

# Pick and Fingerstyle Technique

— Tuck Andress

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[Note to the reader: Eventually I hope to offer illustrations, photos and/or video clips to exemplify the various technical details I describe here. Meanwhile I have tried to be as clear as possible using words to describe hand positions.]

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## Section 1: Pick technique

I played almost exclusively with a pick my whole life until meeting Patti. No one ever taught me anything about picking technique. Everything I ever read or heard convinced me that guitarists (including me) did not yet understand picking technique. So in the 70s I systematically analyzed and practiced every picking style I ever saw in hopes of discovering the underlying principles. Here is what I learned:

## 1.1 Ways to Hold the Pick

- **1.1.1 Standard Style:** I began with what I call the standard style, holding the pick between the flat of the thumb and the side of the index finger, with fingers first anchored on, and later draped across, the pickguard. At first I had no basis for comparison, but as I studied other approaches I realized that there are some **disadvantages**:

- (1) Gripping the pick involves pressing the thumb against the side of the index finger, which is an unnatural position for the index finger, leading to tension, because there are no muscles in that finger capable of pushing back at the thumb. If you don't squeeze hard, the pick wobbles slightly when it encounters the string, absorbing some of the power and negating some of the feel that comes from the arm and wrist. The harder you play, the more the tension. If you squeeze hard enough to control the pick, the tension interferes with feel, spreading into the wrist and arm.

- (2) The pick tends to catch on the strings, which most players spend years wrestling with, assuming that there is no alternative.

I have seen most great players use some variation on this technique, but I believe they are great not because of it, but because they have compensated for its deficiencies. In other words, their technique is not working for them as much as it could.

- **1.1.2 Thumb pick:** I learned this because my first guitar teacher, Tommy Crook, used it. It always felt awkward to me, although he never sounded awkward.

- **1.1.3 Wes Montgomery technique** of downstrokes and upstrokes with flesh of thumb (not actually a pick technique at all): This is like becoming a superhero: Everyone reads the comic, many buy the Superman outfit, but few actually end up using their super powers to save the human race. If one wears the outfit too long without saving humanity or at least exhibiting some super powers, one may begin to look a little silly.

### Advantages:

- (1) The sound and feel of flesh on strings are extremely satisfying.

- (2) It combines well sonically with fingerstyle if you don't have fingernails.

### Disadvantages:

- (1) Getting a clear and consistent tone on upstrokes, especially single notes, is virtually impossible, the stuff of superheroes (it is much more viable on electric bass). I kept working on this in parallel to all the picking techniques I tried, but I tried not to wear the Superman outfit in public too much for fear of embarrassment.

- (2) Transverse/sweep-picking clearly across multiple strings with one upstroke is even more difficult than a single-string upstroke.

- **1.1.4 Standard style, variation 1:** Suspended-fist technique exhibited by Joe Pass, Barney Kessel and many older players who at some point probably had to play hard in order to get volume out of their guitars: This is the standard style, but the remaining

fingers are closed into a loose or tight fist, eliminating any contact between the hand and the guitar other than through the pick.

**Advantages:** By moving the mass of the fingers closer to the axis of rotation of the wrist, there is effectively less excess baggage to swing around. An analogy would be a dancer or skater doing a pirouette, then pulling limbs in tighter to spin faster. When it works, it feels like you're flying.

**Disadvantages:** Same as the standard style, plus I witnessed often-dramatic inconsistency of accuracy in even the greatest of players related to losing the point of reference of fingers touching pickguard. There are definitely good days and bad days, and I mainly wanted to have good days. I reasoned that this was not worth pursuing, since consistent feel and accuracy were more important to me than volume on an acoustic instrument. Still I spent a lot of hours working on it just to have the experience.

- **1.1.5 Standard style, variation 2:** The palm rests flat on the bridge, either behind or in front, depending on whether strings need muting. The additional fingers can be open or closed.

**Advantages:** This is real life for many electric players who often have to deal with feedback that they don't want.

**Disadvantages:** You must play with a side-to-side motion at the wrist rather than rotation at the wrist. This inevitably leads to tension and ultimately a locked wrist as you (try to) play faster. See discussion of wrist motion below ([1.2.2](#), [1.2.3](#)).

- **1.1.6 Standard style, variation 3:** The thumb side of the palm is raised, but the opposite side of the palm rests on the bridge. This allows a rotational wrist motion and is essentially the same as the standard style except for hand location.

- **1.1.7 Circle picking** exhibited by Kenny Burrell and Howard Roberts: A fascinating, bizarre variation on the standard style. The pick is held the same way, but movement is accomplished by flexing the first joint of the thumb (nearest the tip), with the index finger extending at its second joint. The pick actually slides along the string before crossing it, turning counterclockwise on downstrokes and clockwise on upstrokes (viewing the face of the guitar on an axis perpendicular to the plane of the strings). At the moment of crossing the string, the pick is moving in its own plane, which creates a sound different from all the other styles above, where the pick moves perpendicularly to its own plane.

To illustrate, picture the face of the guitar as a plane with a circle drawn on it, centered below the middle point of a picking stroke, and viewed from above. Label the direction of the neck as 0 degrees, and the direction of the bridge as 180 degrees. The pick is in a plane which intersects roughly along the 45/225-degree line. In the standard style a downstroke moves in a line (really an arc, but picture it as a line for convenience) roughly in the 135-degree direction (4:30 in clock terms), so an upstroke moves toward 315 degrees (10:30). In other words, the pick moves in a line perpendicular to the plane of the pick. In circle picking a downstroke moves roughly in the 45-degree direction (1:30), so an upstroke moves towards 225 degrees (7:30). The pick moves in its own plane. The difference in direction of motion between the two styles is thus 90 degrees, with an identical hand position.

Incredibly, it is possible to play very well using circle picking, although it took me years to master it after I first saw Kenny Burrell use it in 1970.

### **Advantages:**

- (1) You can cover several strings with no arm or wrist motion at all, so it seems efficient (but see disadvantage 1).
- (2) I prefer the tone of a pick moving in its own plane.
- (3) It's fun because it feels and looks so weird.

### **Disadvantages:**

- (1) Without arm or wrist motion, feel tends to suffer. It requires constant will power to control timing, because there is no rhythmic swinging of any part of your body to help you out. I believe this explains some of Kenny Burrell's unusual, trademark phrasing.
- (2) Inevitably you must add in wrist motion for larger strokes such as strumming. This requires an unconscious gear change because of the 90-degree difference in motion of the pick, which creates a variety of subtle problems. The net effect is that each technique somewhat undermines the other around the transition point.
- (3) Ultimately the extra motion of the thumb and index finger are inefficient and limit speed.

● **1.1.8 George Benson's picking style:** When I finally got to see George Benson play live in the mid-70s, I was advanced enough myself to realize instantly that he had solved the picking problem. He had somehow resolved the inherent conflict between accuracy and feel, regardless of speed. Unlike every other player I had seen (or have seen since), his technique fully supported him. I observed and dissected his technique very carefully, then applied it to normal humans:

For a normal human, the pick is held between the tip of the thumb and the flat, or pad, of the index finger; the middle finger can also rest next to the index finger. The first joint of the thumb must be locked in fully open position, and the first and second joints of the index finger must be arched and locked. (George Benson's thumb bends back so much at his first joint that it is the flat of his thumb that naturally opposes the flat of his index finger, but this is rare. The exact point where the pick makes contact in the range between the tip and the pad of the thumb varies from hand to hand.) This causes the pick to be rotated about 90 degrees counterclockwise from the standard style, viewing the guitar as described above. Depending on the stance (see below), the other fingers can be splayed out over the fingerboard or curled up toward the palm.

### **Advantages:**

- (1) The pick moves in its own plane rather than perpendicularly to its own plane. This results in a solid, trumpet-like attack yet a more gentle impact of pick against string. It sounds better and the pick does not get caught on the string as much.

(2) It is not necessary to give up the strumming feel in order to accomplish this, nor is there any gear change as in circle picking.

(3) It is possible to apply a very firm pressure on the pick with essentially zero tension. By locking the pick and the thumb and finger holding it, all the motion of the pick is generated from the arm and wrist, resulting in better feel.

(4) Comfortably locking the pick up for the first time allows one to explore the shoulder, elbow and wrist as sources of motion. By isolating and exploring them in that order (from gross to subtle), feel and accuracy both improve dramatically. The body becomes less tense as the physical blockages between head and pick get broken down. The player looks more relaxed and communicates greater openness and confidence.

### **Disadvantages:**

(1) It can take some relearning. During the transition period your original technique will fall apart. There is no gentle transition. The middle ground, where the thumb joint begins to arch or the first joint of the first finger begins to straighten out, is terrible, so it must be avoided through continual vigilance. Likewise letting the pick gradually slide back toward the side of the finger.

(2) The way in which the collision of the pick and the string tends to dislodge the pick is different, and disconcerting; the force of the string opposing the pick is in the same plane as the pick, so it tends to make the pick rotate around the axis of grasping between thumb and index finger.

The solution for both of these problems is to relentlessly lock up the pick using exaggerated pressure from the beginning, concentrating on three principles:

(A) Keep the thumb joint locked.

(B) Keep the first joint of the index finger arched enough that the tip pushes against the pick, rather than just touching it. (The thumb, and thus the axis of gripping, can move closer to or farther away from the point of the pick.) Avoid the tendency to relax this joint and find yourself gripping between the thumb and a point near the first joint, because you will lose control of the pick. The test is to try to dislodge the pick with the other hand and see how much give there is. There should be almost none.

(C) Isolate and exaggerate the tension to just the thumb and index finger. Relax the rest of the hand, wrist, arm and body, including by shaking your arm around away from the guitar until it moves freely at shoulder, elbow and wrist. Later relaxing the grip slightly will be easy and will decrease tension without losing control of the pick.

(3) It is more difficult to pluck with other fingers at the same time (i.e. hybrid picking) or to play artificial harmonics.

(4) The kind of tone associated with a loosely held pick is impossible to achieve (to me this is an advantage), although the tightness of the grip is still a variable that you can profitably explore, but only after you get good at locking it up.

### ● 1.1.9 Notes about the Benson approach

(1) I have taught it to hundreds of guitarists. For virtually everybody it ends up being an improvement, in most cases a drastic one. For some, the results are immediate. For others (me) it can take quite a bit of time. Careful attention to the fundamentals speeds up the process.

(2) It is possible to incorporate something like circle picking into the Benson approach, at least when the wrist is rolled down into the oscillation position I will describe below. It is less specific, because there are many ways the finger and thumb can move without the wrist moving as opposed to just one with circle picking. All three finger joints as well as both thumb joints plus the place where the thumb joins the wrist can move in any combination, allowing considerable range of motion with no wrist motion. However, this should be viewed as an advanced subtlety which involves unlocking the vise grip on the pick. Don't work on it until locking up the pick has become automatic and the basic stroke is comfortable and reliable.

## 1.2 Other Picking Issues

### ● 1.2.1 Shoulder and elbow motion

Before discussing wrist motion, I should emphasize that the most important motions to explore first are shoulder and elbow motion. There are two types of shoulder motion: Shrugging, causing the elbow to move vertically, and sideways, causing the elbow to move horizontally. Learn to play with each of these alone and have it feel and sound good. Then you are conceptually ready to involve the wrist. Only after that are you ready to explore finger motion. Again, work from grossest muscles to most subtle. The gross will never become properly subtle if you allow more subtle muscles to compensate. This in turn limits what the subtle muscles can accomplish, because they are busy doing the work of the gross muscles. Also your shoulder, upper arm and elbow are conduits of expression between your brain and your pick. They can easily block that expression unless trained.

### ● 1.2.2 Wrist motion: Geometry

While studying picking techniques I examined types of wrist motion. I found that all wrist motion could be seen as varying combinations of three simple components, which I termed translation, rotation and oscillation, based on wave motion in physics. My favorite way to isolate and visualize these is by writing with a pen. Hold a pen. Your goal is to scribble while keeping your wrist in one location.

**Translation:** Lay your hand and wrist flat on the desk surface. Restrain your wrist loosely with your other hand. The necessary wrist motion for scribbling will be translation, which is side-to-side wrist motion. You will draw long arcs on the paper, part of a circle whose center is your wrist.

**Rotation:** Raise your wrist two to four inches off the surface, making a circle around your wrist with your other hand so it can move freely but not relocate. Rotate your wrist as you would if turning a doorknob. Your fingertips and the tip of the pen move through an arc of a circle whose radius is the distance from your wrist to the surface. Notice that the marks the

pen makes get shorter and straighter, because theoretically a circle (the pen) and a plane (the paper) only intersect in a point, which gets extended to closer to an inch because of the slop in your wrist and hand.

As a subdivision of rotation, notice that your forearm has two bones. When you made a circle around your wrist, both bones were rotating around the center of that circle. Now restrain the bone that ends at the little-finger side of your hand and let the other move in an arc around it. It is still rotation, but the center has become one of the bones. This universally seems to be the most natural, relaxed motion, and is typically the goal with a pick. Now restrain the bone that ends near the thumb. Typically this feels more unnatural, and it is less useful.

**Oscillation:** Lay your wrist down again in the translation position, but roll your wrist 75-90 degrees away from your body until your hand rests on the side of your hand between the wrist and the knuckle of your little finger, with the forearm bone nearest the little finger resting on or near the surface, and the bone nearest the thumb up in the air. Now if you rotate you will just make dots.

Next restrain both forearm bones. The only available movement is oscillation, the same kind of motion used in knocking on a door or playing piano from the wrist. It is what most people use when writing, also, although usually with more like a 45-degree wrist offset. You'll have to do a combination of holding the pen differently, because it points in the wrong direction and is up in the air, along with the thumb and index finger, and lowering the tips of index and thumb by contracting your hand (i.e. the line or slight curve through the knuckles of your four fingers becomes comfortably more curved). Now the pen makes long arcs again.

### ● 1.2.3 Wrist motion applied to picking

**Translation** is fine for single-string playing at slow-to-medium speeds, but somewhere around 10 notes per second the wrist begins to tense up. By 12 or 13 notes per second the wrist increasingly locks up to the point that the whole forearm is moving. Soon after that it typically makes a transition into a spasmodic vibration of the locked forearm and hand. Some people learn to play very fast this way with considerable control, but only the greatest of players successfully maintain control over a full dynamic range, and the inevitable tension invariably shows up in the music (and sometimes is mirrored in the personality of the player). The strumming feel tends to suffer at all tempos.

On the other hand, translation can sound very even, because the pick moves in the plane of the strings (pretending for the moment that the strings are really in a plane), rather than in an arc which intersects that plane as in rotation. Therefore (1) the force of the stroke makes the strings move closer to sideways for both downstrokes and upstrokes, which gives the purest and loudest vibration without buzzing (analogous to the rest stroke in fingerstyle technique), and (2) the pick cuts into each string to about the same depth on chords, as contrasted to rotation, where one or two strings in the middle of the stroke typically get hit hardest. Although generally regarded as bad technique, I believe translation is worth using when its evenness of sound is needed. Nonetheless, ultimately oscillation (see below) accomplishes the same thing with less tension and is preferable if you use the Benson technique.

**Rotation** is the kind of motion typically advocated by teachers and good players. It is usually possible to play faster before tension sets in, typically 12 to 13 notes per second, but beyond this speed rotation begins to turn into translation for the same spasmodic vibration.

Rotational strumming universally feels better than translational strumming. This is particularly true if shoulder and elbow are used, because a relaxed hand falls into a rotational motion somewhat more naturally than into a translational motion around a moving forearm.

The greater snap of the strings due to the pick moving in an arc relative to the plane of the strings can be used to advantage, both in single notes and in strumming, offering a wider palette of tones and percussive effects, although at the expense of translation's consistent tone. A common approach, for example, is to angle the arc of the strum, making the downstroke more parallel to the plane of the strings and the upstroke more of a percussive outstroke, then to capitalize on the difference in tone as a rhythmic subtext (see [1.2.5 Picking Angle: The miracle cure](#), below).

Concerning unevenness of strummed chords, it is useful to look back at the example of the pen on paper, where the ink mark was perhaps an inch long rather than the theoretical single-point intersection of an arc and a plane. This means that chords on three or four adjacent strings can sound relatively even for no apparent reason. By the time there are six notes, though, they will sound uneven, but many players spend a lifetime strumming full chords and never notice that the outer strings are not as loud as the inner ones. It simply becomes a feature of their style. See [1.2.6 The arc of the strings](#) for a way around this.

**Oscillation** naturally replaces both translation and rotation as the wrist rolls down and the hand contracts between the knuckles, resting on the pickguard or bridge on the side of the hand and, maybe, wrist, as in the scribbling example above. It applies almost exclusively to the Benson technique, so most players have never experienced it, since with the standard technique the pick rolls away from the strings and no longer makes contact. With the Benson technique, though, the hand contracts comfortably to keep the pick near the strings, and the index and thumb rotate the pick counterclockwise (as viewed by the thumb) as much as about 45 degrees from the direction of the fingertip (contraction supplies the remaining 30 degrees). 75 degrees is about the limit for most hands, after which it becomes unnatural to lower the pick to the strings. At a 75-degree wrist offset you will have to use pure oscillation to make a picking motion, whereas with no offset you will have to use pure rotation or translation (depending on wrist height). At every offset in between there is actually a range of possible balances between rotation and oscillation, and you will tend to find your comfort zone instinctively.

### **Advantages of oscillation:**

- (1) It can be speeded up almost without limit (20 notes per second) without tension. As in translation, at the fastest speeds there will be a gradual transition into spasmodic, vibratory motion, but it is far more controllable and sounds much better, because the hand is equally relaxed at all speeds.
- (2) It is possible to cover all the strings without relocating the wrist. The first time I saw George Benson, his wrist was resting on the pickguard, below the strings, the whole night, with his hand reaching back up towards the strings. Only his thumb and index finger appeared to move over the strings.
- (3) The pick moves in a plane as contrasted to rotation where it moves in an arc, so the evenness of translation is regained.
- (4) Oscillation is as natural as rotation when combined with a moving arm, so strumming



feel is enhanced.

(5) It is easy and instinctive to shift the mixture of oscillation and rotation anywhere between the two extremes continuously with no experience of transition. This means that the entire range of expression between rotation, with its range of tones and attacks, and oscillation, with its evenness and incredible speed, is available all the time. It also means that a constantly shifting, fluid, right-hand approach is more possible. This makes playing more like dancing. The second time I saw George Benson, his right wrist ranged from suspended over the bridge, like the standard stance, to below the strings with 75-degree offset, as before, often shifting smoothly several times in a measure.

(6) If you curl the other fingers up (see below), it is easy to play either notes or chords in artificial harmonics, as fast as you want, using both upstrokes and downstrokes, creating the node 12 frets above whatever you are fretting with the second segment of the little finger. The transition from normal notes to harmonics is instantaneous. This is the technique I use on "Up From The Skies."

(7) For many (including me) the Benson picking style using oscillation with 45-degree wrist offset (plus some finger movement to write sideways) looks and feels exactly the same as writing with a pen, so it may already be completely familiar even if never used on the guitar.

#### ● 1.2.4 The other three fingers

Rotation with a raised wrist allows the other three fingers to be draped unless your hand is small enough that they get caught on the high string when playing on low strings (see next paragraph for solution). But full oscillation does not; they get in the way. So for maximum flexibility in combining rotation and oscillation I tuck them into my hand most of the time, with middle joints forming a 90 degree angle and knuckle joints varying. Usually the tips do not touch my palm. This is more relaxed than making a fist. Then there are two possibilities:

(1) Typically they glide across the higher strings when I'm playing the lower ones and the pickguard when I'm playing the higher ones, giving me a reference point, what the suspended-fist style lacked. The first joint or middle segment of the last two fingers is the part that actually makes contact with the strings. To this end, I raise the pickguard until it is just a little below the plane of the strings. This makes gliding between pickguard and strings a smooth process. (This also solves the problem of draped fingers getting caught on the first string; they just glide onto the strings instead.)

(2) Amazingly, the last two fingers can rest on the pickguard or the first string and still allow the pick to travel in a path wider than all six strings without straining or stretching the hand in any way. From the scribbling example above, make a two-inch-wide oscillating motion on the desk. Next curl your extra fingers in somewhat. Now hold down the last two at the tips with your other hand. Notice that it makes very little difference in the motion of the thumb and index finger or the relaxation of the whole hand!

#### ● 1.2.5 Picking angle: The miracle cure

For simplicity, visualize the path of the pick's motion as a line rather than an arc (specifically the line which is tangent to the actual arc at the point of contact with the string). Visualize the strings as being in a plane. The line could be parallel to the plane, or it could intersect.

The angle at which it intersects is what I call the picking angle. It is a variable of tremendous significance. At parallel (0 degrees), it is like translational picking with the wrist laid flat on the bridge. Both upstrokes and downstrokes are equally sideways. At the useless extreme (90 degrees) the downstroke goes straight into the guitar while the upstroke goes straight out. This is like the scribbling example of rotation from the 90-degree-wrist-offset position.

But in between is a whole range which I think of as the assertiveness factor. If I want it to be funkier, snappier and more aggressive, I increase the picking angle. If I want it to sound more even and controlled I decrease it. Here are two ways to explore this range:

(1) The non-aggressive extreme is wrist parallel to the plane of strings with translational picking to even it out. The next step is to switch to rotation. From there on, the more you roll your wrist downwards while maintaining rotation without introducing oscillation, the greater the picking angle and the more downstrokes become instrokes and upstrokes become outstroke's. Note that the greater the angle, the more impossible it is to play full chords and the more this becomes a technique for only three, two or finally one note at a time.

(2) Beginning with the wrist rolled down, say, 20-30 degrees, start with oscillation then gradually switch to rotation. Angled picking is an extremely powerful "overdrive" control to overlay on the rest of your playing.

Additional secret benefit of angled picking: Aim becomes easy, unlocking the elusive key to great feel. Fully relaxing for the first time, the musician confidently and gracefully responds instinctively to all future circumstances with equanimity and poise, like a martial arts expert.

Here's normal guitar playing seen on the micro level: You use a big, sloppy tool with a lot of pivot points (your body) to swing an easily dropped, slippery, thin object (the pick) through a curved path at a miniscule target (the string) which is constantly changing location (with height at picking point varying by as much as 0.10 inches, depending on where it is fretted), with an incredibly narrow margin for error between missing entirely and hitting too hard or running into unintended adjacent strings (as little as 0.01 inch, compared to 0.18 inches minimum for piano black keys). Each impact of the string tends to dislodge the pick from the hand and change the hand position slightly. You must stop and reverse direction after every stroke and have no time to set up or aim the next stroke, unlike in any sport with tolerances this fine (golf, pool, archery). You cannot see from an angle that would really help you, plus the scale is so small that your human eye would not help anyway. No wonder it is hard to play clean.

Here are some common ways guitarists try to solve this problem of accuracy on an incredibly difficult instrument: They concentrate on making and refining the smallest motions possible. They tense up the rest of their body as they narrow their focus to the small muscles of the hand and wrist. They hunch their shoulders and lean over the guitar. They often stop noticing what is going around them (e.g. what others are singing/playing). They repress the frustration years of this creates. All this goes directly counter to good feel.

They try to control all external and peripheral factors: Guitar type, strap length, standing or sitting position, type of pick, gauge of strings, action adjustment, saddle height, amp tone, volume level, band mix, ambient temperature and humidity, health and nutrition, performance conditions, vibe in venue, personal mental state. All this goes directly counter to spontaneity and embracing/responding to the realities of life. I know because I tried it.

Here are some examples of realities I have personally encountered which were not sufficiently addressed by this style of preparation:

Borrowed guitar, different string spacing, bridge or nut sliding during string bending or vibrato, wrong strap length or strap breaking during solo, unwound guitar string used as backup strap gradually cutting through shirt and shoulder, sleeve snagging on bridge suddenly locking up hand, wrong pick, dropped pick, broken pick, no pick, pick stuck between strings, finger caught between strings, wrong strings, dead strings, sticky strings, blood on strings, broken strings, no extra strings, jar of honey spilled all over strings, vintage L-5's gig-bag shoulder strap breaking immediately before album-release concert for 5,000 people causing guitar to fall on concrete and creating crack from tailpiece to neck which gradually splits apart during performance with action getting higher and higher, amp too far away, amp too close, amp broken so play through bass amp or P.A., tone all wrong, overdrive bypass switch broken, cymbal in ear, band too loud, audience too loud, band downstairs too loud, bad monitors, no monitors, in-ear monitors broken so Patti is heard acoustically but Tuck is heard only through house PA 50 yards away resulting in Tuck being unavoidably out of sync with Patti by 1/6 second for whole show, guitar buzz, RF from nearby transmitter louder than the music itself, brownouts making organ pitch fluctuate randomly over an octave range, power outage, equipment plugged into 230 volts immediately before show, earthquake during show in high-rise, outdoor desert performance at 131 degrees with sand-blasting winds, sub-freezing outdoor-mountaintop performance with snow storms and 40-mph winds, high-altitude dizziness, no sleep, no food, too much food, wrong food, food poisoning, fever, locked bathrooms, way too many liquids before long show, nagging suspicion that zipper is down, contact lens falling out during moment of peak concentration, compromised hand position due to repeatedly sliding full width of stage while trying to keep playing but not collide with Patti on yacht in rough, Finnish Gulf of Bothnia, charts blown away by wind, charts on thermal fax paper, charts in wrong key, charts without bar lines, charts with bar lines all displaced by two beats, charts in bass clef or C clef, chord charts with do/re/mi instead of C/D/E and everything else in Portuguese, realization that Miles Davis/Dizzy Gillespie/Joe Pass/George Benson/Chaka Khan/Bobby McFerrin/Steve Gadd just walked in, drunks falling on stage, drunks disrobing on stage, drunks grabbing instruments or band members, band members falling asleep during song, pigs frolicking in sawdust-covered frat house knocking over band equipment, thinly veiled animosity between bride's and groom's families erupting into violence during heartfelt version of "My Romance," nightly juggling of playing and operating the lighting console/footswitches and talking to audience members and trying to reign in tempos and egos of various fellow top-40 band members, arrival at duo gig with unbelievably loud, aggressive fuzz-wah hard-rock bass player to discover that assignment is to back up elderly white-haired and white-suited gentleman singing unfamiliar country songs to unforgiving patrons, crowded upscale happy-hour dance floor unraveling into pandemonium as normal-looking customers all collapse to the floor and writhe around on each other while astonished saxophone-playing duo partner walks out leaving helpless solo guitarist playing "The Hustle" for 25 minutes, funk bass player imprisoned in lounge band insisting on popping strings throughout sensitive ballads, accidental imprisonment of Patti in wine cellar out of earshot during guitar instrumentals, onstage and on-instrument living creatures with varying numbers of legs, belligerent drunken bowling-alley-lounge customer demanding that funk band play Debussy's Clair de Lune while remainder of

band looks expectantly at guitarist, drummer watching ball game on portable TV with headphones throughout performance, guest singer repeatedly changing keys at random moments, realization that the people who have just boldly picked up instruments and are unexpectedly sitting in are Herbier Hancock and Wah Wah Watson, guns drawn at rehearsals to settle disputes about form of song, marginally famous singer resorting to the dreaded "Do you know who I am" line, drummer and delusional would-be front man jumping off the drums in the middle of a song and mistakenly chanting "we don't need no drummer to keep that funky beat" to a dance floor packed with suddenly hostile former dancers, unstable band member deciding that it is his responsibility to educate the audience over the microphone, bass player playing random notes and rhythms because he is not a bass player at all but nonetheless booked the gig, drummer announcing that he killed somebody just before the show, swimming pool party turning into orgy with splashing on inexperienced solo electric guitarist sitting beside pool doing his first solo gig and fielding endless requests for the same song he had just played yet again, bride's and groom's special song evaporating from mortified solo musician's mind at the crucial moment, band member disappearing suddenly when his chair falls backwards off riser, unstable enormous man peaking on LSD brandishing artificial limb removed from his companion at audience and threatening band to "sing with this," mirrors on back wall of club causing introspective young guitarist, wearing a too-tight purple Spandex jumpsuit, to question meaning of his life at early stage in career.

In order to be better prepared for such situations, it is helpful to have a less fragile picking technique that leaves more room for error. Increasing the picking angle slightly turns a downstroke into an instroke and an upstroke into an outstroke. Now the path of a downstroke goes through the target string directly into the next string. For example, when playing a note on the third string, just as in a classical rest stroke, you aim for the second string, let your hand fall onto the strings, hitting the third string in the process, and let the second string stop the motion of the pick rather than using your muscles to do it. There is no longer any need to aim carefully to avoid hitting the second string, because you are supposed to hit it. Even if you miss it and hit the first string, you get the same results. What about clearing the fourth string? The angled picking path automatically keeps you away from the fourth string, so you don't have to aim carefully to avoid it.

Upstrokes: Rather than swinging from an unspecified place in space, you are now starting the stroke from a comfortable point of complete rest against the second string. Simply by reversing the downstroke you will hit the third string and clear the fourth string.

The result: Accurate playing stops being like nervously walking a tightrope. The tolerances are now so wide that it is almost difficult to miss. Because the downstroke is being stopped by the next string rather than by your muscles, the hand is much more relaxed. Downstrokes and upstrokes become like dropping your hand into a relaxed resting position onto a surface and lifting it again. You can freely vary right hand position without worrying about losing your balance, so you start to experience the flexibility, fluidity, agility and even joy of a dancer. Single lines feel like rhythm parts. It is all more punchy because you have also effectively turned up the assertiveness factor. Accuracy and feel stop being opposites. Your whole body can relax and groove. Playing like this can actually melt away years of stifled frustration and even infect the rest of your life, making you a more pleasant, flexible, positive person.

To successfully do this, you need to use good left-hand muting technique on surrounding strings. If you use light strings and low action, you will have to deal with buzzing, although

string buzz caused by this technique sounds much better than string buzz caused by ordinary picking, and you may prefer to enjoy it as a percussive bonus. If not, playing less hard at a less acute picking angle will take care of most of it, as will relaxing your grip on the pick somewhat. I prefer to set up my guitars so I can literally beat them when doing this with minimum buzz. Most players don't.

This is a good place to mention that it is good to start out on all these techniques using big strokes, ignoring accuracy. First perfect the stroke while exaggerating it, then the accuracy will come easily as you gradually reduce the stroke size and intensity. Then you won't lose the accuracy even if you return to big strokes. Once again, the most direct path to accuracy usually begins with big strokes from gross muscles.

● **1.2.6 The arc of the strings:** Sooner or later we must acknowledge that the strings are not in a plane at all, but in an arc corresponding to the curvature of the fingerboard (except on guitars with flat fingerboards). This arc actually curves away from the strumming hand. So for big chords, even with translation or oscillation moving the pick in a plane, the middle strings get hit harder than the outer strings. This can result in harshness of attack and tone. Even many famous soul and bluegrass players who strum a lot suffer from this. Once you become conscious of it, it is forevermore immediately audible.

Solution: Relax your wrist, and strum more from the shoulder and/or elbow, in addition to, or even instead of, the wrist. Drag the hand behind the wrist such that it traverses a path the width of the strings you want to hit. In slow motion, during a downstroke the wrist is moving down, but the hand lags behind slightly. The wrist then begins its upstroke before the hand has finished its downstroke. This is reversed for upstrokes. The result is that the pick moves naturally in a reverse arc matching the strings.

It should feel as if the hand is more loosely attached to the arm at the wrist, and is being dragged around by the arm, constantly lagging behind a little, with little will of its own. This should feel floppy, sloppy and imprecise, and it often is accompanied by a more relaxed attitude. This is either an extremely advanced technique if you started out trying to be accurate and therefore making small finger and wrist motions or an extremely elementary one if you started out relaxed, trying to have a good feel and therefore making gross shoulder and elbow motions without tensing up your wrist or giving it undue attention.

To me this is a fascinating paradox. I know extremely precise, fast guitarists who have worked very studiously, yet whose rhythm (and thus lead) feel is not quite right. They might find this technique unnatural and even objectionable. Ironically, it would transform their playing for the better, suffusing it with a dance energy and whole-body involvement that is lacking. I also know great rhythm players with totally infectious feel for whom this is second nature (I learned it from watching them). They, on the other hand, would have much less difficulty developing the speed and precision of the other guitarists because of their solid, untrained technical foundation (body awareness led to proper use of gross muscles first, thus properly supporting more subtle muscles), but they are typically uninterested in doing so, since they are having such a good time playing already.

I hereby give you permission to do it! Don't worry; be happy.

● **1.2.7 The direction the pick points:** Contrary to conventional wisdom, the pick does not necessarily need to point directly into the guitar. This issue resolves into two or three variables which apply to any picking stance:

(A) Rotation around the axis of gripping, gross: Which edge of the pick hits the strings? For most people it is the tip. For me it is usually one of the curved sides of the pick, with the tip pointing toward my little finger. This is partly to reduce the difference in attack and tone between my fingertips and the pick. It also gives a lot of room for my middle finger to rest on the pick, improving stability. It is probably also more forgiving of the subtle rotation described in the next paragraph. That said, if I want a more brittle attack or extra flop in the pick, I'll use the tip.

(B) Rotation around the axis of gripping, subtle: The pick can be micro-rotated between thumb and index finger. I think of this range as slightly favoring upstrokes or downstrokes. It is a big but subtle variable worth experimentation. Should you find a favorite position, or should you develop flexibility and allow it to change fluidly, either intentionally or unconsciously (e.g. as the pick naturally shifts in response to the collisions with the strings)? My answer is to establish a favorite position or range, but to enjoy the dance as the pick ultimately turns out to have a mind of its own.

(C) Pick lean, i.e. the angle between the plane of the pick and the plane of the strings: From a perpendicular starting position, the pick can be leaned downwards or upwards. Again, this could be experienced as favoring downstrokes or upstrokes.

It is important to isolate and explore these ranges, but I have no single best answer other than that if you find a preferred orientation or range, you should practice within a somewhat wider range for flexibility and to insure against the unexpected.

● **1.2.8 The angle between the plane of the pick and the line of the string:** At zero angle (pick flat against string), the pick and the string intersect in a line going across the pick. Regardless of the direction of the pick's motion or the direction in which the pick points at the moment of impact, this results in the brightest tone, the greatest resistance and the least gentle moment of farewell between pick and string (harsh but clear attack). Even a slight increase in angle causes the intersection to become a point, on the left side of the pick for the standard technique and on the right side for the Benson technique (at the moment the pick first hits the string during a downstroke). This substantially reduces resistance, smoothes the attack and dulls the tone. Increasing the angle more than the first few degrees has more of the same effect, but much more gradually; most of the difference happens in the first few degrees of offset. This means that if you like the duller sound and rounder attack it will be much easier to play and you will have a wide range of options.

● **1.2.9 Where on the length of the string to pick:** This is entirely a matter of preference. In keeping with my general philosophy of flexibility, I have tried to become comfortable throughout the range between the bridge and the center of the string. The closer to the bridge, the more dramatic the shift in tone, so thoroughly exploring this portion of the string offers a very powerful tonal expansion for most players. Playing near the bridge also offers a unique and valuable technical challenge, because the deflection of the string stays small however hard you play, whereas the range of deflection grows as you move toward the center of the string's length. Maybe paradoxically, this makes it harder to play near the bridge for most people, more like hitting a wall than a punching bag. Playing hard at the bridge is great training for playing throughout the length of the string. In addition to this it is worth working on shifting fluidly throughout the string's length while playing, by using the shoulder to move the elbow sideways.

● **1.2.10 The best pick to use:** During all the years I spent studying picking I tried many picks, finally settling on an extremely thick one which I had to cut down and reshape to a small teardrop. I felt that this brought me closest to the Benson sound. Each pick took several hours of work. Then one day I learned that George Benson used a Fender medium. At that point I quit worrying about what type of pick I used, although extremely sharp or dull ones don't work well.

● **1.2.11 Alternate/rhythmic/transverse picking on single lines:** I started out picking randomly, more downstrokes than upstrokes. Soon I learned to alternate pick every note as well as slur. Playing rhythm guitar early on convinced me that the best way to use upstrokes was the same way I strummed: If it fell on a beat (when playing 8th notes) or on an eighth note (when playing 16th notes), use a downstroke. If it fell in between, use an upstroke. With slurring and rests this might mean several downstrokes or upstrokes in a row. I now call this "rhythmic picking." It comes naturally to rhythm players, most of whom just call it alternate picking.

But early on I realized that it was also possible to pick two or more strings in the same direction if they each had an odd number of notes, and that many jazz players did this using downstrokes on triplets and very fast passages, using a slur or rest later if necessary to get the downstrokes back on the beat if the picking got turned around. Inspired by Kenny Burrell, who played this way consistently on downstrokes regardless of speed or rhythm, I worked on it until I could use it whenever the note layout allowed it, both on downstrokes and upstrokes, regardless of how it fell rhythmically. I called this "transverse picking." (Later the term "sweep picking" was coined to refer to the same process applied to lines specifically constructed based on transverse picking patterns.)

But then I saw George Benson play. He seemed to cross strings at very high speed with either alternate or transverse picking, just depending on whim. So, with a strong foundation in rhythmic picking, I went back and learned to alternate pick even through passages that begged for transverse picking and vice versa, so I could be flexible and unfazed by turning the picking upside down. As I continued to study him each year when I saw him, I realized that he was also less predictable than I was about using downstrokes on beats and upstrokes on offbeat's. In fact, he seemed able to invert that pattern or play randomly at will. Everything seemed equally easy to him. So I went back and worked on becoming that flexible, even including literal alternate picking, where each stroke reverses the direction of the previous stroke, regardless of rhythm, slurs or rests.

At about the same time I observed that both Jose Feliciano and one of my students consistently and successfully used upstrokes where I would use downstrokes, and vice versa! This brought me to the final conclusion that a good life approach for me would be to go full circle, from random picking driven by ignorance and technical deficiency, to a variety of systematic approaches driven by the need to understand, to systematically weird approaches driven by the need to be complete, then finally back to randomness now supported by technical mastery, driven by phrasing considerations or whim. Notice that I said it would be a good approach, not that I achieved it, but I did end up very flexible by 1978, when Patti and I met.

What about triple division of the beat? This brings up additional issues concerning rhythmic picking. At slow tempos, most people use downstrokes both on the beat and off the beat (actually the third stroke of the triplet; I'll use the terms "long eighth" and "short eighth"). The classic case is a slow shuffle, which is usually played with downstrokes only. If the tempo

is comfortable enough, the second stroke of any triplet can also be played with a downstroke.

As the tempo increases, players often start playing the second stroke with an upstroke; the pattern becomes down/up/down for each beat. Like a lot of drum rudiments, this can be accelerated quite a bit and still feel surprisingly natural, despite the repeated downstrokes.

An alternative approach, which becomes more and more necessary as the tempo increases further, is to alternate pick through triplet passages, then to transition back to all downstrokes whenever it goes back to shuffle picking or swing eighths. Triple feel allows plenty of time to make the transition during the space of any "long" eighth note, unlike duple feel, where the eighths are equal and it is necessary to wait for a rest or slur to comfortably reverse the picking.

As the tempo continues to increase, using all downstrokes feels less and less comfortable, and can even result in the player starting to shorten the "long" eighth and lengthen the "short" eighth, changing the feel (for the worse). Likewise playing multiple triplets with down/up/down becomes too difficult. The obvious answer is to switch to rhythmic picking when there are two strokes per beat (down/up), and non-rhythmic alternate picking through triplets, again returning to rhythmic picking when the triplets stop. This applies to all faster tempos.

Should we instead base picking on continuous triplets (down/up/down on beats 1 and 3, up/down/up on beats 2 and 4), with everything else being a subset? To me it depends on the content as well as feel or pulse of the music. The more the basic feel/strum of the music is triplets rather than swing eighths, the more natural this will feel. If you're playing a line where triplets are much more common than swing eighths to the point that swing eighths feel like introducing an occasional rest or slur into the ordinary pulse of triplets, this may happen automatically, too. Still, the experience of starting each beat (and even each measure if it's in 3/4!) with a downstroke is lost, with the risk of the feel of the strum no longer reinforcing the beat, unless you shift into experiencing the beat as half-time (e.g. six strokes per beat, with the beat twice as long as before, so 12/8 feels like 2/4 rather than 4/4).

In some triple feels the beat is intentionally ambiguous; 6/8 could be felt as two beats of triplets or three beats of eighths. The more you feel it as three beats of eighths, the more naturally you will fall into continuous triplets, even at a slower tempo.

Another special situation is a shuffle/swing feel, but at a fast enough tempo with so many triplets that most of the time is spent alternate picking continuous triplets. What should you do when it suddenly becomes a shuffle without the intermediate notes? The choices are to revert to down/up for each beat, or to use a subset of continuous-triplet picking, which would be down/down for beats 1 and 3 and up/up for beats 2 and 4. This can be surprisingly comfortable (like skipping vs. walking) provided you do it enough to get past the confusion.

The other wrinkle is introducing transverse picking. As in duple feel, the most successful integration of this is simply to go back to your overall strategy as soon as you comfortably can.

Finally, regardless of duple vs. triple feel, drum rudiments suggest picking patterns that don't occur to most guitarists. The ones to start with are the two 3-stroke ones, down/up/down and down/up/up, and the paradiddle, down/up/down/down/up/down/up/up, all starting on



any stroke. While it will be harder to accelerate when picking than when alternating two hands, these can be liberating and expressively powerful, and they are well worth the effort.

### ●1.2.12 Miscellaneous picking details

(1) I worked a lot on whether the pick would clear the string it had just picked, allowing it to vibrate, or whether it would instantly come to rest on the other side, muting it. Most people don't think of the latter, which is a fantastically powerful advanced technique for achieving staccato, even if the left hand is playing legato (e.g. George Benson, although it took me many years to realize that he was doing it with his right hand).

(2) Most rock players are familiar with the technique of squeezing the pick so that part of the flesh or nail of the thumb or index finger touches the string, too, creating high harmonics. This is a very successful technique with the Benson way of holding the pick. It is even possible to strum using this technique, accentuating all the very high harmonics even to the point of making the fundamental disappear. I typically used this as a coloration device that I could throw in like a wah-wah, varying the intensity of the effect by squeezing more or less hard.

## Section 2: Fingerstyle technique

### 2.0.1 Development of fingerstyle

During one year of college I took weekly classical guitar lessons, the only lessons I ever had in fingerstyle guitar. Perhaps because I was already an advanced player with a pick, my teachers (Stanley Beutens and Charles Ferguson) put more emphasis on musical issues than on technique. Given the relatively simple level of pieces I was playing, combined with the lack of live performances, my technical deficiencies never really showed up as major obstacles.

When Patti and I started playing as a duo I used a pick almost exclusively. I should point out that surprisingly much of the style I play can be played with a pick, provided you are good at muting strings with the left hand and what I call "selective strumming," where on each stroke you have full control over which subset of the six strings the pick actually contacts. I had developed selective strumming during all the years I played rhythm guitar in funk and soul bands. But, to take the extreme case, if you only want to play on the two outer strings, strumming across the muted inner four is inconvenient and sounds bad. So in situations like this I gradually incorporated my other three fingers, commonly termed "hybrid picking."

After a while I reasoned that it was silly to waste my index finger holding the pick, and I began to use all five fingers. Still, for a year or so more I kept a pick palmed in my right hand, even though I would typically only use it on a song or two per night. I had a tense, untrained, claw approach to fingerstyle that would horrify any serious fingerstyle player, and it sounded like it. My attempts to improve by practicing were wasted because I did not understand the fundamentals. This was paradoxical since by now I had understood well the fundamentals of hitting a string with a pick, which is virtually the same issue. I might get to the point of executing something in practice at home, but when Patti and I would perform the technique would be too inflexible for the reality of playing with somebody else, and the feel, time and accuracy would suffer.

Finally Rich Osborne, a friend who was a wonderful classical technician, took me aside after watching me play live and offered to show me the fundamentals, as taught to him by George Sakellariou. I owe my fingerstyle technique to him. He advised me to start over: I played one note with one finger very slowly over and over, eight hours per day, trying to get a perfect stroke. Each week I switched to another finger, finally working up to chords. Later I worked on independence between various fingers. In the process I realized that my little finger was no longer necessary, except as a backup in case one of the other fingers got damaged or sounded bad.

## **2.0.2 The fundamentals of fingerstyle technique according to Tuck**

(1) The hand should be comfortably suspended above the strings, but stable and undisturbed by whatever the fingers do. There should be no tension anywhere from the hand up through the shoulder, including the neck, jaw and facial muscles. The most useful principle I've found for this is overtraining. If you have access to small children, stand in front of one with your arm in playing position (without the guitar) and challenge the child to dislodge your arm by pushing, pulling, climbing, etc. Practice exaggerated, forceful finger strokes even on full chords. Practice forceful rasgueados and strumming. Constantly focus on relaxing.

(2) Location of hand: A classical technician would typically say the top of the hand should be parallel to the guitar, far enough away to keep the second joints nearly straight, with the knuckles directly above the point of intersection between the fingertips and the strings. More and more the consensus would be that the fingers if extended straight out, parallel to the guitar, need not be perpendicular to the line of the strings as in the old days, but more diagonal. But I believe this is a subset of a broader, supervening rule: Do what is appropriate and be flexible enough for your situation.

We should all learn the classical stance because it is bound to be the right thing sometimes. We should become comfortable throughout the range between perpendicular and very diagonal, because this gives tonal variety. Because I use my palm for muting and percussion, I also need to be comfortable with the hand closer to the strings, meaning the second joints arched up to 90 degrees. This means that the finger hits the string more on the tip, so I must be comfortable throughout this range. I must then be able to lower my palm all the way to the bridge, requiring that the wrist be bent backwards a little, what I think of as a claw position. I also sometimes need to bring my thumb closer to the bridge than my fingers for a brittle bass tone. So I must also practice raising my wrist farther off the strings than my knuckles, until my thumb points all the way into the guitar. Practice all the different strokes below in all the positions you need to use. Then practice changing positions, so you are fluid throughout the range of positions.

One unusual but useful additional variation is to rotate your wrist downwards somewhat, away from the guitar, like the position used in oscillation (see [1.2.2 Wrist motion: Geometry](#) above). A different part of your finger will intersect with the strings, changing the tone, and muting will be accomplished with the side of the hand and/or the curled-in little finger, changing the options, e.g. muting the top strings only.

(3) The source of the motion should be entirely knuckle. The knuckle is analogous to the hip of a football player when kicking a ball. It is the grossest and strongest joint. Never kick from the knee and never pluck from the middle joint. (Note: There are many great classical and flamenco players who disprove this. Still, I believe that stroking from the middle joint should be explored as an optional, advanced technique, once the foundational knuckle stroke has

become second nature.)

(4) The first joint should never break (arch backwards) or even flex at all during contact with the string. Both it and the middle joint should maintain their curved position until after leaving the string, rather than absorb any of the power of the knuckle's stroke. An exercise for this is to arch all three joints of your plucking finger, then press it against a finger of the other hand, as if it were the string opposing the finger. As you push harder and harder, there will be a tendency for the first joint to suddenly break as the middle joint arches more to make up for it or vice versa. Practice until all joints keep their same angle no matter how hard you push. After this the string will feel like nothing and will not dislodge your position.

(5) The stroke should initially begin some distance from the string with the finger fully extended, then accelerate and swing powerfully through the string, as in kicking a ball or swinging a bat. After hitting the string, the finger should follow through, through the full range of motion of the knuckle and middle joint, coming to rest forcibly against the palm. Experience the string as insignificantly small, incapable of affecting the momentum of the powerful finger stroke in any way. Visualize the target as the palm of your hand, with the string being an insignificant obstacle on the way to the target, an ant in the path of an elephant. Snap a finger to see where your fingers should end up and how hard they should hit. Fully open and close your hand, forcibly, away from the guitar to experience what the overall stroke should feel like. On the guitar I call this stroke the "flying pluck." Away from the guitar I call it the sound of one hand clapping.

(6) On free strokes, the stroke should barely clear the next string after it hits the target string, and this only because the middle joint curls slightly instantly after impact. This makes the stroke as parallel as possible to the plane of the strings.

(7) Do not change the hand position at all for a rest stroke. The only difference between it and a free stroke is what happens at the middle joint immediately after the stroke. Instead of curling slightly, straighten it slightly so the finger comes to rest forcibly on the next string. Experience the target as the string the finger comes to rest on, rather than the string you are plucking, just as your palm is the target on a free stroke. Therefore let the next string stop your motion, rather than restricting it in any way with your muscles.

(8) Also learn the stroke which is between the rest stroke and the free stroke, which I call the strum stroke. Each finger should be able to strum as many as five strings on one stroke. Again do not change the hand position. Working on this stroke will make both free stroke and rest stroke much easier and will help you switch more easily between them. It will also give you a new, powerful way to strum, with alternating fingers making upstrokes, while leaving the thumb free and in position to play independent bass notes.

(9) Start with powerful strokes, one finger at a time, with enough time in between to make each stroke feel like a separate experience. Worry about aim later. Just perfect a powerful stroke. Aim will miraculously take care of itself. Play chords exactly the same way; they should be a combination of multiple fingers making the flying pluck. (Note: Rich taught me to start with one finger at a time, but I've come to believe that it is equally good to start with all three fingers together.)

Should strokes be fast/explosive or slow/gentle? I believe you should start as fast/explosively as possible, because of the overtraining/relaxation benefits, but occasionally spend a little time slowing the strokes down by various amounts. When making slow strokes, the three

main things that tend to appear are tension, discontinuity in the motion (or the feeling of the motion) and a tendency to push against the string at the moment of impact, rather than swinging through it.

Later practice playing quietly using the same strokes.

For all three strokes, it can be enormously helpful and usually enlightening to practice on a surface (e.g. table, desk) rather than the guitar. This eliminates any remaining tendency to worry prematurely about aim, plus it usefully connects the finger-stroke experience to other familiar experiences, like playing piano or walking/running/trying to get mud off your shoes.

(10) Only after perfecting the long stroke should you begin to shorten and refine it: First learn to start the stroke closer to or touching the string, but with the same power, relaxation and feeling of domination of the string as if you had swung from a distance. Learn not to follow through at all without compromising the power of the stroke, but generally keep following through as much as possible. The more you do this, the better your strokes and the faster you can play when you do reduce follow through.

(11) Learn to make downstrokes of equal power and speed. This will help you with rasgados and strumming. Even if you never use them for this, it will help you make alternating upstrokes and eliminate tension. When playing upstrokes with alternating fingers, learn to experience it also as alternating downstrokes where no string is hit except on the upstroke.

(12) This may sound a little fanciful, but learn to bounce each finger off an imaginary surface located just past the string (or off the next string in the case of a rest stroke), so that it instantly springs back into position. This is analagous to a drummer bouncing a stick in the air after becoming expert at bouncing a stick on a drum head. Other examples are karate and the tongue of a lizard. Returning instantaneously to position applies just as much to the biggest strokes as to the smallest.

An exercise for this is to alternate fingers. Start at a slow tempo and make sure each finger springs/bounces back to its original position before the next one begins its stroke. Gradually increase the tempo and thus the speed at which your finger must spring back before the next stroke. If you practice this on a surface and make the downstroke audible, each stroke should sound like a flam.

Practicing this stroke will also take you in the direction of promptly muting a string after plucking it, reminiscent of the technique of muting with the pick to create staccato.

(14) The thumb will more or less take care of itself. It is the least of your worries. Note: The amazing world of alternate picking with the thumb is something I won't delve into here; its variables are more successfully shown than described. Related are a variety of funk bass techniques, probably better learned from bass players. Personally I would start (and end) with Louis Johnson.

(15) Backbeat: The two basic ways of creating it are by audibly collapsing fingers onto the strings from above, ready to pluck the next chord and by making a downstroke with one or more fingertips, which can be any combination of strumming and flicking. The latter technique is the only choice when playing a note with one of the fingers at the same time; the downstroke should sound like an upstroke plus a click.

Either technique can coincide with a bass note, but make sure you don't unintentionally hit the bass harder during the backbeat.

The cautions: Avoid using your thumb or the heel of your hand for this, as the sound is usually less suitable. Be careful to find a good musical balance between the notes and the backbeats; most players tend to overplay the backbeat, pushing the listener away. It actually takes very little volume, to the point of subliminal, to propel the groove, so study restraint.

To create a backbeat during a sustained note or chord, the trick is to restrict it to a muted string, although a gentle flick on one or more of the notes of a sustained chord can substitute if there are no muted strings available.

All this is based on electric guitar with a magnetic pickup, which precludes all percussive strokes on the body of the guitar. If those are available to you, then of course explore them.

Backbeat typically means beats 2 and 4 in 4/4, but always consider the possibility of half time and/or double time; each feel is unique, and mixing them within one song can be very effective.

It is better to leave a backbeat out than to put it in the wrong place rhythmically.

### **2.0.3 Choosing which finger to use when playing single lines**

My development here parallels my flat-picking development. Initially I used whatever finger I could, slurring to cover the notes I could not pick, even when the slurring interfered with the phrasing. Most commonly this meant that I alternated thumb and index finger, with thumb corresponding to downstroke in rhythmic picking, and incorporating other fingers when lines moved rapidly across strings. I needed my thumb for bass lines, though, so I learned to alternate index and middle, with index corresponding to downstroke in rhythmic picking. I was careful to maintain this discipline even when string layout made it awkward, such as index on second string and middle on third, fourth or fifth strings. I worked very hard on democratizing my technique so the differences between the easy and the hard way became small. Next and most difficult was alternating middle and ring fingers, much more difficult than alternating index and ring fingers. I also worked on reversing the rhythmic roles of the pairs of fingers, so either would be comfortable on the beat.

The remaining organized patterns involved using three fingers. A big inspiration to me in this was Scotty Anderson, who makes masterful use of thumb, middle and index as a pattern for playing lines. First I worked on aim (index, ring, middle), then on imam. I put particular attention into controlling the accent pattern, which naturally tends to group into threes. I also forced myself to group it into twos and fours. Again I emphasized flexibility by laying notes out in unnatural ways and playing them until they became natural, using lots of arpeggios and repeating patterns of numbers of notes not divisible by three so they laid out differently each time I played them.

There are three patterns of using three fingers to play four notes, which fall into the category of striving for completeness: iama, imam, imia. These have proven to be very useful for cross-string lines, but even more so for evening my technique out so that there is always at least one finger available for the next note, no matter what string it is on.

Independently I also embraced the minimalist approach of limiting myself to one finger, as if

the others were simply no longer going to be available, and trying to push past the limitations. Again, recalling drum rudiments, multiple strokes with one finger, like multiple pick strokes in the same direction can be pushed up to surprising speed when there is no other choice.

Coming full circle, I finally returned to grabbing the notes with whatever random fingers happen to be available. Only now all the fingers except the one that just played always seem about equally happy to volunteer. Now when I slur it is more often because it is what I want to hear musically than out of necessity.

Adding a backbeat while playing lines is unusual, but enormously powerful. Theoretically the same two techniques apply, but the more active the line, the more I tend to use the downstroke approach. For eighths the basic pattern becomes i m m-down m, and for 16th notes it becomes i m i m m-down m i m. Naturally, triplets introduce some additional complexity, but my general rule of thumb for the backbeat is simply to use the same finger I used on the previous note, and usually to use it on the following note, too.

I've found that by adding a regular backbeat I have much more latitude concerning phrasing, leaving space, taking rhythmic liberties and musicality in general. It takes some technical work, but it is extremely liberating, melting away most of the self-imposed pressure to play a very busy rhythmic line without a lot of space as well as to intersperse bass lines, comping, octaves and chord solos to try to fill the space, and it is amazing how it shifts both the playing and the listening experience from cerebral toward visceral and emotional.

#### **2.0.4 How to use picking to improve fingerstyle**

My background using a pick is one of my secret weapons as a fingerstyle player. When practicing, I often switch back to playing with a pick, which reminds me of how the part should feel, evokes my experience playing in hundreds of bands (mostly soul bands) and makes me see the deficiencies in my fingerstyle feel. I'm still a bit better at using a pick, but I love the flexibility, the feeling of touching the strings and the challenge of fingerstyle.

**Appendix: For questions readers have sent in and Tuck's answers, go to [www.tuckandpatti.com/tucks-corner](http://www.tuckandpatti.com/tucks-corner).**

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