Liam Carey

## Yes and No

for 22 solo strings

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Duration: 13'15
Instrumentation:

12 violins
4 violas
4 violoncellos
2 double basses

Note on accidentals:
$\downarrow=1 / 4$ tone sharp
$d=1 / 4$ tone flat
Accidentals with an arrow down should be played $1 / 6$ of a tone (approx. 33 cents) lower than usual, so:
$ף=$ natural lowered by $1 / 6$ of a tone
$b=$ flat lowered by an extra $1 / 6$ of a tone
Note on techniques:
All players should play without vibrato as default (unless specifically requested otherwise).
s.p. = sul ponticello - should be very close to the bridge to create a harsh spectral sound.
s.t. $=$ sul tasto - should be right over or very close to the fingerboard to create a weak and thin sound.
ord. $=$ ordinary bowing position
mannsw $=$ with vibrato
工.~nnon = progressive vibrato - should start from no vibrato
n.v. = non vibrato (used only to cancel a vibrato sign used previously)

Throughout the history of music theory a number of theories have been put forward to explain the phenomenon of harmonic consonance and dissonance. Two prominent examples include Jean-Philippe Rameau's theory of the fundamental bass (Treatise on Harmony, 1722), that is the idea that any group of notes belonging to the same harmonic series will be heard as being harmonically consonant, and also Hermann von Helmholtz's theory of roughness (On the Sensation of Tone, 1863), which argues that two very close frequencies cause an unpleasant beating sensation as their waveforms interact which is heard as being harmonically dissonant. It is the contention of the theorist Ernst Terhardt that musical consonance is not one or other of these perceptual processes but both, and that they work together as part of two component concept:
"Music consonance is thus composed of two principal components: sensory consonance and harmony. . . Harmony represents the principles of tonal affinity, compatibility, and fundamental-note relation. . . Sensory consonance is defined as the more or less complete lack of annoying features of a sound; it is pertinent to such sensory parameters as roughness and sharpness."

## The Concept of Musical Consonance: A Link between Music and Psychoacoustics, 1984

If Terhardt is correct this leaves the harmonic series in a a contradictory position: extended chords created from it will be both consonant as they are harmonically related, but will also be dissonant as the higher intervals of the harmonic series become increasingly smaller and have audible roughness.

This piece consists almost solely of a single 22 note chord made up of the first 22 pitches of a harmonic series based on a low C . The aim of the piece is to play with this contradictory nature of this chord - at one moment sounding highly consonant, the next highly dissonant, and then fusing the two together to create a sonority which is an ambiguous combination of both at the same time.

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