These parts may vary considerably in dynamics, ranging from being well under the cello sound, to slightly or even considerably above it for periods of time. Additionally, these figures may have crescendi and descrescendi shapes upon them, composed by the performers either beforehand, or done improvisationally in performance in response to the sound of the piece. These can vary as much as the performers like.

Trombone

The trombone part is similar to the flute and clarinet parts, although independent of them. In general, it is also softer, and should rarely, if ever, sound above the cellos. Like the flute and clarinet, the trombone has a number of figures, in order, which should be introduced (but once introduced, are available for playing) over the course of the piece. Unlike the flute and clarinet part, the trombone part should be in sync with the conductor's pulse, although the conductor's "1" does not need to be the same as the trombonist's "1". The trombonist should sit somewhere behind the cellists. The trombonist may use different mutes for different sections of the piece, and also play with dynamic crescendi/decrescendi in the same way as the flutist and clarinetist.

Thanks

jargon was written completely in Java/JMSL. Thanks to Nick Didkovsky for JMSL and significant help in making the score visible; Michael Finckel for insightful advice regarding cello notation (and to the other 11 cellists who premiered the work, for their input); Michael Byron, on-line Finale guru; Michael Goode for the Dolet plugin; Travis Garrison for the tuning tapes; Aenon Loo for some good notation ideas; Michael Winter for helping me make corrections; and most of all, Daniel Goode of the Flexible Orchestra for commissioning the piece.

Larry Polansky 3/25/05 rev. 9/26/05 Open strings should be played, usually, nearer the neck to minimize their difference to the harmonics. However, they may also be used as accents, and played more strongly, at the players' discretion.

Each measure should be counted in four (by a conductor), only to keep time and place. Rhythm is spatially notated, and it is not critical that players be exact about their attacks in relation to the pulse. Rather, they should try to play the rhythmic spacing of the measure. Notes should generally be held until the next note, or until a rest. Rests are used not as precise rhythmic indicators, but as signals that a certain amount of silence should occur in a given part at a given time, more or less the amount of time of the rest. Exactly even rhythms seldom occur, and synchronies are infrequent.

Notes may be faded in and out to taste, within the rhythmic notation. Again, extremes should be avoided, but some notes may end early, some may come in gently, some may be be attacked more strongly than others.

Dynamics are somewhere between medium and loud. No one should stick out, and no one should be covered up for any length of time. That said, players and the conductor should use their ears to subtly shade the overall sound to make each performance individual. There should be no overall plan of getting louder or softer over the course of the piece — the density, harmonic, and rhythmic changes of the score will take care of that.

As individual parts end, no attempt should be made by the remaining cellists to change their style of playing. That is, they shouldn't fade out, get necessarily louder, or softer. They should simply be sensitive to the new textures, as they have been to the full ensemble.

Flute and Clarinet

The flute and clarinet parts are independent of the cello parts, and should not be metrically related to them. The flutist and clarinetist should determine their own tempi for their figures, and begin them without regard to the pulse of the cello parts.

They should play between 70 – 80% of the time.

Either instrument can play either part (high or low). The parts are in C.

The figures are in order of their introduction into the piece. Once introduced, a figure is available to be played again. However, in general, later figures should be used later in the piece (again, this is up to the performers). Each figure, once begun, may be repeated any number of times.

There are two types of parts: melodies, and rhythmic ostinati. The melodies should come out a little more, the ostinati may weave in and out of the cellos' texture. The ostinati may be repeated in any way, switching back and forth between measures. The performers should invent some simple visual communication system for deciding when and how, during the performance, to play these parts.

jargon for 12 cellos, flute, clarinet, and trombone

Larry Polansky 2004-2005

Performance Notes

Cello Notation

Cellos play *only natural harmonics*, up to the 5th harmonic. The first harmonic is the open string. The 2nd harmonic is played halfway up the string, and is notated and sounds an octave higher than the open string. The 3rd harmonic is notated as a perfect fifth of the string, and sounds an octave and a p5th above the open string. The 4th is notated as p4th up the string, and sounds two octaves higher than the open string. The 5th harmonic is notated, in this score, as a maj6th up the string, and sounds two octaves and a major third above the open string (see the chart below for harmonic fingerings).

Only the nodes, or the fingerings, are notated, not the sounding pitches. These nodes are notated as if the strings are not retuned. The strings are notated as roman numerals (IV for the lowest, C string, I for the highest, A string). Open strings are open diamonds. In double stops, the lower string is to the left.

Cello Tuning

Each cello is tuned differently, as per the tuning chart below. Tuning CDs and/or mp3 files are available. These tunings are also quite simple to learn to do by ear. Most of the strings are tuned to the odd harmonics of the open C (3, 5, 7, 9, 11, 13, 15, 17), though a few strings are tuned to slightly more complex ratios (9/5, 5/3, etc.). The low C is the "fundamental" of the piece. Most of the other pitches may be tuned by simply tuning to the appropriate octaves of harmonics sounded on the low C.

Note that most of the more complicated pitches (33/32, 21/16, 49/32) are easily tuneable by ear in a similar fashion. For example, 33/32 (Cello 2, II) is a p5th (or 3rd harmonic) above the pitch 11/8 (the 11th harmonic of the open C). 21/16 is a p5th above the pitch 7/4 (the 7th harmonic of the open C). 49/32 is a m7th (7th harmonic) above the pitch 7/4. Every pitch in the tuning may be derived simply in this way, and each cellist has only to learn how to tune four of them.

Performance (Cellos)

Tempo is somewhere between 50 and 60 bpm for the piece, and should not vary much.

Cellists should play as expressively as possible.

The *harmonics* should be bowed in some part of the string which, simply put, sounds good in the ensemble. Players may vary between playing more towards the bridge, more towards the nut, and with different parts of the bow, but in general, a shimmering, more or less homogenous sound should be aimed for. Extreme sounds (on the bridge, a lot of bow pressure, etc.) should be avoided.