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Observational Analysis of the Execution of the "Control" Core Technical/Tactical Concept by Sergio Busquets

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Abstract

This paper is based on match analysis using observational methodology. Its object of study is the execution of the control core technical/tactical concept by Sergio Busquets, the FC Barcelona international midfielder. The observation instrument was developed ad hoc and was a combination of field format and category systems. The recording and coding process was carried out using the Lince software, version 1.2.1. The reliability of the observation instrument designed ad hoc was guaranteed through inter-observer matching calculated using Cohen's kappa coefficient. Within the theoretical framework of Generalisability Theory, the observational instrument was validated and the generalisability of the results derived from the number of sequences analysed was guaranteed. Two complementary diachronic analyses were performed: adjusted residuals analysis with the GSEQ5 program and T-pattern analysis with the Theme program, version 6. The results show regular behaviour patterns in which Sergio Busquets controls the ball with his instep, positioned at the back line of his team with the forward line of the opposing team in front of him. His control also has a tactical intention, namely to switch play towards the opposite side from which the ball enters. The conclusions of this paper are a highly significant starting point for designing tasks whose purpose is to develop the "control" core technical concept on the basis of the analysis of a leading player.

Keywords: football, ball control, Sergio Busquets, observational methodology, generalisability, T-patterns

Introduction

Football analysis is evolving rapidly due to the development of automatic procedures for recording the positioning and movement of players and the ball on the pitch (Rein & Memmert, 2016). However, in spite of fledgling efforts to capture technical/tactical performance automatically (Stein et al., 2017), this type of behaviour is mostly recorded semi-automatically by means of display, recording and coding software (Gabin et al., 2012). Against this background, observational methodology is becoming increasingly germane internationally due to the methodological robustness of the match analyses carried out (Preciado et al., 2019).

Although there are numerous papers in football which use observational methodology and include the analysis of its core technical concepts, none of them concerns the object of study of this paper: "control". Based on the common traits in the specialist literature, control can be defined as the technical action by which the player takes possession of the ball, placing them in an ideal situation to perform a new technical action immediately afterwards and continue the game.

Therefore, this core technical concept is probably one of the best examples of how technique and tactics are inseparable and of how technique underpins the players' tactical decision-making ability. The core technical concept is the means, the functional adaptation of performance to the task, while the tactical intent is the end (Guilherme et al., 2015), and a means cannot be envisaged independently of the end for which it is used (Castelo, 1999).

In football, an isolated movement only takes on its true meaning within the context of the game (Guilherme et al., 2015). Without adequate control, the player's technical/tactical behaviour cannot be harnessed to address changing game situations. Hence it is pertinent to stress the influence that control actions have depending on the player's role and the zone of the field where they are performed (Sarmento, Marcelino et al., 2014).

This paper concerns the observational analysis of the sequences included in the control core technical/tactical concept performed by FC Barcelona 1st Division international midfielder Sergio Busquets. This choice is warranted because a midfielder is a player whose role calls for great variety and quality in the performance of control actions (Maneiro & Amatria, 2018). Furthermore, Busquets trained in youth football at FC Barcelona, a club which is a global leader in combination play (Sarmento, Anguera et al., 2014) and which has a youth academy internationally recognised for its work in technical/tactical training in link-up play (Lapresa et al., 2018).

First of all, the aim was to design an observation system which allows observation, analysis and intervention on the "control" core technical/tactical concept. Subsequently, the paper examines the control actions executed by a leading player: the FC Barcelona international midfielder Sergio Busquets. Fulfilling this second objective will make it possible to produce a technical/tactical model (Maneiro & Amatria, 2018) to be used to guide football player training by means of appropriate task design (Stratton et al., 2004).

Methodology

This paper uses observational methodology (Anguera, 1979). As defined by Anguera et al. (2011), observational design is I/S/M: idiographic (the behaviour of a given player is observed); inter- (a number of observation sessions) and intra- (the behaviour is recorded continuously frame by frame) session monitoring which allows subsequent diachronic analysis; and multidimensional (with different levels of response reflected in the different criteria of the observation instrument). Observation is active, respecting the principle of scientificity, and is live, based on the recordings of the matches broadcast free-to-air.

Participants

In this paper, Sergio Busquets, a leading international midfielder, was specifically selected to provide a benchmark to guide task design in relation to the control core technical concept. This player is in the FC Barcelona first team and plays in the position of defensive midfielder. The sequences making up the observational sampling were extracted from the King's Cup Semi-final (Valencia CF vs. FC Barcelona) played on 6 February 2018 at the Mestalla Stadium, and from the King's Cup Final (FC Barcelona vs. Sevilla FC) played on 21 April 2018 at the Wanda Metropolitano Stadium in Madrid.

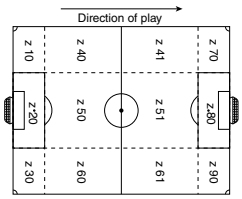
This paper has been approved by the Research Ethics Committee at the University of La Rioja (file no. 17250).

Observation instrument

The observation tool was developed ad hoc and was a combination of field format and category systems. The general approach of the criteria was a field format, although each one was developed in a category system that meets the requirements of completeness and mutual exclusivity. Table 1 sets out the criteria and categories making up the observation instrument (Castellano et al., 2013; Castellano et al., 2007).

Table 1
Overview of the observation instrument

Criterion or dimension	Codes and categories
Reason for beginning the sequence	IMP: retaining possession; IR: recovering the ball; IFTD: direct free kick for the observed team; IFTI: indirect free kick for the observed team; IFJ: offside free kick for the observed team; ISC: kick-off for the observed team; ISB: throw-in for the observed team; ISE: corner kick for the observed team; ISP: goal kick for the observed team.
Consequence of the sequence	CSP: Retaining possession. CIR: Interception by rival – loss of possession. Interruption for the observed team: For/Inside, CAFD; For/Outside, CAFF. Interruption against the observed team: Against/Inside, CCD; Against/Outside, CCF. CGF: Scores goal.
Scoreboard	EM: drawing; W: winning; L: losing.
Zone of the pitch where the action is performed	Own half: safety sector (Z10, Z20, Z30); own half creation sector (Z40, Z50, Z60). Opponents' half: opponents' half creation sector (Z41, Z51, Z61); definition sector (Z70, Z80, Z90).
Context of interaction	Ball in the possession of the observed team: RMO: the back line has the ball in front of the middle line of the opposing team. RAO: the back line has the ball in front of the forward line of the opposing team. MRO: the middle line has the ball in front of the back line of the opposing team. MMO: the middle line has the ball in front of the middle line of the opposing team. MAO: the middle line has the ball in front of the forward line of the opposing team. ARO: the forward line has the ball in front of the back line of the opposing team. AMO: the forward line has the ball in front of the middle line of the opposing team. GO: the goalkeeper of the observed team has the ball. Ball in the possession of the opposing team: RMR: the back line has the ball in front of the middle line of the observed team. RAR: the back line has the ball in front of the forward line of the observed team. MRR: the middle line has the ball in front of the back line of the observed team. MMR: the middle line has the ball in front of the middle line of the observed team. MAR: the middle line has the ball in front of the forward line of the observed team. ARR: the forward line has the ball in front of the back line of the observed team. AMR: the forward line has the ball in front of the middle line of the observed team. GR: the goalkeeper of the opposing team has the ball.
Phase	IAP: start prior technical/tactical action; FAP: end prior technical/tactical action; ICJ: start control; FCJ: end control; IAVJ: start technical/tactical action linked to the control by the observed player; FAVJ: end technical/tactical action linked to the control by the observed player; IAJT: start technical/tactical action by the player who intervenes after the observed player; FAJT: end technical/tactical action by the player who intervenes after the observed player.
Technical/tactical action	C: control of the ball; T: shot; CP: control plus pass; CM: control plus running with the ball and/or dribbling; CMP: control, running with the ball and/or dribbling plus pass; CB: header; IOC: occasional interruption with continuity.
Control contact surface	PL: sole of the foot; IN: inside of the foot; EX: outside of the foot; TA: heel of the foot; EMP: instep of the foot; OT: parts of the body other than the foot: chest, thigh, etc.
Incoming ball positioning in the control	BEAD: front-right quadrant; BEAI: front-left quadrant; BETD: rear-right quadrant; BETI: rear-left quadrant.
Outgoing ball positioning in the control	BSAD: front-right quadrant; BSAI: front-left quadrant; BSTD: rear-right quadrant; BSTI: rear-left quadrant.
Player positioning when controlling incoming ball	JEAD: front-right quadrant; JEAI: front-left quadrant; JETD: rear-right quadrant; JETI: rear-left quadrant.
Player positioning after controlling and playing the ball	JEAD: front-right quadrant; JEAI: front-left quadrant; JETD: rear-right quadrant; JETI: rear-left quadrant.
Opponents in the centre of play	S: centre of play unoccupied; C: centre of play congested; SO1: sector occupied 1; SO2: sector occupied 2; SO3: sector occupied 3; SO4: sector occupied 4; SO12: sectors occupied 1 and 2; SO13: sectors occupied 1 and 3; SO14: sectors occupied 1 and 4; SO23: sectors occupied 2 and 3; SO24: sectors occupied 2 and 4; SO34. sectors occupied 3 and 4; SL1: sector unoccupied 1; SL2: sector unoccupied 2; SL3: sector unoccupied 3; SL4: sector unoccupied 4.



Recording and coding

The observational sample gathered amounted to 105 sequences which include the control core technical concept performed by Sergio Busquets. Each sequence consists of a maximum of eight rows of the record: start and end of the technical/tactical action by the player who intervenes before the observed player (dimensions recorded: reason for beginning the sequence, zone, context of interaction, technical action); start and end of the control action performed by Sergio Busquets (recorded dimensions: zone, context of interaction, technical action, control surface, incoming ball positioning, incoming player positioning, opponents in the centre of play); start and end of the technical/tactical element after the control performed by Sergio Busquets (dimensions recorded: zone, context of interaction, technical action); start and end of the technical/tactical action of the player intervening on the ball after the player observed (dimensions recorded: zone, context of interaction, technical action, consequence of the sequence).

Following Bakeman (1978), type IV, time-based and concurrent data were used; i.e. the data include the time parameter and they concur. The use of this type of data is consistent since it is an intra-session and multidimensional monitoring design. It should be added that in the GSEQ analysis software environment the data are multievent (Bakeman & Quera, 1995).

The recording and coding of the matches played (Figure 1) was carried out using the LINCE software, version 1.2.1 (Gabin et al., 2012). Subsequently, the data obtained were exported and recoded for further analysis in the GSEQ and THEME programs. In both cases, the specific coding syntax of both software programs was used to determine, according to the internal logic of the game, that the adjusted residuals analysis in the lags considered and the detection of T-patterns would be carried out intra-sequence.

Data quality control

In this research, and after a training process following Anguera (2003), two observers recorded the corresponding data packages. The first observer recorded the entire observational sampling while the second observer recorded 10% of the total time.

In this research, the reliability of the observation instrument was guaranteed in the form of concordance using Cohen's kappa coefficient. The "phase", "control contact surface", and "scoreboard" criteria achieved complete concordance. The other criteria earned a rating of almost perfect agreement based on Landis and Koch (1977), with Cohen's kappa values higher than 0.80.

In order to complete the quality of the data in this research, the Generalisability Theory (GT) – Cronbach et al. (1972) – was used, applied in the SAGT software, version 1.0 (Hernández-Mendo et al., 2016). The generalisability design was developed in concordance with the phases expounded by Blanco-Villaseñor (1993):

Figure 1
Capture of a moment of the recording with the observation instrument in LINCE software, version 1.2.1

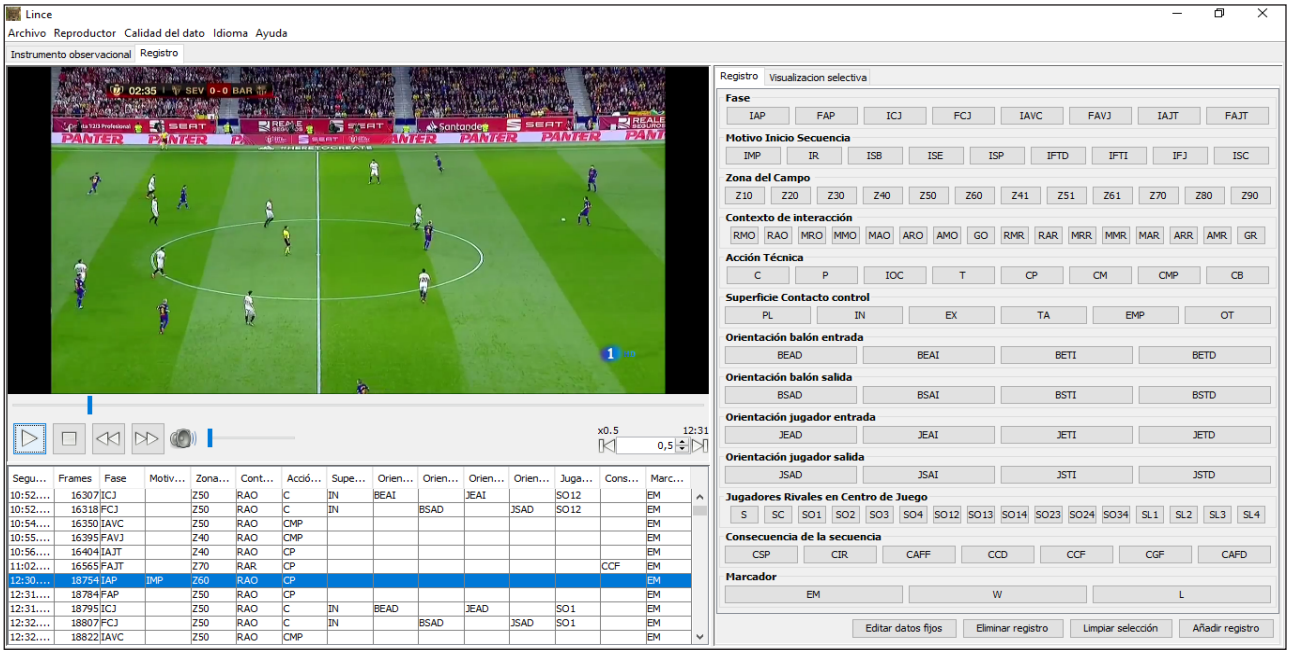


Table 2
Measurement plan results [Categories] / [Sequences]

Variation sources	Sum of squares	Gl	Mean square	Random	Mixed	Corrected	%	Standard error
[Sequences]	6.871	104	0.066	-0.005	-0.005	-0.005	0	0
[Categories]	5571.829	97	57.442	0.542	0.542	0.542	50.101	0.078
[Sequences][Categories]	5444.824	10088	0.54	0.54	0.54	0.54	49.899	0.008

1st phase. Two-faceted observation plan arranged in a "crossed" manner: Sequences (S), with 105 levels; Categories (C), with 98 levels, the 98 categories corresponding to the variable criteria of the observation instrument; 2nd phase. Estimation plan, the universe to which the data were generalised is estimated for an infinite population; 3rd phase. Measurement plan, where two measurement plans were made: [Categories] / [Sequences], to evaluate the generalisability of the results based on the number of sequences observed; [Sequences/Categories], to evaluate the validity of the observation instrument within the GT theoretical framework; 4th phase. No optimisation plan was needed.

Table 2 shows the results of the [Categories] / [Sequences] design conducted in the records for Sergio Busquets. The analysis shows that the greatest variability is associated with the [Categories] facet, 50.101%; followed by the interaction between the [Sequences] / [Categories] facets, 49.899%. The results for the Categories / Sequences measurement plan reflect the uniformity of the sequences that make up the observational sampling, since a relative G coefficient (e^2) = .991 is derived. These results confirm that 105 sequences are sufficient to ensure the generalisability of the results derived from the sequences which include the control actions performed by Sergio Busquets. Accordingly, an optimisation plan was not necessary.

Furthermore, the validity of the observation instrument was addressed based on the results of the measurement plan which involves placing the "categories" facet in the instrumentation facet. In this methodological framework, an instrument will be valid when the variability corresponding to the categories facet is very high, which translates into a generalisability coefficient equal to or close to zero. In this case, the relative generalisability coefficient (e^2 = .000) reflects the categories facet's discrimination capacity and makes it possible to guarantee the validity of the observation instrument designed within the theoretical framework of generalisability theory.

Data analysis

From the methodological standpoint, this paper is based on match analysis using observational methodology (Sarmento, Anguera et al., 2014), involving the complementary use of lag-sequential analysis (Bakeman & Quera, 1995) and T-pattern detection (Magnusson, 1996) to accomplish its disciplinary objectives. Lapresa et al. (2013) showed that although certain results obtained with both techniques can be considered convergent, they sometimes reveal two different sides of the reality of the same object of study. Therefore, in this paper an adjusted residuals analysis was conducted with the GSEQ5 program (Bakeman & Quera, 1995) and a T-pattern analysis with the THEME program, version 6 Edu (Magnusson, 1996).

The GSEQ5 software was used to calculate the adjusted residuals between given and target behaviours, where $z_{rc} = x_{rc} - e_{rc} / \sqrt{e_{rc}(1-p_c)(1-p_r)}$: X_{rc} is the frequency of cases in each box of the table; e_{rc} is the frequency of cases expected by chance; P_c is the proportion of cases in each column; and P_r is the proportion of cases in each row. The significant differences between conditional (based on observed frequencies) and unconditional (based on expected frequencies) probabilities at lag 0 or co-occurrence and at lag +1 (behaviours occurring immediately after – one row after the given behaviour was recorded) were interpreted subsequently.

The following search parameters were selected to detect T-patterns: minimum occurrences: equal to or greater than 3; significance level: a significance level of .005 was used; redundancy reduction: if more than 99% of the occurrences of a new detected time pattern start and end at almost the same time as the time patterns already detected, the new time pattern was discarded; fast requirement activated: whereby the lower time limit of the critical interval is set to a value equal to 0 and the components of the critical interval tend to occur in relatively quick succession.

Results

Adjusted residuals analysis

Table 3 presents transitions greater than 1.96 ($p < .05$), which indicate a greater probability of occurrence than expected by chance (activation relationship between given behaviour and target behaviour); and transitions less than or equal to –1.96 ($p < .05$) that show an inhibition relationship between behaviours.

In lag 0, the intention was to find out to what extent there was a statistically significant relationship – either of association or inhibition – in the co-occurrence of behaviours in the dimensions: "incoming ball positioning" and "incoming player positioning"; "outgoing ball positioning" and "opponents in the centre of play"; "outgoing player positioning" and "opponents in the centre of play".

In turn, the sequential analysis of lag 1 was designed to show the statistically significant relationship – either of association or inhibition – between behaviours corresponding to consecutive rows of the record, which made it possible to drill down into the relationship between the behaviours in the dimensions: "incoming ball positioning" and "outgoing ball positioning"; "incoming ball positioning" and "outgoing player positioning"; "incoming player positioning" and "outgoing player positioning".

Table 3
Sequential analysis of lags 0 and +1; given behaviours are reflected in the left column. The target behaviour and the value of the statistically significant adjusted residual are added In the corresponding cells

	Lag 0		Lag 1	
	Activation	Inhibition	Activation	Inhibition
BEAD	JEAD (7.11);	JEAI (-3.41); JETI (-2.85); JETD (-2.26)	BSAI (5.28); JSAI (5.28)	BSAD (-4.52); JSAD (-4.52)
BEAI	JEAI (7.53)	JEAD (-4.48); JETD (-2.6)	BSAD (4.18); JSAD (4.18)	BSAI (-3.98); JSAI (-3.98)
BETI	JETI (7.98)	JEAD (-2.07); JEAI (-2.85)		BSAI (-2.29); JSAI (-2.29)
BETD	JETD (8.48)	JEAI (-2.56)		
BSAD	JSAD (10.25)	JSAI (-6.96); JSTI (-2.37); JSTD (-3.34)		
BSAI	JSAI (10.25)	JSAD (-6.96); JSTI (-2.15); JSTD (-3.02)		
BSTI	JSTI (10.25)	JSAD (-2.37); JSAI (-2.15);		
BSTD	JSTD (10.25); SL3 (2.33)	JSAD (-3.34); JSAI (-2.56)		
JSTD	SL3 (2.33)			
JEAD			JSAI (4.17)	JSAD (-2.83)
JEAI			JSAD (3.19)	JSAI (-3.41)

T-pattern detection

In the recording of the 105 sequences that included the control core technical concept performed by Sergio Busquets, 822 multi-events – recording rows, made up of 476 standard multi-events – were counted, which means a frequency of appearance of each standard multi-event of 1.72. As a result of their information potential, Table 4 shows the T-patterns detected which, fulfilling the search parameters, reflect the start player control (SPC) and end player control (EPC) dimensions.

Table 4
T-patterns detected according to search parameters and criteria, grouped according to the consequence of the sequence. The string format pattern, the sequence number of the record in which each occurrence of the T-pattern takes place and the order number for its identification are shown for each T-pattern

Consequence	Opponents in the centre of play	String format pattern	Occurrences and sequence no.	*n*
Incoming positioning front-right and outgoing positioning front-left	Sector 1 occupied	((fap,z50,rao,cp,em icj,z50,rao,c,in,bead,jead,so1,em) fcj,z50,rao,c,in,bsai,jsai,so1,em)	*n*=3 (7,29,31)	1
	Sectors 1 and 2 occupied	(icj,z51,rao,c,in,bead,jead,so12,em (fcj,z51,rao,c,in,bsai,jsai,so12,em iavc,z51,rao,cp,em))	*n*=3 (5,11,19)	2
		(icj,z50,rao,c,in,bead,jead,so12,em fcj,z50,rao,c,in,bsai,jsai,so12,em)	*n*=3 (4,50,73)	3
Incoming positioning front-left and outgoing positioning front-right	Sectors 1 and 2 occupied	((fap,z50,rao,cp,w icj,z50,rao,c,in,beai,jeai,so12,w) fcj,z50,rao,c,in,bsad,jsad,so12,w)	*n*=3 (66,83,88)	4
		(icj,z50,rao,c,in,beai,jeai,so12,em fcj,z50,rao,c,in,bsad,jsad,so12,em)	*n*=4 (16,18,30,71)	5

Discussion and conclusions

The reliability of the observation instrument designed ad hoc was guaranteed through inter-observer matching calculated using Cohen's kappa coefficient. Within the theoretical framework of the Generalisability Theory (Cronbach et al., 1972), the observational instrument was validated and the generalisability of the results derived from the number of sequences analysed was guaranteed.

To accomplish the research's disciplinary objective, two complementary analysis techniques at the forefront of observational methodology were used: lag-sequential analysis and T-pattern detection. The former enjoys appropriate conceptual and procedural support in the GSEQ software (Bakeman & Quera, 1995) and has been used in football for match analysis (Sarmento, Anguera et al., 2014). As for T-pattern detection (Magnusson, 1996) using the THEME software, it should be noted that its use in football has increased considerably (Camerino et al., 2012) due to the fact that the software has been free for academic use since 2012 (http://www.patternvision.com).

The lag-sequential analysis made it possible to establish the statistically significant association or inhibition relationship between the related variables, whereas the T-patterns detected constitute a tangible example with evident informative potential (Amatria et al., 2017) and make it possible to classify game sequences including the controls performed by Busquets. The intention was to use the results derived in this paper to generate real and efficient benchmarks that are a milestone towards which performance can be directed in terms of the development of the control core technical/tactical concept.

Statistically significant association (shown in Figure 2) or inhibition relationships were established based on the sequential adjusted residuals analysis performed.

a) The incoming ball and player positioning is the same in all four quadrants (front-left; front-right; rear-left; rear-right). The outgoing ball and player positioning after the control action is also the same. Both conclusions concerning the characteristics of a good encounter between the player and the ball are in line with the recommendations made by Castelo (1999) and Hughes (1990).

b) Statistically significant association relationships were detected when the ball enters (incoming ball positioning) via the front quadrants (left-right), and Sergio Busquets plays the ball (outgoing ball positioning) through the opposite front positioning (right-left). This is reinforced by the fact that there are also inhibiting relationships when the ball exits via the same quadrant as the one through which it entered, except in the rear-right quadrant (BETD). These results confirm the need to approach ball control as a core technical/tactical concept and as a link bringing continuity to the player's subsequent actions (Guilherme et al., 2015).

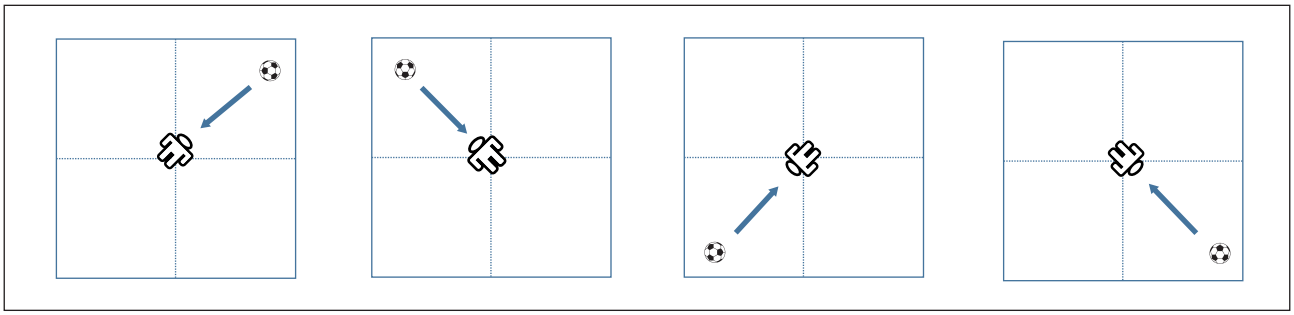
c) Statistically significant association relationships were detected with regard to categories of the incoming ball positioning and outgoing player positioning dimensions in the control actions performed by Sergio Busquets. In particular, the ball entering from the front (right-left) is significantly associated with an opposite front positioning (right-left) of the player on ball exit. This reinforces the statistically significant relationships of inhibition between incoming ball positioning and outgoing player positioning through the same front quadrant. These premises in the execution of the control action are in line with the previous paragraph concerning the relevance of control to afford continuity and intent to the game (Lago-Peñas & Dellal, 2010). It also reflects the way in which Sergio Busquets seeks to give width to the game (Castellano et al., 2013), playing the ball out on the opposite side to the one from which he receives it, thus respecting the football adage "the ball comes from one side and goes to the other". Equally, no significant activation relationships were detected when the ball enters through the rear quadrants, although there is an inhibition relationship, since when the ball enters through the rear left quadrant, Sergio Busquets plays it out through the front left quadrant.

d) Statistically significant association relationships were detected in control actions in which Sergio Busquets is positioned front-right when receiving (incoming body positioning) and has a front-left outgoing body positioning (in addition to an inhibition relationship on exit via the same quadrant). Similarly, the player is positioned on entry towards the front-left and his body has an outgoing positioning towards the front-right (and inhibition towards the front-left). These features of the control actions performed by Sergio Busquets dovetail with the function of linking control with the technical elements that bring continuity to the game, pursuing a specific idea of play in which the ball "enters from one side and exits through the other"; and in which the ball does not exit via the side from which it entered (Castelo, 1999; Hughes, 1990). The lesser association and inhibition relationships in the rear quadrant may be related to the fact that the player in these quadrants does not see the game "face-on" (i.e. the direction in which his team is attacking) and prioritises

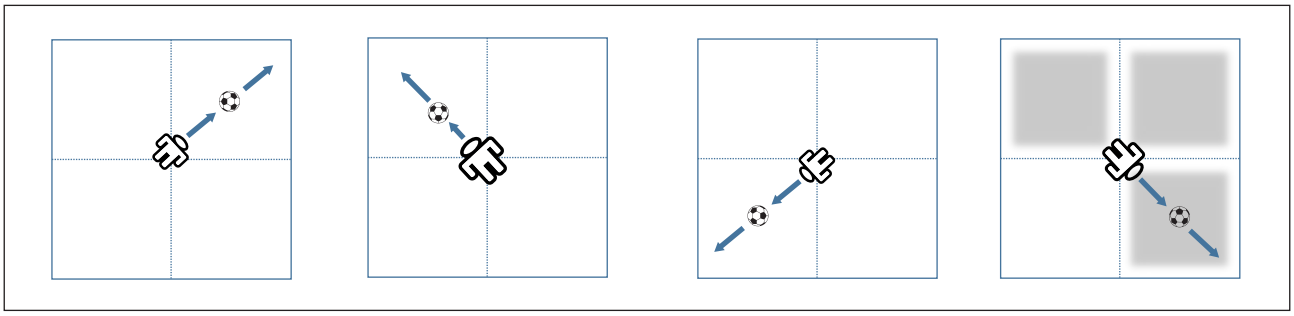
the intention to secure the ball (Serra-Olivares et al., 2017) in an area where possession runs the risk of becoming a threat if the ball is lost (Lago-Peñas & Dellal, 2010).

e) As for the influence of opponents in the centre of play of Sergio Busquets, a statistically significant association was detected with the fact that when sector 3 (FS3) is free, he plays the ball through the rear-right sector (BSTD) with the player also positioned towards the ball exit (JSTD). In other words, in the case of Busquets, control actions were found in which even though there are no opposing players in sector FS3, the player plays the ball through sector SL4. This situation is not ideal from a theoretical point of view and should be related to the results presented in which a significant statistical association is shown whereby when the ball enters via the rear quadrants, the ball enters from the left and exits to the right; in both cases, the player's positioning coincides with the ball's on both entry and exit (Figure 2). These results show how Sergio Busquets brings a tactical intent to the control element, i.e. to play out via the side opposite to the one from where the ball enters, despite the fact that the adjacent quadrant is free. This decision, derived from a defined idea of play (Sarmento, Marcelino et al., 2014), can be executed based on mastering the technical execution of the control core technical concept, which brings with it a corresponding feeling of competence (Weinberg & Gould, 2003).

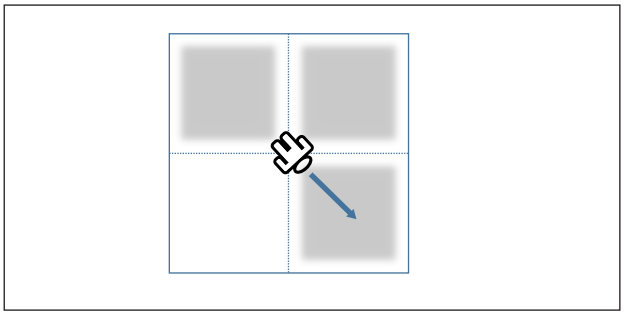
Figure 2
Chart of the statistically significant association relationships shown in Table 3



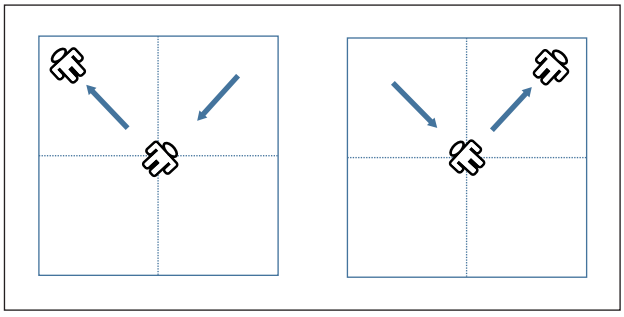
Incoming ball positioning control / Positioning of the player on ball entry in the control.



Outgoing ball positioning control / Positioning of the player on ball exit in the control and opponents in the centre of play (in grey, sectors occupied by opponents).



Positioning of the player on ball exit in the control / opponents in the centre of play.



Positioning of the player on ball entry in the control / Positioning of the player on ball exit in the control.

The T-patterns detected using the pre-set search parameters and requirements permit the classification of specific game sequences which include all the dimensions of the observation instrument. Specifically, the results shown in Table 4 provide information that is consistent with the role taken by Sergio Busquets at FC Barcelona (Maneiro & Amatria, 2018), demonstrating that this player performs control actions with the instep (IN) in the creation zones of his own half (Z50) and the opponents' half (Z51), and with him on the back line of his team with the front line of the opposing team (RAO) in front of him. In addition, the information contained in the T-patterns allows the following sequences to be classified, which also include the characteristics outlined above:

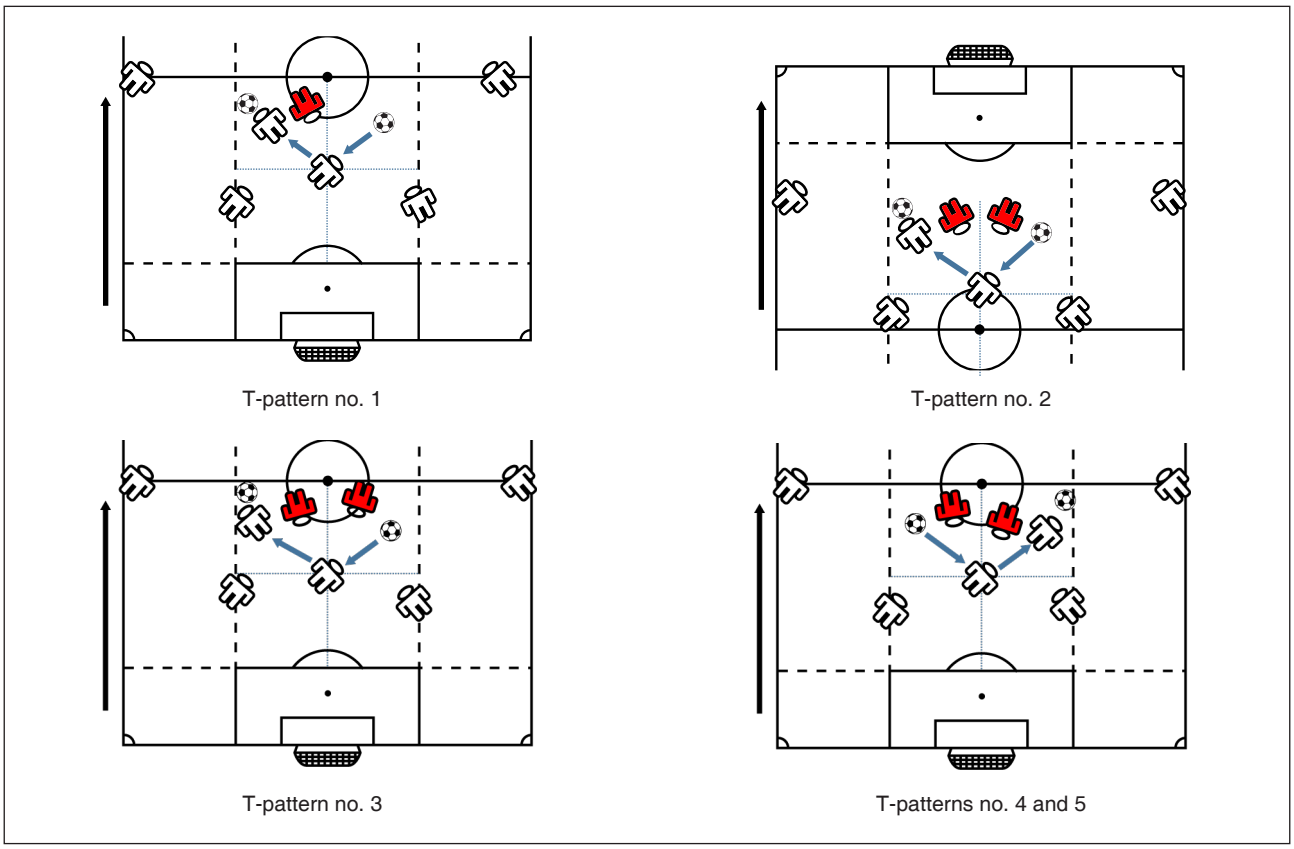
a) Sector 1 of the centre of play occupied (SO1) with the teams drawn, results in ball control with a front-right incoming ball and player positioning (BEAD) (JEAD) and an outgoing ball and player positioning towards the front-left (BSAI) (JSAI) (T-pattern with order number 1).

b) Sectors 1 and 2 of the centre of play occupied (SO12) with the teams drawn, results in ball control by Busquets with a front-right incoming positioning of both player and ball and a front-left outgoing positioning of both player and ball (T-patterns with order numbers 2 and 3).

c) Sectors 1 and 2 of the centre of play occupied (SO12) with the teams drawn or his team winning, results in ball control by Busquets with a front-left incoming positioning of both player and ball (BEAI) (JEAI) and a front-right outgoing positioning of both player and ball (JSAD) (BSAD) (T-patterns with order numbers 4 and 5).

The T-patterns detected support the results derived with the adjusted residuals analysis due to their coincidences, but also complement them based on the information potential of each cluster configuration detected (Amatria et al., 2016). All the game sequences that include Sergio Busquets' control reflected in the T-patterns coincide with the adjusted residuals analysis (sections a, b, c and d) in relation to the statistically significant association that when the ball enters via a front quadrant, the ball exits via the opposite quadrant; and that when the ball enters via the rear-left quadrant, it exits through the rear-right quadrant; in both cases, the player's positioning coincides with the ball's on both entry and exit (Figure 3).

Figure 3
Chart showing the information contained in the T-patterns detected shown in Table 4



The T-patterns also show that Sergio Busquets can impose the tactical sense of the game, exiting via a quadrant occupied by the rival team regardless of his lateral dominance (Guilherme et al., 2015); it shows the skill and competitive drive of a player currently considered one of best defensive midfielders on the international stage (Weinberg & Gould, 2003).

As a limitation of this paper, it should be noted that the technical/tactical performance in the game is conditioned by other contextual variables in addition to the score at the time in the game, such as playing at home or away, the quality of the opponent the team faces and the role of the player (Lago-Peñas & Dellal, 2010; Sarmento, Marcelino, et al, 2014; Taylor et al., 2008). Their interrelationship with the object of study described here is an appealing issue for further research which would also allow for a considerable increase in the observational sampling carried out.

This paper's conclusions are a highly significant starting point for designing tasks whose purpose is to develop the "control" core technical concept on the basis of analysis of a leading player. Task design should include a tactical intention which dovetails with each team's game idea.

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