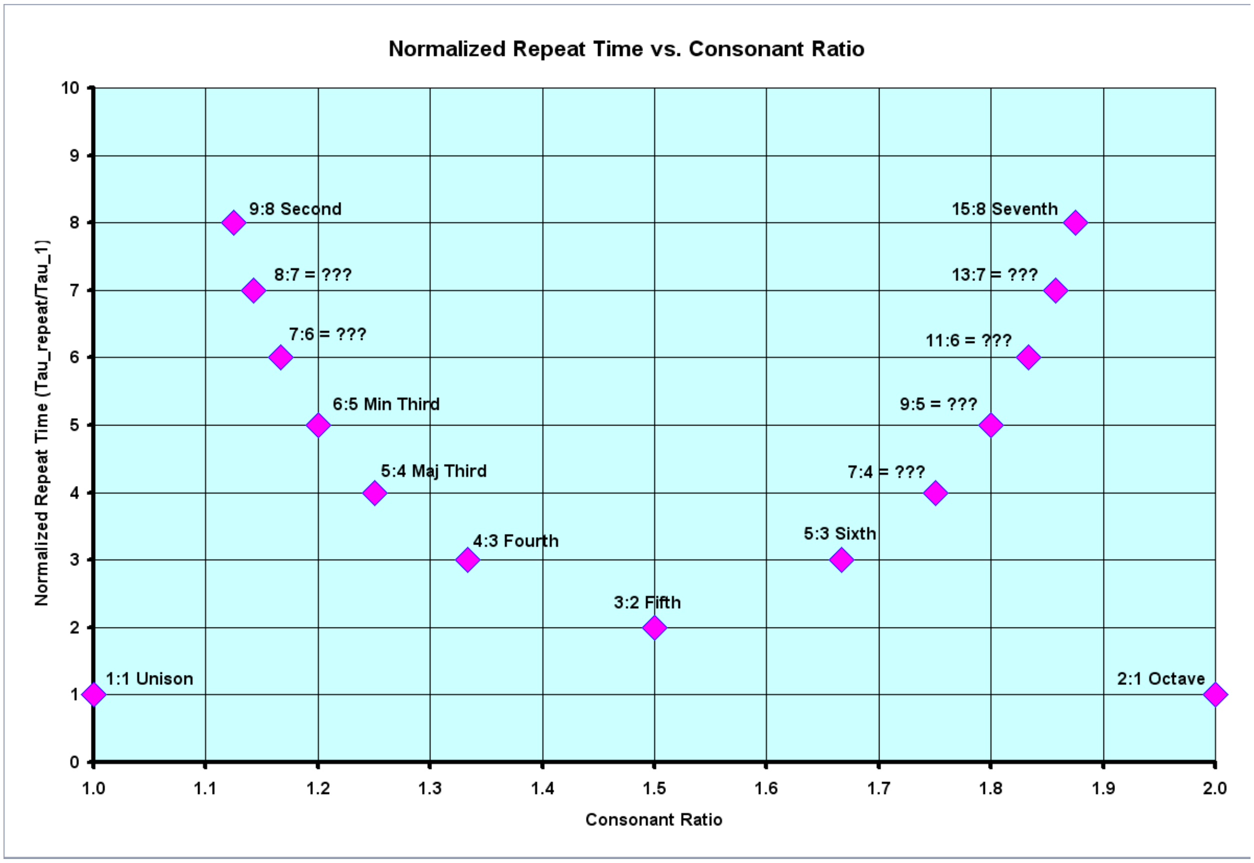

When two (or more) musical tones are dissonant, the *phase relation* of higher frequency relative to the lower frequency is ***not*** time-independent (time stable). The resulting overall waveform is also not stationary/time-stable. This waveform is ***not*** as easy for the human ear/brain to recognize (analyze).

For dissonant tones, the harmonic(s) of the higher frequency tone do ***not*** perfectly/exactly line up with the harmonics of the original lower frequency and/or higher frequency tones. Additionally, quadratic non-linear responses present in the human ear/brain generate/create sum & difference frequencies, *e.g.* $(f_{L-x} + f_x)$ and $|f_{L-x} - f_x|$ that do ***not*** perfectly/exactly line up with the harmonics of these two original tones, and again the generated sum/difference do ***not*** have a time-independent/stationary phase relation relative to the fundamental of the lowest and/or higher original tones!

Because there is a continuum of possible non-integer frequency ratios, with the above properties, the human ear/brain perceives dissonant tones as non-special, non-unique and (much more) brain-intensive/difficult to perceive/analyze such sounds.