Diachronic analysis of match play sequences between Djokovic and Alcaraz at Wimbledon

Análisis diacrónico de las secuencias de juego de los partidos entre Djokovic y Alcaraz en Wimbledon

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Abstract

Background/Objective: The present study, conducted within the framework of observational methodology, analyses match play sequences in a diachronic manner through intra-sessional tracking of the actions performed by Novak Djokovic and Carlos Alcaraz in the 2023 and 2024 Wimbledon finals.
Methodology: An observational tool was designed to record technical-tactical behaviours in their contextualised form. Data recording and coding were carried out using LINCE Plus software. The data structure follows the internal logic of singles tennis and is organised according to the sequential order of behaviours that con-stitute the technical–tactical action sequence of each point. Reliability was assessed through intra and inter-observer agreement using Cohen's Kappa coefficient. A retrospective Lag Sequential Analysis was conducted, taking as criterion behaviours those incorporating information related to the outcome of each point sequence.
Results: The results allow for the characterisation of how both players build, maintain, or lose technical–tactical initiative throughout the point, based on the analysis of: a) winning points; b) the generation of errors in the opponent; c) aces; and d) double faults.
Conclusions: The detection of sequential play patterns allows for a deeper understanding of the internal logic of elite tennis, providing relevant insights into the technical-tactical behaviours that players dis-play during real match play.

Keywords

Diachronic analysis; lag sequential analysis; match analysis; observational methodology; technical–tactical actions; tennis.

Resumen

Introducción/ Objetivo: El presente estudio, realizado en el marco de la metodología observacional, analiza secuencias de juego de manera diacrónica mediante el seguimiento intrasesión de las acciones realizadas por Novak Djokovic y Carlos Alcaraz en las finales de Wimbledon de 2023 y 2024.
Metodología: Se diseñó una herramienta de observación para registrar los comportamientos técnico-tácticos en su contexto. El registro y la codificación de los datos se llevaron a cabo utilizando el software LINCE Plus. La estructura de los datos sigue la lógica interna del tenis individual y se organiza según el orden secuencial de los comportamientos que constituyen la secuencia de acciones técnico-tácticas de cada punto. La fiabilidad se evaluó mediante la concordancia intra e inter-observador utilizando el coeficiente Kappa de Cohen. Se llevó a cabo un análisis secuencial de retardos retrospectivo, tomando como criterio los comportamientos que incorporaban información relacionada con el resultado de cada secuencia de puntos.
Resultados: Los resultados permiten caracterizar cómo ambos jugadores desarrollan, mantienen o pierden la iniciativa técnico-táctica a lo largo del punto, basándose en el análisis de: a) los puntos ganados; b) los errores provocados en el rival; c) los saques directos; y d) las dobles faltas.
Conclusiones: La detección de patrones de juego secuenciales permite comprender mejor la lógica interna del tenis de élite, lo que ofrece información relevante sobre los comportamientos técnico-tácticos que muestran los jugadores durante los partidos reales.

Palabras clave

Análisis diacrónico; análisis secuencial de retardos; análisis de partidos; metodología observacional; acciones técnico-tácticas; tenis.

Introduction

Tennis is a sport characterised by a high degree of decision-making complexity, in which players must constantly select solutions adapted to the situational demands of the game. Within tennis, strategic and tactical dimensions play a central role in structuring competitive behaviour, guiding the player's actions throughout the match (Hizan et al., 2010), depending on the stage of the contest, the score, or the opponent's performance (Cui et al., 2019; O'Donoghue & Ingram, 2001). From an ecological dynamics perspective, decision-making in sport is understood as an adaptive process that emerges from the continuous interaction between the individual, the opponent, and the constraints imposed by the competitive environment (Araújo et al., 2006). Accordingly, players must continuously perceive relevant information, anticipate opponents' actions, and adapt their behaviour to changing competitive conditions (Hizan et al., 2010).

The main governing bodies of professional tennis, such as the Association of Tennis Professionals (ATP), the Women's Tennis Association (WTA), and the International Tennis Federation (ITF), continuously generate large volumes of statistical data derived from the analysis of high-performance competition, thanks to their collaboration with specialised technological platforms (Torres-Luque et al., 2019). These datasets constitute a valuable resource for coaches and performance analysts; however, their meaningful use requires match analysis procedures that allow the information to be functionally integrated (Reid et al., 2010).

Match analysis in tennis provides systematic, objective, and contextualised information on competitive behaviour, with direct applications for strategic guidance and the optimisation of athletes' decision-making (Escudero-Tena et al., 2020; Hughes et al., 2007). Moreover, the data derived from match analysis are highly valuable for planning physical conditioning, as they facilitate the appropriate adjustment of training loads to the real demands of the game, and for injury prevention, by enabling the identification of effort patterns, imbalances, or risk situations associated with competition (Fernández-Galván et al., 2025; Lambert et al., 2025; Messina et al., 2024).

One of the central elements of match analysis in tennis is the interaction between players, conceived as a dynamic process of mutual adjustment in which each action conditions the opponent's response. This phenomenon of co-adaptation is expressed through shot selection, the use of space, the management of match tempo, and adaptation to different moments of the contest (Gao et al., 2024; Lames & McGarry, 2007; Makino et al., 2020; Martínez-Gallego, 2013). In this sense, player interactions cannot be reduced to isolated technical or tactical actions, but should be interpreted within the broader competitive context in which behaviour emerges.

Observational methodology has proven to be a particularly suitable approach for conducting match analysis, as it is based on the systematic recording of technical-tactical behaviours displayed by players in real competitive contexts (Arroyo et al., 2024). In the field of tennis, various observational systems have been developed that enable the analysis of game actions from sequential and/or temporal perspectives, focusing on players' technical-tactical behaviour during match play (Gorospe et al., 2005; Ilarri et al., 2025; Prieto-Lage et al., 2018; Torres-Luque, 2018).

The aim of the present study is to carry out, using observational methodology and diachronic intra-sessional follow-up, a technical–tactical analysis of the interaction within the sequences of play between Novak Djokovic and Carlos Alcaraz in the 2023 and 2024 Wimbledon finals, considered jointly.

Method

This study was conducted within the framework of observational methodology (Anguera, 1979), based on its justified consideration as a mixed method in itself, having developed its own pathway of quantitizing through the "connect" option (Creswell & Plano Clark, 2017), which allows for the alternation of QUAL–QUAN–QUAL stages.

According to Anguera et al. (2011), the observational design is: ideographic, focusing on the technical–tactical performance of Novak Djokovic and Carlos Alcaraz in the Wimbledon finals played in 2023 and 2024, analysed jointly; with inter-sessional follow-up —referring to the confrontation between both

players across the finals studied— and intra-sessional follow-up —centred on the exchange of behaviours occurring within each point—; and multidimensional, incorporating both gestural and proxemic dimensions.

Participants

An intentional sampling procedure was employed (Anguera et al., 1995) to analyse the technical–tactical performance of Novak Djokovic and Carlos Alcaraz in the 2023 and 2024 Wimbledon finals. Both matches were won by Alcaraz: the Spanish player prevailed in five sets in 2023 (1–6, 7–6, 6–1, 3–6, 6–4) and in three sets in 2024 (6–2, 6–2, 7–6).

Procedure

Observation Instrument

To conduct the technical–tactical analysis of the sequences of play deployed by both tennis players, this study employed the observation instrument developed by Ilarri et al. (2025), although contextual variables relating to the score were not considered. The observation instrument (see Table 1) is a field format from which exhaustive and mutually exclusive category systems are derived (Anguera et al., 2007). The campogram corresponding to the proxemic dimensions is shown in table 1.

Table 1. Observation instrument.

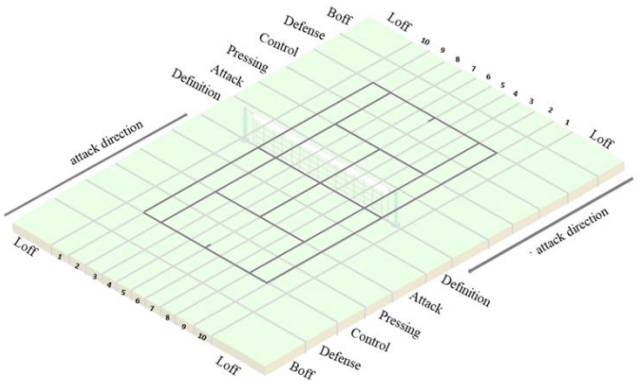
N	Criteria	Codes) for the constituent categories of the criterion
1	Court side	lws) lower side; ups) upper side
2	Game start	srv1) first serve; srv2) second serve; ret1) return on first serve; ret2) return on second serve
3	Player	alc) Alcaraz; djo) Djokovic
4	Sector	def) defense; con) control; pres) pressing; attack) attack; defin) definition
5	Zone	z1) zone 1; z2) zone 2; z3) zone 3; z4) zone 4; z5) zone 5; z6) zone 6; z7) zone 7; z8) zone 8; z9) zone 9; z10) zone 10
6	Outerzone	loff) lateral offcourt zone; boff) baseline offcourt zone
7	Shot type	fha) forehand; iofha) inside-out forehand; bha1) one-handed backhand; bha2) two-handed backhand
8	Spin effect	sli) slice; nsli) no slice
9	Technical action	lob) lob; vol) volley; dst) drop shot; sma) smash; pass) passing; app) approach; bhit) basic hit; otr) other technical resources
10	Resolution type	win) winner; unf) unforced error; foe) forced error; ace) ace; ft) fault; dft) double fault; let) let
11	Point winner	winalc) Alcaraz win; windjo) Djokovic win

Recording and coding

The recording of the data follows the internal logic of singles tennis, such that the following is recorded (see table 2): a) the spatial position occupied by both players at the moment the serve initiating the point is executed; b) the spatial position and technical hitting action performed by the corresponding player for each shot after the serve; c) concluding the recording of the sequence with the resolution of the point.

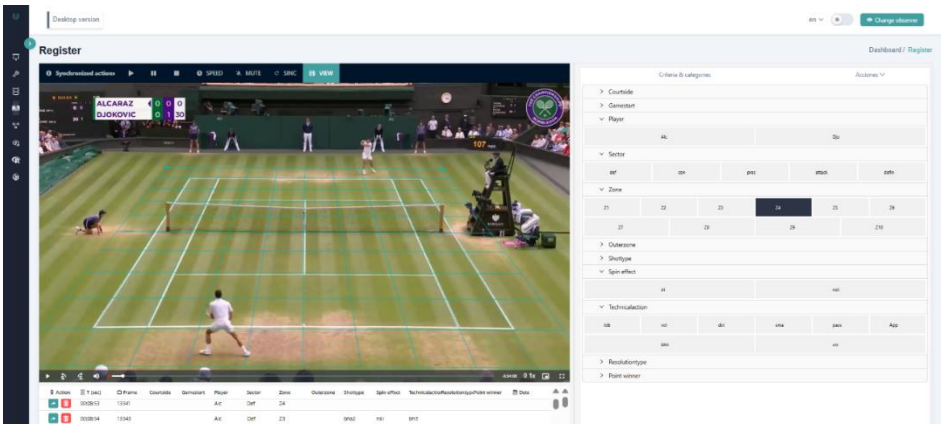
Table 2. Example of the recording of a complete point (Game 1 of Set 1, point 8 played, score after the point: Deuce) and campogram.

Register	Lag	Internal logic	Registered Dimensions
ups srv1 djo def Z5		Spatial location - Server	Courtside, Game start, Player, Sector, Zone
lws ret1 alca def Z3		Spatial location - Receiver	Courtside, Game start, Player, Sector, Zone
alca def Z4 bha2 nsli bhit		Third-to-last shot by the player who does not finish the point	Player, Sector, Zone, Shot type, Spin effect, Technical action
djo def Z4 iofha nsli bhit	Lag -5	Third-to-last shot by the player who finishes the point	Player, Sector, Zone, Shot type, Spin effect, Technical action
alca def Z4 bha2 nsli bhit	Lag -4	Second-to-last shot by the player who does not finish the point	Player, Sector, Zone, Shot type, Spin effect, Technical action
djo def Z3 bha2 nsli bhit	Lag -3	Second-to-last shot by the player who finishes the point	Player, Sector, Zone, Shot type, Spin effect, Technical action
alca def Z7 fha nsli bhit	Lag -2	Second-to-last shot of the point	Player, Sector, Zone, Shot type, Spin effect, Technical action
djo def Z9 fha nsli bhit	Lag -1	Last shot that ends the point	Player, Sector, Zone, Shot type, Spin effect, Technical action
djo foe winalc	Lag 0	Consequence of the shot that ends the point	Player, Resolution type y Ganador del punto



The process of data recording and coding was carried out using the LINCE software. Figure 1 shows a moment from the recording within the LINCE Plus environment (Soto-Fernández et al., 2021), in which the video under observation can be seen —incorporating a grid with the campogram— alongside the observation instrument and the recording of a point. According to Bakeman's (1978) classic classification for observational studies, the type of data obtained corresponds to Type IV, concurrent and time-based.

Figure 1. Screenshot of the recording and coding process using Lince Plus.



Data reliability

The reliability of the records was calculated using the GSEQ5 software (Bakeman & Quera, 2011), based on inter-observer agreement computed over 15% of the points that constitute the sample. The two observers —both authors of this study— completed a training process prior to data recording, following the procedures outlined by Arana et al. (2016).

The intra- and inter-observer agreement results, obtained using Cohen's Kappa statistic, are presented in table 2. In accordance with the classic interpretation by Landis & Koch (1977), all dimensions of the observation instrument reached an "almost perfect" level of agreement (greater than 0.80).

Table 3. Data reliability. Cohen's Kappa results for intra-observer and inter-observers agreement across the dimensions of the observation instrument.

Criteria	Intra-observer		Inter-observers
	Observer 1	Observer 2	
Court side	1	1	1
Game start	1	1	1
Player	1	1	1
Sector	0,98	0,87	0,82
Zone	0,95	0,81	0,81
Outerzone	0,9	0,89	0,86
Shot type	0,91	0,82	0,88
Spin effect	0,95	0,9	0,88
Technical action	0,98	0,98	0,94
Resolution type	0,96	0,96	0,86
Point winner	1	1	1

Data analysis

A lag sequential analysis (Bakeman, 1978) was carried out using the GSEQ5 software (Bakeman & Quera, 2011). The GSEQ software facilitates the calculation of adjusted residuals for the lags defined: in our case, from the last row of the record that includes the "resolution type" of the sequence (lag 0), up to lag –5 (i.e., 5 rows of the record prior to the consequence of the hit that ends the point).

Adjusted residuals allow statistically significant differences to be detected between conditional probabilities —based on observed frequencies— and unconditional probabilities —based on expected frequencies—, between given behaviours and target behaviours. Five lags were considered, since, according to Lapresa et al. (2013), from lag –5 (or +5) onwards, sequential behavioural patterns tend to dilute.

The dimensions crossed in the analysis were: Resolution type as the given behaviours and, as target or conditioned behaviours, the categories belonging to the dimensions Courtside, Game start, Player, Sector, Zone, Shot type, Spin effect, Technical action, and Point winner.

Results

The results obtained from the lag sequential analysis are presented below. The given behaviours correspond to each of the categories that make up the Resolution Type dimension —which incorporates information relating to the outcome of the point, both for and against: winner, unforced error, forced error, ace, and double fault—. The conditioned or target behaviours correspond to the categories belonging to the dimensions Court, Service, Player, Sector, Zone, Grip, Spin effect, Technical action, and Point winner (see table 4).

Table 4. Significant adjusted residuals between the given categories —corresponding to the Resolution Type dimension— and the target behaviours —corresponding to the dimensions Court, Service, Player, Sector, Zone, Grip, Spin effect, Technical action, and Point winner—.

Given	Criteria	Lag -5	Lag -4	Lag -3	Lag -2	Lag-1	Lag 0
win	Player					alc (3,01)	alc (2,77)
	Sector			pres (4,42)	pres (4,38); defin (2,22)	con (7,17); pres (5,57); attack(7,86); defin (3,82)	
	Zone		Z6 (3,06)	Z8 (3,34)	Z8 (2,67); Z9 (4,73); Z10 (2,08)	Z4 (3,36); Z5 (4,86); Z6(4,45); Z7 (2,98)	
	Shot type				bha1 (3,01)	fha (2,06); iofha (2,2)	
	Spin effect			sli (2,33)	sli (2,22)		
	Technical action	app (3,19)	lob (2,52)	vol (2,27); app (4,58)	lob (4,41); pass (2,41)	vol (4,8); dst (2,27); sma (5,37); pass (4,51)	
	Point winner						winalc (3,37)

unf	Sector		con (2,3)	def (2,76)	con (3,51); pres (3,44); attack (4,96)	con (5,86)	
	Zone		Z7 (2,13)		Z2 (4,27); Z3 (4,73)	Z4 (3,29); Z5 (3,13); Z6 (3,84)	
	Shot type			bha2(3,98)	bha2 (3,54)	bha2 (2,5)	
	Spin effect			nsli (3,15)		nsli (2,53)	
	Technical action	bhit (3,2)	bhit (3,58)	bhit (3,79)	bhit (7,35)	bhit (5,43)	
foe	Court Side				lws (1,99)		
	Sector		attack (2,45)			Def (2,39)	
	Zone	Z10 (2,3)	Z6 (2,36); Z10 (2,51)		Z3 (4,51); Z8 (4,9)	Z2 (2,91); Z4 (2,75); Z7 (2,51); Z9 (3,75); Z10 (3,42)	
	Shot type				iofha (2.25)	Bha1 (4,16)	
	Spin effect					Sli (3,08)	
	Technical action		app (2,76)	pass (2,9)	dst (3,07); sma (2,1); app (3,5)	lob (5,57)	
	Point winner						windjo (2,3)
ace	Court Side				lws (2,09)	ups (2,43)	
	Sector				def (2,12)	def (2,85)	
	Zone					Z3 (2,99)	
dft	Player					djo (2,36)	
	Sector					def (2,6)	
	Zone	Z4 (2,53); Z6 (3,1)	Z2 (3,6); Z8 (2,92)		Z6 (3,28)		

Discussion

From the perspective of observational methodology, and based on the diachronic intra-sessional follow-up of the behaviours displayed, a lag sequential analysis of the technical–tactical interaction between Novak Djokovic and Carlos Alcaraz in the 2023 and 2024 Wimbledon finals was carried out. The given behaviours corresponded to each of the categories that make up the Resolution Type dimension (winner, unforced error, forced error, ace, and double fault).

Particularly relevant in this study is the lag sequential analysis performed by setting the winner category as the given behaviour. When considering the 2023 and 2024 Wimbledon finals jointly, the significant adjusted residual obtained [Lag 0: winalc (3,37)] reflects Carlos Alcaraz's greater ability to execute winning shots. This result is consistent with the findings of Fernández & Giménez and Martínez-Gallego et al. (2019), who report that players who win matches tend to produce more winners than those who lose.

The results obtained, taking as conditioned behaviours those corresponding to the Sector dimension, show that the winner of the point performs the penultimate shot [lag –3: Sector Pres (4,42)] from intermediate areas of the court, which enables them to begin constructing the winner by progressing towards more offensive sectors [lag –1: con (7,17), pres (5,57), attack (7,86), and defin (3,82)], and according to the sector occupied by the opponent [lag –2: pres (4,38) and defin (2,22)]. This movement between sectors allows for the creation of hitting angles that facilitate the successful completion of the point. These results are consistent with O'Donoghue et al. (2001), who show that, on grass courts, as the rally lengthens, elite players tend to move closer to the net.

Continuing with the proxemic sequential analysis, setting the winning shot as the given behaviour and the hitting zones as the target or conditioned behaviours, the results indicate that: the player who loses the point performs their penultimate shot from a central zone [lag –4: Z6 (3,06)]; the player who executes the winner responds from the right lateral zone of the court [lag –3: Z8 (3,34)]; the losing player then hits from the lateral zone closest to the singles sideline [lag –2: Z8 (3,38)]; and finally, the winner of the point executes the winning shot from central zones [lag –1: Z4 (3,36), Z5 (4,86), Z6 (4,45), and Z7 (2,98)]. This end-of-sequence pattern aligns with the findings of Fernández & Giménez (2020) and

Prieto-Lage (2023), who reported that the final shot of the point most frequently originates from central areas. This central positioning increases the range of possible hitting angles and reduces the opponent's reaction time, thereby enhancing the effectiveness of the final shot or winner (Fernández & Giménez, 2020; Prieto-Lage, 2023).

As a result of the lag sequential analysis performed, setting the winner as the given behaviour and the *Shot type* categories as the target or conditioned behaviours, a sequential pattern was identified showing a statistically significant association between winners and the use of forehand and inside-out forehand strokes [lag –1: fha (2,06), iofha (2,2)]. These types of strokes —forehand and inside-out forehand— favour more aggressive hitting, generating greater ball speed, allowing players to create wider angles, and enabling the hitter —when using an inside-out forehand— to cover their backhand side more effectively (Martin-Lorente et al., 2017; Zhao et al., 2025). This technical choice for producing a winner is particularly effective as a response to defensive shots such as the opponent's one-handed backhand [lag –2: bha1 (3,01)], which often includes a slice component when executed in situations of tactical imbalance [lag –2: sli (2,22)].

With respect to the lag sequential analysis performed by setting the winner as the given behaviour, the Technical action categories that showed statistically significant associations with the execution of the winner correspond to actions aimed at closing out the point, such as smashes [lag –1: sma (5,37)], passing shots [lag –1: pass (4,51)], drop shots [lag –1: dst (2,27)], and volleys [lag –1: vol (4,08)]. Given that most points in tennis consist of four strokes or fewer, several authors have highlighted the importance of adopting a game strategy designed to finish the point as quickly as possible, particularly on grass surfaces (Fitzpatrick et al., 2021; Lisi et al., 2024; Zhao et al., 2025). The use of one shot type or another is directly related to the spatial positioning of the opponent. In this regard, the use of the passing shot [lag –1: pass (4,51)] and the drop shot [lag –1: dst (2,27)] as effective technical resources shows a significant association with the opponent occupying mid-court or advanced positions [lag –2: pres (4,38), defin (2,22)], lateralised to the right [lag –2: Z8 (2,67), Z9 (4,73), Z10 (2,08)].

With regard to the lag sequential analysis performed by setting the unforced error as the given behaviour, the results show the initiative exerted by the player who wins the point from control sectors [lag –2: con (3,51), pres (3,44), and attack (4,96)], using basic strokes [lag –2: bhit (3,79)] executed from the left intermediate lane [lag –2: Z2 (4,27) and Z3 (4,73)].

The final shot by the point winner, executed with a two-handed backhand [lag –2: bha2 (3,54)], is preceded by a shot from the opponent also using a two-handed backhand [lag –3: bha2 (3,98)] from the back of the court [lag –3: def (2,76)]. This sequence increases the pressure exerted by the dominant player through their progression towards more offensive sectors [lag –2: pres (3,44) and attack (4,96)] or by maintaining their position [lag –4: con (2,3), lag –2: con (3,1)], while opening up the hitting angle towards zones on the left side [lag –4: Z7 (2,13), lag –2: Z2 (4,27) and Z3 (4,73)]. The movement towards areas closer to the net [lag –2: con (3,51); pres (3,44); attack (4,96)] by the point winner can be interpreted as a pressure tactic designed to prevent the opponent from striking comfortably, forcing them to further adjust their shot. These technical–tactical actions, carried out by the player who ultimately wins the point, lead the player committing the unforced error to hit from central zones [lag –1: Z4 (3,29), Z5 (3,13), and Z6 (3,84)] and from intermediate sectors of the court [lag –1: con (5,86)]. These results are consistent with those reported by Martínez-Gallego et al. (2013), who found that winners tend to dominate losers, obliging them to exhibit behaviours typically associated with a defensive strategy and to spend more time in defensive areas and less in offensive ones than the winners.

With regard to the lag sequential analysis corresponding to the forced error as the given behaviour, the results show that the forced error is a consequence of previous offensive actions by the point winner, such as drop shots [lag –2: dst (3,07)] or smashes [lag –2: sma (2,1)], executed from zones that allow greater width in the hitting angle [lag –2: Z3 (4,51), Z8 (4,9)]. A significant association was found indicating that the player who loses the point is positioned in defensive sectors [lag –1: def (2,39)] and in lateral or central zones [lag –1: Z2 (2,91), Z4 (2,75), Z7 (2,51), Z9 (3,75), Z10 (3,42)], thereby having to cover more court space due to the opponent's ability to open angles. These results are in line with those of Carvalho et al. (2013), Martínez-Gallego et al. (2019) and Pereira et al. (2017), who found that the further the opponent is positioned from the baseline, the greater the lateral distance they must cover, which in turn increases the likelihood of committing an error. Under these spatial constraints, the player who commits the forced error performs defensive technical actions, such as a lob [lag –1: lob (5,57)] or

slice strokes that reduce the speed of the ball [lag –1: sli (3,08)], seeking to gain more time to recover their position on the court.

With regard to the lag sequential analysis corresponding to the ace as the given behaviour, the results show a significant association between the achievement of a direct service point and the receiver's positioning in zone 3 [lag –1: Z3 (2,99)]. When the receiver is located in this zone —the inner lane closest to the doubles alley— the server can opt for either wide or body trajectories, which explains the high frequency of direct service points (Gao et al., 2024; Ilarri et al., 2025; Sánchez-Alcaraz et al., 2019; Te & Liu, 2025;). Continuing with the proxemic analysis, the results show that the receiver, when the ace occurs, occupies the defensive sector [lag –1: def (2,85)]. In this regard, authors such as Melonio et al. (2021), Whiteside & Reid (2017), and Zawadzki & Roca (2010) propose that, in order to reduce the number of aces conceded, the receiver should adjust their positioning —either moving further back or further forward—.

With regard to the lag sequential analysis corresponding to the double fault as the given behaviour, the results show a significant association with the serve being executed from the right side of the court [lag –2: Z6 (3,28)], with Djokovic as the receiver [lag –1: djo (2,36)] positioned in the defensive sector [lag –1: def (2,6)]. According to Bailey & McGarrity (2012), Mecheri et al. (2016), and Tea & Swartz (2023), and considering the margin of error assumed by the server, the receiver's position conditions the server's second serve by directing it towards the opponent's backhand.

Conclusions

The results of the lag sequential analysis have made it possible to characterise the technical–tactical interaction displayed by Novak Djokovic and Carlos Alcaraz in the 2023 and 2024 Wimbledon finals, highlighting that technical-tactical interaction in elite tennis cannot be understood as a succession of isolated actions, but rather as a sequential process in which present actions depend on the accumulated dynamics of the point.

The sequential patterns identified in this study should be interpreted within the specific context of the matches analysed. Nevertheless, they offer direct implications for training planning. Regarding the technical–tactical content to be addressed in competition preparation, the results suggest: a) with respect to winners, designing tasks that promote progression from intermediate to attacking sectors; occupying central positions in the penultimate shot; using forehand and inside-out forehand strokes to create angles and close points; and playing short points that end with shots close to the net (volley and smash); b) in relation to forced errors, working on offensive actions that compel the opponent to hit from defensive or highly lateralised sectors, combined with net approaches to apply pressure; c) to reduce the occurrence of unforced errors, incorporating training that emphasises maintaining initiative from the baseline through longer rallies to build consistency; d) with regard to serve and return, serving to specific areas depending on the receiver's positioning.

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