

It Don't Mean a Thing, If It Ain't Got Those Inertia and Ease

An unorthodox explanation of the swing feel - with some naive physics and biology

"All a musician can do is to get closer to the sources of nature, and so feel that he is in communion with the natural laws" - John Coltrane.

Swing, Swing feel, Swung rhythm, Groove, Notes inégales...

I've been thinking about swing for some time.

Specifically about how swing is generated.

How to explain it - or if it is unexplainable.

How to teach it - or if it can't be taught.

Or, at least, how to control it - or because it is really out of control...

I am a musician and I play electric bass guitar and fingerstyle nylon-guitar.

I guess I am a good "swinger", because I have been called to play professionally in a variety of gigs, within all sorts of genres (including Jazz).

I also believe this always was an easy thing for me. In the ensemble classes in my Berklee years, I always was the one teachers preferred to do the rhythm guitar.

So, how do I produce swing?

In my case, I focused my observations and perceptions on the fingers of my right hand. The ones that pluck the strings (or strum them).

I noticed that after I pluck a string for the first note (of a musical phrase), a change of scenario happens:

- The string is now vibrating - loose.
- The finger that plucked the string does a little wasted travel further, for it applied a force that was not entirely liquidated against the string.

Next, playing the next note (note : here I must claim that swing cannot be produced within a single note in time. I believe it needs to be from two consecutive notes or more).

- To pluck again, the finger has to stop that wasted travel and come back in the opposite direction, avoiding hitting the string (by doing a curve), to get ready to play again.
- But now it faces a micro rebound, a ricochet of the still vibrating string.
This encounter, finger versus vibrating string, can compromise the precision of next plucking - its timing, articulation, tone, dynamics, even intonation (pitch).
- So to play the next note with these waverings, but with an acceptable control - and still with some ease, I have to accept the string's rebound as a natural part of this next plucking.

This is achievable with muscle tension/relaxation control.

note: I believe a strong distinction between classical and jazz/folk/pop performance can be marked here: to be 100% assertive/effective, the classical interpreter will force the finger "into it", considering the rebound "hazards of the profession", while the others, a tool, an aid at hand.

- This second note played comes with at least a few microseconds tempo impreciseness. It is a (very) little before or after the "perfect" tempo. It's articulation, tone, dynamics, even intonation (pitch) probably are at least not as "perfect" as the first note.
- Following from the third note onwards, the notes get very similar outcomes - each with their almost unique timing, articulation, tone, dynamics, etc.

- Swing is “on”.

I know this is a very micro perspective. I played two or three notes on a single string using only one finger. But right on, inertia and rebound get combined with some muscle tension/ relaxation.

These physical phenomena proliferate quantitatively and qualitatively as more fingers, hands, strings, instruments parts, etc. join a “full playing”.

They are sensible to the music tempo. Depending on it, the articulation of the plucking is altered, provocating diferente rebounds (again, quantitatively and qualitatively). To my understand, that’s why we have all this swing ratios i.e. Hard swing, Triplet swing, Soft swing, etc.

I am not making this up, I am only relating it, in a micro perspective, to a percussionist or a drummer doing a “ruffle”. It is practically impossible to successfully execute a ruffle, without letting inertia and rebound happen. And to control that, educated muscle tension/relaxation.

One can suggest here that Newton's Three Laws apply.

Because these laws deal with objects, movements and forces.

A bass string, the drumstick, the skin of the percussion, the mouthpiece of the trumpet, the key of the piano, etc. They all are objects moving or creating resistance.

And our body is an object formed by several objects (the fingers, the lip, etc.).

Moreover, our body is a live object and made of independent live objects.

They have a spring of states of tension and relaxation (rigidity / flexibility), states of metamorphosis (shape change), and states of speed and travel distance.

Fingers against strings, a mouth against the mouthpiece rim, drumsticks against percussion skins, etc. It’s all there. And with the voice too (listen to Louis Armstrong, Betty Carter, Al Jarreau etc. Some of them fire inertia and rebound by toying with their diaphragms against their air emission).

Dancers, of course, use a lot (even in classical/ballet).

Plenty of inertias, rebounds with muscle tension/relaxation.

As for the biological matter, everyone has their particular touch. Mine is different of yours because our bodies (with different fingers, hands, etc.) are unique.

So everyone has their unique, particular “swing” profile as for accessing an instrument.

Again, it is near impossible to find two drummers to reproduce exactly the same ruffle.

So, now I can dare to say, these are the most important tools I use to **swing**: some good combinations of inertia/rebound with body tension/relaxation.

In my case, mostly fingers, hands and forearms.

I actually believe a "true" swing can only be generated using this approach.

Of course we add the triplet feel and acentuacion on the weak beat - in the Jazz case.

I say “Jazz case” because, besides in Jazz, swing also occurs in other rhythms (dances). We hear it in Latin, Bossa-Nova, Funk, Rig, and others - even with some folk Polka, each with their particular swing. And also in a lot of eastern music.

Swing has been the object of secrecy and mystery.

“It's not in the books”, “You can't learn, you are born with or without”, “You have to be bitchiness”, “Tricker the devil” etc.

Okay, but nobody said that it is an exclusive talent.

With acceptance of the natural and available inertias and rebounds of the instrument, and an educated control of muscle tensions and relaxations, any musician can acquire it - as a technique.

And if Newton's laws apply, I risk to go even further: consider Einstein's theory of relativity. Would time, space and gravity influence how swing is produced?

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