Ball Control versus Ball Manipulation: Analogies and Theories for Improving Ball Handling and Team R

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A treatise by a leading expert on the subject

Introduction

After watching hundreds of hours of international volleyball and coaching against some of the best college and international teams, I am convinced that there is a difference between ball control and ball manipulation. Though they are often used interchangeably, the first term refers to a conservative and prudent approach to receiving and defending that requires less attention to the details needed to perform these skills with accuracy and precision. In contrast, ball manipulation is precise. It relies on the principles of geometry and physics to dictate the various tempos of a match. To help conceptualize manipulation, I will use sports analogies and basic geometric theories to parallel the rhythmic similarities between volleyball and other sports.

Most college and club coaches would agree that the goal of each possession is to adequately control the ball in hopes of earning a high percentage (second tempo) swing. Others would prefer to integrate at least one first tempo attacker to create space and time along the net for second tempo attackers. Programs training for ball control rely heavily on second tempo frontcourt and backcourt attacks while those attempting to manipulate the ball realize the importance of applying “first tempo pressure.” First tempo pressure forces blockers and defenders to make positioning judgments against multiple tempo attackers. This puts all defenders at a considerable disadvantage because they become responsible for an increased number of potential outcomes and for expanded areas (both along the net and in the backcourt). First tempo pressure is similar to the play-action fake or sending a receiver in motion in football, whereby offenses attempt to cause premature or inaccurate defensive adjustments.

Training for ball control is considerably less risky and requires the appropriation of contingency plans used to complement out-of-system receptions or adequately controlled digs in hopes of earning second tempo opportunities. Programs training for manipulation realize that
the higher level of reception and defensive accuracy, the greater the opportunity to control the offensive tempo of a match. In either case a decision must be made whether or not to take a conservative, less risky approach, or to place a higher premium on accuracy and precision.

A terrific example of a team dedicated to the concept of manipulation is the 2004 Chinese National team, which captured the gold medal at the Summer Olympic Games in Athens. In my opinion the reasons this team was so successful can be directly correlated to the proficient levels of technical and systemic discipline combined with the premium they placed on applying first tempo pressure. This style, beyond its aesthetic appeal, allowed for the Chinese to score at a higher rate of efficiency against teams that were physically superior such as Russia and Cuba.

The key at the highest levels is to focus on and maintain structural, rhythmic and tempo consistency tempered with the appropriate amount of flexibility without sacrificing the first for the latter. The Chinese levels of first tempo expectation are much different than the traditional and often more conservative Western approach. China taught us that the correct blend of structure and flexibility centered around the six systems (reception, defensive, blocking, offensive, transition, and coverage) and dedication towards developing sophisticated, efficient, and practical techniques can enable a team to counteract and overcome an opponent’s power and size. The Chinese also afforded us the opportunity to appreciate the technical, systemic, and structural differences that prompt us as coaches, players, and fans to judge the quality of volleyball we watch and critique. Perhaps the greatest reward of their accomplishment was the encouragement offered to coaches and players to attempt to achieve a similar style predicated on the concepts of ball manipulation.

**Defining Ball Manipulation**

Ball control is a term often used to describe a player or a team that is “scrappy” or has the ability to “pop balls up,” both of which are valued commodities if the goal is to prolong rallies or achieve second tempo opportunities. Ball manipulation requires more attention to the angles of trunk and platform elevation, spin in relationship to defensive depth and location, setter origination (areas penetrating from), and control of both the horizontal and vertical deflection speeds. The control of these variables is what separates one approach from the other. These
are the prerequisites that must be met to control the tempo and rhythm of a match that go beyond frustrating your opponent with longer rallies, and can potentially yield a substantially higher level of execution that is very difficult to defend. It is the ability of a team to receive and defend in such a style that allows for the opportunity to apply the most amount of pressure on the opposition. A team’s inability to apply consistent first tempo pressure places greater pressure on second tempo attackers. For example, one of the primary reasons our 2003 Pan Am team struggled versus Cuba in the semi-finals was our inability to apply a consistent level of this type of attack. Receiving serves and defending attacks traveling in excess of 100 km/h is difficult, but having to score enough points against their triple block, as it turned out, was impossible. To apply the necessary pressure against the top teams at any level ultimately requires mastering the above-mentioned variables.

**Beginning the Process**

Before you engage in the challenging task of perfecting ball manipulation, you, your staff, and your athletes must decide that this is a style worthy of your training time. During training sessions, this will require less time spent in hitting lines, backcourt games, and wash drills, and significantly more time in mundane, repetition driven receiving lines, isolated defensive drills, and spacing-relationship drills. There is also a downside, you can almost guarantee enduring a few early season losses until your system achieves its desired rate of efficiency. This will be your greatest sacrifice. As coaches, we are always wanting to see results in short periods of time; yet we are always the first to complain about systemic lapses. Exercising a balance of persistence and patience is essential in meeting your objectives. If enough time is dedicated to developing a comprehensive system, the chances of reaping the rewards at the end of the year (which is always the goal) are certainly attainable.

**Body Positioning**

The following steps include identifying the correct reception and defensive stances that facilitate the needed balance to deflect the ball with the desired trajectory.

The most important element concerning alignment is the angle of
elevation. The angle of elevation is the increasing or decreasing of the angles between the feet, lower legs (shins), thighs, and trunk that either elevates or de-elevates during contact. This is going to vary according to the following variables: height, ability to maintain ankle and knee flexion during pursuit and contact, and the ability to anticipate the horizontal and vertical speeds of the ball in relation to contact depth and distance to the target.

Body alignment angles should measure approximately 45 degrees between the feet and shin (this will decrease to approximately 35 degrees in a defensive stance), 55 degrees between the calf and thigh, and 65 degrees between the thigh and trunk. A good way to judge these measurements is to imagine the waist as the vertex. Imagine placing an antenna along the back beginning at the base of the neck and ending on the ground. In either reception or defense the angle of the antenna (back) in relationship to the floor should measure approximately 45 degrees. The platform (which I will discuss later) should be away from the body approximately 14-17 inches from elbow to the middle of the thigh. This ensures that contact is made on what I call the second plane.

There are three planes on which you can make contact: the first plane consists of the area between the floor and the knees; the second plane consists of the area between the knees and the waist; and the third plane consists of the area between the waist and the chest. Contacting the ball on the first plane usually requires a floor move such as a knee drop or a recovery move such as a roll. Serves or attacks that are difficult to manipulate are usually the result of poor timing, inefficient footwork, premature conjoining of the platform, or the inability to anticipate contact depth.

The second plane places the ball on a perpendicular plane in relationship to the area between the knees and waist. This will become important when I discuss absorption techniques. Contacting the ball within this region also allows the passer and/or defender to deflect the ball in a balanced stance, capable of making minor adjustments if necessary. Deflecting the ball on the third plane (between the waist and the chest) is a good indication that the passer and/or defender miscalculated the ball’s horizontal speed. The advent of the frequently used overhead pass or dig (although necessary in some defensive instances) has in some ways remedied the miscalculations made by passers but offers little opportunity to develop consistent rhythm. Overhead passing requires elevating the recommended body alignment and makes it very difficult for the setter to predict the ball’s
horizontal and vertical speeds to the target.

The angle of elevation determines the reflection angle. A consistent reflection angle helps prepare the setter for a specific trajectory after contact used to anticipate the ball’s flight pattern toward the net. This is the first step in developing team rhythm. If the platform is consistently elevated during the deflection process, visual contact made by the setter can be done more quickly. This makes it easier for the setter to make the necessary adjustments to get underneath the ball in case the deflected ball requires the employment of a contingency plan. One of the biggest mistakes we can make as coaches is to leave the desired levels of trajectory open for interpretation. We are all guilty of telling our setters to set the ball with more vertical or horizontal speed, or with more underspin. The same should apply to our ball handlers. Expectations of speed and spin left open for interpretation invites inconsistency. This is the greatest obstacle to overcome when attempting to develop true team rhythm.