido from Hungary, whom he beat in the team events along with other great players. However, Sido trained hard for the rematch, figured out how to play against Fritz and his sponge, and won in their second meeting.

At the 1952 World Championships in Bombay, India, there were only 15 men's and 7 women's teams due to high traveling costs! Unfortunately, the defending world team champions from the former Czechoslovak Republic and players from the former Yugoslavia who had won the bronze medal the year before all lacked sufficient funds to get to Bombay, so they did not attend this year's World Championships.

The Japanese were a sensation at their first appearance at the World Championships – their women swept the team events, and their third player, Satoh, won the men's singles! Everyone attributed the success, which was partly true, to Satoh's 1 cm thick yellow sponge that he had glued onto his penholder racket. His opponents were unprepared for playing against sponge bats, as Europe's leading players did not react to the warning they had received the year before when Fritz used his black sponge!

It's interesting to compare the world of table tennis then and now, because it is truly as different as night and day. Can you imagine world-class players defending their World Champion title today, and not appearing at the next World Championships because of lack of money for travel expenses?

And it's hard to imagine a world champion thrown out of table tennis today because of his professionalism, but that is exactly what happened to the World Champion Satoh after the tournament. It's true – the Japanese federation disqualified him because of his "tendency towards professionalism".

After Satoh and his sponge racket won the singles championship in 1952, sponge rackets immediately began to conquer the world of table tennis.

My first encounter with a sponge racket was at a club training in the autumn of 1952. Žarko Dolinar appeared and began to try out his new sponge racket. Playing against an opponent with a sponge racket was an unusual experience – when the ball hit the thick sponge (1 cm or more) on the opponent's bat, there was no sound, and the balls would come back significantly faster than with classic rubber bats.

Žarko saw improvements after just one month of playing with this racket. To everyone's surprise, he won the very strong International Championships of Austria, driving his opponents mad with his new bat, which he had decorated with a skull and two crossbones on its non-playing side, like a pirate's flag.

Žarko was not the first one to begin using the sponge, but he was definitely the player who profited most from this new material. Though his career was reaching its end, the new material shot him back up to the highest level, where he became World Champion in men's doubles and vice-champion in singles.

Even before he glued a sponge onto his racket, Dolinar had quite an unusually shaped bat – a large piece of rectangular wood he called the "shovel". He held the racket in quite a peculiar way, like a penholder, which was actually quite similar to the way that some players with classic grip today usually drop their racket for a forehand serve.

At one time, there were several players in Yugoslavia who held the racket this way, so the grip became known as the "Yugoslav stop grip", though it later disappeared completely.

A young man from Opatija, Jurica Barlović also glued sponge onto the forehand side of his racket soon after Dolinar did. To avoid facing the sponge, opponents would hit to his backhand side, which was still made from classic rubber. However, despite all attempts to thwart him, Barlović's new weapon helped him make it to the 1954 World Championships in London.

The finalists there at the Championships were Ogimura from Japan and Fliesberg from Sweden, both playing with sponge rackets. The finals match was almost without rallies, most points consisting of just one shot, giving the audience the experience of "inaudible" table tennis.



The fact that Ogimura, the newly crowned World Champion, arrived at the World Championships by collecting private donations to fund his trip, seems almost unbelievable today. Furthermore, he arrived to London with a racket that had a 10 mm-thick sponge – another seemingly impossible thing today.

After initial training, Ogimura decided that the sponge was too thick, so he replaced it with a 2 mm sponge, winning the World Championships! In 1955, a similar final to that in London took place, bringing two players with sponge rackets to the finals once more: Tanaka from Japan, and Žarko Dolinar.

These two played the shortest finals in the history of table tennis – after only 13 minutes, the result was 3:0 for Tanaka! I saw a similar final at the International Championships of Yugoslavia in Belgrade in 1954, where Dolinar beat Szepesi from Hungary. There was no sound when the ball hit the bat, both players pushed the ball, and then came one smash – that was the end of the rally! It was play without play!

After its smashing success, various models of sponge rackets could then be bought on the market. The most famous of these was the Stiga-Fliesberg model, with a sponge that had rectangular fields on its surface, and the Dunlop-Barna, with a sponge that had large diameter pimples.

But in the late 1950s, the world realised that sponge by itself meant death for table tennis, so sponge as racket cover was prohibited in 1959. However, players were still permitted to use sponge as the base for classic rubber, thus providing space for new revolutions in table tennis.

## **Rubber Comes Onto the Scene**

At the same time that sponge was entering the world of table tennis, the classic rubber was also being used. At the time, players who opted for this material would use a particular sheet of rubber until the pimples would begin to fall off from the centre, leaving the rubber "bald" in the middle.

Marko Tarle, a teammate of mine who later became a respected scientist, resolved the problem of "bald rubber" in quite an unusual way. He would replace part of the rubber that had lost its pimples with the edge of another rubber that was bald in the middle. His racket looked almost like a mosaic of various pieces of rubber in a number of colours, which was not prohibited by rules, so his racket was quite a hit at tournaments! This way, he still reaped the benefits of the pimples without having to replace the material completely.

Another great and popular table tennis aficionado, Veljko Gospodnetić, was also known for organizing traditional open tournaments in Zagreb. Along with his volunteer work in organizing table tennis events, he was also well known for his racket and his habit to sing out loud at banquets that followed tournaments – he had a very strong voice, but could not always carry a tune!

His racket was a large wooden "shovel", with a playing surface much larger than a normal racket. However, it was not only the shape of the racket that was unique, but also the fact that it was made solely of wood without any cover – without rubber!

When he played, the sound of his large wooden racket could be heard resounding through the hall. For more than half a century, his recreational league allowed him to play with this wooden bat – though they had to introduce a special rule for him because these types of rackets had been prohibited by table tennis rules in the meantime! Gospodnetić happily played with this racket well into his old age, achieving much success and notoriety.

In the mid-1950s, classic spongeless rubber rackets were still quite commonly used in parallel with sponge rackets. But while some players preferred to use rubber, sponge was still becoming more and more popular, and unfortunately detrimental to the development of table tennis.

I continued to play with a classic rubber racket, but my partner, Ivan Stojić, felt differently. He was not happy with either the classic rubber or with the sponge, so he decided to combine the two. At home, he glued classic pimples rubber onto a thin sponge and began to play with this type of "combined" rubber.

This new combination was a revolution indeed; his opponents had huge problems coming up against the new racket. The sponge made the racket fast, while the classic rubber enabled better control and rotations.

However, my friend did not receive any of the glory (or the money) for inventing the "sandwich" racket. Maybe it was being simultaneously invented elsewhere, but I am certain that at the time when he made the racket, I had never heard of nor seen such rubber. It was only later that the term "sandwich" rubber appeared on the market abroad, but that had nothing to do with him!

Somewhat later, finished rackets with this type of "sandwich" rubber became very popular for their hybrid qualities and were made mainly in Japan. At this time, Japan was still without competition in this particular market, and could manufacture medium class rackets such as the St. Brite models that were popular at the time.

Not long after, China's lower production costs managed to push Japan completely out from the market of medium and low-class rackets! And after the rubber with sponge and pimples went out, rubber with sponge and pimples in ("backside rubber") appeared.

With the smooth surface of the backside rubber, it was suddenly possible to produce big rotations, and with this, a new type of stroke came onto the scene. This stroke became the dominant stroke in table tennis as of the beginning of the 1960s –topspin.

Shortly after, in the 1960's, the fully-sponge racket was prohibited – but it was still legal to use sponge as the base for classic pimples rubber. At this point, we saw the rapid development of various types of rubber with pimples in and out.

While the first generations of excellent Chinese players (Chuang Tse-tung, Li Fu Jung, Hsu Yin Sheng and others) used pimples out rubber, the Europeans would use pimples in rubber (on the backside) and began to use topspin.

Topspin is not a European invention. It came from Japan in 1960, where the stroke was developed as a devastating move to destroy the European cut defence! Europe nevertheless welcomed the new stroke. It was easier and more efficient to make the move for topspin by holding the racket in the classic way instead of with the Japanese penholder grip.

Because of their "cultural revolution", the Chinese were forced to end all international sports contacts for a period of six years, so after they returned to the international scene following their isolation, they found themselves in a difficult situation. Because they had been away from the game for so long, they did not know how to play against the newly-developed topspin, and they were at a complete loss for what to do with the new antispin rubber that had emerged as a response of defensive players to topspin.

The 1960s were very tumultuous times for the development of rackets and table tennis. Development of increasingly better quality pimples in rubber (backside) enabled even greater rotations to the ball, so players were forced to keep their game up to speed with these developing racket features.

In the late 1960s, a completely new generation of rubber appeared, led by Sriver rubber. At the time, I was only a coach. When I held a racket with this new rubber for the first time, I couldn't believe the rotations and velocity that I could create. It was an enormous leap forward, just like the one that was made about fifteen years later when speed gluing appeared in table tennis.

## **Antispin Changes the Rules Again**

Dragutin Šurbek was one of the leaders of the new wave of so-called "spinners", players who attacked and dominated their opponents by using topspin. He won the 1968 European Championships in men's singles by using the old generation backside rubber.

Comparing the new generation of rubber with the old generation would be like comparing a modern car to a wheel carriage. In the finals in 1968, Šurbek played against Borszey from Hungary, a defensive player who was using the newly-developed antispin rubber, which made it easier for defensive players to return topspin.

Several years later, in 1971, the Chinese returned back to the scene after years of isolation. Weber, a solid French defensive player, slaughtered the Chinese with this antispin rubber. The Chinese had no idea at the time how to play against such rubber, as they had been away from the sport and all of its recent developments!

Antispin rubber disappeared relatively quickly from top table tennis though, because its possibilities for facilitating active play were almost non-existent. It returned to the scene only during a brief intermezzo, when in combination with the monochromatic backside rubber, it became a dangerous weapon. Because both rubbers were of the same colour, as the player would turn the racket it was very difficult for the opponent to detect on time with which side of the racket the player served or hit the ball.

It's very important for a player to be able to "read" which rubber hits the ball on time, in order to return the ball correctly. So because there are so many different characteristics of the backside and antispin, it's often easy to miss this reading and make direct mistakes in returning the ball.

The most famous player with this kind of rubber combination was Cai Zhenhua from China, a two-time World Vice-Champion. He used two black rubbers on his racket: one backside and the other antispin, and it was not possible to see which side of the racket he used to hit the ball.

His serve was particularly unpleasant for his opponents because he would hit the ground with his leg very strongly at the same time as serving, so that the opponent could not establish based on the sound whether Cai had hit the ball with backside or antispin.

Meanwhile, in Europe, Englishman Hilton appeared out of nowhere. He was quite an average defence player who also played with two black rubbers – one was backside, the other antispin. Just like Cai, he also used the method of turning the racket to score many points and win titles.

At the European Championships in Bern (1980), he won the European Championships in men's singles with such play. He was quite lucky, though, because just before the semi-finals, the favourite of the tournament, Gergely from Hungary, had an argument with his coach. As a result, he played listlessly and practically gave the match away.

From the other side of the draw, Czech Dvoracek entered the finals quite surprisingly, since he knew nothing about how to play against defence! Hilton thus won the only tournament in his career. Never before or after would he be a singles champion of England, not to mention win an international tournament!

The combination of rubbers with very different characteristics but the same colour was a new danger that loomed over table tennis. It upset players who had to play against such opponents, and in terms of the audience, it was a disaster because the only thing they saw was quite incomprehensible, seemingly common mistakes!

The rules until that time permitted all colours; players used yellow, brown, green, black, and red rubber. This use of just one colour for both sides of the racket was becoming a big problem indeed.

In light of this problem, the frequent combination of two black rubbers with various characteristics, it was decided at the ITTF Congress in 1983 that the racket had to include two colours – red on one side, black on the other. This decision put an end to players who had been taking advantage of using the antispin-backside combination in the service, because it was not possible to "cheat" the opponent anymore by turning the racket – one could see immediately which rubber hit the ball, and the element of surprise disappeared. This leveled out the playing field and made the game more enjoyable to watch as well.

At the 1983 ITTF Congress, a funny incident occurred. Wanting to reduce the effect of the service with the antispin-backside combination, it was proposed that players would be prohibited to hit the

ground loudly with their leg. (Players had been using this strategy to prevent their opponents from hearing whether the ball was hit with the antispin or backside of the monochromatic racket.)

Following the introduction of the two-coloured rackets, the advantage of the mono-coloured racket was annulled – but the Congress did not notice this new proposal to prohibit the hitting of the ground with one's leg during play in the package of proposals to be adopted.

So after the new rule was adopted, the Dutch delegates "woke up", realizing that Vriesekoop, their best player and the champion of Europe at the time, would be prevented from playing. Her playing style included playing forehand attack by simultaneously loudly hitting the ground with her leg. The Dutch delegates requested new voting and deletion of the proposal, explaining this situation. It was only then that all delegates realised that the proposal that was adopted was impossible to implement, because judges would be forced to punish any loud jumps of players in the game. In the new voting, the rule was repealed!

Another interesting story from that period is the story of Sarkis Sarkhojan and his racket. He was a Russian table tennis virtuoso and later a respected coach with a formidable forehand topspin and an excellent backhand. This was especially unpleasant for his opponents because he used an old rubber on his backhand that he hadn't replaced in years.

This old rubber on the backhand practically had the characteristics of antispin, so while the new rubber on the forehand would yield strong rotation and high velocity to the ball, the balls on the backhand side would come at the opponent much slower and with much less rotation, creating a considerable problem for them. This just shows the impact that rubber quality has upon the game, and how players have used these different characteristics to their distinct advantage.

## **Rubber Grows Long Pimples**

At the 1975 Calcutta World Championships, the Europeans saw rubber with long pimples for the first time – or "grass", as we like to call it, because the long pimples sway in contact with the ball just like grass in the wind!

At the time, I was coaching Yugoslavia's women's national team. On this team, we had the super talented Eržebet Palatinuš who was in great shape, and who entered the singles quarterfinals. In the quarterfinals, she came up against an unknown Chinese penholder player, Ke Hsin Ai.

We believed that Eržebet stood a chance for our team, but the match was finished in a flash – it was easy 3:0 for the Chinese. Though Eržebet was a world-class player, it was hard work for her to even return the ball!

It was only then that we realised that Ke Hsin Ai played with a completely new type of rubber, and that we lacked the skills and experience to play against it! This just goes to show how quickly the game evolves, and how even the best of players can be brought down easily by a simple shift in something like rubber material.

We saw a similar thing happen in the men's team events, against a previously unknown defence player, Lu Yun Sheng, on the Chinese team. We called him "Grasshopper" for his small stature and tendency to jump around the table a lot.

His first match in Calcutta was the final match between China and Yugoslavia. It was a complete surprise because he was a defence player, and Šurbek and Stipančić from Yugoslavia were world-class players against defence!

Lu lost to Antun Stipančić in an open match and beat Dragutin Šurbek, a specialist for playing against defensive players, all thanks to "grass".

At the time, no one in Europe knew how to play against this long-pimpled rubber known as "grass" – the material was a complete mystery. Šurbek watched the match between Palatinuš and Ke Hsin Ai and would get angry at seemingly common mistakes that Palatinuš repeated over and over again. Unfortunately for him, he later played in mixed doubles against Ke Hsin Ai and was as equally helpless against the rubber as his partner had been!

In the following season, the Chinese sent a new defence player to Europe. Huang Li easily defeated the entire European elite in his first European matches. The European leading players were losing almost all sets and winning less than 10 points in each. In this pattern, each new player who fell victim to the Chinese master was said to have become a member of the "tailor club" – when somebody lost a set winning less than 10 points we said (for unknown reasons) that he became "a tailor"!

Long pimples remain present in table tennis today, but now, learning how to play against long pimples is part of basic training, so it is no longer something to be feared.

## **Wood for Rackets**

The wood used for rackets is a special and interesting story, in view of both the various shapes and various systems of laminated woods that have been used over time. Comprising most of the racket, this material is clearly one of the most important aspects of the racket's build.

Almost half a century ago, the African okuome tree, a slow wood with excellent control, was mega-popular as a material for making table tennis rackets. It was gradually replaced by faster wood though, culminating in the one-layer Japanese hinoki wood – a single-layer wood made from the heart of hinoki. This wood is quite difficult to control, but plays super fast.

I remember our champion, Zoran Primorac, and Dragutin Šurbek before him, playing with hinoki. The wood broke easily, so frequently in fact, that it created problems for the players.

You see, there were only two masters for repairing hinoki and other types of wood: one in Zagreb, and the other in Belgrade. They were both table tennis fanatics, "wood doctors" who "patched" all damaged wood for players.

Primorac's hinoki was "patched" a number of times, and when it finally "departed", Primorac wanted a new single-layer hinoki. It turned out that his old hinoki had quite different characteristics from the "fresh" hinoki, which did not suit him anymore. He had gotten used to the different characteristics of old wood, and was unhappy transitioning to this new, fresh model! It is thus not particularly strange that many players play with the same old piece of wood for as long as they can!

For some time, many European players were obsessed with heavy Chinese wood. Chinese penholders who had rubber only on one side at the time played with relatively heavy wood, much heavier than European or the light hinokis.

Many Europeans would buy rackets in China, take off the rubber that came with the racket, and glue on their own. With rubber on both sides, however, these rackets became very heavy, so the fashion did not stick amongst top players.

Today, wood manufacturers combine layers from various types of wood with different characteristics, and racket advertisements are full of detailed descriptions of all the immaculate characteristics of these layered "cocktails".

Between the layers, manufacturers frequently insert very thin layers of other permissible but usually very hard materials, such as carbon, aluminium, etc. Along with plywood veneer, there were naturally experiments with all kinds of shapes. In fact, there are numerous patents collecting dust in patent offices for these various shapes and new developments!

## **Strange Shapes and New Practices**

Various asymmetrical forms of the racket plywood veneer were also used, and various "anatomical" handles (handles which were not an extension of the wood of the racket but were placed across the racket, supposedly enabling maximum mobility of the wrist joint.)

The most serious attempt based on scientific research was made by a German scientist and amateur coach, Dr. Joachim Kuhn. He established that it was impossible that the ideal form of the table tennis racket had been discovered on the very first day, and that progress was not possible.

With the help from his students at the college, he conducted various research and finally used scientific methods to prove beyond doubt that the ideal form for the table tennis racket would be in the shape of a violin. He established the exact dimensions according to which wood should be made to obtain the desired "sweet spot," and proved that violin-shaped wood would yield better control and greater speed than the same type of wood in a classically-shaped racket.

The famous French champion Eloi, the Canadian champion Pradebaan, and certain Yugoslav national team players played with such wood for quite some time, but yet the traditional racket prevailed.

The "strangely" shaped racket, despite its advantages, did not survive. One of the reasons was that players complained it was difficult to change the rubber on the wood when it was shaped this way.

Along with TIBHAR, some other manufacturers of table tennis equipment also tried to manufacture and sell wood in quite unusual shapes – for example, the Yasaka pistol grip wood, the Donic Dotec blade, the Sanwei pistol grip carbon T-502, the Yinke special penhold, the Uhno shark attack, and others.

When we talk about table tennis today, we are aware that the so-called "speed gluing" trend was only an episode in the development of table tennis that ended when this type of "racket doping" was prohibited.

"Speed gluing" was accidentally discovered by a table tennis ace, Tibor Klampar from Hungary, and it soon became a widely spread practice in the entire table tennis world. Top players would develop their own special gluing rituals to achieve greater rotation and higher speed, much to the chagrin of their opponents. Today, however, any such racket "tuning" is strictly prohibited.

There are numerous types of quality rubber and wood on the market today, so anyone can find the variant best suited to his personal preferences.

The official reason for the “speed gluing” ban was that the glues used for that purpose were dangerous for health. But in reality, the hidden aim of this ban was to slow down the game. It was never quite clear if the so-called “clean glues” were really dangerous, but after the ban of “speed gluing”, new ways were found how to trick out regulations anyway.

“Boosters” for rubber were developed, which had the same effect as “speed gluing” but without the immediate possibility to detect them. Any treatment of ready-made rubber is forbidden by table tennis rules, but “tuning” with “boosters” is exactly that – it happens either in the factory, or the player does it himself.

It is extremely difficult to detect such treatment, and there are definitely top players who use rubbers tuned in the factory or even afterwards. Next to this type of treatment of rubbers are new rubbers that enable the players to give the ball more speed and rotation without tuning. As a result, top table tennis is becoming faster and faster, and the rallies shorter and shorter.

All of this that happened with “speed gluing” and “tuning” is affecting more or less a relatively small circle of top players. In more than 99% of tournaments, racket control does not include control of gluing or boosting, as testing for these is quite costly and is performed only on big international events – almost never on national events, or even on national championships.

Obviously, we need better regulations for these events, which can be applied to all tournaments, and not just to a selected handful.