

Study No. 6b

matthew goodheart

The scale of five, eight, or twelve tones performs a judgment previous to music. The music restores health to the land.

- Robert Duncan

Study no. 6 was written specifically for the sfSoundGroup. And by “specifically,” I do not just mean the particular instrumentation available with this ensemble; rather I have sought to base the piece on something endemic to this group; a particular sound from a particular instrument; specifically on a sound from Matt Ingalls’ clarinet. Despite the similarity of all clarinets, differences in construction, reed quality, and player him/herself, create tiny variants; we can hear differences in tone color, in attack, in clarity, etc. These variants are subtle, but our ears are clued to them: it is the way we perceive the difference between two men with similar pitched voices who speak the same words.

The “scale of tones” in this work is based on a “transforming multiphonic.” Multiphonics are sounds, created by monophonic instrument, which contain more than one pitch. “Transforming multiphonics” are multiphonics which can be varied, some able to move from a single pitch through a spectrum of sounds to a complex set of pitches. The quality of multiphonics vary with the individual instrument and player, so this came to form the foundation of the work. I began by recording Matt playing a multiphonic he thought sounded particularly good on his instrument. This recording was then analyzed using the partial* analysis software SPEAR (which stands for Sinusoidal Partial Editing, Analysis, and Resynthesis), which allowed me analyze the components of the sound and catalogue the harmonics into foreground, middleground, and background sets based on their amplitude.

The next step was to consider the instruments in the ensemble, and find correlations and analogues between the instruments’ capabilities (and “natural properties”) and the partial structure of the multiphonic. The purpose of the ensemble is ostensibly to bring hidden elements of the clarinet’s sound to the surface. Yet the instruments have their own leanings, their own individualistic natures which pull against their adherence to this role and demand explorations in their own right. There is a constant tension in the work between these two roles. Exploring the layers of sound within the clarinet meant simultaneously exploring the relationship between the theoretical framework of the piece and the realization of that framework by the ensemble. While each section explores a different aspect of the sound, it also explores the struggle between the “thing itself” and the separate life of its representation.

I have spoken much here about the technical aspects of the work, of the “scale of tones” and their “judgment.” There is a deeper objective here as well; to delve into what lies before us; to attempt to engaging with sound on a microscopic level and discover otherwise hidden beauties.

* One of the component vibrations at a particular frequency in a complex mixture. – *Grove Dictionary of Music*

About the Study series

This series of works began in 2003. Each focuses specifically on using ensembles in a form of “additive synthesis” to create evolving timbres, exploiting the individual natures of the instruments. The works have been recorded and performed by a number of Bay Area ensembles, including the *Del Sol Quartet*, the *Mills Quartet*, and sfSound Group. *String Quartet (Study No. 5)* has been recorded by the *Presidio Ensemble* and will be released on their upcoming CD. *Study No. 6b* is a re-composition of the earlier *Study No. 6* commissioned by the American Composer’s Forum in 2006. Streaming audio of these works is available at <http://matthewgoodheart.com/compositions.html>