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"Bringing Hitters and Potential Together™"  
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*Ask Mike ...*

***Why don't we copy the "best?"***

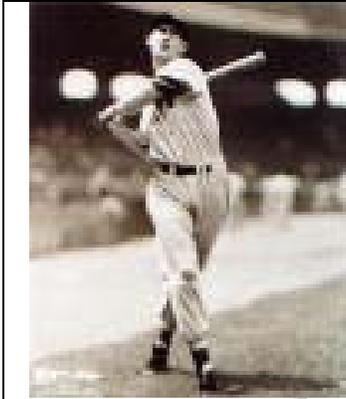
***Denver, Colo.***— Knowing I played for Ted Williams when he managed the Washington Senators, and later mentored under him for ten years, people ask why I would teach the mechanics he used. Their reasoning is Ted had "special" talents, the ONLY person who could hit that way.



Actually, nothing could be further from the truth! As Babe copied "Shoeless" Joe, and everyone attempted to copy Ruth, so did Williams copy those before him. Emulation has been forever intertwined in the history of baseball. Ted's mechanics mirrored the mechanics of other successful hitters in his day—and before him. Emulation has been and still is a fabulous teacher. Make no mistake about it, it has taught more players than any other learning/teaching method.

Unfortunately, it is an exceedingly slow and tedious process, often taking years to reach a level of competence. And not everyone possesses the ability take the correct "picture" and effectively take the internalized information "over the white lines."

After Ted's passing, many of baseball's greatest living hitters were interviewed. From Willie Mays to Al Kaline to Willie McCovey, every player interviewed echoed the same refrain: Ted had the mechanics and fluid swing that everyone drooled over—and tried to emulate.



Ted Williams



Williams (l) and Babe Ruth

If baseball's greatest and most respected hitters espoused Williams' rotational swing mechanics, concurring that it was baseball's "best," how is it that so many coaches today—who never achieved the proficiency level, the experience, or the elite status as these great players—know "more" about hitting than those players, and today teach mechanics that are altogether different?

Instead of teaching the movements of baseball's elite and most productive hitters, we teach hitting mechanics that are not optimized for today's game of *production* and high total bases. We teach a technique that was optimized for the ultra-light, ultra-resilient aluminum bats and rock-hard AstroTurf infields of the 1970s and 1980s. Neither exist today. The game has changed, but what we teach hasn't. Why do we continue to teach what we were taught when we played? Is it because it's "easier" than to learn something current and up-to-date? Because we never heard of "rotational" hitting mechanics and wouldn't know where to begin? Or how to teach it? If this is the case, shame on us! The information is available for everyone on my interactive CD-ROM, "The Epstein Teaching System: How to Hit Your Potential in Just 7 Days!"

### ***Why don't we copy Barry Bonds?***

I remember a business lecture I attended at the University of California (Berkeley) when I was a junior. The professor made an interesting point: "Who in their right mind would copy the business practices of someone who bankrupted three other companies?" His rhetorical question has led me to question today's hitting philosophy: "Does it make sense NOT to copy baseball's best hitters?"

Last summer, while watching "Baseball Tonight," Karl Ravech, ESPN's host/moderator, responded to some comments made by show "regulars" Harold Reynolds and John Kruk. They were talking about Barry Bonds and what a great hitter he is, his incomparable mechanics, and how much it contributed to his "consistency" and overall success.

Ravech asked them, "If that's the case, guys, why doesn't *everyone* teach his mechanics?" He continued by saying that golf instructors teach Tiger Woods' mechanics because they believe his is the best. Ravech found it unbelievable that baseball doesn't do the same.

Could golf be that much further ahead in common sense and logic than baseball in regards to teaching? Apparently, it is.

Reynolds and Kruk, both good baseball men, never answered Ravech's thought-provoking question and continued talking about Bonds' "consistency"—but did not address why it wasn't taught to everyone. Thus quickly ended the beginning of what should have been a provocative discussion for many viewers.

Hitting is much more than simply saying Bonds gets to a “good hitting position” and stays “inside” the ball when he swings. What *is* a “good hitting position?” *How* does one stay “inside” the ball?” This is—and has been—the extent to which baseball’s “experts” have attributed his success. But the question begs answering: how can I TEACH it correctly to others so they can hit their potentials? Unfortunately, we can’t teach what we can’t see or communicate!

My conclusion was they didn’t break down Bonds’ magnificent swing because they couldn’t. In fact, I have read nearly every expert’s attempt at analyzing Bonds’ swing, and not one has mentioned its most important dynamic: *torque*.

There have been countless hitting philosophies introduced to players over the years. Some were beneficial while others were worthless. Many have been theories propagated by “scientists” and “engineers” that never played the game.

I honestly believe that if these people had stood up against the likes of Koufax, Seaver, Palmer, Marichal, Drysdale, Gibson, Johnson, and Pedro, they would have spared us their litany of suppositions, assumptions, and confusion.

Ted Williams used to say that hitting a baseball is the most difficult thing to do in all of sports. After all these years instructing hitters, I would humbly disagree with my mentor. *Teaching* hitting is the most difficult thing to do in all of sports. This is because most of us are burdened with life’s biggest albatrosses: “conventional” wisdom, unfounded knowledge, and hearsay advice. For those of you who have attempted to teach this very delicate and frustrating process, you know *exactly* where I’m coming from.

Barry Bonds’ hitting technique is no different from that of Ted Williams. Or Willie Mays. Or Joe DiMaggio, Mickey Mantle, Billy Williams, Frank Robinson, Lou Gehrig, Ty Cobb, or Henry Aaron. Or for that matter, 95% of baseball’s Hall-of-Fame hitters. They all executed the SAME technique; they were all rotational hitters. Today’s dominant hitters are also rotational. Bonds, Helton, Pujols, Guerrero, Sosa, Ramirez, Piazza, ARod, Bagwell, Lowell, Edgar, Nomar. One of the discerning characteristics of the rotational swing is *torque*.

Those that aren’t rotational do not dominate ball games and are usually “table setters,” singles/contact hitters. Ichiro, Pierre, Castillo, Roberts, Womack. In the recent past it was Carew and Gwynn. Their game is entirely different. I would be the last person to say these players aren’t/weren’t terrific hitters. They are. They make contact, put the ball in play, and “set the table” for the run-producers, the rotational hitters. There is definitely a place for all three hitting types in baseball: singles/contact, line drive/gap, and pure power hitters.

### ***There are only two hitting techniques***

In reality, there really should be no confusion regarding hitting technique. There are only TWO hitting *systems*, rotational and linear. All you have to do is choose the one that fits the player’s hitting type. Generally speaking, singles/contact hitters are linear; line drive/gap and pure power hitters are rotational. Really, quite simple. So why the confusion? They are as distinct and different as water and oil—and mix just as poorly.

The *only* similarity with both techniques is the hitter's "weight-shift." Rotational hitters weight-shift *to* a "balance point" and then immediately rotate around a stationary axis. The linear hitter weight-shifts *through* the balance point from the back leg to the front leg. Again, quite simple. In other words, rotational hitters stay "behind" the ball while linear hitters go "to" the ball. Some would call this "lunging."

Once it is understood that there are only two hitting systems, a hitter's and coach's choices are thankfully limited. *Every* player should have a choice and *should* hit according to their type. My personal experience indicates that the rotational hitting system allows the hitter to make the on-the-fly adjustments that the rigidity of the linear swing lacks. That's one of the reasons why I teach it and why its permanence in quality hitting technique has withstood the test of time. And why Bonds' consistency mirrors this technique.

Others may see it differently. As a facilitator of information, I have no problem with disagreement so long as those who dissent take the time to *equally* compare and contrast the benefits of both systems. But we don't. We opine, often vehemently and dogmatically, about something we know very little about.

As I travel around the country speaking at baseball shows and staging seminars and clinics, I have come to the conclusion that the biggest reason coaches/parents won't/don't consider an alternative to their hitting is that they don't know where to start! Where do I get the proper information to teach the "other" system *correctly*?

Nearly everyone teaching hitting today is a product of the ultra light, ultra resilient aluminum bat/Astroturf generation. We teach what we are familiar with and understand. To "change" requires gaining "new" knowledge and information. If it is not available, we scoff at the notion. It's only "natural" to shy away from the "unknown." Or worse, to simply label it "wrong."

### ***What Successful Hitters Really Do***

Every year my telephone comes alive after Major League Baseball's All-Star Game. Concerned parents saying, "I didn't see one player on this year's all-star team batting like my son is being taught." And confused players saying, "I didn't see anyone 'squishing the bug,' or 'watching the ball hit the bat,' or 'swinging down through the ball,' or 'hitting on their front foot,' like my coach tells me to do. What gives?"

What exactly is it about mechanics that confuses us so that we can't even "see" the mechanics of the players that grab all the headlines and make all the money? My feeling is it is impossible to notice something that we know nothing about. How does one look for "torque" in the swing if one doesn't even know of its existence?

When parents and players are asking questions like the ones above, we coaches have a problem. *We* should be telling *them* about the changes going on. We should be on the leading edge, teaching leading-edge mechanics.

But this isn't happening. Is it really because we don't know what to look for? Is it because we teach what we hear or read? Do we teach what we were taught when we played? Is it because today's proliferation of instant information—both good and bad—has made hitting so confusing?

## ***The rotational swing***

In my many years studying the baseball swing, I have been able to isolate only three consistent movements in an efficient, productive swing. These core movements are 1) the hips lead the hands (torque), 2) matching the plane of the swing to the plane of the pitch, and 3) staying “inside” the ball. (There is a fourth, “starting on time,” but, in my opinion, this is not technique.)

Over the past century, baseball’s productive (high OPS) players have been rotational and have embodied these core movements. Ultimately, the player’s personal style will “wrap around” their universal technique. It is why hitters all “look” different, but employ the same core movements from launch to contact to follow through. They all have different personal styles, but the technique remains constant. What’s made it so difficult to see is it happens in milliseconds and often goes unnoticed.

The hitter’s technique represents the movements that must be emulated! Not their style. “The Epstein Teaching System™” incorporates my proprietary drills to “burn in” the muscle memory required to emulate this time-proven technique.

Rotational hitting is a biomechanically correct sequence of events designed to hit a ball hard. Its effectiveness relies on the kinetic energy developed through the separation of the upper and lower torsos. I “coined” this vital movement “torque” many years ago and was branded “eccentric” by baseball “convention.” This “eccentricity,” however, is backed up by irrefutable scientific fact called the “kinetic link.” People have since changed their opinion and understand its vital importance to productive hitting.

Kinetic energy *always* works “up,” and the rotational baseball swing is no exception. It starts in the feet and works its way up the hitter’s uncoiling torso as the body rotates around a stationary axis. It goes out the shoulders, out the arms and hands, and releases its total accumulated energy at the end of the bat.

In the final analysis, rotational hitting is an easily learned, finely-honed system of pulleys and levers that effect the equal and opposite principles of physics that maximize the upward transfer of kinetic energy.

It is the *only* hitting technique capable of delivering and optimizing high kinetic energy, and is the principal reason why it has been used over the past century by 95% of baseball’s Hall-of-Fame hitters.

## ***The “Four Ts”***

All a hitter or coach has to know about rotational hitting can be summed up in my “Four Ts” of rotational hitting:

1. Turn
2. Torque
3. Tilt
4. Tuck

It sounds simple, but it doesn’t tell us anything—until a hitter goes through the Epstein Teaching System™. Then it serves as an instant reference for both the hitter and instructor to fall back on. These cues “jag the memory” once the hitter has been taught in the approved manner.

### **Turn**

“Turn” is a counter-rotational move *every* rotational hitter makes to begin initiating torque in the swing.

## Torque

“Torque” is the root of all bat speed, bat quickness, and power in the rotational swing. It is a product of the hitter correctly separating his upper and lower torso to produce kinetic energy. I call this “winding the rubber band.”

## Tilt

“Tilt” serves two purposes in the correct rotational swing. It is the process which occurs at swing launch which correctly and naturally restrains the hitter from lunging and coming forward when they swing. Secondly, it predisposes the body to favorably re-position itself to “match the plane of the swing to the plane of the pitch.”

## Tuck

“Tuck” refers to the “slotting” of the rear elbow that is executed at swing launch. If the hitter’s rear elbow does not tuck down and in or slot correctly—at the precise time—the hitter will not be able to stay “inside” the ball, and will “cast” their hands, which reduces bat speed and power.

My interactive CD-ROM, “The Epstein Teaching System: How to Hit Your Potential in Just 7 Days!” is designed to make these four letters come alive and to simplify the teaching process of one of sport’s most difficult tasks.

## *Analysis of Barry Bonds’ swing*

Barry Bonds executes the rotational swing to perfection. IF one knows what to look for, the elements of his swing clearly incorporate the three core movements and my “Four Ts” which were introduced above. I will refer to the “Four Ts” with CAPITAL letters as we go on.

(I have deliberately eliminated the “stance” from Bonds’ swing as this is a product of personal “style” and not universal “technique.”)

I can substitute any number of today’s most productive hitters for the photos of Barry Bonds. The descriptive commentary on the right doesn’t change and would fit *all* of them.

## *Stride to the “Perfect” Hitting Position (TURN)*



- Upper torso counter-rotates as a “unit” (hands, arms, and upper body go back *together*.)
- Front shoulder goes “down and in”
- At the same time, the lower torso begins to open as the front foot turns out. (This is the start of “torque,” the separation of the upper and lower torsos.)
- The hitter strides to their balance point (on vertical axis). Look for their weight either “balanced” or slightly “forward” (over front foot).
- Hands move to “universal launch position” (bottom of armpit).
- Front heel off ground (approximately 1”-2”).

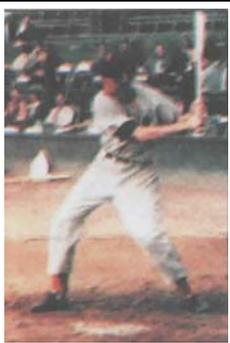
- Front foot turned out no less than 45°.
- Front leg slightly flexed.
- Eyes “level” and head “slightly down to straight ahead.”

### Torque Position



Torque is a term I have been using for nearly twenty five years. It is only now that we hear it being frequently mentioned when hitting is discussed. In most cases, it is used incorrectly.

Torque is “two forces working simultaneously *in opposite directions* on an object.” When watching hitters, we see one force going forward (lower body) and one force going rearward (upper body). *Both* of these forces work on the player’s “axis” (the imaginary “pole” extending from the button on the player’s cap down through their body).



Ted Williams



Sammy Sosa



Jeff Kent



Larry Walker



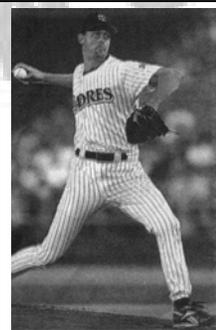
Alex Rodriguez



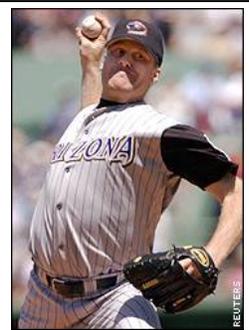
Roger Clemens



Pedro Martinez



Kevin Brown



Curt Schilling

Torque is a scientifically proven, biomechanically correct movement in the “kinetic chain,” called the “kinetic link.”

When a hitter (or pitcher) gets into this torque position, they have the momentum of the strongest and largest muscle mass in their body (the legs) “pulling” the smaller and weaker ones (hands/arms) through the contact zone. I call the effect of this biophysical movement “winding the rubber band” and it is absolutely the root of all bat speed, bat quickness, and power in hitting. It is why we see some smallish players hit the ball harder and further than some who are much larger and stronger. In other words, “effortless power versus powerless effort.”

Nearly every hitter prior to the emergence of the aluminum bat were rotational hitters. A little known fact is that up to 1995, 42 of the top 50 home run hitters in major league history weighed *less* than 190 pounds!

***The Vital “Torque” Position (TORQUE)***



- Hitter *must* be balanced.
- Front heel drops, initiating the opening of the hips, and maximizing the separation of upper and lower torso.
- Hands and upper torso are still going backward as this takes place!
- Back shoulder simultaneously dips as the rear elbow tucks in and front elbow begins to work up as the swing launches.
- Body begins to “tilt” rearward. (TILT)
- Back elbow “slotted” correctly (tucked in to work close to body). (TUCK)
- Back heel raises (not turning or “squishing the bug”) as hips begin rotating.
- Eyes level and head slightly down to straight ahead

***The Approach to Contact (TUCK & TILT)***

- Body continues rearward tilt (Dependent on pitch location: less on high pitches; more on low pitches. See below, “Matching the plane of the swing to the plane of the pitch.”)
- Rear foot comes into play and automatically begins “rotating” forward to provide support for the body tilt.
- Rear elbow “slots” (tucks in).



- Front knee begins to work back as hands come forward providing optimum body leverage.
- Front arm works up. (Dependent on pitch location: less on high pitches; more on low pitches. See below, “Matching the plane of the swing to the plane of the pitch.”)
- Approximate “L-shape” position of rear leg as swing unwinds (more than 90° on high pitches; less than 90° on low pitches.
- Eyes slightly down to straight ahead. (Head should not be rotating rearward to “watch the ball hit the bat.”)
- Top hand begins/continues working “underneath.”
- Belly button facing pitcher on pitches middle-half in; not as much on pitches away.
- Bat-head parallel to ground in beginning phase, but quickly begins working *below* hands as swing progresses toward contact.

### ***Equal and opposite***

As mentioned earlier, rotational hitting is a finely-honed *system of pulleys and levers* that effect the *equal and opposite* principle of maximizing kinetic energy. If the rear elbow is slotted correctly (TUCK), i.e., “down,” so the hitter can stay “inside” the ball, then the lead elbow *must work “up.”* This is physics, so it’s “equal and opposite.”

To properly stay “inside” the ball, the hitter must tuck their rear elbow *in and down* against their rib cage. If the back elbow is down, then the front elbow *must* be up; if the back elbow is up, the lead elbow *must* be down.

The laws of physics dictate that everything must be “equal and opposite.” Since hitting embodies the laws of physics, *balance* must always be present. If it isn’t, the technique is being executed incorrectly, or not at all.

As the body tilts rearward, the rear shoulder “dips.” If the rear shoulder does not dip, the hitter will swing with level shoulders. A “level-shoulder” approach biomechanically predisposes the hitter’s weight to come forward and lunge. Dipping the rear shoulder enables the hitter’s top hand to work underneath, dropping the bat-head *below* their hands and naturally re-positioning the hitter’s weight to the inside of their *rear* thigh.

The hitter’s rear elbow *must* slot close to, or rub against, their body. If the swing does not launch with the rear elbow in this position, it will not be possible for the hitter to stay “inside” the ball.

*In other words, for the hitter to correctly match the plane of their swing to the plane of the pitch, this relationship of the slotting rear elbow, the dipping of the rear shoulder, the lead elbow working up, and the hinging of the rear knee must remain intact and work harmoniously.*

### Contact (TUCK & TILT)



- Hitter must be balanced.
- Hitter “on” or “behind” axis. (Dependent on pitch location: less on high pitches; more on low pitches. See below, “Matching the plane of the swing to the plane of the pitch.”)
- Eyes level and head slightly down to straight ahead. (NOT “watching the ball hit the bat.”)
- Rear elbow down and close to body.
- Front knee must become rigid at contact. It should then immediately “release” to preserve a balanced condition.
- Both arms still slightly bent before contact. (Full extension occurs *through* contact.)
- Front foot eventually points at pitcher (as rotational momentum around the axis picks up velocity) and/or weight goes to the outside of the front foot.
- “Flat palms” (top hand underneath; bottom hand on top).
- Bat gradient should be “up” as it passes the front knee. (Look for a steeper gradient on low pitches; flatter gradient on high pitches.)
- Hands should be in front of hitter’s body on pitches three-quarters of the plate in; not as far on pitches on the outside-quarter of the plate.

### Extension (TILT)



- Hitter must be balanced.
- Hitter “on” or “behind” axis. (Dependent on pitch location: less on high pitches; more on low pitches. See below, “Matching the plane of the swing to the plane of the pitch.”)
- Eyes “level” and head “slightly down to straight ahead.”
- Arms fully extend through contact.
- Look for the “Power V” out in front of the hitter on pitches three-quarters of the plate in; not as far forward on pitches on the outside-quarter of the plate.



- Hitter should be looking straight out his arms with his bat pointing directly at the pitcher on pitches three-quarters of the plate in.
- Hitter should be “sitting” on his rear leg.
- Front leg should maintain rigidity until after contact.

### Follow through



- Hitter must be balanced.
- Position of the hands in the follow-through a product of contact location (higher on low pitches; lower on high pitches).
- Weight will now be on outside of front foot. (More on pitches three-quarters of the plate in; not as much or very little on pitches on the outside-quarter of the plate.)
- Front knee returns to slightly flexed position to maintain balance.
- Up on “ball” of rear foot.
- All energy released.

### “Slotting” the Elbow (TUCK)

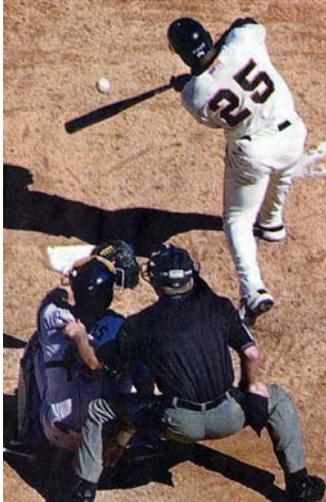


#### Staying “inside” the ball

We also hear coaches and parents telling hitters to stay “inside” the ball. Far too many simply parrot this information and don’t explain it, leaving hitters to figure it out for themselves. My experience is that it doesn’t get explained because most do not know what it means.

The correct definition of staying “inside” the ball is “the hands follow the rotating body *around* its axis.”

Even with the correct definition in hand, the overriding problem is it is virtually impossible for the linear hitter to stay “inside” the ball.



Their body (and swing) goes from back to front and doesn't rotate! Over the years we have bred a generation of linear hitters who all hit "around" the ball because their mechanics made it impossible to do otherwise.

In spite of this linear swing "deficiency," coaches and parents still exhort linear hitters to stay "inside" the ball without realizing how frustrating this is for the hitter to comply with. Rotational hitters do not have this problem. Their hands work in a circular path as they follow their rotating bodies.

Staying "inside" the ball keeps the swing compact, enables the hitter to be short to the ball, and allows them to swing a slightly longer and slightly heavier bat for added momentum and leverage. And power.

In addition, it allows the hitter to keep their bat 90° to the path of the inside pitch, maximizing the sweet spot and keeping the ball fair (as Bonds shows in the photo, left).

*When potential is the goal, knowledge is a must.* This not only applies to hitters, but to coaches and instructors as well.

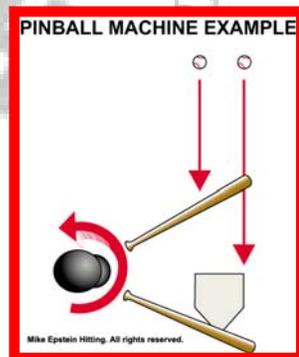
### The "pinball" effect (TUCK)



Outside Pitch

An example that makes sense is a pinball machine. The path of the hands in the baseball swing should be virtually the same for all pitches.

In a pinball game, the bat is mounted on an immovable object. We can't shift the hands to the ball; we have to "time" it correctly to hit it well. To hit an oncoming pinball that is "away," we must let it get deep, or we "run out of bat"—we can't reach it, or we hit it off the end. Conversely, if we perceive the pinball to be "inside," we must contact it out in front—we can't let it get deep or we get jammed.



The arc of the pinball-bat swing doesn't change; we're just making contact at different points in that swing-arc. If we move our hands "to" the ball that is away (outside), essentially we're casting our hands and arms—losing bat speed, lengthening the swing, and hitting around the ball.

Getting into an "unsupported" position like this does absolutely nothing for bat quickness or

power.

Many times in newspapers you will read struggling players saying, "I've got



Inside Pitch

to let the ball get to me.” Yet, so many players who come to me for instruction tell me their coach has told them to “go out and get the outside pitch.”

“Let it get deep” is a cue that I consider to be one of the good ones.

As shown, if the pitch is middle-half in, the hitter has got to get the head of the bat out in front. If they don’t, they can’t get extended—and they get jammed.

This is why good mechanics, coupled with depth perception and timing, are so critical to a hitter, and why the genetic “resources” we are born with are so valuable if the hitter is to hit their potential.

And notice the lead arm working up! It makes little difference whether the pitch is in or out.

Ted Williams never let me forget that hitting was 50% from the neck up. This holds true for every hitter, including Barry Bonds. While I have no idea what goes through his mind at the plate, I *can* see what he does mechanically.

The earlier a hitter can learn the proper technique, the better. Once they master the “blueprint” which their body can consistently track from at-bat to at-bat, *they will never have to change it!* That’s the beauty of rotational mechanics.

Since it is used by nearly every player in the major leagues, they will have plenty of time to make adjustments and perfect it. Again, consistency is the name of the game.

The caveat to this dialogue is the singular word, “talent.” The relationship between talent and technique is a relative one. An elite hitter, with great genetic resources (talent), does *not* have to be “right on” with his technique. A hitter with “average” talent *must* be. However, when a hitter with great genetic resources couples it with a perfect technique, we see an elite hitter. Bonds is one of them.

Since an inordinate few are blessed with this caliber of ability, the vast majority of hitters *must* execute their technique as flawlessly as *they may be physically able*. A good hitting technique allows the hitter to compete effectively despite being “talent-challenged.”

In other words, good hitting technique helps “level” the playing field.

The Epstein Teaching System™ provides the blueprint to master this golden technique.

It is no mystery to me why Barry Bonds is so effective. Nor, at this point, should it be to you. Nor should it remain a mystery as to why 95% of baseball’s Hall-of-Fame hitters used this identical technique.

### ***Value of this article***

I have written this article ostensibly to reflect the physical positioning of the most dominant hitter in baseball today. In my mind, the key question that should be asked is, “am I teaching mechanics consistent with what is shown here?” After all, emulating the “best” has always been the most logical and commonsense approach to learning hitting mechanics.

The key to emulating and/or teaching rotational hitting lies in our ability to open up the paradigm which has clouded our thinking over the past 30 years. Karl Ravech asked the important question: “Why don’t we copy Bonds if he has the best mechanics?” As usual, the question was deflected because of a lack of knowledge. Until now.

Why would anyone want to make such a tough thing as hitting—*tougher?*

Good luck, continued success, and “get a good pitch to hit!”

