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### Scoring Analysis of the 2015 World Wrestling **Championships**

Harold Tünnemann

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### Scoring Analysis of the 2015 World Wrestling Championships

#### Harold Tünnemann<sup>1</sup>

**ABSTRACT.** The videos of all matches from the 2015 Senior World Championships were analyzed for scoring and technique. The world championship in a pre-Olympic year, is also the first opportunity for the athletes to qualify the weight class (attained by finishing in the top 6) for their country for the Olympic Games. Countries and qualified weight classes are presented. Attack efficacy, represented by points scored per minute, is presented for the style as a whole, for the top countries and for the weight class champions. The technical structure of the champions, with scoring by type of technique, is also presented. This was done for all three styles-Men's Freestyle, Women's Freestyle and Greco-Roman. All three styles moved in a positive direction in regard to increased activity and scoring as a result of the most recent rules changes. However, Greco-Roman must explore ways to make larger strides in the variety of scoring, especially techniques from the standing position.

Keywords: competition, history, rules, scoring analysis

The fact that the 2015 World Wrestling Championships also served as the first qualifier for the 2016 Olympic Games was a reminder from a sport politics perspective of the return of the sport to the Olympic program after being eliminated in 2013. After an unprecedented fight of all concerned, the representatives of the International Olympic Committee were given firsthand evidence in Las Vegas, Nevada, that wrestling had learned its lesson and was willing and able to modernize Olympic wrestling. The athletes themselves contributed to this success by providing the International Olympic Committee with spectacular holds as a sign of the attractiveness of wrestling. The athletes in the world championships 2015 were under considerable pressure to qualify the weight class for their country in this first qualification opportunity for the Olympic Games in Rio.

#### ANALYSIS OF MEN'S FREESTYLE

The Russian Federation reached the top-six qualifier status in all six of the weight classes. The strong performance of Iran, with five qualifiers, was second best, and Azerbaijan, Georgia, and Mongolia with four each, was a great achievement. These five countries reached 64% of the quota places available. In contrast with women's freestyle and Greco-Roman, we have in men's freestyle wrestling a powerful concentration of performance in these few countries. Turkey and the United States reached two places, and one place went to Armenia, Bulgaria, France, India, Italy, Kazakhstan, North Korea, Ukraine, and Uzbekistan. For the worldwide development of our sport, it is a very good message that 16 countries were able to win the 36 allocated quota places (Table 1). As a comparison, during the first qualification for London, England, in 2011, only nine countries could reach the 42 available places.

The basis for the country specific results is the technicaltactical quality of their wrestlers. This is also, among others, the expression of the coaches' philosophy. It is difficult to make wrestling measurable, but one can use the attack efficacy (WQ), defense efficacy (–WQ) and the complex performance (index) to describe the quality of wrestling. This index is shown for the performance of six top countries in Figure 1.

The best qualitative values were reached by Russia with a performance index of 1.28, an attack efficacy of 1.68, and a defense stability of 0.4. That means that the Russian team is dominating in the attack efficacy and in the defense efficacy. Azerbaijan, Iran, and Georgia had commendable

<sup>&</sup>lt;sup>1</sup>United World Wrestling Scientific Commission

Correspondence should be addressed to Harold Tünnemann, United World Wrestling Scientific Commission, Corsier-sur-Vevey, Switzerland. E-mail: tuenne@t-online.de

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#### 40 TÜNNEMANN

Country	57	65	74	86	97	125	Total Places
Armenia						x	1
Azerbaijan		х		х	х	х	4
Bulgaria				х			1
France			х				1
Georgia	х			х	х	х	4
India			х				1
Iran	х	х	х	х	х		5
Italy		х					1
Kazakhstan	х						1
Mongolia	х	х	х			х	4
North Korea	х						1
Russia	х	х	х	х	х	х	6
Turkey				х		х	2
Ukraine					х		
United States			х		х		
Uzbekistan		х					1
Total:							
16 Countries	6	6	6	6	6	6	

TABLE 1 Men's Freestyle Quota Places Achieved in Las Vegas



FIGURE 1 Wrestling efficacy of the best countries in men's freestyle.

performances. Mongolia, although with four places qualifiers, could be more successful with a better defense efficacy. Turkey, with acceptable values of the attack efficacy, also has reserves within the defense. In contrast, the U.S. team has good defense values but problems in their attack efficacy.

## Technical-Tactical Developments and Technical Structure of the Champions

A long-term analysis of the quality of wrestling (attacking points per minute) shows a general downward trend until

2012 that was reversed because of the complete rule changes 2013 (Figure 2).

With regard to the attack efficacy, the 2015 value of 1.6 points per minute is the third best value since 1986. This value has been better 2014 with 1.8, but the special qualification situation must be considered. It has also to take into the consideration that after the rule changes of 2013, the action points were increased. After the rules changes of May 2013, one sees that in the World Championships of 2013 in Budapest, Hungary, there was an enormous and stable improvement in the activity increase and attack-oriented wrestling strategy (Figure 3).



FIGURE 2 World top performance in men's freestyle since 1976.



Wrestling performance winner comparison WC 2011, 2013 and 2015 FS

FIGURE 3 Development of the attack efficacy in men's freestyle after rule changes.

Wrestling performance consists of attack and defense abilities. In Figure 4, one can see that the most powerful athletes are the best attackers. Abdulrashid Sadulaev (ussian) in 86 kg with 2.2 technical points per minute and Taha Akgül (Turkey) 130 kg with 2.1 points per minute are dominant among the 2015 champions. Very good performances also are demonstrated by Haji Aliev (Azerbaijan) 61 kg with 1.5, and both Magomedrasul Gazimagomedov (Russia) 70 kg and Jordan Burroughs (United States) 74 kg with 1.4 points per minute.

In general, there is a different pattern of development seen in the technical structure since 2011 (old rules) when compared with 2015 (new rules). The technical-tactical profile of the champions of 2015 is characterized by a clear increase in leg attacks, take down, ankle lace, gut wrench, throws, counters, and using the activity time. In contrast,



FIGURE 4 Attack efficacy of the men's freestyle world champions in 2015.



Technical structure / Attack efficacy FS (winner) WC 2011, 2013, 2014 and 2015

FIGURE 5 Development of the technical structure in men's freestyle since 2011.

there is a decrease in turnover techniques, "out," and warnings (Figure 5).

To find and discuss some reasons for this development it is necessary to look at more details of the technical structure of the 2015 champions (Figure 6). In men's freestyle, there is a big technical versatility with leg attacks, take down, counter, ankle lace, gut wrench, and using the activity time in a tactical means. The champions are using different techniques as their individual winning strategy. Vladimir Khinchegashvili (Georgia), 57 kg prefers leg attacks, take down, and counters. Haji Aliyev (Azerbaijan), 61 kg is versatile, having success with leg attacks, take down, counter, gut wrench, and turn over. Frank Chamizo (Italy), 65 kg likes leg attacks, take down, and counters, and he is also very stable against leg attacks. Magomedrasul Gazimagomedov (Russia), 58 kg wrestles almost with the same technical profile as Chamizo, using leg attack, take down, counter, gut wrench, and activity time. Jordan Burroughs (United States), 74 kg is extremely effective with his very fast leg attacks, ankle lace, take down, turn over, "out," and use of activity time. Abdulrashid Sadulaev (Russia), 86 kg is extremely versatile and effective with leg attack, take down, throws, gut wrench, "out," and counter. Kyle Snyder



Technical structure / Attack efficacy WC 2015 FSwinner

FIGURE 6 Technical structure of the men's freestyle champions in 2015.

(United States), 97 kg is effective with leg attacks, counter, take down, and "out." Together with Haji Aliyev, he belongs to the most active champions, using the activity time. The technical profile of Taha Akgül (Turkey), 125 kg is very clear. He is the master of leg attacks and ankle lace, combining standing and par terre positions.

Men's freestyle offered an attractive and offensive combat behavior. It reflects the work of the coaches' in Russia, Azerbaijan, Iran, Georgia, Turkey, United States, Ukraine, and others.

#### ANALYSIS OF WOMEN'S FREESTYLE

Although no country managed to reach all the quota of six Olympic qualifying places, the strong performance of Japan with five, China with four, and Azerbaijan and Sweden with three, are particularly worthy of mention. They are followed by Canada, Columbia, Mongolia, and Russia with two qualifiers, and a single qualifier each for Belarus, Brazil, Bulgaria, Estonia, Finland, Germany, Latvia, Netherland, Nigeria, North Korea, Turkey, Ukraine, and the United States. One should note the development of Colombia, Brazil, Nigeria, Estonia, Latvia, Finland, and the Netherlands. From the perspective of United World Wrestling, it is a welcome sign for the positive development of wrestling in South America, Africa, and northern European countries. Twenty-one countries were able to win at least one of the 36 allocated quota places (see Table 2). During the first qualification 2011 for London, 16 countries could reach the 24 places.

Country specific performance quality is shown in Figure 7. The best qualitative values by country were achieved by Japan with a performance index of 1.14, an attack efficacy of 1.63, and a defense stability of 0.49. Also excellent were the values of China, but there were some problems with their defense, followed by Mongolia and Azerbaijan. The defensive skills of Mongolia also seem to be a problem. Sweden, with acceptable values for attack efficacy has a negative performance index because of scores given up by their defense. Columbia and Canada should also examine their defensive problems.

# Technical-Tactical Developments and Technical Structure of the Winner

A long-term analysis of the quality of wrestling (attacking points per minute) shows the same pattern discussed in men's freestyle, namely the downward trend, that

Country							
	48	53	58	63	69	75	Total Places
Azerbaijan	x	x	x				3
Belarus						х	1
Brazil						х	1
Bulgaria				х			1
Canada	х			х			2
China	х	х			х	х	4
Colombia			х			х	2
Estonia						х	1
Finland			х				1
Germany					х		1
Japan	х	х	х	х	х		5
Latvia				х			1
Mongolia				х	х		2
Netherlands	х						1
Nigeria		х					1
North Korea		х					1
Russia	х				х		2
Sweden		х	х		х		3
Turkey			х				1
Ukraine						х	1
United States						х	1
Total:							
21 Countries	6	6	6	6	6	6	

TABLE 2 Women's Freestyle Quota Places Achieved in Las Vegas

Wrestling efficacy certain nations' FS Women WC 2015



FIGURE 7 Wrestling performance of the best countries in women's freestyle.

turned upwards in 2013, after the major rules changes (Figure 8).

The attack efficacy for the women's champions of 2.4 points per minute is the best value since 2001. One has to

take into the consideration that after rule changes of 2013 the point value for a leg attack was increased to either 2 or 4 points. The improvement in scoring at the 2013 World Championships in Budapest was an enormous improvement



FIGURE 8 World top performance in women's freestyle since 1976.



Wrestling performance winner comparison WC 2011, 2013 and 2015 FW

FIGURE 9 Development of the attack efficacy in women's freestyle after rule changes.

in the increase in activity and attack oriented wrestling strategy (Figure 9). The adaptation to the new rules in 2015 also leads to an improvement of defense capabilities (-WQ 0:28).

The wrestling performance index consists of the attack and of the defense abilities. In Figure 10, one can see that the most powerful athletes are also the best attackers.

Battsetseg Soronzonboldyn (Mongolia) in 63 kg with 5.33 technical points per minute, Kaori Icho (Japan) in 58 kg with 2.59, and Adeline Gray (United States) in 75 kg with 2.22 are dominant.

In general, the technical structure has changed between 2011 (old rules) and 2015 (new rules). There is an increase of leg attacks, counter and ankle lace. In contrast, there is a decrease of turn-over techniques (Figure 11).

To find and discuss some reasons for this development, it is necessary to look at more details of the technical structure of the 2015 champions (Figure 12). The champions are using different techniques as their individual winning strategy. Eri Tosaka (Japan), 48 kg prefers leg attacks and counter. Saori Yoshida (Japan), 53 kg is the leg attack champion. Helen Maroulis (United States), 55 kg likes leg attacks, take down, and counter. The technical profile of Kaori Icho (Japan), 58 kg is very versatile with leg attack, ankle lace, counter, take down, and throws. Oksana Herhel (Ukraine), 60 kg is the counter and throw specialist. Battsetseg Soronzonboldyn (Mongolia), 63 kg is extremely effective with throws, gut wrench, ankle lace, and counter. Natalja Vorobieva (Russia), 69 kg is effective with take down, leg attack, throws, and turn over. Adelin Gray (United States), 75 kg is the specialist of leg attack and combinations with ankle lace.

During the World Championships in Las Vegas, Nevada, the female wrestlers demonstrated attractive combat behavior.







FIGURE 11 Development of the technical structure in women's freestyle since 2011.

Established countries, such as Japan, China, Sweden, Russia, the United States, Azerbaijan, and Mongolia demonstrated the further development of women's freestyle wrestling. However, it was apparent that great progress has been made by the coaches' in Finland, Nigeria, the Netherlands, and Columbia.

#### ANALYSIS OF THE GRECO-ROMAN WRESTLING

Although no country managed to reach all six quota places, the strong performance of Azerbaijan and Russia with four each, and Iran and Ukraine with three places are particularly noteworthy. They were followed by Armenia, Cuba, Kazakhstan, and the United States with two places; and one place each by Algeria, Belarus, Bulgaria, Denmark, Finland, Germany, Hungary, Kirgizstan, North Korea, Romania, Serbia, South Korea, Turkey, and Uzbekistan. Twenty-two countries were able to win at least one of the 36 allocated quota places (see Table 3). During the first qualification in 2011 for London, 22 countries qualified for the 42 places, which were then available.

## Technical-Tactical Developments and Technical Structure of the Greco-Roman Champions

The quality of wrestling in Greco-Roman (attacking points per minute) in a long-term analysis demonstrates a very clear downward trend since 2005, being somewhat arrested because of the complete rule changes 2013 (see Figure 13). The negative peak in terms of attractiveness of the wrestling especially in the Greco-Roman style was seen at the Olympic Games in London in 2012, when the Olympic champions scored an average of less than one technical point per minute, and winning with defensive actions.



Technical structure /Attack efficacy

FIGURE 12 Technical structure of the women's freestyle champions in 2015.

Country	59	66	75	85	98	139	Total Places
Algeria		x					1
Armenia		х			х		2
Azerbaijan	х		х	х		х	4
Belarus	х						1
Bulgaria					х		1
Cuba	х					х	2
Denmark			х				1
Finland				х			1
Germany		х					1
Hungary				х			1
Iran			х	х	х		3
Kazakhstan	х		х				2
Kyrgyzstan	х						1
North Korea	х						1
Romania					х		1
Russia		х	х		х	х	4
Serbia		х					1
South Korea		х					1
Turkey						х	1
Ukraine				х	х	х	3
United States			х			х	2
Uzbekistan				х			1
Total:							
22 Countries	6	6	6	6	6	6	

TABLE 3 Greco-Roman Quota Places Achieved in Las Vegas

After rule changes in May 2013, there was an enormous improvement in increased activity and attack-oriented wrestling strategy during the World Championships 2013 in Budapest (see Figure 14).

The Borrero (Cuba) 59 kg and Chunayev (Azerbaijan) 71 kg reached the best quality values with regard to the attack efficacy among the champions in Greco-Roman (see Figure 15).



FIGURE 13 World top performance in Greco-Roman since 1976.



Wrestling performance winner comparison WC 2011, 2013 and 2015 GR

FIGURE 14 Development of the attack efficacy in Greco-Roman after rule changes.

In general, we can see an increase of the quality of wrestling in 2015 after intensive rule changes. Compared with the world championships in 2014 there were fewer head butts, less grasping of fingers, and a closer and more upright body position.

#### Relation Between Standing and Par Terre Wrestling

This relation has always been of great interest. Even with the current rule discussions, this aspect plays an important role. Of the technical points, 67% are coming out of the par terre situation, and only 33% from standing position (see Figure 16).

#### Time of the First Technical Point Scored

To determine the general strategy of activity, all bouts of the champions were analyzed. It is obvious that the Greco-Roman wrestlers are concentrating on obtaining a "warning behavior" on their opponent during the first 2 min (see



Attack efficacy winner WC 2015 GR

FIGURE 15 Attack efficacy of the Greco-Roman world champions 2015.



FIGURE 16 Comparison of standing and par terre wrestling in in Greco-Roman.

Figure 17). They want to impress the referee and have their opponents put into the par terre position. The average time for they scoring of the first technical points is at 2:10, and if not for the Cuban Borrero (59 kg), one could see that the value would be worse.

#### **Caution Strategy**

The caution strategy used during the first period leads one to question the relation between caution points and technical points. Therefore, we analyzed the relation between caution points awarded, points scored after ordered par terre position and normal technical points scored (see Figure 18). We analyzed all final matches for medals (1/2 and 3/5) because they are the face for our sport.

One can see that more than 50% of the points are connected with cautions and warnings which result in ordered par terre position. This creates a big influence on the technical-tactical quality of the bouts, when 35% of the points are coming from the par terre position. This leads to the situation that special "non-attractive throws" and gut wrenches are the most important techniques. If we take a look at the gold medal finals, the importance of the points of the ordered par terre position is increased (see Figure 19). The points after ordered par terre position increased at the expense of caution points.



Moment of the first realized technical point

FIGURE 17 Time of the first technical point scored in Greco-Roman.



COMPARISON OF TECHNICAL POINTS AND CAUTION POINTS ALL FINALS WC 2015 GR

FIGURE 18 Relation between technical points and caution points in Greco-Roman (all final bouts).



FIGURE 19 Relation between technical points scored and caution points in in Greco-Roman (Gold medals finals).

winner WC 2011, 2013, 2014 and 2015 0.50 0.45 0.40 0.35 0.30 0.25 0.20 0.15 0.10 0.05 0.00 lifts take down throws gut wrench turn over counter warn./caut. out

Technical structure / Attack efficacy GR

FIGURE 20 Development of the technical structure in Greco-Roman since 2011	FIGURE 20	Development of the	he technical s	structure in	Greco-Roman	since 2011.
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0.1

0.37

0.37

0.44

0.05

0.01

0.03

0.03

0.05

0.02

0.04



### Technical structure / Attack efficacy GR winner WC 2015

FIGURE 21 Technical structure of the in Greco-Roman champions 2015.

#### **Technical Structure**

WQ (pts./min)

WC 11

WC 13

WC 14

WC 15

0.00

0.03

0.02

0.02

0.12

0.39

0.19

0.13

0.21

0.29

0.21

0.47

As in the other two styles, Greco-Roman also shows a different development of the technical structure between 2011 (old rules) and 2015 (new rules). There is an increase in the number of throws, gut wrench and cautions. On the other hand there is a decrease in take down and push out techniques (see Figure 20).

To find and discuss some reasons for this development it is necessary to look at more details of the technical structure 2015 (see Figure 21). As already mentioned the most frequently used techniques in Greco-Roman in 2015 were throws, gut wrench, take down, and cautions. Of course, cautions do not result from techniques but behind these values there is a strategic factor of wrestling behavior.

0.04

0.05

0.09

0.11

0.14

0.05

0.06

0.05



FIGURE 22 Throws and gut wrench as the dominating techniques in Greco-Roman.



FIGURE 23 Throws and gut wrench techniques in Greco-Roman World Championship 2015 in comparison with World Championship 2014.

The significant increase in throws and gut wrench as dominant techniques in 2015 requiring a deeper analysis. Of the technical-tactical actions, 78% are throws and gut wrench (see Figure 22). Most throws and gut-wrench actions are coming after warnings. This means that they are executed from the par terre position (47%), and only 31% of the technical points are originating from dynamic situations from on the feet in standing position. Put this together with the fact that only 22% of the techniques are not throws and gut wrench seems to indicate a problem of low technical-tactical versatility.

To find out whether the coaches have changed their training strategy since 2014, the values of 2014 and 2015 were compared (see Figure 23).

What was seen is the huge increase in the number of throws after the ordered par terre position. This became the predominant Greco-Roman technique of the 2015 world championships.

#### SUMMARY

All three styles moved in a positive direction in regard to increased activity and scoring as a result of the most recent rules changes. However, Greco-Roman must explore ways to make larger strides in the variety of scoring, especially techniques from the standing position.