

Teaching Modern Tennis

PART 4: INTRODUCING MODERN TECHNIQUE

by Brett Hobden & Gord Runtz

In Parts 2 and 3 of this series (see TennisPro on line archives at www.ptrtennis.org), we focused on the horizontal axis of the Modern Coaching diagram: **How do you teach?** We introduced a coaching methodology we call the **Integrated Approach™** - an approach in which coaches always teach technical solutions to tactical problems™ - problems that actually occur in point play at the student's level of development. Many of you who attended this year's PTR Symposium saw our on court presentation of the Integrated Approach in action.

The Integrated Approach combines the strengths of both the older technical and newer games-based approaches to teaching, while avoiding their weaknesses. Twenty years of coaching experience has convinced us that it is **the** optimal way to teach modern tennis successfully - and quickly! Why? Because modern technique has so many variations - each appropriate to specific situations and specific shots. Some of its technical elements are even grip specific (notably those related to racquet preparation, impact point and finish). Hence, it is generally meaningless to teach modern technique divorced from situation, shot and grip. The one exception to this is when helping a student learn a new movement pattern. Only here can the coach temporarily ignore the linkage to situation and shot. However, once the student has a feel for the new pattern, that linkage must quickly be rebuilt - generally using a progression.

We all know that technique must always be adapted - even in the traditional game. In the modern game, however, the necessary adaptations can often be quite dramatic.


Brett Hobden and Gord Runtz are founding partners of Modern Tennis, a company dedicated to providing coaches with the knowledge required to teach modern tennis successfully. The company is currently producing a series of DVDs especially for coaches. These are available from the website: moderntennis.com and at PTR's Pro Shop. Anyone wishing to contact the authors may do so through the website.

In this article, we'll begin to explore the vertical axis of the Modern Coaching diagram: **What do you teach?** Here, you'll see traditional and modern tennis at the two ends of the spectrum. In the middle you'll see the word hybrids - combinations of traditional and modern technique. We'll give some examples of hybrids at the end of this article, and explain why they generally don't work.

Modern technique is too large a topic to cover in its entirety in a single article. For this reason, we'll focus most of our discussion here on modern technique as it applies to the **topspin forehand** groundstroke. This is an area in which some of the biggest technical changes have taken place, and it is a very good place to begin.

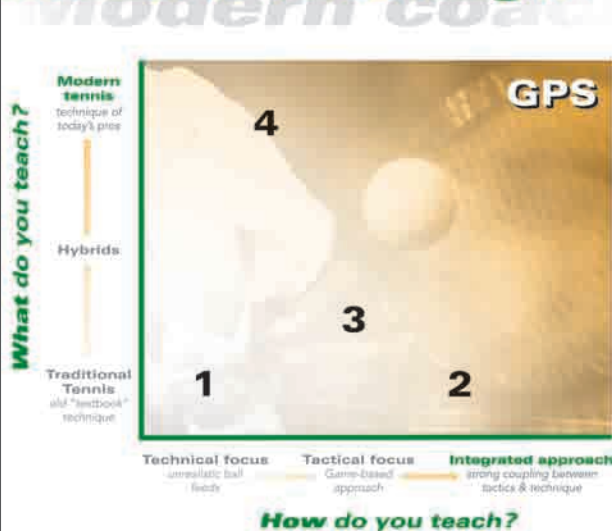
Modern versus traditional

One of the best ways to develop an understanding of modern technique is to compare it with traditional technique. Where and how do they differ? Why do they differ? We'll look first at some generalities, and then at specifics as they relate to the topspin forehand.

Many of the technical elements discussed below are illustrated with additional photos and video clips on the authors' website. These are indicated by the numbered symbol  n.

Simply go to moderntennis.com, click **Article Clips** in the lower menu bar, and then locate this article.

Modern coaching...



GENERAL CHANGES

In general, modern technique utilizes - to a much greater extent than traditional technique - the body's natural capacity for movement. Modern strokes have a high degree of fluidity, with body segments moving smoothly in curved and elliptical paths. With groundstrokes, for example, we see:

- greater use of trunk rotation;
- increased mobility of the various arm and hand segments around the shoulder, elbow and wrist joints;
- a more diverse range of footwork patterns to handle the many situations that occur in point play.

By contrast, the movement patterns of the traditional game are more restricted, largely because it is slower, less diverse and less demanding than the modern game.

The bottom line in modern technique is relaxation, obviously not to the point of collapsing onto the court surface like a rag doll, but rather playing with minimal muscle tension. This allows the body to easily utilize its full, natural range of motion. Without proper relaxation, there is no point in attempting to teach modern technique. It simply will not work effectively, and at worst may lead to serious injury.

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This is an important point because many schooled, traditional players at the recreational level play with excessively high body tension. They grip their racquets too firmly. Their strokes are stiff and often forced. Their court movement is clumsy. They work far too hard for the results they get, and consequently they frequently develop chronic injuries. In short, tennis for them has become a difficult sport. When these players are taught modern hitting technique, they're amazed at their newfound fluidity and freedom of movement, and astonished that hitting a tennis ball can be so easy.

Of course, this not to say that traditional tennis inherently lacks fluidity. A quick look at archival clips of top players - even as far back as the 1920's - quickly dispels that idea. But somehow, in the teaching of the traditional game, something has frequently gone awry. Whatever its cause, excessive muscle tension must be eliminated before modern technique can be taught safely and successfully.

STROKE EFFICIENCY

We often tell students that when they learn modern technique they'll be able to generate "twice the power with half the effort." And that's the truth. It's why the modern game has become so fast paced. Modern technique allows players to easily generate much higher racquet speed through impact and, therefore, deliver balls with much higher pace and spin using far less effort. When players first experience this, they are amazed. It seems so counter intuitive.

SHOT MAKING POSSIBILITIES

The ability to hit with more pace and spin has not only made the game faster, it has also expanded it, enabling a much wider variety of shots than is possible with traditional technique. For example, there are now seven distinct shot types that can be hit with the topspin forehand alone. We call them the drive, arc, loop, lob, angle, bender and dip drive. (For more detail, see Volume 2 of our DVD series.) Most of these can be hit from a variety of impact points, and many can be hit aggressively moving in any direction at impact (left, right, forward and even backward). In short, modern technique gives players a great deal more shot making flexibility, and often allows them to take the offense in situations where defense was once the only sensible option.

BREATHING

Breathing out when sending a ball is now recognized to be an important technical element in many sports. In tennis, proper breathing promotes relaxation, timing and fluidity in shot making, increasing the efficiency of the stroke. Breathing patterns were rarely given much attention in traditional tennis. In modern tennis, they are an integral component of good hitting technique. Does this mean that all players should grunt as they hit? Not necessarily. It depends largely on the player's personality. Although some pros are highly vocal (e.g., Sharipova, Serena Williams), others are very quiet (e.g., Federer, Davenport).

GRIP FIRMNESS

In the traditional game, most players hold their racquets far too tightly. You can test this by asking your players where their grips lie on a 1-5 scale. Tell them that 1 is the firmness with which they'd hold a small child's hand, just enough to control the racquet with one hand. At the other end of the spectrum, you can describe 5 as the firmest handshake they can muster. We sometimes call 5 the death grip. You'll probably find that most traditional players use a grip firmness of about 4, and some will report being off the scale. These numbers are far too high for any type of tennis, be it traditional or modern.

Excessive grip firmness over tightens the muscles of the forearm, thereby greatly limiting the mobility around the wrist and elbow joints - mobility that is crucial to modern shot making. Holding the racquet too tightly can also lead to chronic arm injuries, including tennis elbow. This happens for two reasons: (1) excessive shock to the arm on off-center hits, and (2) excessive arm stress from the abrupt, truncated finishes we usually see when players hold their racquets too tightly. (We'll discuss finishes in more detail later under Follow Through.)

What is the optimal grip firmness? On the above 1-5 scale, it should generally be somewhere between 1 and 2 in both the traditional and modern games. The general rule is that the greater the racquet speed required, the looser the grip should be. In the ready position, grip firmness can be as low as 0 (zero), as here the racquet is fully supported by the "helper" hand. A relaxed grip allows arm and hand segments to move freely throughout the stroke, something that is especially critical in modern groundstroke technique. Without this mobility, players will be very limited in the amount of racquet speed they can generate through impact. This limits the amount of ball pace and spin they can produce and, hence, the range of shots they can hit.

Recreational players who grip their racquets too tightly often do so to prevent the racquet from twisting in their hand on off-center hits. Here the focus should be on learning to hit cleanly using minimal grip firmness. On off-center hits, it's actually better if the racquet does twist, thereby avoiding the shock of the mis-hit being transferred to the arm.

GRIP

Traditional tennis players generally use an eastern grip on the forehand. Some even lean toward a continental. Most players on the pro tour today use either a semi-western grip or a hybrid grip (midway between an eastern and semi-western). For example: Roddick, Gonzalez and Mauresmo use the semi-western; Federer, Blake and Davenport use the hybrid. The full western grip - once more prevalent on the tour - has almost disappeared.

Why the change in grips? Here's the rule of thumb. With an eastern grip, it's easier to generate ball pace, but more difficult to generate high topspin. Conversely, with a full western grip, it's easy to generate high topspin, but more difficult to hit with pace. The semi-western and hybrid grips provide the best balance between speed and spin, and offer the greatest range of shot-making possibilities.

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RACQUET PREPARATION (BACKSWING)

The most commonly taught preparation for traditional topspin groundstrokes is to move the racquet head "back" or "back and down", dropping the racquet head quickly below the level of the planned impact point and pointing the racquet tip at the back fence. Although this allows the player to produce topspin by "brushing upward" on the ball through impact, the linear nature of the stroke - back and down, then forward and up - makes it almost impossible to generate significant racquet speed through impact without expending a great deal of effort. Consequently, players are very limited in the amount of ball pace and spin they can generate.

By contrast, in the modern topspin forehand, the elbow traces an elliptical loop as it moves from ready position to impact, drawing the racquet head behind it in a much bigger loop. When executed properly - with a relaxed arm and the proper rhythm - this loop can easily accelerate the racquet head to high velocity through impact. At the end of the modern backswing, the racquet tip does not point toward the back fence. Rather, the elbow points backward, and the trailing racquet tip points forward and/or upward. The hitting surface faces downward and/or outward. (The specifics vary with the player's grip, and somewhat with the player's style.)

The end of the backswing is on the upper segment of the loop, generally near its highest point. This is the only place at which the motion can be paused without losing power. From this position, it takes minimal effort and movement of a relaxed arm and hand to accelerate the racquet head through the remainder of the loop (farther back, down and then forward), bringing it into the impact point with high speed. When the motion of the upper body and arm segments are properly coordinated with the lower body, players can generate tremendous ball pace and spin with minimal effort.

When developing an initial feel for the rhythm of the loop, some players find the analogy of a roller coaster helpful. The roller coaster climbs to a high point on the track (analogous to the end of the backswing). It slows as it passes over the crest, and then begins to plummet downward, accelerating and reaching maximum speed as it passes through the low point on the track (analogous to the impact point). It then decelerates naturally as it begins its next climb (analogous to the follow through). This is the rhythm of a topspin groundstroke.

IMPACT POINT

For a traditional forehand hit with an eastern grip, the most comfortable impact point is at thigh/hip level. For a modern forehand hit with a hybrid or semi-western grip, the most comfortable impact point is higher (at abdomen/chest level) and more forward (toward the net). The general rule of thumb is this: as the grip rotates in the western direction, the most natural impact point moves both forward and upward.

Modern technique does, however, allow players to hit aggressively from a wide variety of impact points. For example, the dip drive is always hit at shoulder/head level. (This shot is typically used to take short, high bouncing balls on the rise and drive them powerfully downward into the opponent's court.)



Modern forehand preparation: the elbow draws the racquet back



Hitting aggressively from a high impact point (here a dip drive)



Hitting aggressively from a low impact point



The bender, at the other end of the spectrum, is hit from a low impact point - usually between shin and thigh level. (The bender was a trademark of Pete Sampras, a shot he most frequently used to return wide balls aggressively when on the run.)

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FOLLOW THROUGH

In traditional tennis, players are usually taught to finish their forehands with the racquet tip pointing toward the net. In the modern game, the follow through is much longer. This is for two reasons: (1) with a higher racquet speed through impact, it takes longer to dissipate the momentum of the body and hitting arm; and (2) a longer follow through is the natural result of hitting with a relaxed arm and minimal grip firmness. Once players learn to relax, the longer follow throughs will become natural for them, even when swinging more slowly. (A fast swing is not a prerequisite for using modern technique and reaping its many benefits.)

It's important to remember that the follow through should not be something that's consciously "tacked on" to the end of a stroke, but rather the end point of the path that the racquet and hitting arm naturally take as they decelerate after impact. This path will depend primarily on how the racquet, arm and body move through impact. It will also depend on the player's grip. Surprisingly, most recreational players do not have the natural follow throughs for the shots they are trying to hit. For this reason, modern follow throughs usually need to be taught.

When players experience modern groundstrokes and the longer follow throughs, they're usually amazed at how fluid the strokes feel. Not only are they easier on the arm, but players are usually able to generate considerably more pace and spin with much less effort.

In the modern game, follow throughs for topspin forehands fall into two broad categories: wrap-around and vertical.

Wrap-around: When the impact point is well forward and the racquet has significant forward momentum through impact (i.e., generating good ball pace), the follow through will always wrap around the body. Here it's very important that the forearm pronate after impact so that the back of the hitting hand faces into the body at the end of the stroke. This pronation facilitates stress free deceleration of the arm, something that's very important for injury avoidance.

The height of the wrap-around finish can vary considerably, depending largely on the shot, the grip used and the height of the impact point. It can range from over the shoulder, to around the shoulder, to around the hip. Also, when players hit with extreme topspin and/or use grips toward the western end of the spectrum, the finish is frequently inverted (with the racquet tip pointing somewhat downward, coming to rest well below the level of the hitting hand).

Wrap-around finishes are natural for all forehands in which the racquet head has significant forward movement through impact. This is almost always the case with the drive, arc and dip drive. It's also the norm for most loops, angles and topspin lobs.

Vertical finish: Here the racquet moves sharply upward after impact, finishing above head level on the right side of the body for right handers, and on the left side for left handers. We typically see vertical finishes on shots where the racquet head has less forward momentum through impact, moving predominately upward instead.


You'll always see a vertical finish on the bender, and frequently you'll see it on the topspin lob. Sometimes you'll unexpectedly see a vertical finish on other shots, notably when a player has insufficient time to set up properly and is either too close to the ball or is forced to hit late (i.e., meeting the ball farther back than normal). When this happens, it's difficult to generate as much forward racquet momentum through impact, and hence the finish is often vertical. You'll also see some vertical finishes when players receive very fast balls. Here one doesn't need to generate much horizontal racquet speed to return the ball with good pace, and players can opt instead for a more vertical racquet path through impact to produce more spin.

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An elevated wrap-around finish  4



An inverted wrap-around finish  4



A vertical finish  5

FOOTWORK

In traditional groundstrokes, players usually hit from closed or neutral stances, generally stepping somewhat forward (toward the net) just prior to impact. After impact - especially when a player has been running laterally to the ball - the trailing foot in a traditional groundstroke **should** step to the outside (toward the sideline) to stop the player's sideways momentum and allow the recovery to begin. This outward step is usually called the "brake step".

(NOTE: Although the brake step and the initiation of recovery are integral parts of the footwork for groundstrokes - in both the traditional and modern games - they often receive little attention from coaches. In traditional tennis, players are often advised to "hold the finish", keeping the toe of the trailing foot in contact with the court. Recovery is typically treated as an afterthought. When the rhythm of the shot is disrupted in this way, a quick recovery is all but impossible.)

We still see neutral hitting stances in the modern game, but only when the player moves forward to intercept a shorter ball, or when the ball is hit close to the player and very little lateral movement is required. Sometimes we even see closed stances, especially when players "run through" a shot when retrieving a very wide ball. However, for the most part, modern forehands are hit from open stances. One reason for this is that the open stance allows players to recover more quickly. Time is a precious commodity in the faster paced modern game. Open stances also have several other advantages. They use trunk rotation more effectively, they allow for better shot disguise, and they make it easier to hit cross court, especially on wide balls.

How does the open stance pattern work for the forehand?
There are two variations.

(1) When a right handed player runs to the right to retrieve a ball, we see a footwork pattern we call the right-right. Here the player initiates the shot by planting and pushing off the right leg. At this stage, the right foot is roughly parallel to the baseline, pointing in the direction the player has been running. We then see a slight hop as the right leg moves farther outward, planting a second time but now with the foot roughly perpendicular to the baseline. This second plant is the brake step. The change in foot orientation is critical for stopping sideways movement and allowing recovery to begin. It also allows for proper uncoiling of the hips, an important component of the kinetic chain required to generate power.



6 - website clip of RR footwork

(2) On the run around forehand (where a player moves around a ball that is hit to their backhand side), we see a different pattern, one we call the right-left (for a right handed player). The player again initiates the shot by planting and pushing off the right leg with the foot roughly parallel to the baseline. However, the next plant - the brake step - is now with the left leg, with the left foot roughly 45 degrees to the baseline.



7 - website clip of RL footwork

In the modern game, players can hit offensive forehands not only when moving right, left or forward, but also when moving backward. This is most common when a player is recovering back behind the baseline after having moved a meter or two forward to take a shorter or lower ball. We also see this when a player is driven back by a deep, high bouncing ball, especially on clay. The footwork pattern here is again right-left, but with the left leg now planting to the back (rather than the side) to initiate recovery forward. We call this the reverse pivot.



8 - website clip of reverse pivot footwork

These are all important patterns that must be learned, each appropriate to a specific situation.

THE "HYBRID TECHNIQUE" TRAP

Unfortunately, modern technique is not yet widely understood in coaching circles. Information is still highly fragmented, and much of what appears is misleading. This presents a major barrier to coaches who want to teach the modern game. Because they don't have a comprehensive understanding of modern technique, they often end up unknowingly teaching hybrid technique - mixtures of modern and traditional.

Modern and traditional technique are generally like oil and water - they don't mix. Players who are taught hybrid technique will at best be limited in what they can do, and will not realize their full shot making potential. At worst, they'll end up with an injury.

Below are some examples of hybrid forehand technique we commonly see in our travels:

1. A player with a modern semi-western grip has been taught to use the most traditional looking of all the follow throughs - a wrap-around, over the shoulder finish. The problem is that - for most forehand shots - the natural finish for players using a semi-western grip is below the shoulder, frequently as low as hip level. For most shots that require extreme topspin, that finish should be inverted (as described earlier). For others, the finish should be vertical. In short, with a semi-western grip, the natural finish is almost never over the shoulder. Instructing a player to hit this way is awkward and places extreme limits on what the player can do with the ball. At worst, it can lead to injury.

2. A player is trying to hit with extreme topspin using an eastern grip and an over the shoulder wrap-around finish. Here the technique is inappropriate for what the player is trying to accomplish. Neither the grip nor the finish is conducive to producing the steep vertical racquet path and high racquet speed through impact required to generate extreme topspin.

3. A right handed player with a modern grip and modern swing pattern is trying to use a traditional footwork pattern when returning wide balls (stepping forward into the ball with the left foot prior to impact). On wide balls, this footwork is awkward and limiting. The player should be using the right-right open stance footwork for efficient hitting and rapid recovery.

PROFESSIONAL VERSUS RECREATIONAL TECHNIQUE

Are there significant differences in modern technique at the professional and recreational levels of play? Surprisingly, no. For a given situation and shot, the essential elements are the same. Of course, pro players will have a much wider range of shots at their disposal. Although recreational players can greatly expand their shot making repertoire with modern technique, the more advanced shots should be taught only when the necessary foundations are in place.

Pro players will also execute the movement patterns more quickly, generating much higher racquet speed through impact than recreational players. Because the racquet head moves both forward and upward through impact on topspin shots, this increased racquet speed means that the pros will naturally hit their shots with more pace and more spin than recreational players. However, remember that pace and spin work in synergy. Whenever shot pace is increased, more topspin is required to maintain the same ball trajectory and to ensure that the ball stays in play. Conversely, when less pace is used, less topspin is required.

Although recreational players will generate less racquet speed through impact, the trajectories of their shots will be very similar to those at the pro level. This is true for all of the seven topspin shot types mentioned earlier. Take the arc for example, a low risk shot used in baseline rallies to move an opponent around while waiting for an opportunity to do something more aggressive. This ball travels from baseline to baseline with a net clearance of about 3-4 feet

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(1 meter). A recreational player can send the arc ball from baseline to baseline using moderate pace and spin. A pro player will hit the arc with a similar trajectory, but with much higher pace and spin.

THE MAGIC OF MODERN

Modern hitting techniques have greatly expanded the range of what one can do with a tennis ball, and hence the shot making possibilities available to players. Nowhere is this truer than for the topspin forehand, a signature stroke of the modern game. The best news of all is that most of what touring pros have discovered and developed over the years can be used effectively by the vast majority of recreational players. What's needed now are coaches who are keen to develop the competencies required to teach the modern game successfully!

In this article, we've briefly introduced many of the technical elements relevant to the modern topspin forehand. Of course - as in traditional coaching - it's not enough to be armed with a knowledge of technical elements and a handful of teaching points. If you're truly going to be successful and serve your students well, you'll need to know not only what to teach, but also when and how to teach it.

For example:

- What should be taught at each level of development, in each age bracket from tots to seniors?
- What is the appropriate combination of technical elements for each situation and shot?
- What are the most effective teaching progressions for a given situation and shot?
- What are the best ways of correcting the most common technical flaws?
- How should you proceed when transforming a traditional player into a modern one?

In short, you'll need a complete tool kit of knowledge. That's not to say that you'll need to know everything about modern tennis before you begin, but you'll certainly need to know what's important for each age group and level of play you'd like to coach. For example, you could begin learning about the age group/level of most interest to you, and then expand from there over time.

When modern technique is taught properly, everyone can learn to Think and play like the pros™! This is tremendously motivating for both players and coaches alike. Our experience is that when players make the connection between what they see at the professional level and what they're learning in their lessons, something magical happens. That magic benefits the entire tennis industry.



9 - website clip showing modern technique for a variety of ages & skill levels



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