

HISTORY

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Rule and equipment modification issues in World Taekwondo Federation (WTF) competition

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Abstract

Background: At the beginning of the new millennium, the WTF was entangled in a variety of high-level scandals involving its leadership. In addition, taekwondo matches were often considered too boring to watch for audiences, and the IOC demanded more transparency in taekwondo's scoring process. As a result, the taekwondo establishment feared for its continuing membership as an official discipline in the Olympic Games. Therefore, the WTF initiated a variety of far-reaching rule and equipment changes during the past decade.

Aim: The aim of this study is to examine the results of the rule changes and equipment modifications introduced to the competition system of the WTF after the year 2000.

Method: The methodology used included the analysis of documents. In addition, general observations and interviews played a role in the process of deduction and synthesis.

Results and Conclusion: Presently, the desired outcomes of the rule changes and equipment modifications have not been entirely accomplished. While there have been various improvements in the overall competition system, several unintended and unanticipated consequences have arisen from recent modifications. Moreover, it seems that the single-minded focus by the WTF on keeping taekwondo's Olympic membership status has not always been the best for the sport.

Introduction

At the beginning of the new millennium, a number of high-level taekwondo officials were embroiled in a variety of embarrassing scandals. Kim Un Yong, the principle engineer of the WTF and Olympic taekwondo, was accused of corruption surrounding his leadership in connection with the WTF and the Olympics. Kim was a powerful vice-president of the International Olympic Committee (IOC), and perhaps the most influential figure from Asia in the Olympic movement. Moreover, he was the president of the WTF and the Korean Sports Council, and was regarded as seemingly untouchable. However, Kim was accused of a long string of irregularities over the years. To the surprise of many, Kim swiftly fell into disgrace and had to resign from one post after another. Before long, Kim was convicted by a Korean court of embezzling more than \$3 million from the WTF and other sports organizations, bribery, and other massive wrongdoings surrounding the 2010 Winter Olympic bid by the Korean city of Pyeongchang.

Consequently, in 2004, he was sentenced to two and a half years in prison, and the taekwondo establishment fell into temporary disarray [Abrahamson 2004]. However, in general, it was not just the leadership of taekwondo that left bad impressions, ordinary coaches and athletes were often known for unruly and un-sportsman-like behavior. During the Beijing Olympics in 2008 [Associated Press 2008], for example, a Cuban athlete kicked the referee in the face, after being disqualified when the allotted, one-minute, injury time expired while the injured competitor was receiving medical attention. This incident happened despite the WTF having rounded up the coaches before the Olympics to give them a crash course on how to behave 'properly' during the Games [WTF 2008].¹ Following this episode, the string of embarrassing scandals surrounding the taekwondo community did not diminish. A well-known Korean taekwondo athlete, who won a gold medal in taekwondo at the 2004 Athens

¹ The meeting was held from June 16-18, 2008, at the Grand Hotel in Busan, Korea. I attended the meeting.

Olympics, and subsequently became an IOC member, was accused of plagiarizing his PhD dissertation. Because of his affiliation to South Korea's ruling Saenuri Party and his election as a lawmaker in the National Assembly in 2012, he was scrutinized and exposed by opposition parties. Although a panel at Kookmin University (the issuer of the doctoral degree) concluded recently, after a two-year investigation, that the dissertation in question is “flagrant as a cut-and-paste job,” the IOC seemed to prefer to let the scandal just go quietly away with the wrongdoer's end of term in 2016 [Jung 2014]. This incident was another instance which reflected poorly on taekwondo's decision makers and leaders, as well as the sport, as a whole.

But perhaps most serious of all were the admissions by Lee Chung Woo² in an interview in 2002. Lee, a taekwondo pioneer who held a variety of important posts in the Korean taekwondo hierarchy over the years, openly stated that the WTF used to manipulate matches in favor of Korean athletes during international tournaments, such as the 2000 Sydney Olympics. According to Lee, a common practice was influencing the draw in favor of Korean athletes, or pressuring, or strategically “assigning” the “right” judges to important matches, so that Korean athletes could easily advance in the tournament [Yook 2002]. Many of Lee's confessions were suspected, but not publicly revealed, previously. Such an admission brought taekwondo into the spotlight and threatened the continuing existence of taekwondo as an Olympic discipline. As a result, the taekwondo leadership proposed tackling the problems by intensifying an already ongoing trend of reforms to improve the tarnished image of taekwondo by making technical changes to scoring, refereeing, and more recently, the qualification system for the Olympics. These were changes that the WTF believed would help improve the battered image of taekwondo in the light of these widespread scandals. However, most rule changes and equipment modifications were introduced with the single goal of keeping taekwondo in the Olympics, leading to some rushed implementations and a series of unintended side effects.

These issues and circumstances motivated this study. At first, I will discuss the technical and practical reforms to the competition system that were implemented during the last decade. Then, this study will concentrate on the most important issues and weigh the pros and cons of modifications. Lastly, the discussion focuses on a variety of non-anticipated outcomes of these changes.

² Lee was former secretary general and vice president of the World Taekwondo Federation, and former vice-president of the Kukkiwon, home of the World Taekwondo Academy, the organization responsible for taekwondo standards, training, and certification.

Background: intentions of rule and equipment modifications

In regards to technical matters, several key problems in the WTF taekwondo competition system came to a head during the 1990s. Among a range of troubles, disagreements regarding scoring decisions and judging loomed large. Match results were often regarded as subjective, and there existed a perception of a general lack of scoring transparency. Another major challenge was the consensus that taekwondo matches were very boring to watch, since athletes often adopted a safe, defense oriented game-style [Moenig *et al.* 2012: 1373; Moenig 2015: 102; 126-128].

As a result, after the year 2000, a variety of rule changes and equipment modifications were progressively implemented. Subsequently, the WTF, under the new leadership of Choue Chungwon (first elected in June 2004), accelerated these technical reforms during the last decade. Among the most significant and far-reaching changes were:

- The introduction of an electronic body protector, referred to as the ‘Protector Scoring System’ (PSS).
- The introduction of a ‘sudden death’ rule, which constituted a fourth, overtime round after a tie at the end of a match, with the winner being the first to earn a point.
- The introduction of a ‘stall rule,’ which resulted in warnings or point deductions after about ten seconds of inaction during a match.
- A reduction of the fighting time from three minutes to two minutes per round.
- The reintroduction of multiple point scores for head kicks and turning kicks.³
- Safety improvements for athletes.
- The introduction of video replay, and the right of coaches to appeal decisions, thereby using video replay evidence as the basis for invalidating or reversing a decision.
- A modification of the qualifying process for the Olympic Games, through the introduction of a Grand Prix system.
- The introduction of an electronic head gear system.

The introduction of the Protector Scoring System, initiated under the guidance of Lee Chung Woo during the 1990s, was intended to eliminate subjective human judging and thereby provide more scoring transparency during matches. The 2014/2015 adaptation of the electronic head gear system was meant to further remove the human element, as well as to more accurately document high kicks scored in a fast-paced competition environment. The new systems were supposed to reduce

³ Multiple point scores for kicks to the head were awarded until the late 1970s. After that time, uniform, one point scores were introduced for all scoring techniques [Kang, Lee 1999: 125].

the endless disagreements and arguments from coaches regarding scoring decisions. In addition, the introduction of a video replay system, modeled after tennis and American football, was supposed to provide more clarity and accountability during matches, as well as a way to repeal referee decisions.

A fundamental problem with taekwondo matches was that many athletes often used to wait defensively for a chance to counterattack once an attack took place, resulting in situations where both athletes effectively stalled the fight. However, a spectator sport required more action for audiences. Therefore, the introduction of the ‘sudden death’ and ‘stall’ rules, and the reduction of the fighting time of matches, was designed to trigger a more aggressive-oriented game behavior by athletes.

Moreover, during the 1990s, athletes used to execute mostly a variety of different types of roundhouse-kicks to the trunk scoring area during matches, only. Other more complex and difficult kicking techniques, especially high kicks, were largely neglected due to the uniform scoring policy of one point for each successful attack. The reintroduction of multiple point score awards for high kicks and turning kicks was also thought to result in an increase of more spectacular techniques, thereby improving the commercial appeal of the sport.

The trend to improve the safety of athletes already started during the 1980s, with the addition of shin and forearm guards, head gear, and a soft fighting mat, to avoid serious injuries as well as in anticipation of someday becoming an Olympic discipline [Moenig *et al.* 2012: 1372]. The safety of athletes was paramount for an Olympic sport. Generally, the Olympic community does not like to see brutal knockouts and injured athletes. The savage element of combat sport was supposed to be eliminated, or at least reduced. The recent adoption of light gloves and instep foot protectors also became connected to the problem of some PSS systems which needed these accessories to carry their sensors, in addition to providing increased protection for athletes.

Lastly, these tournaments can be incomprehensible and impossible to follow by ordinary audiences and television broadcasting since, in regular international tournaments, participants number typically into the hundreds or even thousands, and events often extend over many days. Therefore, the launch of the Grand Prix qualification system for the Olympics was intended to make taekwondo tournaments more interesting and popular for spectators by limiting the participating athletes and matches, and by presenting the competition in a more commercially appealing fashion. In addition, the Grand Prix system was supposed to lay the groundwork for a future, professional sport taekwondo league system [Capener 2014; see also Moenig 2015: 102-108].⁴

⁴ This section is largely based on a personal interview conducted with Steven D. Capener. Dr. Capener was a former U.S.

The introduction of the electronic body protector and headgear systems (Protector Scoring System PSS)

Initially, three companies, Adidas, LaJust (a Korea-based company), and Daedo (a Spain-based firm) developed a Protector Scoring System. The Adidas system functioned on pressure after contact, which means that the system did not need a corresponding foot-sock with sensors; generally, however, it was difficult to score upon, because it required powerful contact. The problem was that the system uniformly gave points for any kind of contact, such as illegal knee strikes, athletes bumping into each other, self-scoring, or falling to the floor. And since the system's decisions could not be overridden, many dreadful match outcomes took place. In contrast, the LaJust system used corresponding sensors hidden in socks, gloves, and the body protector. However, the system had many glitches, such as unreliability and possible electronic interferences from cell phone transmissions. Moreover, the scoring was limited to the immediate contact areas of the sensors. And, after using the socks several times, the sensors became quickly degraded; finally, wet socks also influenced scoring. Because the system was vulnerable to interference and manipulation, several incidents over cheating athletes were exposed. For example, some hid extra sensors in socks or gloves to gain scoring advantage. Furthermore, the body protectors looked like unappealing, bulky futuristic space suits. The Daedo system, as a slight latecomer, relied on a system similar to LaJust. However, the Daedo system proved to be more reliable and advanced with the possibility of scoring on the entire area of the body protector. In addition, unlike the LaJust model, sensors were also placed on the heels of the foot socks, which made scoring with push and back-kicks possible. The system also featured a body protector similar in shape and weight to the conventional protectors, in contrast to the other systems, which were sometimes too heavy for nimble athletes [Kailian 2010: 367-389; Abley n.d.; *Daedo electronic protector system (TK-strike)* 2005].

The first electronic body protector prototypes were already tested by the WTF, in 2001. Subsequently, in 2005, Adidas and LaJust competed to become the first officially WTF-approved PSS provider. Over rumors of a murky selection process and favoritism, the WTF chose the Korean LaJust system in 2006. In contrast, much to

National Team member, PanAm Champion, and medalist at the 8th World Championships in Barcelona, in 1987. During the early 1990s, he worked for the World Taekwondo Federation and was, from 2007 to 2009, the Special Advisor to the Secretary General for Competition and Refereeing. In 2009, when extra points for turning kicks and head kicks were introduced, he was part of the decision-making process as the Vice-Chairman of the World Taekwondo Federation Technical Committee.

the dismay of the WTF, the Europeans strongly favored the Adidas system, and used it in the 2008 European Championships in Rome [moodukkwan-taekwondo.de n.d.]. Although the technically immature LaJust system was not ready for the 2008 Olympic Games, it was prematurely introduced to the World Championships in Copenhagen in 2009. The WTF was under intense time pressure, because of Choue Chungwon's pledge to the IOC to use the electronic body protector at the Olympic Games, with the aim of achieving more objective, unbiased match results [Choi n.d.]. Despite continuing technical glitches, the LaJust system was used again at the 2011 World Championships in Gyeongju. However, the WTF finally lost its faith in the soundness of the system. Among accusations of breach of contract, and court battles, the WTF switched, after a renewed selection process, to the Daedo system for the Olympic Games in London, in 2012. Meanwhile, during the WTF's struggles for the choice of an official PSS, in 2009, the Korea Taekwondo Association (KTA) picked yet another domestic company, KP&P, to provide an electronic body protector system for use in domestic Korean tournaments [Gim 2009].

The KTA always experimented with new rules and game settings, which were often later adopted by the WTF. For instance, among a variety of slightly different rules, the KTA also modified the competition area to that of an octagonal configuration, which shrunk the fighting court and significantly influenced fighting strategy.⁵ However, under the new leadership of Choue Chungwon, the KTA seemed to have lost its sway over the WTF establishment, and the KTA's modifications were not adopted by the WTF any longer. Choue purposely tried to distance himself and the WTF from the influence of the KTA, in order to battle the common perception that the WTF was purely controlled by Koreans. In addition, the KTA's loss of power over the WTF was also the result of an increasing number of non-Koreans holding important positions in the WTF [Excerpts from a speech by Choue 2008]. Korean officials in the WTF were always strongly attached to the Korean taekwondo establishment in which they often held multiple positions and were integrated into a hierarchical web of relationships and obligations. In fact, it was a system prone to corruption and nepotism, and the KTA and the Kukkiwon had their fair share of scandals in recent times.

Despite having arguably a superior electronic body protector and competition system, the KTA had to backtrack in its use of modified rules and a different PSS, because Korean athletes won only three gold medals (out of sixteen for men and women combined) on home turf in the 2011 World Championships in Gyeongju. After

these dismal results, the KTA was forced to reform its selection process for the Korean national team. It also introduced the Daedo system to prepare its athletes better for international competitions. Consequently, the Korean team won six gold medals at the World Championships in Puebla, in 2013. The whole episode also demonstrated a disconnect between members of the KTA and the WTF. The primary objective of the KTA is placing its athletes in international competitions on the podium in order to qualify for increased government funding and keeping its status as the global taekwondo leader, whereas the foremost concern of the WTF (in addition to also winning medals to qualify for greater funding), is to maintain taekwondo's continuing membership in the Olympics. As an outcome of these developments, the arguably superior KP&P system was put on temporary hold.

However, a major issue with the electronic body protectors (regardless which system), was (and is), again arguably, that they still do not work adequately after more than a decade of trial and error. Some contend that an imperfectly functioning electronic body protector system discriminates equally against both competitors, and thus rationalize its use believing this to be a lesser evil than the endless disputes and fights over scoring decisions by judges [Kailian 2010: 44-48]. In fact, a divergence is taking place within the sparring community, as the peculiarities of the electronic protector demand that the Olympic-level sport accommodates itself to the limitations of immature technology. The effect on athletes is that they are more often forced to adapt their technique to the shortcomings of the system than improve their technical competence. In addition, the PSS' only criterion is target impact strength; it does not evaluate the 'art' of the combat, which was always partly done by human judges. The electronic system fundamentally changed the nature of the quality of taekwondo sparring [Kailian 2010: 398-400]. As a consequence of the introduction of the PSS, taekwondo seems to have become a computer controlled martial art.

Until recently, since many of the matches were now often decided by high kicks (because of the multiple point scores, three or four points depending on the technique) that were still indicated by human judges, it begged the question why an expensive electronic body protector was necessary. As a solution to the problem, an electronic head gear system was tested for the first time during the European Junior Championships in 2013, and followed by tests on the sidelines of the Trelleborg (Sweden) Open, and U.S. Open, in 2014. It was thought to be the answer for the dilemma of having to continuously rely on human judges for high kick scoring, which had become decisive for victory. Surprisingly, beginning in 2015, the system was quickly adopted and required in all officially sanctioned WTF tournaments. However, a major shortcoming of the joint system, the electronic body protector combined with the electronic

⁵ However, the octagonal-shaped fighting court was eventually, officially recognized by the WTF as an alternative to the conventional square-shaped court in the rule amendment on July 1, 2014.



Figure 1. Spinning-back-kick, a 4 point scoring technique New competition rules: more head injuries? [Source: Courtesy of Peter Bolz]

head gear, is that although the human element was eliminated for simple body and head scores, it still remains necessary for kicking techniques to the face which lacks protection and, therefore, sensors. Moreover, points for punches are still added manually by the corner judges, as well. Lastly, it seems unlikely that any system will ever be able to completely eliminate the necessity for human judges to the indicating scoring of additional, multiple points for turning kicks to the trunk and head [WTF 2015:24 (article 12); 26 (article 13)]. That would require another overhaul and modification of the point assignments for kicks and punches.

Lately, Adidas and KP&P started cooperating on a joint PSS, based on the KP&P system. The joint system was finally approved as an alternative to the Daedo system in June 2014. Despite the approval, and to the dismay of Adidas officials, the WTF again selected the Daedo system for the 2015 World Taekwondo Championships in Chelyabinsk, Russia [see *Outline - 2015 World Taekwondo Championships Chelyabinsk*: 4]. Moreover, Daedo is likely to be used at the Olympic Games (2016) in Rio, as well. As a minor concession to the Adidas/KP&P officials, its system will be used in many regional and continental tournaments. As a consequence, taekwondo associations, clubs, and schools may be forced to adapt to and buy yet another expensive system, which costs well over a thousand dollars per unit (a pair of body protectors and the supporting electronic system/suite). Richer nations and associations are certainly able to afford such investments, but smaller clubs and associations in Third World Countries are not. Another point of frustration is

that all the legacy systems in the sport taekwondo world will become obsolete in the face of the newer systems. Martial arts and combat sports have always been considered to some extent a ‘poor men’s sport,’ requiring a small number of affordable pieces of protective equipment (with the exception of maybe kendo). On the other hand, taekwondo has been increasingly developing into an elite sport affordable only by a few, sometimes requiring sophisticated and expensive electronic gear for those clubs interested in competition.

Recent rule modifications and results

The implementation of some of the rule modifications turned out to be very successful. The reduction of the fighting time, and the introduction of the ‘sudden death’ and ‘stall’ rules resulted in much more action taking place during matches. Although, on a minor note, athletes tended to use less strategy, and kick as many times as possible in the hope of scoring points. Other major rule changes, however, in combination with the electronic body protector, resulted in several non-anticipated and far-reaching complications.

Multiple point scores were progressively reintroduced at the start of the new millennium. The last amendment regarding multiple-point scoring policies happened in 2009, with the decision to increase the award of successfully executed turning kicks to the head to four points. However, the introduction of multiple point scores had several unintended side effects. First, it became

very difficult to follow and understand the outcome of a match for a common audience. A spectator, who never practiced taekwondo, is very unlikely to understand the complicated point system, which awards now one, two, three, or four points, depending on the technique used. In combination with an array of other rules, point awards and deductions, which are indicated instantly on the scoreboard, are probably often incomprehensible for non-experts.

Another problem that emerged is that an increasing number of kicks to the head led to potentially more injuries. Even though athletes tend nowadays to kick less powerfully (see the following discussion), the increased execution of high kicks could lead, statistically, to more head injuries and concussions; although, there have not been any conclusive studies carried out yet [DeFreitas, Koh 2013; Koh, Dunn 2013].

While relatively tall athletes for their respective weight division were always favored by taekwondo rules, being tall, and, therefore, also very skinny, has become a prerequisite for success in competition. Tall athletes with long legs can easily score with kicks to the head more often than shorter ones. Despite the subjectivity of this observation, in the current rule system, reach promises greater award than strength or tactics. Therefore, athletes and coaches tend to choose the weight division below an athlete's natural weight. As a result, most athletes have to lose weight through diets or body fluid loss before weighing-in. Starving for competition, with potentially deleterious effects on athletes' health, has become the norm.

Lastly, and most visibly, the multiple point scores to the head led to an extensive use of front leg kicking techniques which are not powerful, but relatively easy to execute. This trend was accelerated by the introduction of the video replay system, which was first used in Copenhagen at the World Championships, in 2009. Actually, the system led to some mixed results. Although the system can be annoying to spectators and athletes alike, because of the frequent interruptions to the flow of the game, overall, it makes decisions more transparent, and allows for the repeal of referee decisions during a match. The recent introduction of the electronic head gear seems to have led to an overall reduction of appeals because the PSS is "not...subject to Instant Video Replay"; but, only contact to the more limited area of the exposed face is contestable [WTF 2015: 24 (article 12.2.3)]. A further safeguard against too many interruptions is that coaches lose their rights to appeal (via video replay) in case their appeals are rejected during the course of a tournament twice per competitor. In fact, the tactical use of these limited numbers of appeals by coaches became quite an art in itself. In hopes of turning the tide, coaches will generally exercise their right for appeal during the end of a match in the event that their athlete is losing, even without having valid grounds, and thereby often inter-

rupting the fight, groundlessly.

Apart from the positive effects of improving transparency, the video replay system had a non-anticipated and transformational impact, which was probably not considered by its architects. Before the introduction of the electronic headgear, the official WTF policy instructed judges to award points for kicking techniques, "when any part of the foot touches the opponent's head," [WTF July 14, 2013],⁶ which included even light brushes or accidental contact. This policy was necessary, since the force of the impact to the target is not easily visible during a video replay review.

Partly, as a result of the video replay system, taekwondo moved in the direction of becoming a point sport, and not a genuine tactical, full-contact combat sport. Moreover, according to a recent study, the Daedo electronic body protector also "scores points even with low impact forces...., there is no need to use kicks with high impact forces" [Ramazanoglu 2013: 6]. Instead of force, the angle of the kick, and the location of impact on (and also between) the body protector and the foot protector (connected to the location of the sensors), which also varies among systems, often plays a role in scoring a point. Accordingly, athletes tend to adjust their technique and training to the scoring requirements of the system. For instance, athletes started increasingly to execute the frivolous inside-out-kick or *biteureo-chagi*, or the ludicrous "scorpion kick," techniques which were never previously considered valid scoring techniques in full-contact sparring taekwondo and, therefore, also not used until recently. Even though, the techniques lack force projection for real fighting, they occasionally receive points by the electronic body protector system and corner judges. Execution and mastery of conventional, standard techniques does not much matter any longer, since any contact with the foot to the PSS (or the head area) has the potential to gain points. Consequently, the technical limitations of the PSS contributed to a degradation in technique as well as to the situation influencing taekwondo to increasingly become a point game. Many in the taekwondo leadership probably do not mind that taekwondo is turning into a point sport, because they want to present taekwondo as a less aggressive and safe sport for all, again, in accordance with the Olympic spirit.

The extensive use of front leg high kicks, in combination with the electronic body protector, which awards points also relatively easily for front leg push-like kicking techniques (called cut-kicks, which were traditionally

⁶ This sentence was added in the rule amendment on July 14, 2013, but has been taken out in the amendment of July 1, 2014. The unofficial policy to award points for any contact to the opponent's head has been in place and instructed to judges for several years and will likely be kept in future, in case that the electronic headgear is not used.

not awarded with points), led to an overreliance on front leg kicking techniques (trunk and high kicks) during matches. Even though accurate statistics do not exist about the exact use of kicking techniques before and after the rule and equipment modifications, most coaches and athletes would generally agree that there developed a strong dependency on front leg kicking techniques in sparring. This trend was already clearly visible during the 2011 World Championships in Gyeongju [Moenig *et al.* 2012: 1373], but has since accelerated. For example, in the final match of the 2013 World Championships in Puebla, in the male weight division -68 kg, the Iranian athlete managed to beat the Korean athlete by exclusively using front leg techniques (feinting, initiating, or holding the front knee or leg in the air, or executing front leg kicking techniques). The Iranian athlete kicked or initiated a front leg motions approximately 70 times during the three round match. In contrast, he kicked only twice with the back leg during the same time (one muted double-kick in the first, and a clumsy roundhouse-kick in the last round). The Korean athlete had a similar record for the first two rounds, but tried to score desperately with a variety of kicking techniques during the last round, because the Iranian athlete was leading in points [see *World Taekwondo Championships 2013*]. While this particular match represents an extreme example, similar game behavior has become the norm. Unfortunately, such matches are an embarrassment for the image of the sport and certainly not suited for a wider TV audience, especially an Olympic one.

The training routines of athletes shifted from practicing mostly roundhouse-kicks to concentrate more on high kicks and cut-kicks, executed with the front leg. As a result, nowadays, taekwondo matches often look like light-contact karate point games. During the 1990s, taekwondo fights were often boring to watch, but many of the present-day matches are not appealing either.

The qualification system for the Olympics

Throughout the 1990s, Korean athletes would typically win, on average, ten out of sixteen gold medals (men and women combined) at the World Championships.⁷ During the 1980s and before, male Korean athletes held an even greater dominance; although women's taekwondo in Korea started to develop relatively late, they would not

lead in international tournaments until the 1990s. Even though the skill level of Korean athletes was generally higher in comparison to non-Koreans, the ethnic composition of the referee corps might have given them an additional advantage. Therefore, in regards to improving the fairness of judging, the WTF probably diversified the referee corps because of pressure from participating countries as well as a desire to impress the IOC, since the referee corps consisted of a disproportionately large number of Koreans and ethnic Koreans holding passports of other nationalities. Indeed, non-Korean athletes started to win international competitions in greater numbers only after this situation changed after the turn of the new millennium. Besides, the skill-level of non-Korean fighters also started increasingly to match, and sometimes even surpass, that of the Korean athletes during of the previous decades.

For the Olympic Games, the IOC restricted taekwondo's participation from eight, for each, male and female, to respectively four weight categories; moreover, any participating country was limited to sending only two male and two female athletes. This system may have been introduced to prevent Korean athletes, who still greatly dominated international competitions during the 1990s, from winning all the gold medals at the Olympics, thereby distorting the overall medal count. In addition, the participating athletes at the Olympics were limited to 128 (male and female combined), who had to prequalify in one of five Continental Qualification events, or the World Qualification Tournaments. Individual countries would nominate their athletes to participate in these selection trials to qualify for the Olympic finales.

The World Qualification Tournament was modified by the WTF in 2013, with the introduction of a Grand Prix system, which works in coordination with the WTF World Ranking system. The Grand Prix tournaments are held up to four times a year, depending on the timely proximity of the Olympic Games. Through this process, the six highest ranking athletes in each weight division can qualify automatically for participation in the Olympics, without having to compete in one of the continuing Continental Qualification Tournaments, although the rest of the athletes for participation in the Olympics remain selected through the established Continental Qualification system [WTF Council 2013; *WTF Standing Procedures for the WTF World Grand-Prix Series* 2013].

In the new system, athletes are invited to the Grand Prix tournaments according to their standing in the WTF World Ranking list. Athletes receive points for the ranking list in all tournaments promoted or sanctioned by the WTF. While the system is, in principle, sound, athletes are forced to participate in a great number of competitions to improve their standing in the ranking list. This situation was partly exacerbated by the WTF, which awarded too many G 1 (formerly called A-Class)

⁷ Korean gold medal count at biennial World Championships (out of 16 medals for men and women combined): 1991: 8 (male 5, female 3); 1993: 11 (male 6, female 5); 1995: 10 (male 5, female 5); 1997: 11 (male 4, female 7); 1999: 9 (male 6, female 3); 2001: 8 (male 2, female 6); 2003: 8 (male 3, female 5); 2005: 7 (male 4, female 3); 2007: 4 (male 1, female 3); 2009: 5 (male 3, female 2); 2011: 3 (male 2, female 1); 2013: 6 (male 3, female 3).

or 'open' (international) tournaments to national federations that are eligible for collecting points for the ranking list. As a consequence, athletes have to participate in numerous competitions often in faraway countries and locations, which keeps a lot of financial strain on the coffers of associations, clubs, and athletes. Moreover, athletes often have insufficient time to recover from injuries, because they are constantly forced to compete. Furthermore, the quality of some of the G 1 tournaments tends to be very low, because there are just too many of them, which restricts participation of top athletes and teams to a very few.

Although it is too early to judge the overall success of the Grand Prix system, it seems to present taekwondo in a more commercially appealing way; however, if this will lead to a professional taekwondo league remains to be seen. Many of the participating athletes train taekwondo semi-professionally already, but find themselves mostly supported by government or sports federation related institutions through grants or employment. Without a major overhaul of rules and policies, it seems unlikely that taekwondo will succeed as a major professional sport, financially solely supported by spectators and sponsors. The taekwondo rule and competition system is fundamentally not suited to appeal to large audiences, in the same way as boxing, K-1, or the mixed martial arts. More likely, taekwondo will remain more of an Olympic centered competition sport, promoted mostly by private or government supported sports institutions, such as the case with judo, fencing, and wrestling.

Conclusions

The main concern of the establishment, especially the strong Korean taekwondo lobby, is that taekwondo remain an Olympic sport. From a Korean point of view, the prestige of the nation depends on it. As a result, equipment modifications and rule reforms were mostly, and often hastily, implemented with the intent to safeguard taekwondo's status as an Olympic discipline. However, decisions taken with such a singularity in mind are not always best for the sport, the athletes, and the general taekwondo community, at large. The rushed introduction of an immature electronic scoring system is a good example of this decision making process. Moreover, even though the WTF, under new leadership, pledged greater transparency, the selection procedure of the PSS was, and continuously remains, opaque.

In regards to technical issues of the competition system, instead of re-evaluating the viability of the electronic body protector, the WTF opted to double down with the introduction of the electronic headgear. Relying on the electronic body protector for impartial scoring, only, introduced an incomplete system; therefore, the adoption of electronic head gear was a logical step. However,

since the body protectors do not even function properly or reliably after more than a decade of use and improvement, what are the prospects for a proper performing electronic head gear system in the near future? Moreover, the human element is still not completely eliminated, since scoring to the face and for punches still relies on corner judges. Although it seems only a matter of time until sensors are added to gloves for punch scoring, what will be the answer for face scoring? Instead of providing comprehensive solutions to the dilemma, the introduction of the e-helmet and further electronic scoring gear, such as foreseeable e-gloves, may lead to a multiplication of problems, forcing athletes even more to adapt to the limitations of the technology. Instead of addressing these technical problems in a comprehensive fashion, the WTF is most likely to respond by further 'dumbing down' the sport by inhibiting the development of technique due to the limitations of the available technology; for example, in the near future, the face will probably be eliminated for scoring, as a solution to the absence of facial sensors in the electronic headgear.

It may be that in today's age of computer games, the taekwondo community became infected with a blind faith in technology. The belief in the superiority of computer-controlled systems over experienced, sound human judgment brought an array of new, non-anticipated problems and side-effects to the sport. However, unlike computer games, the athletes do not control the computer, but are more often controlled by it. At present, the technical direction of the sport is not as much chosen by humans as dictated by the technical limitations of an immature electronic system.

Moreover, the rule modifications of the last decade turned out to be also only partially successful. While these modifications solved some problems in the competition system, they also created a myriad of other, non-anticipated troubles, which often reflected badly on the sport. The WTF enacted official rule amendments twenty one times between its founding in 1973 and 2015. However, the fact that the WTF enacted ten amendments, between 2009 and 2015 alone, is testimony that officials are also not satisfied with the recent outcomes and direction [WTF 2015]; of course, it might also suggest an inadequate research and policy development process prior to the enactment of the rule changes. Some might suggest going back to former rules, which is probably also not the best path. Moreover, with the recent equipment and rule modifications, the WTF leadership has put their and taekwondo's standing on the line, which makes any change of direction highly unlikely.

Lastly, it will be difficult to find any easy fixes for all of the current woes. On the other hand, ill-conceived rules and reckless scandals can actually stunt taekwondo's growth, retard its development, and threaten its future. In any case, an extensive discussion and debate related to current rules and use of protective equipment is long

overdue. As a starting point, coaches and athletes must be more included in these policy-making discussions. Moreover, regular survey instrumentation regarding rule and equipment and competition issues should be distributed, completed, and collected during all levels of sport taekwondo competitions.

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Zagadnienia dotyczące modyfikacji reguł i sprzętu w zawodach Światowej Federacji Taekwondo (WTF)

Słowa kluczowe: taekwondo, Igrzyska Olimpijskie, elektroniczny ochraniacz ciała, zasady modyfikacji

Abstrakt

Na początku nowego tysiąclecia, WTF (Światowa Federacja Taekwondo) została uwikłana w szereg skandali na wysokim szczeblu, z udziałem jej liderów. Ponadto turnieje *taekwondo* były często uznawane za zbyt nudne do oglądania dla widzów, w związku z czym dalsza obecność *taekwondo*, jako oficjalnej dyscypliny w igrzyskach olimpijskich, stała pod znakiem zapytania. Międzynarodowy Komitet Olimpijski zażądał także większej przejrzystości procesu punktacji *taekwondo*. Ponieważ metoda oceniania została uznana przez sędziów sportowych za zbyt subiektywną, miała zostać zastąpiona przez bardziej obiektywny system. W konsekwencji, WTF zainicjowała szereg daleko idących zmian w przepisach i sprzęcie w ciągu ostatniej dekady.

Najbardziej znaczące modyfikacje sprzętu dotyczyły wprowadzenia elektronicznego ochraniacza ciała i, bardzo niedawno, elektronicznego systemu nakrycia głowy, do wskazania automatycznej punktacji kopnięć dla ciała i głowy, eliminując w ten sposób element ludzki. Kilku różnych producentów rywalizowało o oficjalne prawa do dostarczania sprzętu elektronicznego do turniejów, jednak niektóre systemy zostały wprowadzone przedwcześnie. Ponadto, po ponad dziesięciu latach badań i testów, działanie owych systemów ma zapewne wiele istotnych braków. Największym problemem wydaje się fakt, że sportowcy często muszą dostosować swój styl walki do ograniczeń systemów elektronicznych. Zamiast poprawy jakości walk, systemy elektroniczne, często ograniczają i/lub „dyktują” techniki wykorzystywane przez zawodników. Choć

wiele osób uważa, że jest to mniejsze zło, niż niekończące się spory wśród sędziów dotyczące punktacji.

Ponadto, stopniowo po roku 2000, wprowadzono wiele zmian reguł, mających na celu uatrakcyjnienie konkurencji *taekwondo* dla widzów. Najważniejszą zmianą dotyczącą reguł było zniesienie pojedynczych punktów (za ciosy i kopnięcia), na rzecz wielu punktów za niektóre spektakularne i trudne kopnięcia, takich jak wysokie kopnięcia w głowę. Poza tym, wprowadzono wiele drobnych alternacji reguł, które znacząco wpłynęły na przebieg walki.

Jednak pożądane rezultaty modyfikacji reguł i sprzętu nie zostały w całości zrealizowane. Pomimo różnych ulepszeń całego systemu współzawodnictwa, z ostatnich zmian wyniknęło kilka niezamierzonych i nieoczekiwanych konsekwencji. Nowe zasady, w połączeniu z elektronicznym systemem punktacji, zmieniły znacznie styl walki zawodników, nie zawsze w pozytywny sposób. Wśród różnych efektów, zawody *taekwondo* częściowo przekształcono z walki *full contact* w kierunku walki *light-contact*, przypominającej karate sportowe.

Ponadto przyjęcie *taekwondo*, jako oficjalnej dyscypliny olimpijskiej w 2000 roku, wymagało również zmiany systemu kwalifikacji, ponieważ uczestnicząca liczba sportowców biorących udział w igrzyskach olimpijskich została ograniczona. Podjęto próby przekształcenia *taekwondo* w bardziej przyjazny dla widza i profesjonalny sport, choć powodzenie tych działań będzie widoczne dopiero w przyszłości.

Podsumowując, większość reform reguł *taekwondo* i modyfikacji sprzętu zostało wprowadzone z myślą o zagwarantowaniu miejsca *taekwondo* w udziale w igrzyskach olimpijskich. Jednak podejmowane często w pośpiechu i nie zawsze przejrzyste decyzje dotyczące zmian reguł i modyfikacji sprzętu doprowadziły do wielu nieoczekiwanych rezultatów, które nie zawsze były korzystne dla sportowców i sportu. W rezultacie, krytyczna analiza zalet i wad obecnego systemu reguł i urządzeń jest od dawna potrzebna.