

je me nuit

for one, two or three flutes
and electroacoustic environment

(2007)

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Acknowledgements:

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Setup:

je me nuit is for one, two or three flutes and four-channel electroacoustic environment using a MaxMSP patch.

The audio interface used will require 1 input and 4 outputs. Use of a mixing desk is recommended for control. With several flutes, the microphone feeds (one mic per flute) should be mixed to a single signal before being sent to the patch; the four outputs should be routed back to the mixing desk to allow for fader control during performance.

Slight amplification of the live flutes may be set if this helps blend flute and electroacoustic sound but should be minimal.

The four loudspeakers surround the performers, two in front of the performers but still on stage, spaced widely, and two behind the performers closer together but at enough of a distance to give depth to the image (figure 1). The loudspeakers should be at a similar height to the flutes. If possible, a subwoofer should be used in conjunction with the four main loudspeakers.

If additional loudspeakers are setup in the space (e.g. acousmatic diffusion setup), the electroacoustic part can be enlarged or actively diffused. In the case of active diffusion, the progression from concentrated point to expansive movement should be reflected.

Multiphonics and symbols:

Each flute uses only one multiphonic fingering for the entire work, the mode of sound production being varied throughout. Three recommended multiphonics are given below (figure 2) but others may be used provided they have been experimented with. Performers can use identical or differing multiphonics.

There are five modes of sound production (figure 3); there is some overlap between each, and they are zones more than objects. The 'pitched sound' mode uses the lowest note of the multiphonic; for the first suggested multiphonic, this can be interpreted as being the unstable A/B (la/si) dyad in oscillation, or either pitch alone. The 'breath-formant' sound is like a shadow of the lowest pitch, using a loose embouchure to colour a very airy sound.

Explanation of the graphic notation + performance:

The notated score is in landscape format, with the small square from which the lines emanate being top left.

A large rectangle forms the border, which mirrors the square in the top left. Both square and rectangle are related to the breath sound mode, and represent a border zone foreshadowing and ending each path. This is both what sound the flute parts emerge from and move to, as well as being a conceptual foundation; the sometimes silent breath of the flutes always sustaining the piece.

Leading from the square to the outside rectangle are four paths, to be read left to right, bottom to top; the fourth path splits into two. Performers trace each of the four paths in turn, each time emerging from (square) and dissolving to (border rectangle) breath-sound then silence. Sampling occurs during each path, playback between each path, so that as the flutes dissolve into the large rectangle they overlap then dissolve into sound from the loudspeakers.

Though the timing of the patch processing is set, the performers should treat the beginnings and ends of each path as continuous transitions, meaning there should be overlap between live flute and processed sound; for the path ends, this increases throughout, from a little overlap ending the first path to substantial overlap after the fourth (exact duration of overlap judged in the moment).

Verticality and horizontality of each path in the score loosely indicates either a more intense and focused feel (vertical) or a more drifting and mobile one (horizontal). The piece moves from focused, concentrated paths to drifting ones, with overlap increasing at ends.

During each path, sound production needs to be continuous and without retake of breath due to the sampling that takes place. With multiple flutes, there is less pressure to sustain sound continuously.

The four paths in the score can be described as:

- 1: breathy sound coloured by lowest component of the multiphonic; like the shadow of a pitch.
- 2: clear pitch sound using lowest component of the multiphonic.
- 3: slow fluctuation centred on lower components of the multiphonic; exploring the inherent instability of the multiphonic, movements, inharmonicity; more overlap at end.
- 4: flutter-tongue, on lower breath-sound elements and on trajectories through the entire multiphonic (the split path represents the borders of this span, attempting to play both at once results in a flitting and transitioning between both).

Emerging figures can be more dynamic than in path 3, shadows of melodies. Much greater overlap when the electroacoustic

environment comes in, intertwining with the sound, coming and going as seems fit, exploring the full range of the multiphonic, disappearing into the environment as the work ends. It is important that the flutes dissolve and disappear into the environment at the very end.

Long, sustained breaths should be used throughout. The nature of the work is one of gradual emergence and dissolution with small-scale instability. Dynamics are not specified, these should be varied to suit the feel of each path and to fit the space, and help to define the shift from concentrated moments at the opening to greater drift later on.

The electroacoustic environment:

The MaxMSP patch behaves in a set manner and can be learnt as a sounding architecture through rehearsal, even though the character and feel will differ depending on multiphonic, space, etc.. There is an indicator in the patch showing when sampling is taking place to help rehearsal; sampling lasts between 8 and 10 seconds.

The patch samples the flutes during each path. On starting the patch, the performers have 10 seconds until the first sampling takes place; how to start the patch and performance are up to the performer (tentative starts, sustained immediately...). After this, the appearance of sound in the loudspeakers should be the signal that sampling is no longer taking place, indicating that the flutes are in the large rectangle zone, and that they should dissolve to breath and silence. The disappearance of sound from the speakers is the indication that the next path (and so sampling) is about to begin. Rehearsal and use of the sampling indicator in the patch will make this architecture clear. The flutes should overlap with these emergences and disappearances, and, as mentioned previously, increase overlap at end with each path.

The characteristics of the four electroacoustic treatments are:

- 1: (from the breath sound) diffuse cloud, one shorter and higher, one longer lower one.
- 2: (from single pitch) unison gradually splitting and opening out to several low swells, ending with a low swell clearly separated from the rest.
- 3: (from fluctuation between lower components) filtered mid-range sounds at various registers, splitting to shimmering trajectories and low swells, long fade at end.
- 4: (from flutter-tongue breath / fluctuation between multiphonic elements) high clouds, shimmering trajectories, mid-low colours, ending with high clouds.

