

Joshua Fineberg - *La Quintina*  
2012  
for string quartet and electronics

There is a wonderful repertoire of four-part vocal polyphony in Sardinia in which singers attempt to create an illusory fifth voice while singing in harmony through excellent intonation, careful shaping of vowels, and the acoustics of resonant churches. Our auditory processing system misinterprets the combinations of the vocal quartet's overtones and suppressed frequency regions as a separate voice, producing this astonishing effect. This vaguely feminine phantom voice is called *la quintina* (the fifth part), and is considered to be the Virgin Mary singing along. *La Quintina*, for string quartet and live electronics, uses this phenomenon as a central metaphor. Initially, the string quartet's parts combine so as to produce the phantom tones acoustically, aided only by reverberation and filtering. However, as the piece progresses, the electronics begin to generate full parts in these ghost voices, built from bits and pieces of the quartet's shared partials through more intense filtering and analysis/synthesis techniques. With the electronics, these voices are able to take on much more presence and autonomy than the vocal quintina voices while still preserving the essentially ephemeral nature of these extended voices.

In this piece, the virtuosity of the Arditti quartet is employed in a unique situation in which they must adjust their intonation, blend and balance in response to these virtual voices whose presence helps shape their performance. Thus the quartet plays along with a fifth voice that they simultaneously accompany and create. To help generate an acoustic space in which this can happen, the live string quartet must disappear and merge into a larger virtual space as part of a new quintet. The quartet is seated in a tight circle, as they would sit in rehearsal, playing to each other (the Sardinian singers stand in a circle with arms around each other's shoulders). For almost the entire work, the quartet use lead practice mutes that make the live acoustic sound of the group extremely faint. Though they can hear themselves, their sound is far softer than the projected, transformed image of the quartet that will emerge from the speakers around the hall.

This piece marks the first co-realization between the ExperimentalStudio and IRCAM. The initial research phase of research took place at IRCAM and it involved the testing of various methods for generating these quintina voices. At IRCAM, we explored simple techniques like filtering as well as more subtle analysis/resynthesis strategies that alter the components of the quartet's sound in ways that fracture the gestalt of their timbre, causing the extra voice to emerge.

This Sardinian vocal tradition takes place in very particular sort of church and the acoustic of this space plays a big role in creating the quintina. Thus, the other large component of the work is to integrate both the live quartet and the virtual voices into a larger virtual space where all the sounds become slightly de-physicalized collaborators in a new synthesis. For this part of the work, we took advantage of the ExperimentalStudio's experience in creating gripping, complex diffusion environments.

IRCAM generally structures its work environment with collaborative teams of specialists, while the ExperimentalStudio tends to create performance environments in broadly skilled teams. I have been privileged to benefit from the amazing level of skill, virtuosity and musicality from the brilliant Joachim Haas and Greg Beller, who bring both of these approaches together.