

# Creation of Passing Lanes in Soccer : On the Surface Observation Based Upon Threats and Opportunities of Team and Opposition

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DOI: 10.29322/IJSRP.12.02.2022.p12210

<http://dx.doi.org/10.29322/IJSRP.12.02.2022.p12210>

**Abstract-** In soccer it's imperative for players to create passing lanes which allow the ball to be passed from one player to another. This progressed the team towards the goal line and consequently scoring a goal. Positioning players at several zones in the pitch or field would create several channels for the ball to be passed. However, this also creates threats even though opportunities do ingrainedly exist. In this paper, we observed these passing lanes via tabulation of threats and opportunities.

**Index Terms-** Soccer, Passing Lanes, Threats, Opportunities

## I. INTRODUCTION

The game of soccer is the most popular sport in the world where spectators have different and numerous views upon the tactics of teams. Soccer is played with 11 players on each team and the objective is to score more than your opponent in order to win a match. According to Costa and et al, the tactical aspect of the game is important as it could mean winning or losing [1]. Teams have to develop their own style of play which is adaptable to several tactics in order to suppress the opponents. Costa and et al had stated that movement and transgressing the field in a tactical manner are essential [1].

Harridon concurred with that assessment and stated that tactical play is also important in other fields such as Search and Rescue and tactics plays the role of a successful mission or match [2]. In soccer, the creation of passing lanes established movements and this is done via tactical play while in Search and Rescue the tactical play is the optimization of available resources [2]. We can also observe the application of tactical play in other fields such as marketing, military invasion, economic drive, and others.

Playing soccer has ingrained benefits and one of them is the alleviation of physical fitness. Malm and et al stated that there are several health benefits in participating in physical activities and those benefits are strengthening of muscles, increase of stamina, and others [3]. Malm and et al considered these benefits as catalysts for good mental development as well [3]. We concurred with this stipulation as heuristics had shown similar stipulation as well.

The approach that we had utilized for the observation is the SWOT analysis but without the component of Strengths and Weaknesses. Ours utilized the Opportunities and Threats only.

According to Ekberg, the component Opportunities and Threats could be used to quantify probable scenarios that would exist in certain situations [4]. She used this approach for her study upon media management and highlighted the importance of strategy in mitigating media management [4]. We followed suit and quantified several possible outcomes which were categorized as Threats or Opportunities.

The importance of passing lanes is crucial as its part of any performance analysis of a team. If the passing lanes are numerically superior and also effective, that could be denoted as high performance. Goes and et al stated that assessment of performance of a soccer team includes the analysis of passing decisions and also the risk associated with those decisions [5]. Goes and et al went further by collecting data of passes of a soccer team from Netherlands and studied the available options (threats and opportunities) of these passes [5]. Our research is somehow similar with different labels for risks and rewards of passes.

## II. LITERATURE REVIEW

The physical aspect of soccer is prominent where players perform sprinting, kicking, jumping, and other regularly during matched and training. Hence its imperative for players to be fit and players that are extremely fit perhaps have high degree of concentration and thus able to think ahead to create several passing lanes. According to Moseid and et al, endurance, agility, muscle strength, and other traits are essential in any sports and the development of them is considered vital in improving the individual's athletic abilities [6]. Moseid and et al also iterated that the physical training of these athletes should be optimized in order to avoid injuries and be sustainable throughout the season [6]. These aspects were integrated into our Threats and Opportunities in relation with passing lanes in soccer.

In fact, it is imperative to measure the fitness of these players in order to gauge the abilities of the players in actuating high number of passing lanes. Harridon had measured the physical fitness of individuals via simplistic strain analysis and Body Mass Index (BMI) measurement [7]. A majority of soccer players has appropriate Body Mass Index which entails the sufficiency of using BMI for fitness measurement but it has to be integrated with other means of fitness measurement such as Copper Test and others.

As mentioned, our method of observation is the semi-SWOT. Numerous researchers and individuals had utilized SWOT for their analyses of certain situations. Gurel and Tat had indicated that SWOT is sufficient to be used for analyses and it covers most vital parameters that should be observed by the researchers or analysts [8]. In fact, as elucidated by Gurel and Tat the usage of SWOT is prominent with usages for strategic decisions and competitive analyses [8].

The world of soccer is intricate and complex with matches filled with numerous tactical plays. Memmert and et al had indicated that there exist common tactical features such as 4-4-2, 4-3-3, and others where each has its own strength and weaknesses [9]. Memmert and et al further clarified that these tactical formations were apparent in their creation of passing lanes which facilitate the movement of the ball towards the goal of the opponent [9]. Its therefore seems necessary to analyze these passing lanes within the context of “grading” them in terms of opportunities and threats. Thus, our approach seems to complement the analyses of the tactical formations of soccer within certain areas.

Steiner on another hand had analyzed the passing of the ball and how players make the decisions to pass the ball around [10]. These decisions will in fact create opportunities and threats for the team and also for the opposition. And these decisions develop passing lanes of various nature with ingrained opportunities and threats as well.

The high number of passing lanes in a match require players to be productive and several factors come into play in sports that affect the productivity of individuals. Harridon stipulated that productivity is almost similar across several industries such as sports, aviation, military, and others where the consumption of edibles should be adequate to ensure the individuals perform well in their tasks [11]. Players or individuals that do not eat right will have dire physical fitness and thus affecting their concentrations and hence their abilities to create passing lanes.

The usage of SWOT or semi-SWOT is perhaps viable as numerous literatures offered evidences of the effectiveness of its usage. Phadermrod and et al had actuated a study upon the usage of SWOT and the results of their study showed that the utilization of SWOT is appropriate where the subject of the study was accurately depicted [12]. We were driven by these results and opinioned that semi-SWOT is sufficient in our case though much more works could be done in order to enhance our research.

### III. METHODOLOGY

The methodology that was utilized to analyze the passing lanes in soccer is shown in Figure 1.

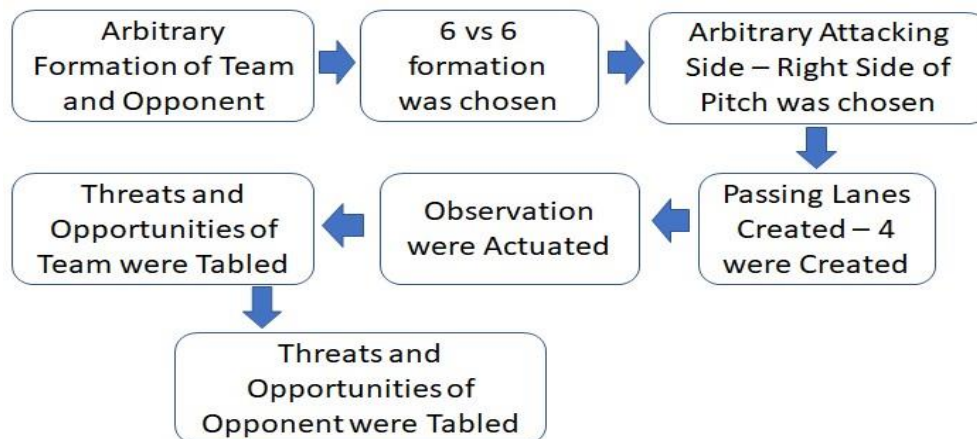


Figure 1. The Methodology to Observe the Passing Lanes in Soccer

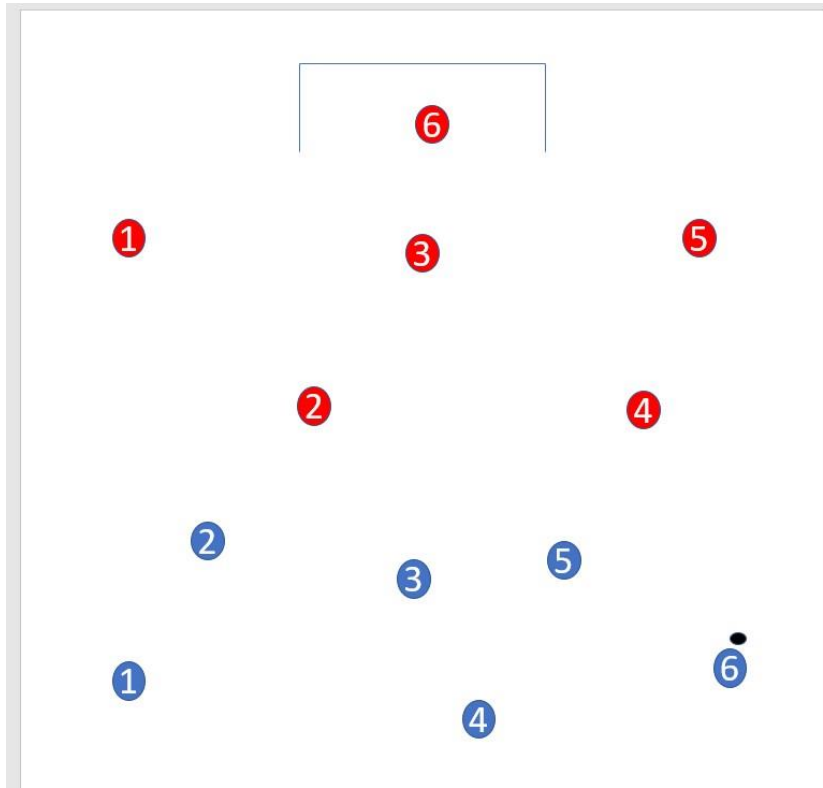
We had formed an arbitrary team and opponent. In the scenarios to be analyzed, the team has 6 players while the opponent has 6 players also. The pitch was divided into 3 zones which were left, middle, and right. We arbitrary had chosen the right side of the pitch to be played during the attacking scenarios.

At the end of the attacking movement, 4 passing lanes were created. These passing lanes were created due to the movement of the player with the ball and also due to the dynamic shifts of the players without the ball. We acknowledged that there were various combinations that could be played but we had chosen combinations of movement which ended up with the situation as shown in Figure 5. We then actuated our observation where we had peered the locations of players from the team and also the opponent. The observation was via categorization of Threats and Opportunities of the team and opponent. These were tabled in Table 1. The Threats and Opportunities were observed in different

and various angles and areas and there were areas where the tabulation of Threats and Opportunities were in depth. These provided us with layers of entities in the columns of Table 1. Some observations were perhaps outstretched but they indeed gave us plausible situations that should be taken into account. The degree of materialization of those situations is beyond the scope of our research but there is a need or requirement to initiate the analyses in further works.

### IV. RESULTS

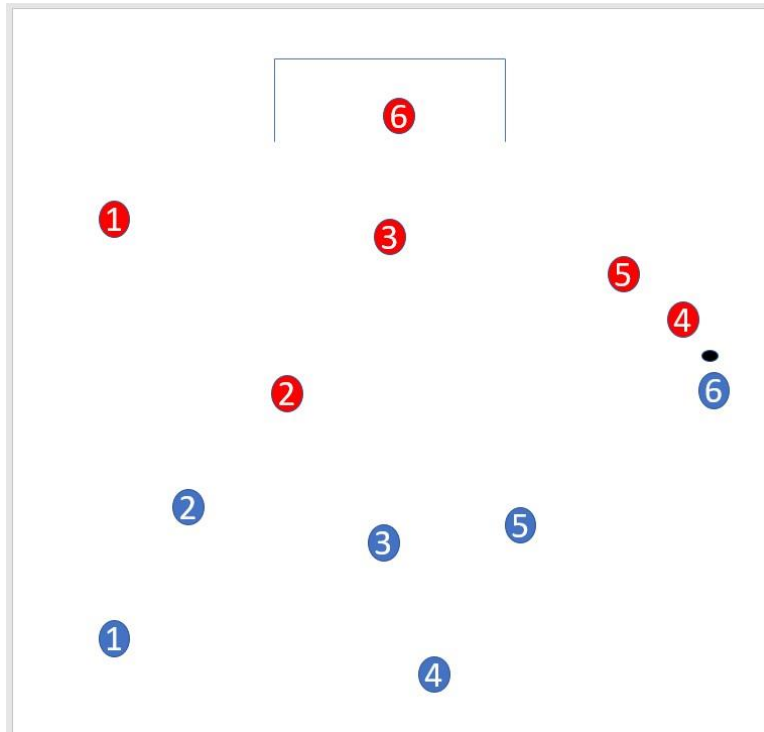
The results of our research are shown in Figures 2 till 5 and in Table 1. In Figures 2 till 5, the players of the team were denoted in blue while the opponents were denoted in red. More in depth commentaries are shown in the Discussion Section of this paper.



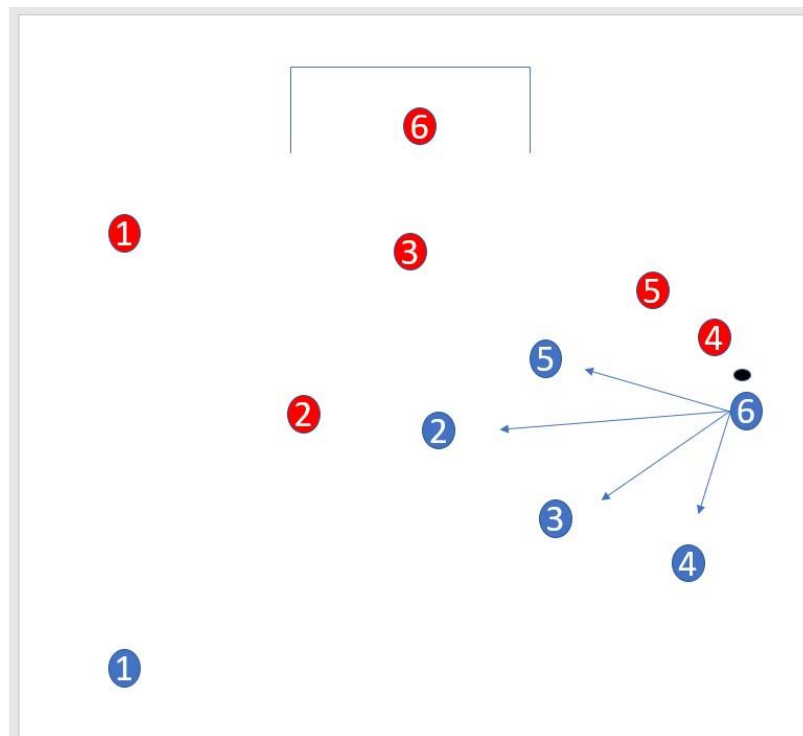
**Figure 2. The Team with 6 Players Started Off with This Configuration**



**Figure 3. Number 6 of the Team Veered Right of the Pitch**



**Figure 4. Number 4 and 5 of the Opposition Approached Number 6 of the Team**



**Figure 5. Number 2, 3, 4, and 5 Moved to Create 4 Possible Passing Lanes**

**Table 1. On the Surface Observation of the Threats and Opportunities of Team and Opposition**

On The Surface Observation				
TEAM			OPPOSITION	
Threats		Opportunities	Threats	Opportunities
1	Player 4 of the Opponent could intercept the ball	4 passing lanes exist thus giving 4 options to pass the ball	The Opposition could not get to the ball as the ball is passed around constantly	There is a chance that the players of the Team would tire down due to constant movement
2	Player 5 of the Opponent could intercept the ball	In Figure 5, if Player 6 pass the ball to another player of the Team, the other player would still have 4 options to pass the ball provided no blockage from the Opponent	The Team could move in increment to the goal of the Opposition and this increases the chances of the Team scoring a goal	There is a chance that the Team would make a mistake since passing the ball constantly requires high amount of concentration
3	Player 6 of the Team has to remain vigilant of the team mates	In Figure 5, the ball can be moved swiftly and interchanged between 5 players even without any movement from the 5 players	The Opponent would be bored watching the ball passed around	The Opposition could intercept the ball when the Team makes a mistake in passing
4	Need to sustain high concentration	Interchanged play (in Figure 5) would make the Opponents running wildly chasing the ball	The players of the Opponent would be in constant movement in order to mark the constantly moving players of the Team	The Opposition can relax and watch the Team tire themselves out by passing constantly
5	Creating high numerical value of passing lanes is tiring to the team as there is constant movement all the time	While passing the ball (in Figure 5) the players of the Team could in increment travel much nearer to the goal of the Opponent which increases the chances of scoring a goal	It is exhausting for the Opponent to chase the ball constantly	The Opposition can regroup to defend via zones
6	With so many options to pass, there is a tendency to stall the pass in order to think which option is better	The interchange of play of the Team could tire down the Opponent	High level of fitness is required by the players of the Opponent as they would be chasing the ball constantly	The Opposition can defend via “putting a bus in front of the goal” and watch the Team tire themselves out
7	Too many players in attack which create a void in the middle of the field		The lone player of the Team (player 1) could overlap and receive the ball and thus shifting the play to the left of the field	The Opposition can counter attack through the void left by the Team
8	If the ball is intercepted, the opponent could counter attack by moving through		It would be mentally disturbing for the players of the Opposition taking a back seat watching the Team play perpetually	The energy expenditure of the players of the Opposition would be low if the players of the Opposition retain the

	the void left by the players of the Team			philosophy of “putting a bus in front of the goal”
9	Player 6 from the Team had to run all the way up the pitch (Figure 2 till 5) which if done constantly would fatigue Player 6			
10	Need high level of physical fitness to sustain optimum positioning of players of the Team in order to have high numerical figure of passing lanes			

### V. DISCUSSION

Figure 2 shows the players from the Team and Opposition. The Team is in blue and the Opposition is in red. Both Team and Opposition start with 6 players each. The ball is at Player 6 of the Team. In Figure 3, Player 6 of the Team begin to move forward at the right side of the pitch. Players 1 till 5 of the Team is static but aware of the movement.

In Figure 4, Player 4 of the Opposition begin to move to the front of Player 6 of the Team. This is the defending process of the Opposition. Player 5 of the Opposition moved behind Player 4 of the Opposition. This is the Double Defending process. This ensures that there is a backup defender if Player 6 of the Team had successfully managed to go through Player 4 of the Opposition.

In Figure 5, Players 2 till 5 of the Team begin to positioning themselves at the appropriate locations to form a Pentagon Shape with Player 6 of the Team. This Pentagon Shape ensures that there are 4 possible options to pass, hence 4 passing lanes. If one look closely, there is only one progressive passing lane which is to pass to Player 5 of the Team. This is the forward pass while all other options to pass were backward passes.

With the situation in Figure 5, we denoted the Threats and Opportunities pertaining to the Team and Opposition and these were tabulated in Table 1. The Threats and Opportunities listed are self-explanatory.

### VI. CONCLUSIONS

We had developed a hypothetical situation where there were 4 possible passing lanes. Within that context, we observed in details the possible Threats and Opportunities of the Team and Opposition where we had touched upon physical fitness, tactical plays, and others which exemplified the depth that we had actuated by utilizing only the methodology of Threats and Opportunities. Further works could be actuated by introducing other hypothetical situations while retaining the gist of the current methodology.

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