hammer, bell, song

for septet: cello and six sustaining instruments with phone electronics

John Eagle

March 2026

hammer, bell, song
for Tacet(i) Ensemble, March 2026

If I had a hammer, I'd hammer in the morning,
I'd hammer in the evening, all over this land.
I'd hammer out danger, I'd hammer out a warning.
I'd hammer out love between my brothers and my sisters, all over this land.
If I had a bell…
If I had a song...
– *If I Had a Hammer (The Hammer Song)*, Pete Seeger and Lee Hays (1949)

hammer, bell, song was first conceived as a piece about environmental interaction stemming from Bernie Krause's acoustic niche hypothesis—that species in an ecosystem utilize unique places in frequency space and time in order to avoid sonic competition in their communications. This presupposes a certain level of balance in an ecosystem. But what if that system were out of balance? In danger of collapsing?
– John Eagle, March 2026

INSTRUMENTATION:
The six open parts may be any sustaining instruments, ideally with the comfortable range in each part. If necessary, parts may be octave-transposed. Also ideally, one (possibly more) instrument is a plucked string instrument such as a guitar or banjo using an Ebow for the first sustained pitch and pick for the ending material. Tacet(i) ensemble's instrumentation for the premiere performance was: flute, Bb clarinet, alto saxophone, trombone, tuba, electric guitar, and cello.

SETUP:
Cello should be center-stage. Other instruments may be set up in a line or loose semi-circle with cello at the center, or in a semi-diffuse manner (but still in the general center). The phones in their enclosures (see below) should be placed on the floor next to each performer. There should be room to walk around the setup and, possibly, into the audience seating area. Lights should be low or off. Preferably all instruments besides cello have their parts memorized and do not have music stands on stage.

EQUIPMENT:
All performers, except cello, require a smartphone with the application MobMuPlat running a Pure Data patch supplied by the composer. The phones are placed in spherical 3D printed enclosures (called "crickets") which can be provided by the composer or printed from provided files. Download the software and print files as needed from: https://github.com/john422e/hammerBellSong and follow the instructions in each folder's README file for setting up application and printing crickets.

Before starting the piece:

All performers except cellist: with the MobMuPlat application properly configured (see software/README.md), assemble each cricket except for the top hemishpere:

1. the phone mount is attached to the middle piece where the phone is placed and tightened securely.
2. the bottom hemisphere is screwed onto the middle piece.
3. each performer selects a unique position using the center knob in the app. display (the performer with position #1 must still press the knob once in order to initialize data properly.

Starting the piece:

The cellist cues the beginning of the piece, starting their stopwatch while all other performers press the blue button in bottom-left corner of app. display. Those performers then fully assemble their crickets by screwing on the top hemisphere and placing the cricket next to their chair.

Section A:

After 30 seconds, the cellist begins playing, after which all other performers begin entering on their sustained pitches, one at a time. All performers should begin within fifteen seconds, approximately. Pitches are sustained at a comfortable, moderate dynamic without vibrato, breathing or pausing as needed.

Section B:

After two minutes have passed from this point, crickets will begin sounding, one at a time, with a pulsing sound and flashing in time with the pulse. Once this happens, each performer begins a process of exploring/searching. In this process, each performer may freely explore the performance area as well as any accessible spaces in or around the audience. They bring their crickets with them during the entire process, either carrying it in their hands or gently rolling it with their feet. The three-dimensional rotation of the cricket will alter the pitch, pulse-rate, and timbre of the sound (the flashing speed adjusts to the pulse-rate). Each performer may experiment freely with the position of their cricket to create different sounds while exploring different areas of the space. Movements should be natural and not too fast. After a period of exploration and once other performers have begun their own exploring/searching process, performers begin looking for partners. A partner is another performer whose cricket is sounding at the same pitch. Performers will need to spend some time with each potential match, adjusting their crickets, to see if they are able to match pitch. Once a match is found, the two performers try to modify the pulse-rate of their crickets so that they are alternating at a steady speed (the flashing lights are especially helpful here). A degree of tolerance is expected in both phases of this process as the sensitivity of the crickets makes precise matching difficult. The two matching performers slowly place their crickets on the ground next to each other, doing their best to sustain the matching pitch and pulse-rate (they may continue adjusting) and then return to their seats/instruments for Section C. A numerical display on the phone app. shows the current time in the piece which can still be seen while inside the cricket. After nine minutes have passed, if a match has not been found, that performer gives up and places their cricket on the ground and returns to their seat for Section C.

Section C:

Once each performer returns to their seat, they begin freely playing the short cells of pitches. The rhythm is ad lib., but should be phrased as a short melodic phrase (expressively, but within the overall dynamic/sound). The speed should be moderate to slow. There should be space between each performer's cells, especially as the number of performers in this section grows (there will be a period where some performers are still in Section B). The texture will inevitably become more dense, but there should be space for each performer's melody to cut through.

CELLO: the part is made up of slow dyad changes, sometimes with glissandi. The glissandi should be very slow and even, though speed may vary and small jumps for finger/string changes are okay. The bow icon, , indicates a change in bow pressure and/or position. Position means ord., sul tasto, or sul ponticello (and all gradations in between are available). Bow pressure is anything from the very light bow pressure to very heavy overpressure, while still keeping a continuous bow movement and sound. The change at each bow icon should be immediate and, at least some of the time, the change in sound should be dramatic.

Full Score (C score)

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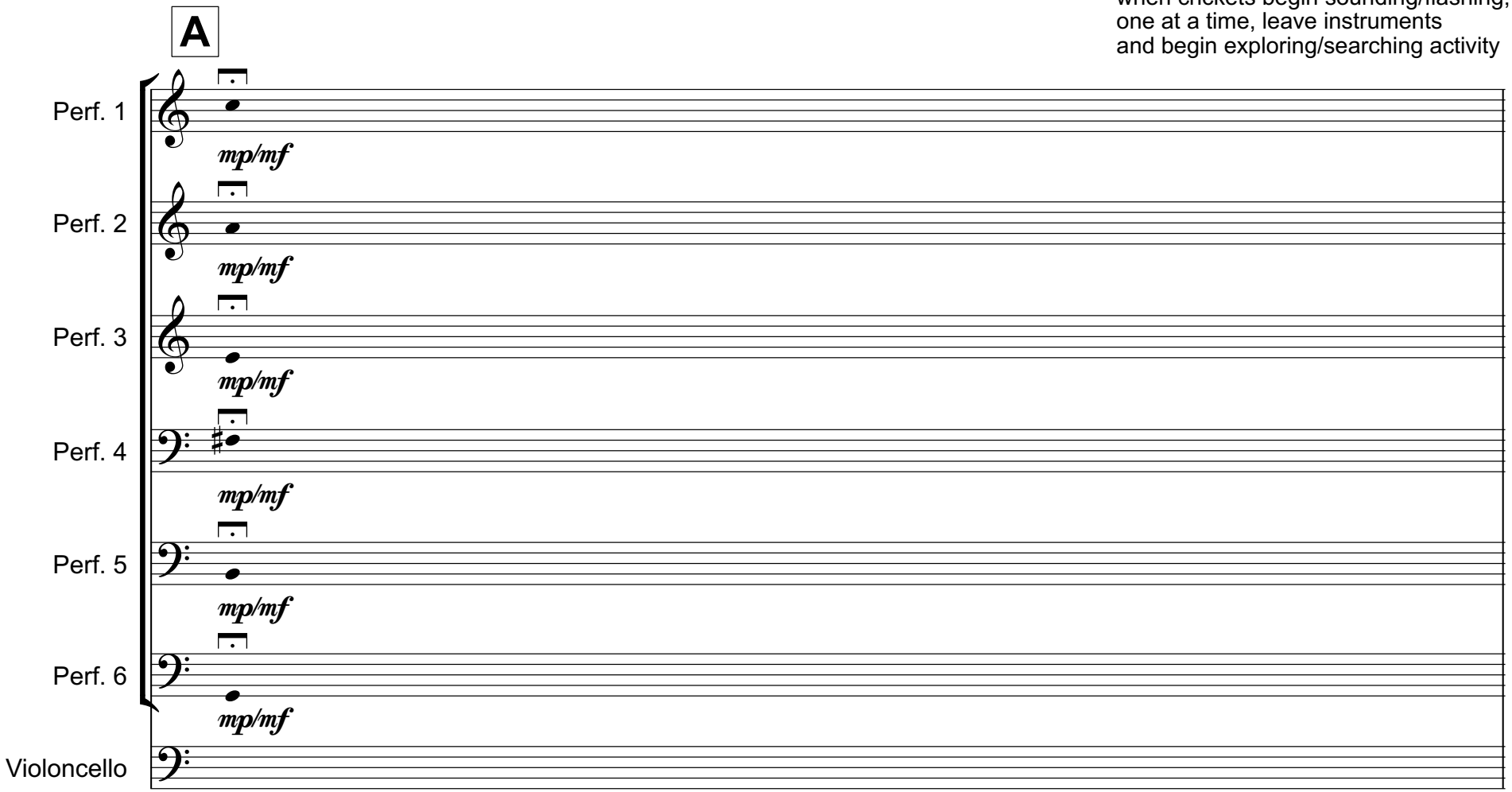
Cello cues beginning: a stopwatch start for cello while
all other parts press blue button on app and assemble the crickets.
After 30 seconds, the cello begins playing, after which all other parts
enter on pitch individually (all players should start within fifteen seconds
of first instrument), sustaining indefinity (breathing/breaking as needed)
for at least two minutes

when crickets begin sounding/flashing,
one at a time, leave instruments
and begin exploring/searching activity



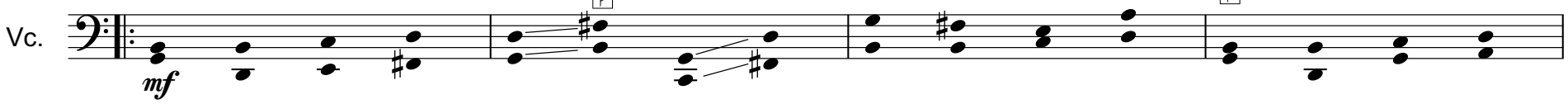
(begin at 30": see material on next page)

begin at 30 seconds (other instruments enter afterwards)

B

(all glisses very slow, but may vary)

2 freely, very slow (bow pressure/placement change) (similarly)



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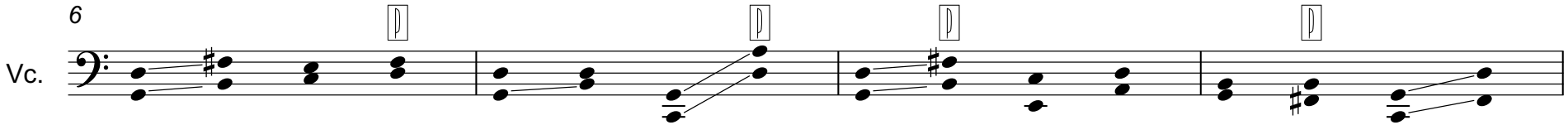

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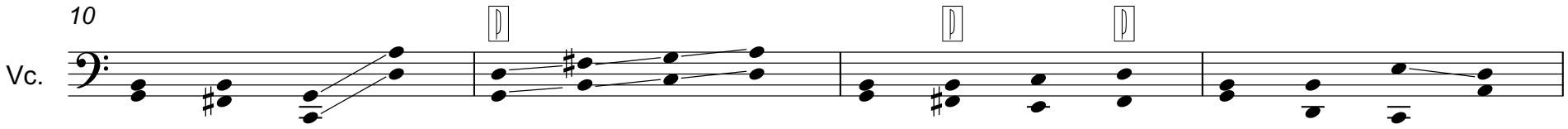
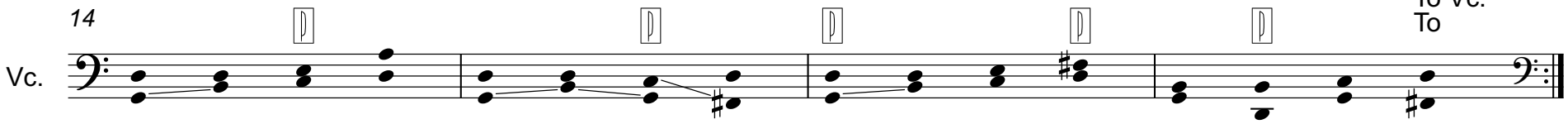


continue repeating until all players have stopped playing (playing at least one full measure before stopping). The end may be anywhere within this loop (a complete measure)

14 To Vc. To



All parts except cello:
once searching activity is complete, one at a time, return to instruments;
begin playing melodic fragments contained in boxes in order,
with moderate to long pauses in between, freely and not synchronized,
always legato and tenuto, at moderately slow speeds but with subtle
lyrical phrasing, repeating full range of cells.

Once each instrument's cricket stops sounding/flashing, stop playing (one at a time), until only the cello remains.