

**MENTAL ENLIGHTENMENT SCIENTIFIC –
METHODOLOGICAL JOURNAL****MENTAL ENLIGHTENMENT SCIENTIFIC –
METHODOLOGICAL JOURNAL**<http://mentaljournal-jspu.uz/index.php/mesmj/index>**ANALYSIS OF TECHNICAL AND TACTICAL ACTIONS OF HIGHLY QUALIFIED
FEMALE KARATE WKF ATHLETES IN THE COMPETITIVE PROCESS****Fotima Ostanova***Master's student**Uzbekistan State University of Physical Education and Sport**E-mail: fotimaostonova1@gmail.com**Chirchik, Uzbekistan***ABOUT ARTICLE**

Key words: Technical methods, tactical actions, striking, accuracy index, effectiveness, competition process, female karateka.

Received: 01.05.26**Accepted:** 02.05.26**Published:** 03.05.26

Abstract: This article analyzes the technical and tactical actions of elite female athletes during the competition process. The study examined the combat activity of elite female karateka, specifically winners of international competitions, highlighting the effectiveness of their offensive, counter-attacking, defensive, and combination movements. Based on the results obtained, practical recommendations have been developed, which can positively impact the training process when implemented in training sessions. Furthermore, the article attempts to clearly present an analysis of data from specialists regarding the preparation of female karateka. A comparative study of technical-tactical actions was conducted based on statistical analysis.

Introduction. The systematic development of physical education and sports in the Republic of Uzbekistan, including the sport of karate (WKF), is considered one of the priority areas of state policy. In particular, Resolution No. PQ-356 of the President of the Republic of Uzbekistan, dated November 3, 2023, outlines tasks such as further development of karate (WKF), improvement of the athlete training system, enhancement of competitiveness in

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international competitions, and strengthening of scientific and methodological support. The effective implementation of these tasks requires an in-depth analysis of athletes' competitive activities, especially the scientific study of the technical and tactical actions of highly qualified female athletes [1].

Furthermore, Resolution No. PQ-414 of the President of the Republic of Uzbekistan, dated November 3, 2022, pays special attention to further improving the system of personnel training and scientific research in the field of physical education and sports. This resolution identifies as an important task the scientific analysis of training and competition processes, as well as the improvement of athletes' technical and tactical preparedness through the use of modern pedagogical and analytical methods. In this regard, the analysis of the actions of female karate athletes during competitions fully corresponds to the requirements set forth in this resolution [2].

Resolution No. 122 of the Cabinet of Ministers of the Republic of Uzbekistan, dated March 4, 2020, establishes the improvement of the system for selecting athletes to national teams by sport, in which athletes' technical and tactical performance indicators in competitions are recognized as one of the main criteria. Therefore, analyzing the competitive activity of female karate (WKF) athletes, in particular the accuracy of strikes and tactical effectiveness, makes it possible to make scientifically grounded decisions in the process of forming national teams [3]. In addition, Presidential Decree No. PF-5924 of the Republic of Uzbekistan, dated January 24, 2020, defines tasks for further improving and popularizing physical education and sports, as well as for the widespread introduction of scientific approaches to achieve high sporting results. Based on the requirements of this decree, an in-depth scientific analysis of technical and tactical actions during competitions in karate is of great importance for improving athletes' level of preparedness and ensuring their success in the international arena [4].

The increasing complexity of competition conditions, the intensification of rivalry, and the growth in the speed and intensity of bouts require athletes to perform technical and tactical actions with high accuracy and efficiency. Therefore, the scientific analysis of technical and tactical actions performed during competitions is considered one of the urgent issues of modern sports science [5; 6; 7]. Practical experience shows that the success of highly qualified female karate athletes in competitions depends not only on their level of physical preparedness, but also directly on the accuracy of strikes, the speed of tactical decision-making, the coordination of attacks and counterattacks, and the rationality of movement sequences. However, in the existing scientific and methodological literature, studies aimed at a comprehensive analysis of the technical and tactical actions of female karate athletes during

competitions are not sufficiently covered, especially in the context of competitions conducted under WKF rules [8; 9].

At present, supporting female athletes in our country, creating the necessary conditions for their participation in sports, and ensuring their involvement in international competitions are considered important factors of state policy. Technical and tactical preparedness plays a significant role in achieving high results by athletes. In karate, this is regarded as a complex process. Athletes are required to perform each strike with precision and perfection; in particular, the effective execution of cunning attacks, defense, and combination movements by female athletes in kumite bouts is one of the main factors in evaluating their sporting mastery. This research is aimed at studying the accuracy and effectiveness of attacking, counterattacking, defensive, and combination actions of female athletes during kumite competitions. The obtained results can contribute to further improving the training process, enhancing athletes' competitive preparedness, and achieving high sporting results.

Methods. Purpose of the research: Aimed at analyzing the level of effectiveness of technical and tactical actions of highly qualified female karate athletes during competitions.

Research objectives:

to develop a database of information related to the research topic based on the analysis of scientific and methodological literature;

to analyze the accuracy of performing technical and tactical actions of karate athletes during competitions based on pedagogical observation;

to develop practical recommendations based on the identified shortcomings.

Result and discussion. Organization of the study. During the research, the competitive activity of highly qualified female karate (WKF) athletes was analyzed based on pedagogical observation. The observations were aimed at determining the structure of technical and tactical actions performed during competitions, the frequency of their repetition, the accuracy and effectiveness of strikes, as well as the ratio between attacking and counterattacking actions.

The obtained results showed that during competitions, athletes mainly used direct strikes, roundhouse kicks, and fast counterattacking actions. At the same time, the accuracy of technical actions varied depending on the situation, and it was found that the accuracy rate in attacking actions was higher than in counterattacks. This indicates that athletes gain a technical advantage when acting with active initiative.

From a tactical perspective, the analysis results demonstrated that for highly qualified female karate athletes, proper distance selection, anticipation of the opponent's actions, and quick tactical decision-making are among the key factors for success in competitions. However,

in some situations, disruptions in the sequence of continuing attacks and delays in counterattacks were observed, which led to a decrease in the effectiveness of strikes.

Analysis of the obtained results. The level of effectiveness was determined by the ratio of successful strikes to the total number of executed strikes. The obtained results show that, in kumite bouts of skilled female athletes, the accuracy and effectiveness of hand techniques were analyzed as being higher from both technical and tactical perspectives. During the match, it was observed that strikes performed with hand techniques provided a higher opportunity to score points.

Although a large number of kicks were executed, their scoring effectiveness was found to be relatively low during the research. At the same time, it was identified that combination movements during the match had a high potential for scoring among athletes. This indicates that the level of technical and tactical preparedness directly affects performance effectiveness during competitions (see Table 1).

Table 1

Analysis of the technical and tactical actions of Gulshan Alimardanova in the final stage of the 2025 World Championship (-50 kg)

Technical and tactical actions					
Technical actions		+	-	Total	Sk%
Tsuki waza (hand strikes)	Oi-zuki	0	0	0	0%
	Kizami-zuki	2	5	7	40%
	Gyaku-zuki	1	2	3	50%
	Uraken-uchi	0	0	0	0%
Geri waza (foot strikes)	Mavashi-geri	0	4	4	%
	Ura-mashi-geri	1	2	3	50%
	Yoka-geri	0	0	0	0%
	Ushira-uramavashi-geri	0	0	0	0%
	Ushiro-geri	0	0	0	0%
Nage waza (throwing techniques)	Ashi-barai	0	0	0	0%
Overall analysis		4	13	17	23,5%

The table presents the indicators of technical and tactical actions of Gulshan Alimardanova in the final match of the 2025 World Championship in the -50 kg weight category. The analysis was conducted based on video recordings, with each strike recorded separately and marked as scoring (+) or non-scoring (-), and the total number of actions was calculated.

Among hand strikes, kizami-zuki was applied 7 times, of which 2 were successfully executed. The effectiveness rate was 40%, indicating that although this strike was used frequently during the match, its accuracy was moderate. Oi-zuki (from chudan) was applied

twice during the match, with 1 strike successfully executed, resulting in an effectiveness rate of 50%. This analysis shows that this strike was relatively effective.

Among foot strikes, ura-mashi-geri was applied twice, with 1 successful execution, also resulting in 50% effectiveness. Scoring with this strike created an opportunity for the athlete to secure victory.

The results indicate that, although fewer in number, foot strikes demonstrated superiority in the overall composition of actions. The successfully executed foot strike provided an advantage over the opponent, with ura-mashi-geri showing particularly effective results. Hand strikes, being more frequent, were mainly used tactically to create deceptive movements; for example, kizami-zuki and gaki-zuki strikes showed high technical effectiveness and earned points, as observed during the match. It was also noted that the athlete did not perform other strike combinations.

Gulshan Alimardanova applied tactical pressure on her opponent and was highly evaluated for her strategy, winning the match with a score of 6:1. However, the analysis revealed that her technical-tactical experience was somewhat limited, and it was recommended to increase the sequence of combination strikes. The analysis of strike accuracy showed a rate of 23.5%, indicating a relatively low level of effectiveness.

Table 2

Analysis of the technical and tactical actions of Ahlam Youssef in the final stage of the 2025 World Championship (-55 kg)

Technical and tactical actions					
Technical actions		+	-	Total	Sk%
Tsuki waza (hand strikes)	Oi-zuki	4	2	6	66,6%
	Kizami-zuki	1	0	1	100%
	Gyaku-zuki	1	1	2	50%
	Uraken-uchi	0	0	0	0%
Geri waza (foot strikes)	Mavashi- geri	0	8	8	0%
	Ura-mashi- geri	0	0	0	0%
	Yoka- geri	0	0	0	0%
	Ushira-uramavashi-geri	0	0	0	0%
	Ushiro-geri	0	0	0	0%
Nage waza (throwing techniques)	Ashi-barai	1	0	1	100%
Overall analysis		7	11	18	38,8%

The table presents a quantitative and percentage analysis of the technical and tactical actions of Qatari athlete Ahlam Youssef in the final match. Overall, she performed 18 technical actions, of which 7 were successful and 11 were unsuccessful. The overall effectiveness rate was 38.8%. The study showed that her hand technique is well-developed, with speed and

accuracy evident in her movements. The main scoring action was the oi-zuki strike, with an effectiveness rate of 66.6%. The kizami-zuki strike was executed once during the match and achieved 100% effectiveness.

In the gyaku-zuki strike, the athlete used tactical skill to score against the opponent through a counterattack, with an effectiveness rate of 50%. Among foot techniques, the mawashi-geri was applied 8 times during the match, but its effectiveness was 0%, indicating a lack of precision and tactical consistency in her foot strikes. The ashi-barai technique, however, showed clear effectiveness, achieving 100% efficiency.

The analysis results indicate that Ahlam Youssef's technical and tactical actions in the final match were of moderate effectiveness. Of the 18 technical actions performed, only 38.8% were successful, showing that she was active during the match but was not able to use all opportunities effectively. Hand strikes, particularly oi-zuki and kizami-zuki, were executed with high accuracy and served as the main scoring tools. In contrast, foot strikes, especially mawashi-geri, lacked precision and tactical coordination. The high effectiveness of the ashi-barai technique demonstrates the athlete's well-developed tactical thinking. Overall, improving foot strike technique is crucial for enhancing her overall competition effectiveness.

Table 3

Analysis of the technical and tactical actions of Yorgerlis Salazar in the semifinal stage of the 2025 World Championship (-50 kg)

Technical and tactical actions					
Technical actions		+	-	Total	Sk%
Tsuki waza (hand strikes)	Oi-zuki	0	0	0	0%
	Kizami-zuki	1	1	2	50%
	Gyaku-zuki	0	1	1	0%
	Uraken-uchi	0	0	0	0%
Geri waza (foot strikes)	Mavashi- geri	0	1	1	0%
	Ura-mashi- geri	1	0	1	100%
	Yoka- geri	1	1	2	50%
	Ushira-uramavashi-geri	0	0	0	0%
	Ushiro-geri	0	0	0	0%
Nage waza (throwing techniques)	Ashi-barai	0	0	0	0%
Overall analysis		3	4	7	42,8%

The table presents a quantitative analysis of the technical and tactical actions of the renowned Hungarian athlete Yorgerlis Salazar during her match for the bronze medal at the World Championship. Overall, she performed 7 technical actions, of which 3 were successful and 4 were unsuccessful. The overall effectiveness rate was 42.8%.

Among hand strikes, kidzami-zuki was applied twice, achieving 50% effectiveness, while gyaku-zuki was executed once but did not result in a successful outcome. Among foot strikes, the ura-mawashi-geri demonstrated 100% effectiveness, indicating that the strike was executed with high precision. Yoko-geri was applied twice, with a 50% success rate, while mawashi-geri was executed once but was unsuccessful. Overall, the athlete made more effective use of foot strikes in this match. Hand strikes were fewer in number and demonstrated average effectiveness. The analysis also indicated that combination movements played an important role in the match. As a highly skilled athlete, she achieved tactical superiority and was able to force her opponent to leave the tatami through warnings.

The technical and tactical actions of Hungarian athlete Yorgerlis Salazar in the bronze medal match of the World Championship demonstrated relatively high effectiveness. Of the 7 technical actions performed, 42.8% were successfully executed, confirming that the athlete acted precisely and appropriately according to the situation during the match. Foot strikes, particularly the ura-mawashi-geri executed with 100% effectiveness, showed her high precision and technical mastery. Hand strikes were fewer and performed with average effectiveness. Overall, Yorgerlis Salazar effectively utilized combination movements, achieved tactical superiority, and won the match due to her high level of experience.

In our study, we analyzed and summarized a total of 3 matches of Gulshan Alimardanova at the World Championship, 4 matches of Ahlam Youssef, and 5 matches of Yorgerlis Salazar. The results of this summary are presented in the following table (see Table 4).

Table 4

Overall performance indicators of the female athletes (n=12) during the competition at the 2025 World Championship

№	Full Name	Gulshan Alimardanova (-50 kg) n=3			Ahlam Youssef (-55 kg) n=4			Yorgerlis Salazar (-50 kg) n=5		
		+	Σ	CK%	+	Σ	CK%	+	Σ	CK%
1	Oi-zuki	0,2	0,4	37,5	0,3	0,8	37,5	0,2	0,5	40,0
	Kizami-zuki	2,8	7,1	38,7	3,1	7,9	39,2	2,6	6,5	40,0
	Gyaku-zuki	1,6	3,9	39,7	1,8	4,5	40,0	1,7	4,2	40,5
	Uraken-uchi	0,0	0,0	0,0	0,2	0,5	40,0	0,1	0,3	33,3
2	Mavashi- geri	1,3	5,2	24,3	1,5	6,0	25,0	1,4	5,8	24,1
	Ura-mashi- geri	1,6	3,9	39,7	1,2	3,2	37,5	1,3	3,5	37,1
	Yoka- geri	0,1	0,6	16,7	0,2	0,7	28,6	0,2	0,6	33,3
	Ushira-uramavashi	0,2	0,6	33,3	0,3	0,8	37,5	0,2	0,5	40,0
	Ushiro-geri	0,1	0,8	12,5	0,2	0,6	33,3	0,1	0,4	25,0
3	Ashi-barai	0,0	0,0	0,0	0,1	0,2	50,0	0,1	0,3	33,3
Jami tahlil		4,0	17,0	23,5	4,9	25,2	28,9	4,9	22,6	27,4

Note: 1 – Tsuki waza (hand strikes); 2 – Geri waza (foot strikes); 3 – Nage waza (throwing techniques).

The overall performance indicators of the female athletes - Gulshan Alimardanova, Ahlam Youssef, and Yorgerlis Salazar - during the 2025 World Championship show that the matches were primarily conducted using hand strikes (tsuki waza), which constituted the main portion of all technical actions. In particular, kizami-zuki and gyaku-zuki strikes were the most frequently used among all athletes and stood out as the most effective techniques. Kizami-zuki was used most often due to its speed and ability to control the opponent, while gyaku-zuki provided accuracy and finishing power, achieving an effectiveness of approximately 40%. Oi-zuki was used less frequently, reflecting a relative decrease in direct attacks in modern karate matches. Uraken-uchi techniques were rarely or almost never used, indicating that athletes prioritize safe and reliable strikes.

Analysis of foot strikes (geri waza) shows that although mawashi-geri was used most frequently, its effectiveness was relatively low compared to other strikes (around 24–25%). Its frequent use reflects its versatility, but its effectiveness is reduced because it can be more easily blocked or anticipated by the opponent. Conversely, ura-mawashi-geri, though used less frequently, demonstrated high effectiveness (37–39%), reflecting its complexity and unexpected execution. Yoko-geri and ushiro-geri strikes were infrequently applied and showed inconsistent effectiveness, indicating cautious use of these techniques by the athletes. At the same time, ushiro-ura-mawashi demonstrated high effectiveness (40%) in some athletes, particularly Yorgerlis Salazar, showing individual technical superiority.

Ashi-barai was almost never used and observed only in a few cases. For example, Ahlam Youssef's execution of ashi-barai achieved 50% effectiveness, but the total number of attempts was very low. Gulshan Alimardanova did not use this technique at all, indicating that competitions focus primarily on striking techniques, with throwing techniques being of secondary importance.

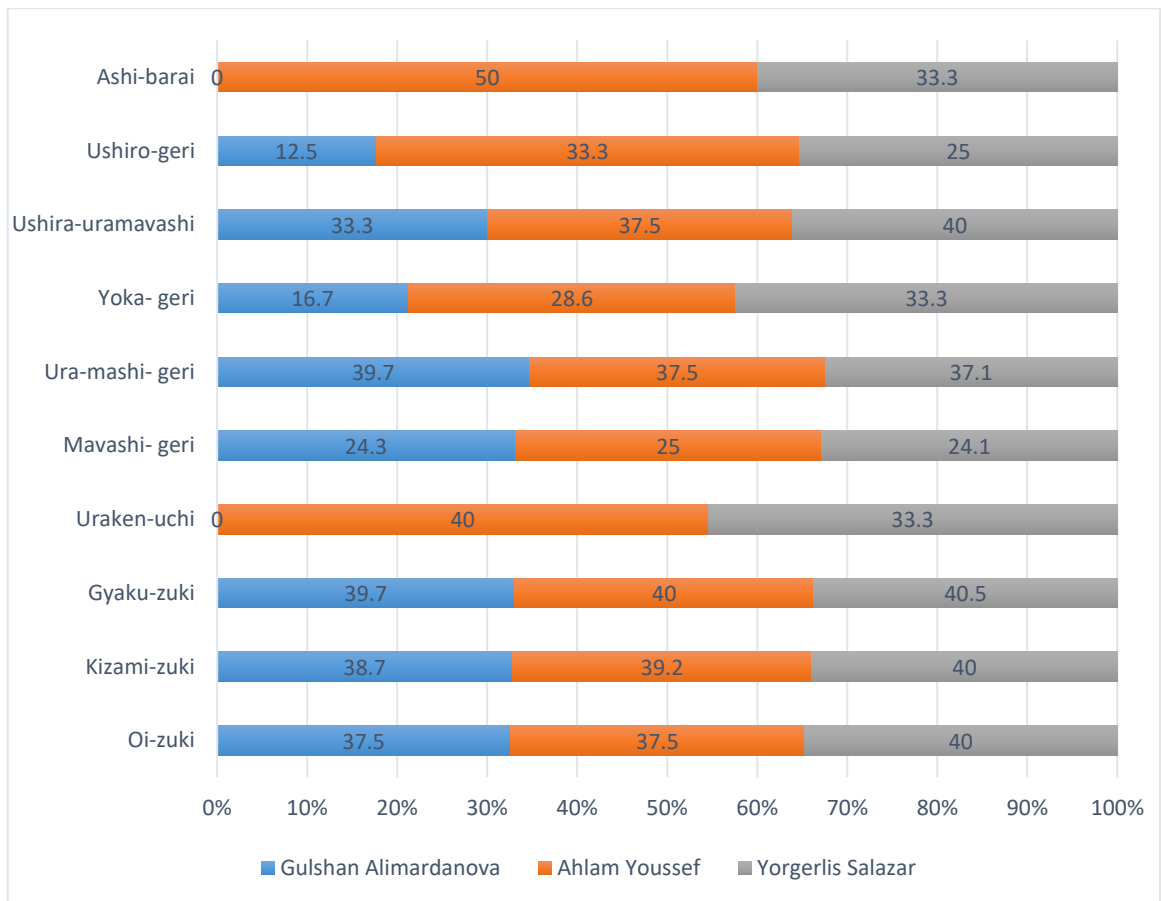


Figure 1. Effectiveness indicators of technical and tactical actions of female karate (WKF) athletes during competitions

By analyzing the data presented in the table, we can draw clear conclusions regarding the athletes' technical and tactical performance. Differences in performance indicators among the female karate athletes were observed. To provide a more detailed assessment, we examined the effectiveness of technical-tactical actions in Figure 1. Ahlam Youssef's ashi-barai technique showed higher performance compared to Gulshan Alimardanova and Yorgerlis Salazar, with 50% of correctly executed actions. Her effectiveness in foot strikes was also higher than that of Yorgerlis Salazar and Gulshan Alimardanova: ushiro-geri 33.3%, ushiro-ura-mawashi 37.5%, yoko-geri 28.6%, and mawashi-geri 25%.

Regarding hand strikes, Ahlam Youssef also showed higher performance relative to Gulshan Alimardanova and Yorgerlis Salazar. Her uraken-uchi and gyaku-zuki strikes achieved 40% effectiveness, kizami-zuki 39.2%, and oi-zuki 37.5%. Analysis of her matches showed that she performed all strikes in combination, although the effectiveness of hand strikes was slightly lower than that of foot strikes.

The absence of Ahi-barai and uraken-uchi techniques in Gulshan Alimardanova's performance is clearly observed. In contrast, Yorgerlis Salazar used these techniques, with an effectiveness rate of 33.3%. Yorgerlis Salazar's ushiro-ura-mawashi strike reached 40%

effectiveness, and her oi-zuki strike also achieved 40%, showing higher effectiveness compared to the same strikes by Gulshan Alimardanova and Ahlam Youssef.

During the analysis, it was noted that Gulshan Alimardanova performed fewer combination strikes compared to the other athletes. Her ura-mawashi-geri and mawashi-geri strikes demonstrated higher effectiveness percentages relative to her other techniques. In contrast, Yorgerlis Salazar showed a greater number of combination movements. Although all techniques were present and executed during the match, their overall effectiveness was observed to be moderate according to the analysis.

Practical Recommendations: Based on the above analysis, the following practical recommendations can be made using the performance of athletes such as Gulshan Alimardanova, Ahlam Youssef, and Yorgerlis Salazar as examples.

First, special attention should be given to hand strikes during training, particularly kizami-zuki and gyaku-zuki. These techniques were used most frequently and demonstrated high effectiveness during competitions. Therefore, a specialized training system should be developed for athletes to improve speed, accuracy, and combination strikes. For example, practicing rapid-response strikes at close range, counterattack techniques, and combinations will enhance overall effectiveness.

At the same time, it is important to improve training in foot strikes. Although mawashi-geri is widely used, its effectiveness is relatively low, so athletes should be trained to execute it with greater precision and proper timing. Complex but effective strikes, such as ura-mawashi-geri, should be incorporated more frequently in training and practiced until automatic execution is achieved, which will lead to higher performance results. Additionally, yoko-geri and ushiro-geri should be practiced in tactically appropriate situations to develop correct decision-making skills.

Since ashi-barai was rarely used, special preparation in this area is recommended. In particular, teaching simple but effective techniques like ashi-barai in combination with other strikes will enrich the athlete's technical repertoire and create unexpected advantages during matches. This can disrupt the opponent's balance and provide additional scoring opportunities. Athletes are encouraged to execute attacks using combination movements as much as possible, as this is associated with higher scoring efficiency and effectiveness.

Conclusion. The conducted analyses showed that the effectiveness of technical-tactical actions of highly skilled female karatekas during competitions is closely related to the type of strikes, their accuracy, and the correct assessment of tactical situations. Gulshan Alimardanova's performance in the final match demonstrated the high importance of leg

strikes, particularly the ura-mawashi-geri technique, which, despite being used infrequently, provided a clear advantage in terms of effectiveness. Hand strikes, on the other hand, were primarily used as a tactical distraction, and their accuracy was found to be average. The row athlete, Ahlam Youssef, exhibited high technique and accuracy in hand strikes, but her leg strikes showed tactical and technical weaknesses. In the match of the Hungarian athlete, Yorgerlis Salazar, leg strikes, especially the ura-mawashi-geri technique, were performed with high accuracy and effectiveness. The analysis results indicated that, during competitions, combination movements, strike sequences, and individual tactical approaches are key factors in achieving high sports results. Therefore, in improving the technical-tactical preparation of highly skilled karatekas, particular attention should be paid to strike accuracy and the development of combination attacks.

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