

Column by Renzo van Riemsdijk (Masterenzo):

Dynamics!

Dynamics are a strange thing. When we look at the sixties and seventies our view on dynamics nowadays has changed dramatically.

Our hearing has become used to listening to compressed music. This is a process that gradually evolved over the years. By the end of the nineties the loudness war added an extra dimension to our hearing experience by introducing a phenomenon called *hypercompression*.

Because of this dreadful war music was mastered at continuously higher levels and contained less and less dynamics. Imagine being in a closed room that's slowly filled with water. The ceiling is getting closer and your sense of space is reduced greatly.

By the turn of the century and the following years the dynamic range (difference between the loudest and softest passages) was reduced greatly. Have a listen to the Metallica album 'Death Magnetic', released in 2008. Listen to a vinyl record coming from the seventies after the Metallica album.

You can also listen to these albums on Spotify but you have to make sure that loudness normalization is turned off (advanced settings: something like 'equal playback volume for every track').

You'll probably notice a couple of differences in sound between the two albums. The first thing you'll notice is a huge difference in volume, followed by differences in energy, impact and placement of vocals and instruments. Pay attention to the *space* every instrument has and in particular the snare drum.

Limiting, a technique used by mastering engineers to make tracks louder, can cause a change in the impact a song has. When used sparsely a limiter can certainly contribute to the impact and energy of a song.

The limiting used on the Metallica record can hardly be called sparsely. Here we can hear the relentless and brutal effect of heavy brickwall limiting. Listening to the snare drum you'll probably notice that the impact of the snare is somewhat covered by the other instruments. This is a common effect caused by heavy limiting. It causes songs to sound very loud but not often pleasantly loud. This type of loudness actually has a name: *wimpy loud* (courtesy of Bob Katz, an American mastering engineer). And as for the *brickwall* limiter: what's in a name.

Heavy brickwall limiting has another effect: it causes ear fatigue. Because of the *hypercompression* caused by the limiter our ears are being stressed out. Most people want to lower the playback volume when listening to hypercompressed music. Dynamic music with a great sense of impact and energy wants to be played loud!

Like I said our hearing has gotten used to less dynamics in music.

This has another cause: our hearing experience has changed over the years. More earbuds/headphones, more listening while being on the road and thus more background noises.

Actually these background noises were one of the main contributors of the loudness war. The loudness war itself is responsible for less dynamics in music. Et voilà: we got ourselves a vicious circle that keeps spinning round. Luckily the loudness war was ended by the introduction of loudness normalization by music streaming services.

In next month's column I will elaborate on some more technical aspects of dynamics. Compressors, limiters (even more), clipping, ducking, fluffing, that kind of stuff. Very interesting. See you next month!

Renzo

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