A CRITIQUE OF THE PREVAILING JUMP SHOT THEORY: POOR ATHLETICISM, POOR POWER, POOR PROTECTION

By Robert Tilitz

The argument here is that the prevailing jump shot theory is a thorough failure. Whether that is true or not, the prevailing jump shot theory, which is all but officially endorsed by the NBA, is hard to pin down analytically. That's because it is spare on specifics, both in terms of theory and technique. But rather than invite criticism, the very vagueness of the prevailing jump shot theory seems to have somehow shielded it from criticism.

The prevailing jump shot theory focuses to a great extent on accuracy by way of its shooting stance. Its instructions for implementation consist mainly of descriptions of the shooting stance. It does not develop a sequential narrative or a comprehensive analysis. It does not include comparisons to other sports. The prevailing jump shot theory does not even have a name.

To facilitate analysis of the prevailing jump shot theory, an attempt will be made to fill in the many narrative and analytical gaps that occur from beginning to end. Concepts and techniques, including the gap fillers, will be described and analyzed. The goal is to do so without adversarial bias and with fair-minded objectivity. Each section will conclude with a follow-up critique written from the point of view of the whole-body jump shot theory.

First order of business is to give the prevailing jump shot theory a name. The fact that the prevailing jump shot theory needs a name is consistent with its overall lack of attention to detail. The name given to the prevailing jump shot theory as described here is the elbow-in-strokesnap jump shot theory. The name blends key parts of its shooting stance and its release.

In a testament to the durability of bad ideas, the elbow-in-strokesnap jump shot theory has prevailed for about fifty or sixty years without significant formal opposition other than my whole-body jump shot theory. The belief in the elbow-in-strokesnap jump shot theory is so widespread and unshakeable that it never gets blamed for the decline of the jump shot.

When the decline of the jump shot is discussed, elbow-in-strokesnap jump shot theory advocates deny responsibility. Some say that although the elbow-in-strokesnap theory works, it might not work for everybody. Others say that the elbow-in-strokesnap model is merely a guide on the way to developing a personalized shooting form and technique. The effect of both denials is to shift responsibility for the decline of the jump shot from the prevailing jump shot theory to the players. As an advocate for the players, it seems to me that the disclaimers add insult to injury.

Building the case that the prevailing elbow-in-strokesnap jump shot theory is almost all wrong is a big step toward solving several serious basketball problems. In terms of participation, the difficulty/near impossibility of shooting an athletic jump shot with the elbow-in-strokesnap technique has probably discouraged many young people from pursuing basketball despite its athletic appeal. In terms of performance, along with the decline in jump shot skill, there has been a decline in jump shot usage. In terms of coaching, head coaches usually delegate jump shot instruction for fear of failure that could result in a loss of authority. In terms of the state of the game, basketball analytics is predicated on downgrading the mid-range jump shot from high usage to low usage. If the mid-range jump shot is revived by way of conclusively debunking the almost all wrong prevailing elbow-in-strokesnap jump shot theory and replacing it with one that works, basketball analytics will need major revision.

A CRITIQUE OF THE PREVAILING JUMP SHOT THEORY

What follows is an attempt to describe and to analyze the prevailing jump shot theory, also called here the elbow-in-strokesnap jump shot theory, by breaking it down and analyzing its component parts. The separate component parts will be analyzed in their sequential order as the elbow-in-strokesnap jump shot develops. And because the prevailing elbow-in-strokesnap jump shot theory presents itself as a jump shot instead of as a theory, all references to it henceforth will be to the elbow-in-strokesnap jump shot, not the theory.

The Jump Stop and the Two-Step Stop: False Equivalency

When pulling up for a jump shot, elbow-in-strokesnap jump shot supporters seem to believe that both the jump stop and the two-step stop can get the job done, implying a performance equivalency between the two. The elbow-in-strokesnap jump shot supporters make some noteworthy distinctions between the two methods of pulling up for a jump shot based on their relative strengths but voice no major problems with either.

The jump stop's simultaneous landing of both feet is viewed as providing better stability. Support for the jump stop is strongest in connection with inside jump shots.

The two-step stop's sequential landing establishes the first foot to land as both the brake and the pivot foot. The sequential landing is seen as good for transition.

Critique: The whole-body jump shot theory endorses the two-step stop and is almost completely against on the jump stop. The explanation is rooted in athleticism, transition and ballhandling.

Whole-body jump shot theory opposition to the jump stop starts with the belief that two jumps for one jump shot is one too many. It's a basketball example of less is more, as in more effective. Other than those instances on the inside where a little hop into a jump shot is OK, the jump stop is generally unathletic, inefficient and dangerous. Unathletic because it complicates the merge of the move or run-up to free up the jump shot and the jump of the jump shot by adding a difficult to control variable between them. Inefficient because it wastes time and effort on an unnecessary extra jump. And dangerous because attempting to merge the preceding move or run-up and the following jump of the jump shot with a second jump adds unnecessary stress and torque.

The two-step stop stops on balance and in position after the move or run-up that precedes a strongside pull-up jump shot, setting up a smooth transition to the jump of the jump shot. Following the braking and the pivoting into a whole-body strongside jump shot's intentionally unsquared shooting stance, the transition into the square-in-the-air jump of the strongside pull-up jump shot is easy and natural. The pivot/rotation of the two-step stop partly powers the square-in-the-air jump, which gets most of its power from the forward rotation of the shooting shoulder and the extension of the shooting arm during the release of the whole-body jump shot.

The two-step stop off strongside moves and run-ups provides the perfect time and opportunity to set up the precursor of the shooting grip. Not a small thing. Actually, a very big thing. That's because the widespread inability to set up the precursor to the shooting grip and the shooting grip itself off strongside moves and run-ups are two of the biggest reasons that the strongside pull-up jump shot and the entire strongside game are relatively rare and out of fashion. The two-step

stop provides the time and the opportunity to synchronize the athletic action that must precede the strongside pull-up jump shot with the ballhandling necessary to set up the precursor to the shooting grip that is equally essential to the success of the jump shot. The goal is to first grab the strongside dribble with the dominant hand and then softly slam the basketball into the off-hand to form a firm and flexible double whole-hand grip with the hands located on opposite sides of the basketball. After the firm and flexible double-whole-hand grip sets up, the hard part of setting up the precursor to the strongside pull-up jump shot's shooting grip begins. The two-step interval between the grab of the dribble and setup of the jump shot's ready-to-jump position provide the opportunity to complete the hard part of the setup of precursor to the strongside pull-up jump shot's shooting grip. A jump stop would in no way provide the same opportunity.

The two-step stop applies to weakside pull-up jump shots too. But for weakside pull-ups the two-step stop is mainly a brake, not a pivot. That's because weakside jumpshooters usually pull up in a semi-sideways posture, which transitions without pivot or rotation directly into their preferred semi-sideways shooting stance. Another reason it is counterproductive for weakside pull-up jumpshooters to pivot or to rotate in order to square in the air is that an airborne square would rotate the shooting shoulder away from the basket during the release.

Shifting the Shooting-Side Foot Forward: Ahead of Where the Step into the Jump Shot Should Land

Shifting the shooting-side foot forward and pointing it toward the basket works well for elbow-in-strokesnap long-range standing-start semi-jump shots, but not so well for elbow-in-strokesnap pull-up jump shots. The forward shift of the shooting-side foot is intended to help with accuracy. The idea is to point the forward-shifted shooting-side foot directly at the basket while also aligning the shooting side knee, hip and shoulder with the basket to form a vertically reinforced directional guide for accuracy of the jump shot. Shifting the shooting-side foot forward is also supposed to create a more stable and balanced base.

Critique: The forward shift of the shooting-side foot drives the setup of a semi-sideways shooting stance. For the straight-ahead pull-ups, the shift is not ideal but it can work when circumstances, such as move or run-up complications or defensive pressure, necessitate less than ideal footwork. For weakside pull-up jump shots, the forward shift of the shooting-side foot is easy and natural. The weakside pull-up jump shot usually concludes weakside moves and run-ups in a semi-sideways posture that evolves easily and naturally into a semi-sideways shooting stance that in turn shifts the shooting-side foot forward. Execution of the straight-ahead and weakside pull-ups add up to the origin story for the semi-sideways jump shot.

The principal limitation of shifting the shooting-side foot forward for front-facing pull-up jump shots derives from the fact that the jumping posture for a two-legged jump requires the feet to set up more or less even with each other. The ready position for a rebounder provides a clear basketball example. Given the time to set up, a rebounder would never prepare for a jump by shifting one foot in front of another. Front-facing jump shots that set up the shooting stance with the shooting-side foot shifted forward are effectively squashing the jump of the jump shot.

Despite the stated purpose to improve accuracy, the big benefit gained from shifting the shooting-side foot forward occurs on, and only on, elbow-in-strokesnap long-range standing-start

semi-jump shots. That big benefit is not improved accuracy. That big benefit is a significant increase in power. The power increase occurs because the forward shift of the shooting-side foot kicks off a shooting mechanics chain reaction that results in shooting shoulder involvement in the release, effectively transforming the elbow-in-strokesnap long-range semi-jump shot into a whole-body semi-sideways semi-jump shot.

For long-range standing-start semi-jump shots, it turns out that shifting the shooting-side foot forward and pointing it at the basket is all good. That's because long-range standing-start semi-jump shots, unlike pull-up jump shots, do not require a jump. To briefly digress, although long-range standing-start semi-jump shots get off the ground, it is not because of a jump. Rather, it is the upward thrust of the effort that goes into shooting the long-range standing-start semi-jump shot that gets it off the ground. The common practice of calling long-range standing-start semi-jump shots a jump shot is, therefore, not only incorrect but also a potential detriment to the development of a true jump shot in that it falsely implies that the job is already done.

In summary, for the elbow-in-strokesnap long-range standing-start semi-jump shot shifting the shooting-side foot forward enhances accuracy, balance and power. Accuracy benefits from aligning the forward shift of the shooting-side foot with the basket. Balance benefits from the spread of the feet providing a solid base for the shooting stance. Power benefits most because the forward shift of the shooting-side foot unintentionally activates the shooting shoulder as a power source for the elbow-in-strokesnap semi-jump shot's release.

The accuracy and balance enhancements are nice, but power enhancement is by far the biggest benefit that the forward shift of the shooting-side foot brings to the elbow-in-strokesnap long-range standing-start semi-jump shot. The power enhancement starts when the forward shift of the shooting-side foot unsquares the shoulders in the alignment shooting stance. A resulting dominant-side backward twist of the upper body opens and resquares the shoulders by rolling the shooting shoulder back, which activates it as a source of power. The activation occurs when the rollback engages the shooting shoulder with the release mechanism, which results in forward rotation of the shooting shoulder during the release. The forward rotation of the shooting shoulder is itself a power source for the release. But more importantly, the forward rotation of the shooting shoulder is the dynamic that channels the athleticism and the power of the push-off by the shooter's legs, i.e., lower body, into the release.

Whole-body semi-jump shots also benefit from a forward shift of the shooting-side foot during setup. But the whole-body semi-jump shots' forward shift of the shooting-side foot is smaller than the elbow-in-strokesnap semi-jump shot's forward shift. And the whole-body semi-jump shot's forward shift of the shooting-side foot is not used as a directional guide. But the balance and power of the whole-body semi-jump shots both benefit from the forward shift of the shooting-side foot during setup.

Although both elbow-in-strokesnap and whole-body semi-jump shots derive shooting shoulder involvement in the release from the setup of their shooting positions, their setups are different. For the elbow-in-strokesnap semi-jump shot, shooting shoulder involvement in the release depends upon its transformation into a semi-sideways semi-jump shot by way of the forward

shift of the shooting-side foot. For all of the whole-body semi-jump shots, shooting shoulder involvement in the release is the result solely of the setup of their shooting position.

The Alignment Shooting Stance: Starting Off Stiff

The alignment stance is the shooting stance for the elbow-in-strokesnap jump shot. As such, it is both literally and figuratively the central pillar of the elbow-in-strokesnap jump shot. It is designed for the control of direction. The alignment stance calls for elbow-in-strokesnap shooters to line up the shooting hand, the shooting shoulder, the angled-in shooting elbow, the shooting-side knee and the shooting-side foot with the basket at the start of the release. That alignment is supposed to be maintained during the release until the jump shot is completed.

Critique: The built-in stiffness of the elbow-in-strokesnap jump shot, both in terms of form and function, is attributable to the alignment stance. From the point of view of the whole-body jump shot theory, the alignment stance is much more about theory than function. The theory is not complicated. The theory is that lining up the shooting hand, the shooting shoulder, the angled-in shooting elbow, the shooting-side knee and the shooting-side foot with the basket at the start of the release will determine and control the direction of the jump shot. In terms of function, everything other than direction is neglected.

The first stumbling block for the alignment stance is that it is difficult to set up on the fly. That should not be surprising. Straight lines by way of the alignment stance and right angles by way of the yet to be discussed squared-up elbow-in shooting position for the start of the release do not mesh well with fluid athleticism. In addition, the more defensive pressure that is encountered, the more difficult it is for the jumpshooter to set up the alignment stance.

Another stumbling block is that successful setup of the alignment stance takes the torque out of the jump shot. As with all athletic and powerful actions in sports, torque, which is described here as the coiling and uncoiling of the body, plays an important role. The unwavering stiffness of the alignment shooting stance, however, nullifies the torque of the jump shot and, to a large extent, the athleticism and the power of the jump shot that the torque would facilitate.

Square the Shoulders: More Rhetoric Than Reality

Squaring the shoulders before the jump of the jump shot and therefore before the release of the jump shot is fundamental to the elbow-in-strokesnap jump shot. Squaring the shoulders is another elbow-in-strokesnap jump shot setup technique that is supposed to enhance accuracy by lining up the shooting position for the start of the release with the basket, which is to say pointing the elbow-in shooting position at the basket. The idea is that a drawn line connecting the squared shoulders should be perpendicular to or at right angles to the basket-aligned elbow-in shooting position and the intended flight path of the jump shot.

Underlying the square of the shoulders and the perpendicular/right-angle setup of the elbow-in shooting position is an implicit belief in an exact geometry for the jump shot. The belief is that when the exact geometry clicks into place as a result of squaring the shoulders and aligning the elbow-in shooting position, it is time to lock and load the elbow-in-strokesnap jump shot.

The squared setup of the elbow-in-strokesnap jump shot does not come from out of the blue. Squaring the shoulders is consistent with and a complement of the straight up and down vertical lineup of the alignment shooting stance.

Critique: Setting up and maintaining the square of the shoulders curtails athleticism. First, a slowdown of the preceding move or run-up is required to set up and to maintain the square the shoulders in most instances. Second, a downsizing the jump of the jump shot is required to avoid disrupting the square of the shoulders by way of excessive effort. Third, a downsizing of the release to strokesnap proportions is required to avoid big muscle involvement that would rotate the jumpshooter's body torque style, disrupt the square of the shoulders and, as a consequence, turn the direction of the squared-up release away from the basket.

For the elbow-in-strokesnap jumpshooters in pursuit of athleticism, squaring the shoulders is more rhetoric than reality. So powerful is the predominant weakside tendency of the elbow-in-strokesnap jump shot that the resulting semi-sideways pull-up shooting stance effectively replaces the alignment stance, which completely cancels the square of the shoulders. No problem. Just angle the shooting elbow out to the side and point it at the basket. That way the straight line from the shooting shoulder through the shooting elbow and onward to the basket is preserved. At the same time the erstwhile elbow-in-strokesnap jumpshooter gains a degree of athleticism and power from the weakside move or run-up and what is actually a weakside semi-sideways jump shot evolved from the intended elbow-in-strokesnap jump shot, which leads to involvement of the partially rolled-back shooting shoulder in the release.

For strongside elbow-in-strokesnap jump shots squaring the shoulders before the jump and before the release of the jump shot is theoretically possible, though very difficult and anti-athletic. Yes, it is possible to square the shoulders off a strongside move or run-up. But the rotating jump stop or a pivoting two-step stop would need to immediately freeze the rotation or pivot in order to maintain the square-up for the release. That freeze would be difficult, to say the least. Whether the resulting momentum disruption is minor or major would depend on the angle of the strongside move or run-up. In the end, elbow-in-strokesnap jumpshooters seldom even attempt to shoot strongside pull-up jump shots in large part because of the squaring problems. There are also other technical issues that discourage elbow-in-strokesnap strongside jump shots.

Alternatively, the whole-body jump shot theory views squaring the shoulders as a process integral to the strongside pull-up jump shot. To be more specific, the whole-body jump shot theory views squaring the shoulders as a dynamic jump shot technique, not as a prerequisite setup technique. Therefore, the release of a whole-body strongside pull-up jump shot should take place during the square-up process, not after the shoulders are squared. Along with the jump of the jump shot, the square-up dynamic is at the heart of jump shot athleticism. The benefits of the square-up dynamic are big time. Whole-body strongside squaring in the air maximizes jump shot athleticism, power, protection and adjustability.

Power for the rotation of the square-in-the-air jump of a whole-body strongside pull-up jump shot mostly comes from the relatively small but crucial forward rotation of the shooting shoulder and by the extension of the shooting arm during the release. Squaring in the air and the whole-body release are both set up by a preceding shooting shoulder rollback. Next comes the midair

forward rotation of the shooting shoulder, which, working in combination with the extension of the shooting arm, powers both the rotation of the square-in-the-air jump and the release of the strongside whole-body pull-up jump shot and channels the athleticism and the power of the jump of the jump shot into the whole-body release.

The whole-body jump shot theory's proscription against squaring the shoulders as a setup technique for strongside pull-up jump shots derives in part from the power production role that the rotating shooting shoulder plays in the whole-body release. Same for the whole-body standing-start semi-jump shot. The release of a crouched and coiled whole-body standing-start semi-jump shot should take place as the shoulders are squaring. As such, the standing-start semi-jump shot is a scaled-down version of a whole-body strongside pull-up jump shot.

The Elbow-In Shooting Position: Locks in a straitjacket effect

The elbow-in shooting position sets up out front, horizontally extended and basket aligned. The elbow-in alignment with the basket is a directional aid for the elbow-in-strokesnap jump shot. The elbow-in shooting position should form a right angle with a line drawn between the squared shoulders. Put another way, the elbow-in shooting position should be perpendicular to a line drawn between the squared shoulders. From a side view, the elbow-in shooting position's horizontally-extended upper arm should form a sideways U-shape with the vertical or bent back forearm and cocked wrist. The elbow-in shooting position locates the shooting hand underneath the basketball about forehead-high as part of its sideways U-shape. In sum, the aim of the elbow-in shooting position is to aim the jump shot.

Supporters of the elbow-in-strokesnap jump shot also say that the horizontally-extended upper arm should form an L or a 90 degrees angle with the vertical or bent back forearm. Add the bent back or cocked wrist to the picture and you get the just mentioned U shape.

Because the elbow-in shooting position is predicated on an unnatural and unathletic assemblage of right angle, perpendicular, 90 degrees and horizontally-extended shooting techniques, a small industry has grown to manufacture straps, wraps, bands, sleeves and harnesses to impose or force the desired robotic shooting form. They are not quite the lash. But they are physically coercive.

Critique: The elbow-in shooting position, by way of its out-front location, horizontal extension and basket alignment working in combination, excludes the shooting shoulder and the shooting arm from the release of the jump shot. In terms of mechanics, the exclusion of the shooting shoulder removes the from the jump shot and the exclusion of the shooting arm removes the primary lever from the jump shot. As a result of the exclusion of the shooting shoulder and the shooting arm, the elbow-in-strokesnap jump shot suffers a critical loss of athleticism and power.

The out-front location of the elbow-in shooting position disconnects it by distance from the jumpshooter's shooting shoulder. The jumpshooter's shooting shoulder channels the athleticism and power from the jumpshooter's body into the release. The out-front location, the horizontal extension and the basket alignment of the elbow-in shooting position prevent the rollback of the shooting shoulder to engage with the release mechanism. Without the rollback the shooting shoulder cannot rotate forward to initiate and to help power the release and to channel the athleticism and the power of the jumpshooter's body into the release.

The elbow-in shooting position limits athleticism in several ways. The out-front location of the elbow-in shooting position curtails the jump of the jump shot, which is the main athletic component of the jump shot. The damage takes place mainly during the jump as the basketball is being raised to the shooting position. The out-front location of the elbow-in shooting position dictates raising the basketball away from, that is, outside the scope of, the jumpshooter's body. The out-front arm action distorts and compromises the jumpshooter's jumping posture, which should locate the hands almost as far back as the body and spread the elbows.

The jump of the jump shot is further curtailed by the horizontal extension of the elbow-in shooting position that locates the start of the release at a relatively low shoulder-high height. Setting up the elbow-in shooting position at shoulder-high height cuts short the arm action that raises the basketball to the shooting position during the jump of the jump shot and doubles as a source of supplementary power for both the release and the the jump of the jump shot.

The horizontal extension of the elbow-in shooting position also precludes squaring in the air, which is the midair rotation of the jump of the jump shot toward the basket that many strongside pull-up jump shots require and all could use. The problem is that the horizontal extension of the shooting elbow blocks the rollback of the shooting shoulder. Without the setup rollback there will be no following forward rotation of the shooting shoulder during the release, which is a primary power source for the rotation of the square-in-the-air jump. When shutting down the square-in-the-air jump, the horizontal extension of the elbow-in shooting position immobilizes the gun turret adjustability that comes with the resulting rotation of the release mechanism.

With respect to protection, the out-front, shoulder-high of the elbow-in shooting position exposes the basketball. Number one, the out-front location of the elbow-in shooting position locates the basketball within easy reach of the defender. Number two, the shoulder-high height of the elbow-in shooting position curtails the jump of the jump shot by cutting short its supplementary arm action power. Number three, the shoulder-high height of the elbow-in shooting position sets up so low that it invites obstruction.

If you do not buy the argument against the elbow-in shooting position because you see great jumpshooters using it, you need to take a closer look. Take a closer look at the elbow-in of great whole-body reachback jumpshooters, such as Michael Jordan and Kobe Bryant. Take a closer look at the elbow-in of great whole-body elevated-elbow-in jumpshooters, such as Kevin Durant and Devin Booker. And take a closer look at the elbow-in of Stephen Curry's one-of-a-kind whole-body sidegrip jump shot.

A closer look at whole-body reachback and whole-body elevated-elbow-in jumpshooters would show that both set up their shooting position for the start of the release is forehead-high or higher with the shooting elbow aligned with the basket but angled upward. The forehead-high or higher shooting positions of the whole-body reachback and elevated-elbow-in jump shots means that the shooting shoulder is not an impediment to shooting shoulder rollback to engage with the release mechanism whole-body style. Incidentally, both the whole-body reachback and elevated-elbow-in jump shots work with an elbow-out shooting position. That's because either way, elbow-in or

elbow-out, their forehead-high or higher shooting positions allow for the rollback and the other shooting shoulder-centric techniques that define whole-body jumpshooting.

A closer look at Stephen Curry's one-of-a-kind whole-body sidegrip jump shot would show a setup for the shooting position with an upward angled shooting elbow facilitated by Curry's sidegrip. The sidegrip and the upward angle of the shooting elbow allows a rollback of the shooting shoulder to engage with the release mechanism. From there, Curry continues with the shooting shoulder-centric techniques that define him as a whole-body jumpshooter.

The Underneath Shooting Grip: A Good Idea Gone Bad by Way of the Out-Front and Horizontally-Extended Elbow-In Shooting Position

The general consensus among basketball coaches is that the shooting hand should locate underneath the basketball. The underneath the basketball location positions shooting hand to lead the way toward a medium upward arc of the shot. A common description of a side view of the underneath shooting grip is the letter C facing the shooter's body. Locating the shooting hand underneath the basketball seems reasonable, obvious and doable. But there are also micro-instructions, such as centering, aligning and forking fingers, that seem needlessly complicated. Throw in a need for the seams and all hell breaks loose

Some elbow-in-strokesnap supporters favor a behind the basketball location of the shooting grip. Seems strange. Right? Strange because a behind-the-basketball shooting grip would send the shot out, not up and out. Must be a misunderstanding. No. More likely behind-the-basketball advocates are strictly adhering to the out-front, horizontally-extended specification for the elbow-in shooting position, which restricts the ability locate the shooting hand underneath the basketball and therefore more or less forces the behind-the-basketball location of the shooting grip. Another take is that maybe different definitions of shooting grip are at play. It could be that some of the behind-the-basketball advocates are referring to what is actually a precursor of the shooting grip formed during the gather.

Elbow-in-strokesnap jump shot supporters recommend locating the off-hand on the side of the basketball for accuracy. The idea is that the side-of-the-basketball off-hand location is good for guiding and balancing the basketball during the release while not interfering with the release. That works just fine for the elbow-in-strokesnap jump shot, which is built around accuracy. If movement i.e., athleticism, is added to the jump shot equation, then the side of the basketball location for the off-hand becomes a problem because of poor securement of the basketball. The side-of-the-basketball off-hand location works for the minimally athletic elbow-in-strokesnap standing-start semi-jump shot, same as it would for all standing-start semi-jump shots.

Critique: To bad but the inherent logic and functionality of the underneath shooting grip gets upended by the out-front and horizontally-extended elbow-in shooting position. The out-front extension of the elbow-in shooting position makes it difficult and awkward to locate the shooting hand underneath the basketball. In order to locate the shooting hand underneath the basketball, an external rotation of the shooting hand is required. Under most circumstances, no problem. But the out-front and horizontally-extended elbow-in shooting position turns the external rotation of the shooting hand into an awkward and uncomfortable contortion.

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The whole-body jump shot theory locates the shooting grip back within the scope of the jumpshooter's body, which makes it easy to set up an underneath shooting grip. As a result, the whole-body jump shot theory locates the jumpshooter's entire body almost directly underneath the underneath shooting grip in order to enhance the control and the impetus derived through and from the shooting hand. To level the underneath shooting grip and to prepare for the brushing hand-action that follows, the shooting hand should be bent back or as sometimes said loaded.

For the whole-body elbow-out jump shot, alignment of the shooting hand is no longer an issue. In fact, to set up the whole-body elbow-out shooting stance the shooting hand should be angled in. That's the first order of setup business by way of a specialized ballhandling routine after the basketball is grabbed off the dribble. It's the first order of business because angling the shooting hand in angles the shooting elbow out. The angled-in shooting hand still controls direction, but not through alignment. You could say that determining the direction the whole-body elbow-out shot is another function of the hand-eye coordination that predominates in basketball.

The whole-body reachback jump shot works with an elbow-in or an elbow-out shooting stance. The player's choice comes down to a matter of individual preference. Neither is mandatory and neither is forbidden. Despite the fact that West, Jordan and Bryant shot a whole-body elbow-in reachback jump shot, the recommendation here is for the elbow-out reachback. The idea is that if jump shot diversity is the ultimate goal, the whole-body elbow-out reachback would make more of a seamless match with the whole-body elbow-out jump shot.

The whole-body jump shots all work best with a shooting grip that locates the off-hand on the side toward the top of the basketball. The on-the-side-toward-the-top location of the off-hand provides good grip securement for holding on to the basketball during the jump of the jump shot. The off-hand also plays an active role in the setup of the shooting grip. Prior to the formation of the whole-body jump shot's shooting grip the off-hand serves as a brace as the shooting hand rotates the basketball to set up the shooting grip. During the release, the off-hand should secure the basketball throughout parallel extension. Toward the end of the whole-body release, the off-hand should separate from the basketball as brushing hand-action begins.

Whole-body jump shot techniques override two pesky sometimes serious elbow-in-strokesnap jump shot shooting grip problems. Whole-body brushing hand-action eliminates the need for using the basketball's seams during the release both physically and psychologically. And the whole-body secure off-hand grip on the side toward the top of the basketball in combination with late off-hand removal eliminates the possibility of thumbing the release with the off-hand thumb that comes with an on-the-side location of the off-hand.

Another shooting grip making the rounds today is Stephen Curry's sidegrip. Although he did not invent it, Curry perfected his own unique version of the sidegrip. Curry's sidegrip sets up low and starts low like the elbow-in-strokesnap, but that's where the similarities end. Two major differences between Curry's sidegrip and the elbow-in-strokesnap shooting grip stand out. First, Curry's sidegrip negates the necessity getting the shooting hand underneath the basketball with an awkward external rotation. Second, Curry's sidegrip and the aforementioned upward angle of the shooting elbow allow for a shooting shoulder rollback, thereby encouraging shooting shoulder-centric whole-body jump shot techniques.

The Strokesnap Release: Poor Power

After, usually immediately after, the setup of the elbow-in shooting position the strokesnap release takes place. The release of the elbow-in-strokesnap jump shot mainly consists of a forearm stroke and a wrist snap. Call it the strokesnap release. The strokesnap release is set up by the alignment stance and the out-front, horizontally-extended elbow-in shooting position. The setup of the strokesnap release is geared first and foremost for accuracy. The strokesnap release achieves accuracy through aligning the elbow-in shooting position with the basket, which is to say pointing it at the basket. The strokesnap release is also the primary source of power for the elbow-in-strokesnap jump shot.

The forearm stroke starts off the strokesnap release. For the forearm stroke, the forearm is the lever and the shooting elbow is the fulcrum. The forearm stroke is the most powerful part of the strokesnap release. At approximately 1/4 or 1/3 into the arc of the forearm stroke the wrist snap should begin. For the wrist snap, the shooting hand is the lever and the wrist is the fulcrum.

The wrist snap is supposed to double up as a source of power and control. The wrist snap powers the jump shot through the impetus derived from its forward flex. Relative to the overall power production capabilities of the jumpshooter's body, the wrist snap is a meager power source. That's because the wrist and the shooting hand are small and weak by comparison the body's big-muscle units. Perhaps worse, the wrist snap is difficult to control.

Critique: The elbow-in-strokesnap jump shot's out-front and horizontally-extended elbow-in shooting position causes many of the problems that plague the strokesnap release. For the strokesnap release, the worst problem caused by the out-front, horizontally-extended elbow-in shooting position is the resulting disconnect from the jumpshooter's body, which can be a primary source of jump shot athleticism and power.

The strokesnap release has poor power production capability and resulting control problems because its physical components are not only poorly positioned but are also too small and too weak to get the job done. The out-front, horizontally-extended elbow-in shooting position disconnects the strokesnap release by distance from the jumpshooter's body, the ultimate source of jump shot athleticism and power. In other words, the structural isolation of the strokesnap release significantly reduces the possibility of using whole-body jump shot big-muscle power production techniques to compensate for strokesnap weakness.

Whole-body jump shot big-muscle power production techniques that can supplement the release are for the most part unavailable to the strokesnap release because it sets up outside the scope of the jumpshooter's body. The big-muscle supplemental power production techniques fall into two basic categories: direct augmentation and secondary motion enhancement. The initial thrust from the forward rotation of a rolled back shooting shoulder during a whole-body-style release is an example of direct augmentation. The rotating square-in-the-air jump, in part powered by the forward rotation of the shooting shoulder, that adds centrifugal power to the whole-body jump shot is an example of secondary motion enhancement.

The forearm stroke is a legitimate big-muscle release technique, but it is an inadequate source of jump shot power when working in combination with only the wrist snap. By contrast, the whole-body jump shot theory uses the forearm stroke in combination with other big-muscle shooting techniques. In addition, the whole-body jump shot techniques, in particular the forward rotation of the shooting shoulder and the full extension of the shooting arm, add a dynamic element to the forearm stroke by stretching it out.

The wrist snap, however, is pretty much and an irredeemable built-in problem for the elbow-in-strokesnap jump shot. The wrist snap is too small and too weak to be of much help in the power production department. Moreover, the wrist snap is difficult to control. To make matters worse, the elbow-in-strokesnap jump shot tasks the wrist snap with both primary power and control responsibilities, which are beyond its capabilities. Unlike the forearm stroke, the wrist snap has no useful place in the whole-body jump shot theory. Brushing hand-action, which looks like a supersmooth wrist snap, is the whole-body jump shot theory's replacement for the wrist snap.

In general, the power production deficiencies of the strokesnap release cause control problems because elbow-in-strokesnap jumpshooters often attempt to compensate for their weak release with excessive effort. By contrast, the release of the whole-body jump shots abounds in power because of reliance on multiple big-muscle shooting techniques. And because the shooting position for the start of the release for the whole-body jump shots sets up within the scope of the body, even more power is available from supplementary power production techniques.

The stiff, awkward and aligned strokesnap release cannot be adjusted. Not instantly. It is a functional impossibility. In order to adjust/change the direction of an elbow-in-strokesnap jump shot, the jumpshooter's entire body, head to toe, must shift to realign. That's not how the whole-body jump shots work. The forward rotation of the shooting shoulder during a whole-body jump shot release, especially in combination with a strongside square-in-the-air jump, opens a wide window to instantly adjust/change the direction of the whole-body jump shots.

The incompatibility of the strokesnap release with athleticism stands in contrast to the mutually beneficial relationship between the release of the whole-body jump shots and athleticism. The whole-body jump shots can channel the athleticism and the power of the jump of the jump shot and the square-in-the-air rotation of strongside jump shots into the release through the forward rotation of the shooting shoulder during the release. Athletic attack jump shots are the reward.

Fingertips Control: Too Small and Too Weak

Fingertips control of the elbow-in-strokesnap jump shot is one of basketball's longest-standing principles. But it is not a stand-alone principle. Fingertips control is part of a package deal with the fingertips shooting grip. The idea is that as the basketball exits the shooting grip the fingertips create backspin, which is a jump shot control technique.

The fingertips are viewed as good for control because their innate sensitivity provides a tactile feel for the basketball that is supposed to manifest as a soft touch by way of backspin. Fingertips control materializes as the forearm stroke and the wrist snap arc forward. The fingertips exercise control during the back-to-front removal of their naturally adhesive grip on the basketball that produces touch by way of the creation of backspin.

Critique: Before proceeding with an analytical takedown of the fingertips shooting grip and fingertips control as a staple jump shot technique, please permit a small but significant change in terminology. The suggested change is more about semantics than it is about shooting mechanics.

The suggested change in terminology is to substitute fingerpads for fingertips. The whole-body jump shot theory, which is a harsh critic of the elbow-in-strokesnap jump shot, the fingertips shooting grip and fingertips control, sees the use of the term fingertips as lazy thinking rooted in basketball's two-hand set shot era. That's when the fingertips really were in charge, all ten of them, by way of the two-hand set shot's shooting grip and release. Recognized and taught and treasured at the time, basketball' brain trust never bothered to make the appropriate changes to the fingertips concept and technique when the two-hand set shot went bye-bye.

But besides being a vestige of the past, the fingertips are just plain the wrong tool when applied to jump shot technique. Not wrong by much, but wrong nonetheless. The fingerpads are the tool that works for jump shot technique, not fingertips. The structural reason is that the jump shot's shooting hand forms a flat tangent with the basketball that is conducive to fingerpad contact. By contrast, the two-hand set shot's two hands form two angles of intersection with the basketball that are conducive to fingertip contact. The functional reason is that the fingerpads greater surface area can control the basketball much better than the fingertips puny surface area.

Analysis aside, the fingertips and fingerpads together are simply too small and too weak to be a primary source of power, direction and touch. The next time a recalcitrant bottle cap gives your fingerpads and your fingertips a hard time, think about the dubious prospects of controlling a jump shot with the same tools.

The whole-body jump shot theory does use the fingerpads and the fingertips to finalize the fine-tuning of direction and distance and to finalize the production of touch through the generation of backspin. But the forward-half of the shooting hand via the underneath bent-back half-hand shooting grip does most of the work. In other words, the whole-body jump shot theory relies on the shooting hand to control the jump shot.

The Timing of the Release: On the rise is best for the elbow-in-strokesnap jump shot

There is disagreement among basketball coaches about whether it is better to shoot on the rise or at the top of the jump. The debate does not take place under the heading of what is best for the elbow-in-strokesnap jump shot. But it should.

If the debate about the timing of the release was strictly applied to the elbow-in-strokesnap jump shot, there would be a definitive answer to be had. Given the fact that the elbow-in-strokesnap jump shot is best defined by its poor athleticism, poor power and poor protection, the timing of the release that best compensates for those shortcomings is the right answer. Shooting on the rise is, therefore, the best way to shoot the very imperfect elbow-in-strokesnap jump shot.

Shooting on the rise addresses the elbow-in-strokesnap jump shot's poor athleticism by merging the jump of the jump shot with the release of the jump shot, at least to the extent possible without shooting shoulder involvement in the release. The partial merge occurs when the arm action that

raises the basketball to the shooting position for the start of the release doubles as a source of supplementary power for the jump of the jump shot. Shooting on the rise addresses the elbow-in-strokesnap jump shot's poor power by using the upward momentum of the jump of the jump shot to supplement the power of the release. Shooting on the rise addresses the elbow-in-strokesnap jump shot's poor protection by starting the release early, that is, faster before the defender is ready. These are not perfect solutions. But they maximize the performance of the elbow-in-strokesnap jump shot.

Shooting at the top of the jump works well for some types of jump shots, but not for elbow-in-strokesnap jumpshooters. The main reason that shooting at the top of the jump is a bad choice for elbow-in-strokesnap jumpshooters is that it denies them the athleticism, power and protection mini pluses that they would get from shooting on the rise. Furthermore, shooting at the top of the jump brings no particular benefits to elbow-in-strokesnap jumpshooters.

Critique: While shooting either on the rise or at the top of the jump is an issue for elbow-in-strokesnap jumpshooters, it is the jump of the elbow-in-strokesnap jump shot that is the real issue. The problem is that the shooting stance of the elbow-in-strokesnap jump shot, from its alignment both vertical and with the basket to its out-front, horizontally-extended elbow-in shooting position, works as an impediment to athleticism, that is, the jump of the jump shot. Aligning all those body parts is awkward and time-consuming. Once set up the out-front, horizontally-extended strokesnap release mechanism is disconnected by distance from the jumpshooter's body, which is the ultimate source of jump shot athleticism. As a result of the setup, the jump and the athleticism of the elbow-in-strokesnap jump shot are second rate.

By contrast, the whole-body jump shots maximize their jump-of-the-jump-shot athleticism. The setup of the shooting position back within the scope of the jumpshooter's body is key to athleticizing the jump of the whole-body jump shots. Depending on which one is in use, the release of the whole-body jump shots works very well both on the rise and at the top of the jump. For example, the release of the whole-body elbow-out jump shot works best on the rise and the release of the whole-body reachback jump shot works best at the top of the jump.

The Follow-Through: After the Fact

After the power phase of the release is completed and the basketball is on the way to the basket, the follow-through phase of the release occurs. Supporters of the elbow-in-strokesnap jump shot sees the follow-through as vitally important to the jump shot. The assumption appears to be that if the follow-through is correct, then the preceding jump shot will be correct.

Supporters of the elbow-in-strokesnap jump shot focus on the look of the follow-through. Despite that focus, supporters of the elbow-in-strokesnap jump shot have not settled on one description for the correct look of the follow-through. The following is a list of some of the various terms and concepts that supporters of the elbow-in-strokesnap jump shot have used to describe what they think a correct follow-through should look like: imagine the index and middle fingers looped just over the front edge of the rim; imagine the shooting hand reaching over the rim and down into the basket; elbow extension and wrist flexion; arm pronation; limp with the hand finishing down in the basket and the gold standard gooseneck.

Could it be that those who focus on the elbow-in-strokesnap jump shot's follow-through see it as a causative part of the release? Don't forget that the follow-through occurs after the basketball has left the jumpshooter's hand and is on its way toward the basket. That means concluding that the follow-through somehow determines the flight of the jump shot defies commons sense. Just the same, the belief that the follow-through is causative has gained acceptance to the point that it is integral to elbow-in-strokesnap jump shot instruction.

Critique: When you think about it, the belief that the elbow-in-strokesnap jump shot should be guided by an action that occurs after the release has sent the basketball on its way is entirely appropriate. The almost all wrong elbow-in-strokesnap jump shot deserves a total whiff at its conclusion as a fitting capstone.

The whole-body jump shot theory, on the other hand, sees the follow-through as the motion that takes place after the release has occurred, not as part of the release. To put it another way, the whole-body jump shot theory sees the follow-through as an effect, not a cause. Admittedly, if the jumpshooter were to focus excessively on the follow-through, it could influence the outcome of the jump shot, likely negatively. But that approach puts the cart before the horse. It is better to focus on the setup of the shooting position for the start of the release and the mechanics of the release, both of which precede the follow-through. The reason is that it is the setup and the release that actually determine the jump shot's direction, trajectory, rotation, etc.

The whole-body jump shot theory also takes issue with the belief among supporters of the elbow-in-strokesnap jump shot that there is but one form of correct follow-through. To the contrary, follow-throughs vary with the circumstances of each jump shot. Therefore, the follow-through can be seen as a post-release variable that can be used to analyze the preceding release.

Final Comments: From Blame to Hope

Given the terrible flaws in the elbow-in-strokesnap jump shot, who should be blamed for its prevalence in basketball? Should the coaches be blamed for imposing a defective jump shot on the players? Or should the players be blamed for taking bad advice? The view here is that full blame goes to those coaches who have championed and pushed the elbow-in-strokesnap jump shot. The players who have followed instructions and tried to shoot the elbow-in-strokesnap jump shot are victims of well-intentioned but ultimately poor leadership.

Here's a prediction: If/When the elbow-in-strokesnap jump shot theory is finally discarded and replaced with the whole-body jump shot theory, then basketball will soon afterward gain more players and more fans. That's because basketball will be more fun to play and more fun to watch thanks to a newfound ability to shoot athletic, powerful and protected mid-range pull-up jump shots and post-up jump shots. Plus, 3-point and free throw shooting will improve.