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Federer as Religious Experience

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Almost anyone who loves tennis and follows the men's tour on television has, over the last few years, had what might be termed Federer Moments. These are times, as you watch the young Swiss play, when the jaw drops and eyes protrude and sounds are made that bring spouses in from other rooms to see if you're O.K.

The Moments are more intense if you've played enough tennis to understand the impossibility of what you just saw him do. We've all got our examples. Here is one. It's the finals of the 2005 U.S. Open, Federer serving to Andre Agassi early in the fourth set. There's a medium-long exchange of groundstrokes, one with the distinctive butterfly shape of today's power-baseline game, Federer and Agassi yanking each other from side to side, each trying to set up the baseline winner...until suddenly Agassi hits a hard heavy cross-court backhand that pulls Federer way out wide to his ad (=left) side, and Federer

gets to it but slices the stretch backhand short, a couple feet past the service line, which of course is the sort of thing Agassi dines out on, and as Federer's scrambling to reverse and get back to center, Agassi's moving in to take the short ball on the rise, and he smacks it hard right back into the same ad corner, trying to wrong-foot Federer, which in fact he does — Federer's still near the corner but running toward the centerline, and the ball's heading to a point behind him now, where he just was, and there's no time to turn his body around, and Agassi's following the shot in to the net at an angle from the backhand side...and what Federer now does is somehow instantly reverse thrust and sort of skip backward three or four steps, impossibly fast, to hit a forehand out of his backhand corner, all his weight moving backward, and the forehand is a topspin screamer down the line past Agassi at net, who lunges for it but the ball's past him, and it flies straight down the sideline and lands exactly in the deuce corner of Agassi's side, a winner — Federer's still dancing backward as it lands. And there's that familiar little second of shocked silence from the New York crowd before it erupts, and John McEnroe with his color man's headset on TV says (mostly to himself, it sounds like), "How do you hit a winner from that position?" And he's right: given Agassi's position and world-class quickness, Federer had to send that ball down a two-inch pipe of space in order to pass him, which he did, moving backwards, with no setup time and none of his weight behind the shot. It was impossible. It was like something out of "The Matrix." I don't know what-all sounds were involved, but my spouse says she hurried in and there was popcorn all over the couch and I was down on one knee and my eyeballs looked like novelty-shop eyeballs.

Anyway, that's one example of a Federer Moment, and that was merely on TV — **and the truth is that TV tennis is to live tennis pretty much as video porn is to the felt reality of human love.**

Journalistically speaking, there is no hot news to offer you about Roger Federer. He is, at 25, the best tennis player currently alive. Maybe the best ever. Bios and profiles abound. "60 Minutes" did a feature on him just last year. Anything you want to know about Mr. Roger N.M.I. Federer — his background, his home town of Basel, Switzerland, his parents' sane and unexploitative support of his talent, his junior tennis career, his early problems with fragility and temper, his beloved junior coach, how that coach's accidental death in 2002 both shattered and annealed Federer and helped make him what he now is, Federer's 39 career singles titles, his eight Grand Slams, his unusually steady and mature commitment to the girlfriend who travels with him (which on the men's tour is rare) and handles his affairs (which on the men's tour is unheard of), his old-school stoicism and

mental toughness and good sportsmanship and evident overall decency and thoughtfulness and charitable largess — it's all just a Google search away. Knock yourself out.

This present article is more about a spectator's experience of Federer, and its context. **The specific thesis here is that if you've never seen the young man play live, and then do, in person,** on the sacred grass of Wimbledon, through the literally withering heat and then wind and rain of the '06 fortnight, then you are apt to have what one of the tournament's press bus drivers describes as a "bloody near-religious experience." It may be tempting, at first, to hear a phrase like this as just one more of the overheated tropes that people resort to to describe the feeling of Federer Moments. **But the driver's phrase turns out to be true — literally, for an instant ecstatically — though it takes some time and serious watching to see this truth emerge.**

Beauty is not the goal of competitive sports, but high-level sports are a prime venue for the expression of human beauty. The relation is roughly that of courage to war.

The human beauty we're talking about here is beauty of a particular type; it might be called kinetic beauty. Its power and appeal are universal. It has nothing to do with sex or cultural norms. **What it seems to have to do with, really, is human beings' reconciliation with the fact of having a body.⁽¹⁾**

Of course, in men's sports no one ever talks about beauty or grace or the body. Men may profess their "love" of sports, but that love must always be cast and enacted in the symbology of war: elimination vs. advance, hierarchy of rank and standing, obsessive statistics, technical analysis, tribal and/or nationalist fervor, uniforms, mass noise, banners, chest-thumping, face-painting, etc. **For reasons that are not well understood, war's codes are safer for most of us than love's.** You too may find them so, in which case Spain's mesomorphic and totally martial Rafael Nadal is the man's man for you — he of the unsleeved biceps and Kabuki self-exhortations. Plus Nadal is also Federer's nemesis and the big surprise of this year's Wimbledon, since he's a clay-court specialist and no one expected him to make it past the first few rounds here. Whereas Federer, through the semifinals, has provided no surprise or competitive drama at all. He's outplayed each opponent so completely that the TV and print press are worried his matches are dull and can't compete effectively with the nationalist fervor of the World Cup.⁽²⁾

July 9's men's final, though, is everyone's dream. Nadal vs. Federer is a replay of last month's French Open final, which Nadal won. Federer has so far lost only four matches all year, but they've all been to Nadal. Still, most of these matches have been on slow clay, Nadal's best surface. Grass is Federer's best. On the other hand, the first week's heat has baked out some of the Wimbledon courts' slickness and made them slower. There's also the fact that Nadal has adjusted his clay-based game to grass — moving in closer to the baseline on his groundstrokes, amping up his serve, overcoming his allergy to the net. He just about disemboweled Agassi in the third round. The networks are in ecstasies. Before the match, on Centre Court, behind the glass slits above the south backstop, as the linesmen are coming out on court in their new Ralph Lauren uniforms that look so much like children's navalwear, the broadcast commentators can be seen practically bouncing up and down in their chairs. This Wimbledon final's got the revenge narrative, the king-versus-regicide dynamic, the stark character contrasts. **It's the passionate machismo of southern Europe versus the intricate clinical artistry of the north. Apollo and Dionysus. Scalpel and cleaver. Righty and southpaw.** Nos. 1 and 2 in the world. Nadal, the man who's taken the modern power-baseline game just as far as it goes, versus a man who's transfigured that modern game, whose precision and variety are as big a deal as his pace and foot-speed, but who may be peculiarly vulnerable to, or psyched out by, that first man. A British sportswriter, exulting with his mates in the press section, says, twice, "It's going to be a war."

Plus it's in the cathedral of Centre Court. And the men's final is always on the fortnight's second Sunday, the symbolism of which Wimbledon emphasizes by always omitting play on the first Sunday. And the spattery gale that has knocked over parking signs and everted umbrellas all morning suddenly quits an hour before match time, the sun emerging just as Centre Court's tarp is rolled back and the net posts driven home.

Federer and Nadal come out to applause, make their ritual bows to the nobles' box. The Swiss is in the buttermilk-colored sport coat that Nike's gotten him to wear for Wimbledon this year. On Federer, and perhaps on him alone, it doesn't look absurd with shorts and sneakers. The Spaniard eschews all warm-up clothing, so you have to look at his muscles right away. He and the Swiss are both in all-Nike, up to the very same kind of tied white Nike hankie with the swoosh positioned above the third eye. Nadal tucks his hair under his hankie, but Federer doesn't, and smoothing and fussing with the bits of hair that fall over the hankie is the main Federer tic TV viewers get to see; likewise Nadal's obsessive retreat to the ballboy's towel between points. There happen to be other

tics and habits, though, tiny perks of live viewing. There's the great care Roger Federer takes to hang the sport coat over his spare courtside chair's back, just so, to keep it from wrinkling — he's done this before each match here, and something about it seems childlike and weirdly sweet. Or the way he inevitably changes out his racket sometime in the second set, the new one always in the same clear plastic bag closed with blue tape, which he takes off carefully and always hands to a ballboy to dispose of. There's Nadal's habit of constantly picking his long shorts out of his bottom as he bounces the ball before serving, his way of always cutting his eyes warily from side to side as he walks the baseline, like a convict expecting to be shanked. And something odd on the Swiss's serve, if you look very closely. Holding ball and racket out in front, just before starting the motion, Federer always places the ball precisely in the V-shaped gap of the racket's throat, just below the head, just for an instant. **If the fit isn't perfect, he adjusts the ball until it is. It happens very fast, but also every time, on both first serves and second.**

Nadal and Federer now warm each other up for precisely five minutes; the umpire keeps time. There's a very definite order and etiquette to these pro warm-ups, which is something that television has decided you're not interested in seeing. Centre Court holds 13,000 and change. Another several thousand have done what people here do willingly every year, which is to pay a stiff general admission at the gate and then gather, with hampers and mosquito spray, to watch the match on an enormous TV screen outside Court 1. Your guess here is probably as good as anyone's.

Right before play, up at the net, there's a ceremonial coin-toss to see who'll serve first. It's another Wimbledon ritual. The honorary coin-tosser this year is William Caines, assisted by the umpire and tournament referee. William Caines is a 7-year-old from Kent who contracted liver cancer at age 2 and somehow survived after surgery and horrific chemo. He's here representing Cancer Research UK. He's blond and pink-cheeked and comes up to about Federer's waist. The crowd roars its approval of the re-enacted toss. Federer smiles distantly the whole time. Nadal, just across the net, keeps dancing in place like a boxer, swinging his arms from side to side. I'm not sure whether the U.S. networks show the coin-toss or not, whether this ceremony's part of their contractual obligation or whether they get to cut to commercial. As William's ushered off, there's more cheering, but it's scattered and disorganized; most of the crowd can't quite tell what to do. **It's like once the ritual's over, the reality of why this child was part of it sinks in.** There's a feeling of something important, something both uncomfortable and not, about a child with cancer

tossing this dream-final's coin. The feeling, what-all it might mean, has a tip-of-the-tongue-type quality that remains elusive for at least the first two sets.⁽³⁾

A top athlete's beauty is next to impossible to describe directly. Or to evoke. Federer's forehand is a great liquid whip, his backhand a one-hander that he can drive flat, load with topspin, or slice — the slice with such snap that the ball turns shapes in the air and skids on the grass to maybe ankle height. His serve has world-class pace and a degree of placement and variety no one else comes close to; the service motion is lithe and uneccentric, distinctive (on TV) only in a certain eel-like all-body snap at the moment of impact. His anticipation and court sense are otherworldly, and his footwork is the best in the game — as a child, he was also a soccer prodigy. All this is true, and yet none of it really explains anything or evokes the experience of watching this man play. Of witnessing, firsthand, the beauty and genius of his game. You more have to come at the aesthetic stuff obliquely, to talk around it, or — as Aquinas did with his own ineffable subject — to try to define it in terms of what it is not.

One thing it is not is televisable. At least not entirely. TV tennis has its advantages, but these advantages have disadvantages, and chief among them is a certain illusion of intimacy. Television's slow-mo replays, its close-ups and graphics, all so privilege viewers that we're not even aware of how much is lost in broadcast. And a large part of what's lost is the sheer physicality of top tennis, a sense of the speeds at which the ball is moving and the players are reacting. This loss is simple to explain. TV's priority, during a point, is coverage of the whole court, a comprehensive view, so that viewers can see both players and the overall geometry of the exchange. Television therefore chooses a specular vantage that is overhead and behind one baseline. You, the viewer, are above and looking down from behind the court. This perspective, as any art student will tell you, "foreshortens" the court. Real tennis, after all, is three-dimensional, but a TV screen's image is only 2-D. The dimension that's lost (or rather distorted) on the screen is the real court's length, the 78 feet between baselines; and the speed with which the ball traverses this length is a shot's pace, which on TV is obscured, and in person is fearsome to behold. That may sound abstract or overblown, in which case by all means go in person to some professional tournament — especially to the outer courts in early rounds, where you can sit 20 feet from the sideline — and sample the difference for yourself. If you've watched tennis only on television, you simply have no idea how hard these pros are hitting the ball, how fast the ball is moving,⁽⁴⁾ how little time the players have to get to it, and how

quickly they're able to move and rotate and strike and recover. And none are faster, or more deceptively effortless about it, than Roger Federer.

Interestingly, what is less obscured in TV coverage is Federer's intelligence, since this intelligence often manifests as angle. Federer is able to see, or create, gaps and angles for winners that no one else can envision, and television's perspective is perfect for viewing and reviewing these Federer Moments. What's harder to appreciate on TV is that these spectacular-looking angles and winners are not coming from nowhere — they're often set up several shots ahead, and depend as much on Federer's manipulation of opponents' positions as they do on the pace or placement of the coup de grâce. And understanding how and why Federer is able to move other world-class athletes around this way requires, in turn, a better technical understanding of the modern power-baseline game than TV — again — is set up to provide.

Wimbledon is strange. Verily it is the game's Mecca, the cathedral of tennis; but it would be easier to sustain the appropriate level of on-site veneration if the tournament weren't so intent on reminding you over and over that it's the cathedral of tennis. There's a peculiar mix of stodgy self-satisfaction and relentless self-promotion and -branding. It's a bit like the sort of authority figure whose office wall has every last plaque, diploma, and award he's ever gotten, and every time you come into the office you're forced to look at the wall and say something to indicate that you're impressed. Wimbledon's own walls, along nearly every significant corridor and passage, are lined with posters and signs featuring shots of past champions, lists of Wimbledon facts and trivia, historic lore, and so on. Some of this stuff is interesting; some is just odd. The Wimbledon Lawn Tennis Museum, for instance, has a collection of all the various kinds of rackets used here through the decades, and one of the many signs along the Level 2 passage of the Millennium Building⁽⁵⁾ promotes this exhibition with both photos and didactic text, a kind of History of the Racket. Here, *sic*, is the climactic end of this text:

Today's lightweight frames made of space-age materials like graphite, boron, titanium and ceramics, with larger heads — mid-size (90-95 square inches) and over-size (110 square inches) — have totally transformed the character of the game. Nowadays it is the powerful hitters who dominate with heavy topspin. Serve-and-volley players and those who rely on subtlety and touch have virtually disappeared.

It seems odd, to say the least, that such a diagnosis continues to hang here so prominently in the fourth year of Federer's reign over Wimbledon, since the Swiss has brought to men's tennis degrees of touch and subtlety unseen since (at least) the days of McEnroe's

prime. But the sign's really just a testament to the power of dogma. For almost two decades, the party line's been that certain advances in racket technology, conditioning, and weight training have transformed pro tennis from a game of quickness and finesse into one of athleticism and brute power. And as an etiology of today's power-baseline game, this party line is broadly accurate. Today's pros truly are measurably bigger, stronger, and better conditioned,⁽⁶⁾ and high-tech composite rackets really have increased their capacities for pace and spin. How, then, someone of Federer's consummate finesse has come to dominate the men's tour is a source of wide and dogmatic confusion.

There are three kinds of valid explanation for Federer's ascendancy. One kind involves mystery and metaphysics and is, I think, closest to the real truth. The others are more technical and make for better journalism.

The metaphysical explanation is that Roger Federer is one of those rare, preternatural athletes who appear to be exempt, at least in part, from certain physical laws. Good analogues here include Michael Jordan,⁽⁷⁾ who could not only jump inhumanly high but actually hang there a beat or two longer than gravity allows, and Muhammad Ali, who really could "float" across the canvas and land two or three jabs in the clock-time required for one. There are probably a half-dozen other examples since 1960. And Federer is of this type — a type that one could call genius, or mutant, or avatar. He is never hurried or off-balance. The approaching ball hangs, for him, a split-second longer than it ought to. His movements are lithe rather than athletic. Like Ali, Jordan, Maradona, and Gretzky, he seems both less and more substantial than the men he faces. Particularly in the all-white that Wimbledon enjoys getting away with still requiring, he looks like what he may well (I think) be: a creature whose body is both flesh and, somehow, light.

This thing about the ball cooperatively hanging there, slowing down, as if susceptible to the Swiss's will — there's real metaphysical truth here. And in the following anecdote. After a July 7 semifinal in which Federer destroyed Jonas Bjorkman — not just beat him, *destroyed* him — and just before a requisite post-match news conference in which Bjorkman, who's friendly with Federer, says he was pleased to "have the best seat in the house" to watch the Swiss "play the nearest to perfection you can play tennis," Federer and Bjorkman are chatting and joking around, and Bjorkman asks him just how unnaturally big the ball was looking to him out there, and Federer confirms that it was "like a bowling ball or basketball." He means it just as a bantery, modest way to make Bjorkman feel better, to confirm that he's surprised by how unusually well he played today; but he's also revealing something about what tennis is like for him. Imagine that

you're a person with preternaturally good reflexes and coordination and speed, and that you're playing high-level tennis. Your experience, in play, will not be that you possess phenomenal reflexes and speed; rather, it will seem to you that the tennis ball is quite large and slow-moving, and that you always have plenty of time to hit it. That is, you won't experience anything like the (empirically real) quickness and skill that the live audience, watching tennis balls move so fast they hiss and blur, will attribute to you.⁽⁸⁾

Velocity's just one part of it. Now we're getting technical. Tennis is often called a "game of inches," but the cliché is mostly referring to where a shot lands. In terms of a player's hitting an incoming ball, tennis is actually more a game of micrometers: vanishingly tiny changes around the moment of impact will have large effects on how and where the ball travels. The same principle explains why even the smallest imprecision in aiming a rifle will still cause a miss if the target's far enough away.

By way of illustration, let's slow things way down. Imagine that you, a tennis player, are standing just behind your deuce corner's baseline. A ball is served to your forehand — you pivot (or rotate) so that your side is to the ball's incoming path and start to take your racket back for the forehand return. Keep visualizing up to where you're about halfway into the stroke's forward motion; the incoming ball is now just off your front hip, maybe six inches from point of impact. Consider some of the variables involved here. On the vertical plane, angling your racket face just a couple degrees forward or back will create topspin or slice, respectively; keeping it perpendicular will produce a flat, spinless drive. Horizontally, adjusting the racket face ever so slightly to the left or right, and hitting the ball maybe a millisecond early or late, will result in a cross-court versus down-the-line return. Further slight changes in the curves of your groundstroke's motion and follow-through will help determine how high your return passes over the net, which, together with the speed at which you're swinging (along with certain characteristics of the spin you impart), will affect how deep or shallow in the opponent's court your return lands, how high it bounces, etc. These are just the broadest distinctions, of course — like, there's heavy topspin vs. light topspin, or sharply cross-court vs. only slightly cross-court, etc. There are also the issues of how close you're allowing the ball to get to your body, what grip you're using, the extent to which your knees are bent and/or weight's moving forward, and whether you're able simultaneously to watch the ball and to see what your opponent's doing after he serves. These all matter, too. Plus there's the fact that you're not putting a static object into motion here but rather reversing the flight and (to a varying extent) spin of a projectile coming toward you — coming, in the case of pro tennis, at

speeds that make conscious thought impossible. Mario Ancic's first serve, for instance, often comes in around 130 m.p.h. Since it's 78 feet from Ancic's baseline to yours, that means it takes 0.41 seconds for his serve to reach you.⁽⁹⁾ This is less than the time it takes to blink quickly, twice.

The upshot is that pro tennis involves intervals of time too brief for deliberate action. Temporally, we're more in the operative range of reflexes, purely physical reactions that bypass conscious thought. And yet an effective return of serve depends on a large set of decisions and physical adjustments that are a whole lot more involved and intentional than blinking, jumping when startled, etc.

Successfully returning a hard-served tennis ball requires what's sometimes called "the kinesthetic sense," meaning the ability to control the body and its artificial extensions through complex and very quick systems of tasks. English has a whole cloud of terms for various parts of this ability: feel, touch, form, proprioception, coordination, hand-eye coordination, kinesthesia, grace, control, reflexes, and so on. For promising junior players, refining the kinesthetic sense is the main goal of the extreme daily practice regimens we often hear about.⁽¹⁰⁾ The training here is both muscular and neurological. Hitting thousands of strokes, day after day, develops the ability to do by "feel" what cannot be done by regular conscious thought. Repetitive practice like this often looks tedious or even cruel to an outsider, but the outsider can't feel what's going on inside the player — tiny adjustments, over and over, and a sense of each change's effects that gets more and more acute even as it recedes from normal consciousness.⁽¹¹⁾

The time and discipline required for serious kinesthetic training are one reason why top pros are usually people who've devoted most of their waking lives to tennis, starting (at the very latest) in their early teens. It was, for example, at age 13 that Roger Federer finally gave up soccer, and a recognizable childhood, and entered Switzerland's national tennis training center in Ecublens. At 16, he dropped out of classroom studies and started serious international competition.

It was only weeks after quitting school that Federer won Junior Wimbledon. Obviously, this is something that not every junior who devotes himself to tennis can do. Just as obviously, then, there is more than time and training involved — there is also sheer talent, and degrees of it. Extraordinary kinesthetic ability must be present (and measurable) in a kid just to make the years of practice and training worthwhile...but from there, over time, the cream starts to rise and separate. So one type of technical explanation for Federer's

dominion is that he's just a bit more kinesthetically talented than the other male pros. Only a little bit, since everyone in the Top 100 is himself kinesthetically gifted — but then, tennis is a game of inches.

This answer is plausible but incomplete. It would probably not have been incomplete in 1980. In 2006, though, it's fair to ask why this kind of talent still matters so much. Recall what is true about dogma and Wimbledon's sign. Kinesthetic virtuoso or no, Roger Federer is now dominating the largest, strongest, fittest, best-trained and -coached field of male pros who've ever existed, with everyone using a kind of nuclear racket that's said to have made the finer calibrations of kinesthetic sense irrelevant, like trying to whistle Mozart during a Metallica concert.

According to reliable sources, honorary coin-tosser William Caines's backstory is that one day, when he was 2½, his mother found a lump in his tummy, and took him to the doctor, and the lump was diagnosed as a malignant liver tumor. At which point one cannot, of course, imagine...a tiny child undergoing chemo, serious chemo, his mother having to watch, carry him home, nurse him, then bring him back to that place for more chemo. **How did she answer her child's question — the big one, the obvious one? And who could answer hers? What could any priest or pastor say that wouldn't be grotesque?**

It's 2-1 Nadal in the final's second set, and he's serving. Federer won the first set at love but then flagged a bit, as he sometimes does, and is quickly down a break. Now, on Nadal's ad, there's a 16-stroke point. Nadal is serving a lot faster than he did in Paris, and this one's down the center. Federer floats a soft forehand high over the net, which he can get away with because Nadal never comes in behind his serve. The Spaniard now hits a characteristically heavy topspin forehand deep to Federer's backhand; Federer comes back with an even heavier topspin backhand, almost a clay-court shot. It's unexpected and backs Nadal up, slightly, and his response is a low hard short ball that lands just past the service line's T on Federer's forehand side. Against most other opponents, Federer could simply end the point on a ball like this, but one reason Nadal gives him trouble is that he's faster than the others, can get to stuff they can't; and so Federer here just hits a flat, medium-hard cross-court forehand, going not for a winner but for a low, shallowly angled ball that forces Nadal up and out to the deuce side, his backhand. Nadal, on the run, backhands it hard down the line to Federer's backhand; Federer slices it right back down the same line, slow and floaty with backspin, making Nadal come back to the same spot. Nadal slices the ball right back — three shots now all down the same line — and Federer slices the ball back to the same spot yet again, this one even slower and floatier,

and Nadal gets planted and hits a big two-hander back down the same line — it's like Nadal's camped out now on his deuce side; he's no longer moving all the way back to the baseline's center between shots; Federer's hypnotized him a little. Federer now hits a very hard, deep topspin backhand, the kind that hisses, to a point just slightly on the ad side of Nadal's baseline, which Nadal gets to and forehands cross-court; and Federer responds with an even harder, heavier cross-court backhand, baseline-deep and moving so fast that Nadal has to hit the forehand off his back foot and then scramble to get back to center as the shot lands maybe two feet short on Federer's backhand side again. Federer steps to this ball and now hits a totally different cross-court backhand, this one much shorter and sharper-angled, an angle no one would anticipate, and so heavy and blurred with topspin that it lands shallow and just inside the sideline and takes off hard after the bounce, and Nadal can't move in to cut it off and can't get to it laterally along the baseline, because of all the angle and topspin — end of point. It's a spectacular winner, a Federer Moment; but watching it live, you can see that it's also a winner that Federer started setting up four or even five shots earlier. Everything after that first down-the-line slice was designed by the Swiss to maneuver Nadal and lull him and then disrupt his rhythm and balance and open up that last, unimaginable angle — an angle that would have been impossible without extreme topspin.

Extreme topspin is the hallmark of today's power-baseline game. This is something that Wimbledon's sign gets right.⁽¹²⁾ Why topspin is so key, though, is not commonly understood. What's commonly understood is that high-tech composite rackets impart much more pace to the ball, rather like aluminum baseball bats as opposed to good old lumber. But that dogma is false. The truth is that, at the same tensile strength, carbon-based composites are lighter than wood, and this allows modern rackets to be a couple ounces lighter and at least an inch wider across the face than the vintage Kramer and Maxply. It's the width of the face that's vital. A wider face means there's more total string area, which means the sweet spot's bigger. With a composite racket, you don't have to meet the ball in the precise geometric center of the strings in order to generate good pace. Nor must you be spot-on to generate topspin, a spin that (recall) requires a tilted face and upwardly curved stroke, brushing over the ball rather than hitting flat through it — this was quite hard to do with wood rackets, because of their smaller face and niggardly sweet spot. Composites' lighter, wider heads and more generous centers let players swing faster and put way more topspin on the ball...and, in turn, the more topspin you put on the ball, the harder you can hit it, because there's more margin for error. Topspin causes the ball to

pass high over the net, describe a sharp arc, and come down fast into the opponent's court (instead of maybe soaring out).

So the basic formula here is that composite rackets enable topspin, which in turn enables groundstrokes vastly faster and harder than 20 years ago — it's common now to see male pros pulled up off the ground and halfway around in the air by the force of their strokes, which in the old days was something one saw only in Jimmy Connors.

Connors was not, by the way, the father of the power-baseline game. He whaled mightily from the baseline, true, but his groundstrokes were flat and spinless and had to pass very low over the net. Nor was Bjorn Borg a true power-baselinier. Both Borg and Connors played specialized versions of the classic baseline game, which had evolved as a counterforce to the even more classic serve-and-volley game, which was itself the dominant form of men's power tennis for decades, and of which John McEnroe was the greatest modern exponent. You probably know all this, and may also know that McEnroe toppled Borg and then more or less ruled the men's game until the appearance, around the mid-1980's, of (a) modern composite rackets⁽¹³⁾ and (b) Ivan Lendl, who played with an early form of composite and was the true progenitor of power-baseline tennis.⁽¹⁴⁾

Ivan Lendl was the first top pro whose strokes and tactics appeared to be designed around the special capacities of the composite racket. His goal was to win points from the baseline, via either passing shots or outright winners. His weapon was his groundstrokes, especially his forehand, which he could hit with overwhelming pace because of the amount of topspin he put on the ball. The blend of pace and topspin also allowed Lendl to do something that proved crucial to the advent of the power-baseline game. He could pull off radical, extraordinary angles on hard-hit groundstrokes, mainly because of the speed with which heavy topspin makes the ball dip and land without going wide. In retrospect, this changed the whole physics of aggressive tennis. For decades, it had been angle that made the serve-and-volley game so lethal. The closer one is to the net, the more of the opponent's court is open — the classic advantage of volleying was that you could hit angles that would go way wide if attempted from the baseline or midcourt. But topspin on a groundstroke, if it's really extreme, can bring the ball down fast and shallow enough to exploit many of these same angles. Especially if the groundstroke you're hitting is off a somewhat short ball — the shorter the ball, the more angles are possible. Pace, topspin, and aggressive baseline angles: and lo, it's the power-baseline game.

It wasn't that Ivan Lendl was an immortally great tennis player. He was simply the first top pro to demonstrate what heavy topspin and raw power could achieve from the baseline. And, most important, the achievement was replicable, just like the composite racket. Past a certain threshold of physical talent and training, the main requirements were athleticism, aggression, and superior strength and conditioning. The result (omitting various complications and subspecialties⁽¹⁵⁾) has been men's pro tennis for the last 20 years: ever bigger, stronger, fitter players generating unprecedented pace and topspin off the ground, trying to force the short or weak ball that they can put away.

Illustrative stat: When Lleyton Hewitt defeated David Nalbandian in the 2002 Wimbledon men's final, there was not one single serve-and-volley point.⁽¹⁶⁾

The generic power-baseline game is not boring — certainly not compared with the two-second points of old-time serve-and-volley or the moon-ball tedium of classic baseline attrition. But it is somewhat static and limited; it is not, as pundits have publicly feared for years, the evolutionary endpoint of tennis. The player who's shown this to be true is Roger Federer. And he's shown it from *within* the modern game.

This *within* is what's important here; this is what a purely neural account leaves out. And it is why sexy attributions like touch and subtlety must not be misunderstood. With Federer, it's not either/or. The Swiss has every bit of Lendl and Agassi's pace on his groundstrokes, and leaves the ground when he swings, and can out-hit even Nadal from the backcourt.⁽¹⁷⁾ What's strange and wrong about Wimbledon's sign, really, is its overall dolorous tone. Subtlety, touch, and finesse are not dead in the power-baseline era. For it is, still, in 2006, very much the power-baseline era: Roger Federer is a first-rate, kick-ass power-baselinier. It's just that that's not all he is. There's also his intelligence, his occult anticipation, his court sense, his ability to read and manipulate opponents, to mix spins and speeds, to misdirect and disguise, to use tactical foresight and peripheral vision and kinesthetic range instead of just rote pace — all this has exposed the limits, and possibilities, of men's tennis as it's now played.

Which sounds very high-flown and nice, of course, but please understand that with this guy it's not high-flown or abstract. Or nice. In the same emphatic, empirical, dominating way that Lendl drove home his own lesson, Roger Federer is showing that the speed and strength of today's pro game are merely its skeleton, not its flesh. He has, figuratively and literally, re-embodied men's tennis, and for the first time in years the game's future is unpredictable. You should have seen, on the grounds' outside courts, the variegated ballet

that was this year's Junior Wimbledon. Drop volleys and mixed spins, off-speed serves, gambits planned three shots ahead — all as well as the standard-issue grunts and booming balls. Whether anything like a nascent Federer was here among these juniors can't be known, of course. Genius is not replicable. Inspiration, though, is contagious, and multiform — and even just to see, close up, power and aggression made vulnerable to beauty is to feel inspired and (in a fleeting, mortal way) reconciled.

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