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STRATEGY AND TACTICS IN SPORTS PERFORMANCE

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Summary
This chapter proposes a model of strategy and tactics in sport based on a survey of coaching literature in game sports. The nature of strategy and tactics in various contexts is discussed before considering strategy and tactics in sport. The model is described and supporting evidence for the model discussed. The model includes influence of game objectives, regulations, environmental factors, game state and the relative strengths and weaknesses of performers with respect to opponents. The role of decision making and how strategy and tactics manifest themselves in observable behaviour are also addressed.

Introduction
Humans make tactical and strategic decisions in all areas of their lives and there is evidence of this in observable behaviour. This means that there are general theories of strategy and tactics from many contexts that may be relevant in sports performance. As such, this chapter briefly examines strategy in business and military contexts, identifying the general factors that influence strategy, tactics and subsequent action. Of prime importance is the objective of any undertaking and often there are many different ways in which individuals or organisations can set about achieving them. The strategy chosen and activities planned must be conducted within constraints, such as legal constraints, limitations of resources and environmental factors. The strategy chosen will also make the best use of talent and other resources available. Many of these issues are transferable to sport where athletes have long-, medium- and short-term objectives, must compete within the regulations of their sports and must perform in an optimal way given their relative strengths and weaknesses with respect to the opponents.

One of the purposes of performance analysis is the analysis of strategy and tactics. This has traditionally been done by analysing patterns of play and making inferences about tactical decisions made by players and coaches that cannot be observed directly. Unfortunately, theoretical models of strategy and tactics in sport for explaining the results of these investigations are missing. Therefore, a purpose of this chapter is to propose a general theoretical model of strategy and tactics in sports performance that is evidenced by previously developed research in coaching.
theory and practice. The chapter commences with discussion of strategy and tactics in non-sports contexts, comparing these to the nature of strategy and tactics in sport. The model of strategy and tactics in sport is then shown, followed by a discussion of supporting evidence.

**Strategy and tactics in non-sports contexts**

*General decision making*

What clothes did you decide to wear today? How did you travel to your place of work today? What did you eat for lunch today? Now ask yourself what the other alternatives were in each case and why you made the decisions you did. This should show that we make decisions every time we act, having weighed up the advantages and disadvantages of different alternative actions that could be taken. Whilst being aware of some disadvantages to the actions eventually taken, you will probably have justified the actions based on their advantages or greater disadvantages of the alternative options. The choice of clothing may have considered how the weather might change and the probability of different weather conditions occurring. Each opportunity or risk is considered with the probability of different events occurring. Some decisions, such as travel arrangements and accommodation for a weekend break, require more consideration than other decisions that have to be made in situations that arise more rapidly. For example, when driving, we are often faced with a choice of lanes where the queue in one lane may be longer and moving more slowly than the queue in another lane. However, the shorter, faster-moving queue may completely stop if a vehicle ahead needs to turn off the road by crossing lanes of on-coming traffic. Such choices of lanes are not planned before taking the journey but decisions are made as such situations are encountered. These examples of planning a weekend break and making decisions while driving illustrate the contrast between strategy and tactics. Strategy is typically planned in advance of action, considering a great deal of available information. Tactical decision making, on the other hand, involves more moment-to-moment decisions made under time pressure as situations arise.

**Military strategy**

Military strategy has been studied and developed over thousands of years. There are multiple translations of Sun Wu’s *Art of War*, which is thought to have originated in around 500 BC and covers tactical aspects of warfare. Military strategy is an immense area of decision making that is beyond the scope of this chapter. However, there are some interesting aspects of military strategy that are relevant to sport. One similarity between sport and military contexts of strategy is the hierarchy of situations where strategic and tactical decisions have to be taken. Military campaigns may include many engagements, which are made up of phases and which, in turn, are made up of individual incidents. Similar hierarchies can be seen in sport, with campaigns such as seasons or tournaments, individual matches, matches being made up of different periods and individual set play and open play events occurring within these periods.

The role of communication through chains of command is vitally important in any undertaking by organisations of large numbers of people, such as military forces. Misinterpretation of instructions and information as they are passed through different levels of command can lead to catastrophe, such as the charge of the Light Brigade at the battle of Balaclava in 1854. Coaches are less remote to the on-field action in sport than generals would be to a battlefield in the nineteenth century, but there is still a need for clear, unambiguous instruction.

Unorthodox military tactics have the advantage of being unexpected by opposing forces but also come with risks of being untried and untested. At the battle of Trafalgar in 1805, Admiral
Lord Nelson’s fleet attacked the opposing line of French and Spanish ships from a perpendicular direction, rather than moving past the opposing line in an orthodox parallel direction. This high-risk strategy was used because it gave an opportunity for a decisive victory. Unorthodox tactics have also proved successful in sport – for example, Muhammad Ali conserved energy during his successful world heavyweight boxing challenge against George Foreman in 1974 by leaning against the ropes and covering up, a strategy that has been termed ‘rope-a-dope’. Unorthodox attacking strategies in rugby union have the advantages of surprise, deception and not being as easy to counter as routine expected attacks (Van Heerden, 1968). Other common factors that are considered in strategy and tactics in sport and military contexts are strategic objectives, resources, capabilities, geographical environmental, climate, logistics and practical considerations, conventions and laws.

A difference between military and sports contexts is the use of information. In sport, opposing teams can be analysed using public information about their competitions, including statistics and full-match video recordings. However, covert observation of closed opposition training sessions would be frowned upon in many sports. By contrast, intelligence services go to great efforts to obtain and analyse secret data about opposing forces. For example, the US Navy had knowledge of Japanese intentions prior to the battle of Midway in 1942 as a result of successfully decoding Japanese radio signals.

Strategy for business

Strengths, weaknesses, opportunities and threats (SWOT) analysis was originally developed for business contexts but the general technique applies in many fields (Hill and Westbrook, 1997). Strengths and weaknesses are considered to be internal factors of an enterprise, while opportunities and threats come from external sources. Internal factors include personnel, finance and manufacturing capability. External factors include legislation, market conditions, economic environment, technological advances and social changes. The approach of SWOT analysis involves matching strengths to opportunities while converting (or mitigating) weaknesses and threats. There are many similarities between sport and business when it comes to the analysis of strengths, weaknesses, opportunities and threats. However, a key difference is that, while business enterprises may avoid areas where they have difficulty competing, in some sports it is not possible to completely withdraw from a match to play alternative matches where there is a better chance of success.

Model of strategy and tactics in sport

Figure 20.1 shows the model of strategy and tactics proposed. This model is based on a survey of coaching literature in different sports, as well as other sources of evidence to support different aspects of the model. Evidence was drawn from textbooks for various sports that included the words ‘strategy’ or ‘tactics’ within the title. The performer may have general strengths and weaknesses but these need to be related to the given opponent because a relative weakness against one opponent might be a relative strength against another. An important aspect of this model is the knowledge that performers have about their opponents. There may be relative strengths and weaknesses that are not considered when making tactical decisions simply because of a lack of knowledge about the opponent. As a match is played, the experience of observing and competing against an opponent may increase a performer’s knowledge about him or her.

In any game, performers attempt to achieve their objectives playing within the constraints of the regulations of the sport. Over time, strategies and tactics have been devised to maximise the
Strategic and tactical decisions are mental processes that cannot be directly observed. However, patterns of observed behaviour can be used to make inferences about the decisions that have been taken. For example, if a soccer team uses a slow build-up style rather than a direct fast-breaking style, then the team probably decided to adopt this tactic. If a tennis player goes to the net on an above-average percentage of points, it is probably because the player decided to adopt a strategy of attacking the net when possible.

**Evidence supporting the model**

**Strengths and weaknesses of performers**

Doubles tennis players have been classified variously as poachers/quick movers, hard hitters, precision players and all-court players (Cayer, 2004). These different types of players all have strengths and weaknesses when serving, when the partner is serving, when receiving and when the partner is receiving. There are different abilities, including physical, tactical, technical and psychological, that may constitute strengths and weaknesses for particular players and opponents. Ultimately, sports players require a collection of strengths, as illustrated in the view of Holzman and Lewin (1973: 70) on Bill Russell’s basketball defence: ‘He had the physical equipment. He had the mind. He had the knowledge. He had the ability to quickly analyse and react. He was the perfect blend of what it takes to play sound, fundamental defence.’ In similar...
vein, Navin (2008) listed a collection of abilities necessary for maintaining ball possession in netball, including the ability to scan and recognise important cues, being alert to intentions of teammates, well-timed movements and good passing technique. Netball players likewise were identified as requiring a set of abilities for applying zonal defence, including excellent movement skills, peripheral vision and the ability to intercept.

Strengths and weaknesses of players are considered in the development of tactics, as the following examples demonstrate:

1. Physical ability. In soccer, for example, physical abilities are considered when choosing tactics because some tactics involve higher physical demands than others (Daniel, 2003; Prestigiacomo, 2003). In rugby union, the positions in which players should be included in the team also depend on physical attributes, including physique, strength, speed, quickness of reaction and anticipation (Van Heerden, 1968).

2. Technical ability. Shot types in basketball, for instance, are characterised by the technical abilities of players (Holzman and Lewin, 1973). Also, technical abilities and tactics are linked in soccer, as a sound technical base is necessary if players are to carry out a given tactical plan (Daniel, 2003). For example, players need to be aware of their own technical abilities when selecting passing tactics in soccer (Hughes, 1998).

3. Tactical awareness. In soccer, tactical awareness has been identified as an ability that dictates what defensive tactic a team may use, be it ‘man-to-man’, zonal or a combined defence (Daniel, 2003). Similarly, awareness of surroundings in field hockey has been reported to help players in possession of the ball make better tactical choices when passing and players receiving the ball move to the best position to receive it (Mitchell-Taverner, 2005: 19).

4. Psychological traits. Psychological skills are important in the performance of many skills as well as broader plays in team sports. In volleyball, they are important to passing accuracy and anxiety management (Herbert, 1991). Psychological traits identified as important in soccer include concentration, determination, conviction and motivation (Prestigiacomo, 2003).

As well as analysing strengths and weaknesses of individual players, it is also important to analyse collective strengths and weaknesses of teams. Soccer teams need to play cohesively when defending, with players working in coordinated fashion to maintain appropriate width and depth of defence (Bangsbo and Peitersen, 2002). Prestigiacomo (2003) included group harmony and unity of intent as collective strengths of a team, while identifying selfishness by individuals as a weakness for the team. In field hockey, strengths and weaknesses of the defensive unit should be considered when selecting tactics to defend against penalty corners (Mitchell-Taverner, 2005).

**Opposition effects**

Tactics are also based on the strengths and weaknesses of opponents. Soccer coaching literature acknowledges the need to study the opposition to avoid underestimation by establishing what opponents are good at and how they perform such plays (Prestigiacomo, 2003). However, not only should opponents be considered at a strategic level before a match commences, but moment-to-moment tactical decisions by players during matches must also account for opposition effects. For example, when defending in soccer, tracking opponents and timing tackles depend on the speed of teammates, the area of the pitch and the type of opponent on the ball (Hughes, 1998). From basketball coaching literature, consideration of opposition effects was articulated by Holzman and Lewin (1973: 82) thus:
How close you play an opponent depends on him . . . it is a good idea to determine a shooter’s range and play him accordingly . . . determining everyone’s strength, then act accordingly. If the man you play is not a good outside shooter, you can float until he gets the ball in close. If the man is a playmaker, you must play him closer. If he is an excellent shooter, play as tightly as possible and attempt to discourage getting the ball to him.

**Knowledge of opponents**

Tactical decisions are not so much made based on the relative strengths and weaknesses of a performer and the opposition but the perceived relative strengths and weaknesses (O’Donoghue, 2009a). Indeed, the relative strengths and weaknesses of a performer with respect to a given opponent may not be fully understood, particularly at lower levels of sports performance. For example, university-level performers have reported that they know little about the opponents in intervarsity competition prior to matches (O’Donoghue, 2009b). Thus, preparation is tailored to the strengths and weaknesses of the performer without necessarily addressing the unknown strengths and weaknesses of forthcoming opponents. Knowledge about opponents, however, changes over the course of a match as performers become more aware of opposition performance, allowing the relative strengths and weaknesses of opponents to influence tactical decisions later in the game. This can occur in many individual and team games, particularly those when coaches are able to intervene between match periods, in sports such as netball and basketball. Strategies and tactics are therefore made using appropriate knowledge of opponent strengths and weaknesses, as well as appropriate self-knowledge (McGee, 2007). Decisions made in women’s tennis, for example, are influenced by problem-solving ability and knowledge of opponents (Antoun, 2007).

**Relative strengths and weaknesses of performers**

The style of play used by a field hockey team depends on the strengths and weaknesses of the team and their opponents (Mitchell-Taverner, 2005). The same holds for basketball, where the relative strengths and weaknesses of competing teams include physical and technical components. Good examples when considering strengths and weaknesses of a team and opponent for both offensive and defensive tactical skills in basketball are described in McGee (2007), who reported that the entire game plan should be based on the relative abilities (strengths and weaknesses) of the two teams, as perceived. A further example from basketball offered by Holzman and Lewin (1973: 134) shows how the same team may adopt different offensive tactics against different opponents:

For example, the Boston Celtics, normally a fast breaking team, may find it advisable to play control ball simply to slow down an opponent. Or a deliberate team, such as the Chicago Bulls, might be faced with a situation where the opponent is slowing things down. As a matter of strategy, or change of pace, the Bulls would want to start fast breaking to interrupt the other team’s pattern.

Soccer is another sport where it is recognised that a coach needs knowledge of team qualities and opposition style in order to be able to make strategic decisions (Bangsbo and Peitersen, 2000). This is done at both a team and an individual level, with the tactical system evolving based on emerging strengths and weaknesses that become apparent during the match (Bangsbo
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and Peitersen, 2000). Optimal tactics in squash may also be based on the abilities of the opponent (McGarry, 2008) if advance knowledge of opponents’ shot and winner–error profiles can be used to determine playing strategy.

**Regulations and conventions**

The main objective of a performer in any game is to win, which usually involves scoring more goals or points than the opponent. Some plays may be more productive for scoring than others – for example, 40 per cent (Hargreaves and Bate, 2010) to 50 per cent (Hughes, 1998) of goals in soccer come from set plays and so special preparation will be made to execute them. Performers and coaches need to devise ways of scoring goals and avoiding conceding goals within the rules specified for the sport. Therefore, there is an inherent link between rules of games and the tactical behaviours that emerge within sports. Indeed, as rules change in sports, performers will find new tactics to optimise performance under the new regulations, an observation confirmed by studies undertaken on rule changes in sport (Williams et al., 2005; Eaves et al., 2008; Williams, 2008). An example of a rule change that has had an effect on tactics in soccer is the rule restricting the goalkeeper to holding the ball for six seconds or less when the ball is in play (Bangsbo and Peitersen, 2004). Williams (2008) surveyed research on rule changes in many sports and discussed examples where rule changes resulted in changing styles of play. In many cases, the rule changes were intended to change the nature of play. However, even when the specific purpose of a rule change was to improve player safety, there are examples in rugby league, rugby union, ice hockey and American football where such rule changes have also changed the nature of play.

The first thing to understand about rules in sport is that they are frequently broken and match officials award free kicks, caution players and/or dismiss players when rule violations occur. Sports rules open the possibility of a ‘professional foul’, where a rule is intentionally violated by a player in some instances to help a team achieve its objective (Hargreaves and Bate, 2010). Consider the handball by Suarez of Uruguay against Ghana in the quarter-final knockout match of the 2010 FIFA World Cup that prevented a goal for Ghana in the closing minutes of normal time. The rules of the game do not prevent a player from doing what Suarez did, and Suarez was consequently dismissed from the game. In addition, as a result of this infringement, Uruguay conceded a penalty kick (which Ghana failed to score from) and thereafter had to play extra time with only ten players. Uruguay proceeded to win the game and advance to the semi-final. The sequence of events described occurred within the laws of the game. Thus, unless the soccer authorities introduce a ‘penalty goal’ similar to the penalty try that exists in rugby union, situations will remain where, in some instances, committing a professional foul is the best tactical option for a player and team.

**Successful tactics**

Tactics are commonly used in different sports and are often shaped by the regulations of that sport. For example, in volleyball, the primary hitter system has evolved over time (Herbert, 1991). In basketball, defending teams pressurise the ball carrier as much as the rules permit to prevent penetration and to force and exploit errors by the opposing ball carrier (Holzman and Lewin, 1973). In martial arts, the best tactics to use in different situations are understood such that they should be taught early so that skills can be performed in their tactical context (Kozub and Kozub, 2004). The tactics that are successful in soccer are typically founded on principles of possession, support and communication in attack, as well as delay, concentration, mobility and
balance in defence (Hargreaves and Bate, 2010). These tactics change as the game evolves, as described in Bangsbo and Peitersen (2000). When 4–2–4 formations were used, the ‘Brazilian’ system created numerical superiority in defence and offence and relied on physical and tactical abilities of the two midfield players. Indeed, some systems were influenced by the strengths of particular players within teams. For example, the 4–3–3 system played by Juventus in 1996 was successful due to the ability of Conte and Dechamps to play long balls and the ability of Del Piero and Vialli to make breaks. The 3–5–2 system used by Barcelona in 1994 relied on good player interactions, while the 3–4–3 system played by Ajax Amsterdam in 1995 required players to be versatile and defenders to be good at applying zonal and ‘man-to-man’ defending. Furthermore, different styles of play in soccer have been based on national characteristics; for example, there are Latin styles, South American styles, a British style, a Norwegian style and an African style (Bangsbo and Peitersen, 2000: 41–7). The Norwegian style, for instance, is a direct, fast-breaking style that is supported by evidence that a greater percentage of counter-attacks lead to goals than elaborate, slow-build attacks (Tenga et al., 2010a).

Environmental factors

The weather, including its effects on the surface of a football pitch, should be considered when developing a strategy for a soccer match (Prestigiacomo, 2003). Tactics in tennis likewise can be influenced by both sun and wind, as illustrated in the following examples (Anderson, 2009). When the sun affects the server’s toss-up, the receiving player may have opportunities to gain the upper hand with a strong return of serve. The position of the sun is also a factor in deciding which direction to play lobs and whether to attempt overhead shots and volleys. Also, approach shots can be played effectively with the wind, whereas drop shots are infrequently played in that same direction. The wind is also a factor in volleying and attempting winning shots.

Game state

Game state is a combination of score-line, numerical advantage, time remaining and how the game came to be in its current state (Mitchell-Taverner, 2005), with players and teams possibly changing tactics if the tactics used to that time have not been effective. For example, from basketball: ‘We were outrebounded most of the time. We had to find other ways to get the ball’ (Holzman and Lewin, 1973: 90). In volleyball, Herbert (1991) also acknowledged the need to allow players flexibility to change tactics on court if situations changed within the match. This type of tactical decision making might be improved if ‘what-if’ questions are considered by squads before matches take place (Mitchell-Taverner, 2005). In soccer, Tenga et al. (2010b) found that attacks are more effective against unbalanced defences than against balanced defences, indicating that teams in possession need to recognise the state of opposing defences from moment to moment and look to exploit unbalanced defences as they occur.

Opportunities and risks

Often in sport the tactics associated with the highest opportunities of success are also those with the greatest risk. By contrast, ‘playing safe’ usually limits opportunities for success. For example, Herbert (1991) discussed low-risk side-out offence in volleyball, explaining that tactics should be designed not only to maximise winning the side-out but also to reduce risk of error. Other examples of risk taking associated with opportunity in sport include the following:
1. In rugby union, a player in possession may bypass other teammates and make a long pass to a teammate on the wing, a successful pass opening the possibility of the wing player running through unopposed for a try. However, long passes are more prone to interception and therefore bring the prospect of a counter-attack and possible try scored by the opponent.

2. In cricket, many of the shots required to score four or six runs have greater risk than safer shots of the batsman being dispatched, by being either bowled out, caught by a fielder or run out.

3. In tennis, a player leading 40–0 during service may try the ‘cannon ball’ on second serve (Ashe, 1981). This decision risks serving a double fault but, if the serve is in, it may be a point-winning serve, either directly or indirectly.

4. In soccer, when a team is losing by a single goal with little time remaining in an important match, the goalkeeper may enter the opponents’ penalty area when the team has a corner. This decision risks conceding a goal if the opponents regain the ball with the goalkeeper stranded; however at the same time the presence of the goalkeeper when the corner is taken serves as an additional attacker, increasing the chance of scoring an equalising goal.

5. In boxing, a ‘haymaker’ punch can knock out the opponent or otherwise cause substantial damage, leading to further punches resulting in the same outcome. However, this same punch leaves the boxer vulnerable to a counter-punch, leading to similar consequences as that intended for the opponent.

Some of the high risk ‘all-or-nothing’ plays listed above are often seen in score-line states where a performer is likely to lose the match if risks are not taken. The performer may still lose the match if risks are taken, but the opportunities associated with high-risk play give the chance of avoiding defeat and hence are considered a good, late (albeit somewhat desperate) option for the trailing contestant.

**Rehearsed and improvised play**

In team sports, there is a balance between rehearsed play and improvisation. Rehearsed play can be predictable or unpredictable and is possible when players have a shared understanding of the tactics used and their specific roles within them. These plays are not only communicated to squads during preparation but also practised. Transition from rehearsed play to spontaneous play is made under conditions where spontaneous play may create opportunities, with players knowing when to stick to rehearsed moves and when to play ‘off the cuff’ (Daniel, 2003). Spontaneous improvised play by soccer players in possession of the ball can cause difficulties for opposing defences as ‘no system can handle the unexpected if it is allied with skill, speed of thought, and deception’ (Daniel, 2003: 34).

Rehearsed and spontaneous plays occur in rugby union also. Indeed, tactical decisions are often evolutionary as the game progresses and opportunities become apparent (Herbert, 1991). Van Heerden (1968: 11) used words such as ‘wizardry’, ‘magic’, ‘surprise’, ‘subtle’ and ‘cunning gambits’ to describe how improvised play can lead to a try being scored, with opposing defences kept guessing, suggesting that coaches allow specialist players to make spontaneous plays and improvise when appropriate, rather than restricting all players to rehearsed moves, reasoning ‘never stifle genius – opposition can cope with the obvious’.
**Decision making**

In brief, the relative strengths and weaknesses of performers and opponents, as well as environmental factors and the importance of a particular match, will influence strategic decisions made prior to the match. During the match, players will be faced with many situations where there is a choice of options. Each option will have its advantages and disadvantages. Players need to be able to make use of available information (Williams and Davids, 1998) and use situational probabilities in selecting a given option at a given time (Singer and Janelle, 1999).

**Observed behaviour**

When players follow a strategy, the observed behaviour allows analysts to make inferences about the strategy (O’Donoghue, 2010). Patterns of play at different levels of different sports have been analysed using objective data for many years to give an indication of tactics without seeking self-report data from coaches and players to confirm or otherwise the tactics used. The data gathered to infer tactics typically include the frequency profiles of events, the location of events within the playing area, the players involved and the timings and orderings of events (Yamanaka et al., 2002; O’Donoghue and Liddle, 1998).

**Concluding remarks**

From surveying coaching texts, this chapter has proposed a general model of strategy and tactics in sport and presented supporting evidence. The model recognises accepted long-standing tactics that optimise the chances of success while playing within the regulations of that sport. Strategies and tactics for individual matches need to account also for the relative strengths and weaknesses of performers and opponents while also considering environmental factors. Together with advance strategies, moment-to-moment tactical decisions are made using available current information to decide on the best options available. Game state and evolving knowledge of the opponent’s playing style, strengths and weaknesses are also considered during such decisions.

**References**


