

Pressure and Speed
String Quartet
Notes

Pressure and Speed is a project that attempts to deal with the fundamental physical aspects of string instrument sound production. By notating specific hand pressures, bow pressures, and bow speeds a whole range of sounds is created not only by the many combinations of the three parameters, but also by the infinitesimal gradations in the transitions between each state, not to mention the peculiarities of each instrument. Though each set of numbers (pressure and speed coordinates) in a phrase is a fixed state they should be thought of as targets within a shifting field. The piece takes place in between the fixed states as much as it takes place at the fixed states.

1. The piece is made of 20 phrases. Each phrase consists of 1 to 5 sets of three vertically aligned numbers. These numbers indicate the pressure exerted on the strings by each hand as well as the speed the bow moves across the strings.

The top number indicates the left hand pressure: 0 = finger hovering just above the string, 4 = string pressed firmly against the fingerboard.

The middle number indicates the pressure of the bow against the string: 0 = hovering just above the string, 4 = pressing as hard as possible without damaging yourself or the instrument

The bottom number indicates the bow speed: 0 = still, 4 = as fast as possible.

Numbers between 0 and 4 are to be scaled within the parameters set above.

2. A "-" between numbers indicates a gradual change, a "/" indicates a sudden change.

3. Each performer should use only one string for the duration of the performance. All instruments should stop the string on the same pitch in the same octave, preferably not on a strong harmonic node. Everyone should play on a differently tuned open string. Try the F# above middle C with violin 1 playing on the D string, violin 2 on the G string, viola on the C string, and cello on the A string.

4. Each phrase has a time duration that the phrase occurs within. The phrase may begin and end any time within that duration, however once a phrase has begun it should be carried through to completion without pause.

5. Durations within a phrase (between each set of pressure and speed coordinates) are open.

6. Within a phrase if there is an action in the notation that will not result in a sound, such as bow speed = 0 or bow pressure = 0, it should still be performed as part of the phrase.