intra-actions

for solo cello

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Duration 10mins+

Technique:

- play open strings only, playing long and sustained (*flautando* and *sul pont* should work best) to bring out isolated partials and subsets of partials (multiphonics) from the open string tone.
 - the left hand is not used to play on the strings, left hand only used for detuning (see below).
- aim for **stable** harmonics/multiphonics but also accept those that may only be sustained briefly; they may flicker but should still have a presence and be repeatable. Avoid harmonics that are completely unstable, unrepeatable, or cannot be sustained for even part of a bow-length.
- sound should be **continuous** with generally **quiet** dynamics, almost whispering, and allow strong harmonics to "sing out" gently. However, the technique may require some grinding (e.g. with the heel of the bow) to initialise higher harmonics, and there may be times when harmonics "slip" or change quickly, this is expected but should not be exaggerated for dramatic effect.
- playing should not be busy or hurried, even if the resultant sound occasionally is.
- detuning is always carried out with the left-hand while the right-hand continues bowing; any resultant "pings" as the tuning peg slips and sticks again are an expected perturbation of sounding surface. Detunings should always be as small as possible, almost imperceptible, however the nature of the instrument means that some larger slips of tuning are inevitable. Also, detuning one string will almost certainly affect the tuning of other strings. The purpose of the detuning is to alter the string formant as this will alter the weighting of the partials for that string, and thus the available pitches.

Score

1. continuously bow (as above) an open string until one stable partial or multiphonic dominates and the fundamental recedes or disappears completely.

- 2. Using double-stopping to smoothly and slowly crossfade (over several bow lengths), to a string adjacent to that used in (1), but aim for a partial with the same sounding pitch¹ as was achieved in (1). If a stable partial is achieved that is the same pitch as (1) then goto (3), else goto (4).
- 3. return (by slow double-stopped crossfade) to the string played in (1) and attempt to play the same partial as was achieved in (1). Simultaneously, detune one string that was not used in (1) or (2). If the same partial is achieved then goto (2), else goto (4).
- 4. detune the string currently being played, then end, begin process again with another string, without double-stopped crossfade. Goto (1).

The piece continues for as long as is physically viable for the player (see variations below), or until the strings are detuned beyond the possibility of sustaining stable pitches.

Variations

- periodically (after at least 5 minutes of continuous sound, preferably longer), the player should stop bowing while an isolated partial is sounding, allowing it to decay, and rest for a time before continuing.
- periodically (after at least 5 minutes of continuous sound, preferably longer), the player should stop bowing while an isolated partial is sounding, allowing it to decay, and sing the pitch of the partial, quietly and simply, perhaps several times repeated, until the bow arm is rested enough to continue.

¹ or closest perceivable pitch in the case of multiphonics.