Grips, Resonance, and Alignment

The grip forms a cradle, via hand position and finger curvature, in which the stick balances and includes a fulcrum point where it pivots. Grip is probably best thought of as a carefully positioned cradle in which the stick rests, providing maximum control with minimal effort. I view the term grip as the macro level – what flesh touches the stick, and fulcrum as the micro level, where the stick actually pivots in the hand. Creative percussionists utilize a variety of grips and fulcrums depending on the context – including the instruments they play, the music performed, the anatomy of their hand, and the size of the stick. Less thoughtful percussionists apply the same grip/fulcrum concept to every context.

The term “grip” should not imply tension. Most grip problems result from illogical finger position or excessive finger pressure. Such habits often cause various musculoskeletal problems. An efficient grip should allow the stick to move freely, taking full advantage of momentum and inertia and provide maximum resonance of both the instrument and the stick.

Some teachers advocate a particular “grip” regardless of the students’ anatomy. I prefer to have a student begin by dropping their hands to their sides, fingers relaxed as when walking, and see where their thumbs naturally lay relative to their fingers. Then have them gently close this finger position to discover their most natural fulcrum point. For most people, their thumb most naturally touches between the forefinger and middle finger and this should be their fulcrum position.

Unfortunately, many pedagogues teach a forefinger and thumb (pinch) fulcrum that creates two negative outcomes: it causes the thumb to reach forward and the fingers to pull back. This is often not the most natural anatomical position and is less effective because it adds unnecessary tension before playing.

I believe it unwise to teach a student that there is only one fulcrum point. There are actually distinct fulcrums in the fingers, wrist, elbow, and shoulder, all of which can function together to form a comprehensive technique and fluid movement system. To teach a single fulcrum (fingers only) creates the impression that the wrist is the sole manipulator of the stick, which I address in more detail elsewhere. If the fingers remain closed around the stick, there is actually no fulcrum in the hand, since the stick cannot pivot in the hand if the fingers are closed around it.

Fulcrum. Throughout percussion pedagogy there are at least four common fulcrum approaches:

1. **First finger only fulcrum** (front of the hand) is often used for very delicate playing such as soft orchestral applications. The less friction (skin contact) applied at the fulcrum, the more sensitive it is. Unfortunately is it often taught as the primary fulcrum technique regardless of the musical context. There are a number of issues that should be considered. First, it is common to exert too much pressure between the thumb and first finger, which reduces stick resonance and creates excessive muscular tension. Second, a first finger fulcrum tends to limit the distance the stick can travel, which can be a disadvantage in louder playing but an advantage in extremely soft playing. For extremely soft playing, the fulcrum can be
moved forward to primarily the first finger and nearer the tip of the thumb. This provides a more delicate touch and less flesh contact area, providing an efficient pivot point.

2. **Second finger fulcrum** (middle of the hand) is a relaxed and versatile general-purpose technique that permits maximum stick resonance thereby reducing shock being transmitted through the upper body. The forefinger controls the height of the stick (serves as a backstop) and is positioned relatively open (finger tip pointing down) which adequately controls the length of the stroke and the proximity of successive bounces.

3. **Three-finger fulcrum**, a synthesis of the previous two approaches. Simply think of your hand as two units – the thumb and the four fingers. It is important that the four fingers generally be in contact with each other to provide strength and stability in the grip. For some players, however, it is beneficial to have a slight gap between the forefinger and middle finger. Grasp the stick between these two units. There is actually only a very small difference between this fulcrum and the second finger fulcrum; that being the function of the first finger – serving here more as a backstop rather than a pressure point.

4. **Fingers closed fulcrum.** This technique is most commonly advocated in beginning level percussion pedagogy and some marching percussion instruction. I have significant reservations about this approach as the closed hand position limits finger movement, limits stick resonance, and encourages over-use of the wrist at the exclusion of the available musculature. With this approach, the fulcrum either predominates or exists solely in the wrist. Because of these issues and others, I generally consider this technique dysfunctional for holding rudimental, marching, orchestral, or drumset sticks. A baseball bat is, however, another matter.

**Thumb-first finger gap.** I would recommend that the stick be positioned high in the hand, i.e. touching the palm near the middle finger. Provided this position is observed, there should be little or no space between the thumb and forefinger. Holding the stick low in the hand (nearer the finger tips) causes a large gap and muscular weakness. I often use the analogy of forming your hand as if performing a karate chop. Martial artists know that maximum strength is achieved when the fingers are slightly curled rather than extended straight.

**Forefinger.** Do not curl the tip of the forefinger up under the stick. Curling the finger under the stick does not make the fulcrum more efficient, rather it introduces unnecessary grip tension and inevitably moves the fulcrum forward to the forefinger whether this is intended or not.

**Pinky.** Since the pinky is the shortest finger, I find it most comfortable to position the tip of the pinky near the stick. This allows the pinky to be off the stick or on the stick as comfort dictates. In general playing, I seldom wrap the pinky around the stick as this distorts stick and forearm alignment and dampens stick resonance. If I am playing dead strokes, however, wrapping the ring and pinky
fingers around the stick is the easiest way to control these strokes. Some students have a habit of extending their pinky almost straight down toward the floor. I advise against this as it causes excess tension in the hand and disconnects the fingers from each other. I often use the analogy of cupping the hand as if holding water in the palm.

**Balance point on the stick.** The most efficient balance point for any model stick can best be determined by playing long multiple bounces and finding the point where there is maximum bounce duration. To assure a consistent grip spot on both sticks, it is helpful to wrap a small piece of tape around each stick just above this point. Often, a different grip spot is discovered in the weaker hand. Generally, percussionist will move their balance point forward or back depending on the musical context. I prefer a more forward position for extremely soft playing and a further back position for loud playing.

**Stick Resonance.** It is important to understand that it is a combination of the drum sound and stick resonance that gives each player their characteristic tone. In the beginning stage my approach is to allow the sticks to vibrate in the hands as much as possible. To check this, play on a table, board, or hard rubber practice pad and listen to the stick resonance and pitch. Notice as you grip tighter, resonance is dampened and the stick pitch becomes lower. Allowing maximum stick resonance is the key to minimal tension and full spectrum tonal production, i.e. a “warm” sound, on any percussion instrument. As a teacher, my primary method for determining a students grip pressure is listening to stick resonance; as it is a more accurate indicator of a their grip pressure than visual cues. Probably the most important visual cue I use to monitor grip pressure is watching how the skin moves on the forearm. If it moves in a jerky fashion this is often an indication of excessive pressure in the fingers or wrist.

**Finger-palm gap.** The distance of the fingers from the palm, while playing continuous evenly spaced attacks, will, in large part, determine how natural of a stroke motion you develop. A complete closure of the stick into the palm with the fingers (a fixed position) will create a tight grip that lacks a rebound potential and requires excessive motion elsewhere, usually in the wrist. Positioning the fingers halfway open provides the most comfortable finger position and the most efficient stick movement; by allowing a longer stroke path. Further, when the fingers are halfway open they can open or close to manipulate the stick. In general, when the wrists are the primary mover of the stick, this opening can be more closed and when the fingers are utilized this opening varies but is generally semi-open. I recommend a semi-open finger position for general playing.

**Stick & forearm alignment.** To determine the most efficient stick position within the hand, lightly grip the stick between the thumb and second finger and allow your arm to hang toward the floor. You will observe that gravity, if you allow
it to, pulls the stick tip toward the floor; producing a straight alignment of the stick and forearm. Allow this to happen. Notice where the butt of the stick is positioned; near the skin crease at the base of your palm or slightly outside of it. This position creates an arm/stick mechanism that is one complementary unit and yields the most efficient use of energy; because the arm can throw the stick in a straight line. Most problems with stick alignment are due to excessive finger pressure or excessive closure of the fingers, which turn the stick inward from the forearm. I consider the all-finger closed fulcrum a dysfunctional technique because it eliminates finger movement, over-pronates the hand, over-emphasizes the wrist, and destroys stick/forearm alignment.

**Hand angles.** Next, bring the arms into playing position while maintaining this alignment, which, in turn, determines the necessary elbow distance from the torso and hand position in regards to rotation – supination or pronation. Percussionists frequently refer to such hand positions or angles as German grip (back of the hand facing up-pronation) or French grip (thumb facing up-supination). For matched grip, I suggest an intermediate position halfway between German and French grips - where the hand is in an oblique natural position. In other words, the back of the hand is positioned at approximately a forty-five degree angle to the floor. Some timpanists refer to this position as “American grip”.

The stroke motion should conform to these physical realities. The forearm is relatively tense when the hand is fully pronated or fully supinated. This middle-ground approach, is known as “ulnar deviation” in physiology; the forearm’s natural resting position. The ulna is one of the two long forearm bones. When the forearm is in its most relaxed position these bones are parallel, but when the hand is supinated or pronated, the bones are rotated around each other, and this rotation requires additional work and contains additional tension.

**Stick angle to each other.** The angle between the sticks (assuming a playing area where the stick tips are one inch apart) should be less than 90 degrees. The angle will be determined by how far you are from the playing area, elbow position from the torso, and how the hand is pronated/supinated.

**Traditional and matched grips.** Change grips to alter mindset, attitude, musical feel, and sound. Drummers such as Tony Williams, Art Blakey, etc. have done this.