MICRO-IMAGES, GENERA, AND *POÈME EXOTIQUE*: A GUIDE TO TONE COLOR SELECTION, RELATIVE DYNAMICS, AND TEMPORAL PACING FOR EFFECTIVE PERFORMANCES OF THREE MICROTONAL FLUTE WORKS BY DANIEL KESSNER

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Micro-Images for Solo Flute, *Genera for Flute/Alto Flute/Bass Flute and Clarinet/Bass Clarinet,* and *Poème exotique for Flute and Piano* by American composer Daniel Kessner (b. 1946) utilize a hybrid compositional approach in which microtones are incorporated with more traditional chromatic writing. Through representative musical examples from each piece, this document highlights the timbral, dynamic and pacing complexities associated with the microtonal fingerings and prompts flutists to forgo idiosyncratic tendencies in favor of contextually based choices. In order to help guide musicians toward effective performances of these three pieces and similar works, a new tone color spectrum and description of relative dynamics are provided along with a discussion of the relationships between tone colors, relative dynamics and temporal pacing. Appendices include transcripts of email interviews with composer Daniel Kessner and Carla Rees, British contemporary flutist, as well as an updated list of Kessner's flute works.

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First, I would like to thank all those who helped me with this project. Daniel Kessner, I have so enjoyed performing your music and learning about your compositional process through our interviews. Carla Rees, your championing of Dan's music gave me a wonderful starting place for this document. Gabriel and Christian, thank you for sharing your beautiful playing to help make my lecture recital a reality. I am also grateful to my wonderful committee members who went consistently above and beyond, kindly guiding me through the editing process.

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CHAPTER 1

INTRODUCTION

Background

Daniel Kessner has won a variety of national and international composition competitions, including the 1972 Queen Marie-Josè International Composition Prize in Geneva. Promoted to Emeritus Professor after his retirement in 2006 from California State University, his compositions for orchestra, band, choir and various chamber ensembles have been performed around the world.[1] Although he studied piano, violin, percussion, trombone, oboe, bassoon, cello, and horn at various times throughout his life, until 1993, he identified the clarinet as his primary instrument. In this year, he decided to shift his focus to flute, alto flute, and bass flute, and has focused most compositional efforts on these instruments since that time.[2] Primarily known as a composer, he is also active as a performer, conductor, administrator, and lecturer.[3]

Statement of Purpose

Kessner's flute music utilizes a hybrid compositional approach, combining more traditional chromatic writing with contemporary elements and extended techniques, often including the use of microtones. From his list of compositions for C flute, the most prevalent integration of microtones can be found in the following pieces: *Micro-Images* for solo flute (2003-2004), *Genera* for flute/alto flute/bass flute and clarinet/bass clarinet (2002) and ***Poème exotique*** for flute and piano (2008). These pieces also include the creative use of limited dynamic and pitch ranges, which present specific challenges related to expressive performance.

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[1] Daniel Kessner, "Daniel Kessner, Composer, Conductor, Flutist," Daniel Kessner, http://daniel.kessnerfamily.org/home (accessed March 6, 2012).

[2] Carla Rees, "Microtones and Big Flutes: An Interview with Composer Daniel Kessner," *Flutist Quarterly* 34; no. 1 (2008): 28-32.

[3] Kessner, "Daniel Kessner, Composer."

Most flute microtones have particular sound characteristics associated with them. They naturally differ in timbre and volume from the surrounding pitches. Similarly, standard flute pitches also tend to be naturally stronger, weaker, more hollow or dense depending on their register and volume. If flutists perform with the unaltered, idiosyncratic timbres (or "default tone colors") of both microtones and standard pitches without regard to musical context, they may lessen the dramatic impact of Kessner's works. Additionally, many flutists tend to associate particular tone colors with different dynamics. Softer dynamics are often linked with transparent timbres and louder dynamics with denser and richer characteristics. Because *Micro-Images, Genera,* and ***Poème exotique*** all contain Kessner's creative use of limited pitch and dynamic ranges, a more specific interpretation of relative volumes, as well as musically (rather than instrumentally) based tone colors, may be necessary. It is the purpose of this document to guide flutists in selecting intentional, contextually based tone colors and relative dynamics for all three pieces as well as similar works. Intentional tone color selection, relative dynamics, and temporal pacing can aid in communicating the subtleties and overall musical trajectories in Kessner's works, resulting in more effective performances.

Significance and State of Research

Despite Daniel Kessner's accomplishments, Carla Rees (British low flutes and contemporary music specialist) is the only noted author to write about his flute works to date.[4] There are no published recordings of *Poème exotique* or *Micro-Images* and only two available CDs containing *Genera*.[5] One critic remarks of Kessner's music,

[4] Carla Rees, "Microtones and Big Flutes: An Interview with Composer Daniel Kessner," *Flutist Quarterly* 34; no. 1 (2008): 28-32.

[5] Daniel Kessner, et al. *Chamber and Solo Works,* Baton Rouge, La.: Centaur, 2011.
Michael Oliva, Daniel Kessner, Karen Gourlay, Lorenz Dangel, David Burnand and Vasco Hexel, *Moss Garden; A Rarescale Sampler*, Rarescale Records, CD, 2008.

> It's contemporary sounding but doesn't fit into any readily identifiable fashion or school; it's freely chromatic but not avant-garde; it's coherent and thoughtful but lacks memorable tunes or big dramatic gestures or clearly demarcated formal outlines; it's seldom either offensive or seductive; it's for the most part rather restrained and inward…his [pieces pass] by as a dream, leaving little to remember after it's gone. Perhaps that's the point.[6]

It is this author's contention, however, that Kessner's music contains great expressive potential when performed with thoughtful execution of relative dynamics, effective tone color selection, and a mindful approach to temporal pacing. In numerous email interviews, the composer has indicated his desire for emotional impact in performances of his compositions, commenting in one instance that, "the audience should be as emotionally wrung out as the players" at the end of a performance.[7] He clearly desires a memorable aesthetic experience for his audiences.

Though much has been written about the aesthetic experience of music performances and microtonality has been addressed in a variety of theoretical contexts, practical suggestions regarding effective performances of compositions including prevalent use of microtones remain limited. In his article, "Temperaments, Tonalities and Microtonalities: An Introduction," new music composer Christopher Fox writes,

> All compositional activity is necessarily contingent on its realization and it is perhaps a paradox that most music using microtones has been written for realization on acoustic instruments designed with 12-tone equal temperament in mind and for performance by musicians trained to play in that temperament.[8]

Though many resources do address this problem by providing microtonal fingerings and discussions of microtonal theory, authors rarely address the performance practice issues that arise with their execution.

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[6] Lehman, "Natural Cycles/Genera/Toccatta…," *American Record Guide* 75, no. 3 (2012): 119.
[7] Daniel Kessner,"Daniel Kessner, Composer, Conductor, Flutist," Daniel Kessner. http://daniel.kessnerfamily.org/home (accessed March 6, 2012).
[8] Christopher Fox, "Temperaments, Tonalities and Microtonalities; an Introduction," *Contemporary Music Review* 22, no.1/2 (2003): 1-2.

Mieko Kanno, contemporary music specialist and violinist, provides a helpful source of information concerning the intonation of microtones in her article, "Thoughts on how to play in tune: Pitch and intonation,"[9] but she primarily refers to microtones in the context of violin *glissandi*. Saxophonist MacErlaine discusses the expressive properties of microtones in his dissertation, but does so from a mostly theoretical and musicological perspective and makes his recommendations concerning the use of microtones in improvisation, rather than in a fully notated composition.[10] Robert Dick, widely regarded as the father of contemporary flute, includes a chapter on microtones in his book *The Other Flute: A Performance Manual of Contemporary Techniques*.[11] Though he writes about the technicalities of producing microtones on the instrument and encourages flutists to push the boundaries of traditional flute sounds, he does not discuss the timbral, dynamic, and pacing complexities that arise as a result of performing microtones.

The performance guide for *Micro-Images*, *Genera*, and *Poème exotique* will address the often-neglected discussion of the technical and artistic challenges that arise when performing microtonal music. Methods used will include score and recording study, composer critiques of rehearsal recordings, analysis of composer interviews and specific analysis of tone colors, volumes and pacing decisions that will provide the most effective performances. Primary sources available for this document include the scores of all three works, both recordings of *Genera*, unpublished recordings of *Poème exotique* and *Micro-Images* provided by the composer, and email interviews with the composer.

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[9] Mieko Kanno, "Thoughts on How to Play in Tune: Pitch and Intonation," *ContemporaryMusic Review* 22, no. 1-2 (2003): 35-52.

[10] Sean Mac Erlaine, *Microtonality as an Expressive Device: an Approach for the Contemporary Saxophonist*. M.M. Dissertation, Dublin Institute of Technology, 2009.

[11] Robert Dick, *The Other Flute: A Performance Manual of Contemporary Techniques* (New York: Multiple Breath Music Co.), 2011.

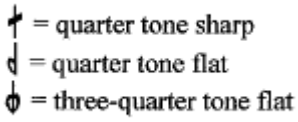
CHAPTER 2

PERFORMANCE GUIDE

Introduction

In any given musical performance, specific tone color selection can enhance or detract from intended dynamics. Volume choices can also influence the performer's execution and the audience's perception of chosen timbres. Similarly, a performer's approach to pacing can have great impact on the effectiveness of all other musical decisions. Small changes in sound characteristics, dynamics, or timing can have a domino effect, creating an entirely different interpretation of the same passage. In Daniel Kessner's *Micro-Images, Genera,* and *Poème exotique,* these relationships become even more complex with the prevalence of microtones and limited pitch and dynamic ranges. Through the use of representative examples and specific performance suggestions, this document will guide musicians through the interpretive challenges involving tone color selection, gauging of relative dynamics, and execution of effective temporal pacing in all three works.

Throughout this document, quarter tone sharps will be written as a plus sign, quarter tone flats as a minus sign and three-quarter tone flats by a flat sign followed by a minus sign (see examples below). All referenced pitches will be accompanied by their octave designation.[12]



Examples (treble clef):
B+4 = B quarter tone sharp, in the staff
B-5 = B quarter tone flat, above the staff
Bb-7= B three-quarter tone flat, five ledger lines above the staff

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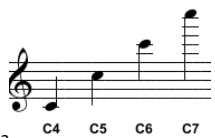

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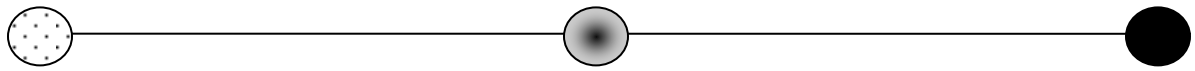
Tone Colors

The subject of flute tone colors, or timbres, does not bring with it a standard vocabulary, perhaps because the conceptual approach is different for every performer. Trevor Wye, British flute pedagogue, refers to purple and yellow tones in his *Practice Books for the Flute,*[13] but not every flutist associates literal colors with tone "colors." The possibilities for describing tone colors could include a spectrum of hot to cold, sweet to spicy, soft to hard and more. Because tone colors are usually discussed in greatly subjective and varying terms, this author will limit descriptions to the following spectrum.

Tone Color Spectrum



Transparent/Light	Centered/Balanced	Dense/Dark
Hollow/Wooden	Core with air cushion	Edgy/Metallic
Fuzzy		Smooth

On modern flutes, many microtones tend toward the left end of this spectrum, as do C#5, E4, E5 and E6. Notes like A4, Bb5 and Eb6 tend toward the right end of the spectrum. Often, flutists strive for a tone in the middle of the spectrum, with an audible core and a cushion of air around that core. William Kincaid, renowned American flutist and teacher, describes core as "the heart of the tone."[14] Variations in speed and depth of vibrato can enhance or diminish particular timbres, though an in-depth discussion of vibrato is beyond the scope of this document.

[13] Trevor Wye, *Practice Books for the Flute* (London: Novello), 1999.
[14] John C Krell, *Kincaidiana; A Flute Player's Notebook* (Culver City, California: Trio Associates), 1973.

Flutists can learn to adjust the speed and angle of air, internal vowel shapes, and external embouchure shapes to achieve different colors along the spectrum, creating timbral flexibility for artistic and intonation purposes. Intentional and idiosyncratic intonation tendencies are intimately, but not irrevocably, related to tone colors (often, but not always, with sharp pitches more on the left side of the spectrum and flat pitches more on the right). Within the context of standard repertoire, classical flutists are trained to make timbre adjustments for more accurate tuning (matching C#4 to D4 is perhaps the most common example), but may not be familiar with this concept in microtonal music. Intonation of microtones in particular will be discussed in this performance guide along with representative musical examples from *Micro-Images*, *Genera*, and *Poème exotique*. To guide flutists toward effective tone color choices in Kessner's works, composer recommendations and contextual considerations will be provided.

Relative Dynamics

Musicians often pair particular tone colors with written dynamics, both intentionally and unintentionally. Additionally, default tone colors can enhance or detract from the effectiveness of performed dynamics. In order to communicate any composer's dynamic scheme convincingly, performers should forgo habitual tendencies and select tone colors and volumes that contribute to the effectiveness of intended *crescendos*, *diminuendos*, etc. This performance guide will address the additional challenges concerning relative dynamics that arise when performing Daniel Kessner's mixture of microtonal and more traditional chromatic writing as well as his creative use of limited dynamic ranges. The term "relative" is used to emphasize the following relationships:

- Dynamics in a particular moment compared to the larger musical context
- Dynamic markings and volumes chosen specifically to bring out contrasts
- Approach to microtone volumes compared to surrounding standard pitches

For the overall trajectories, musical gestures, and dramatic impact in *Micro-Images*, *Genera*, and *Poème exotique* to be performed effectively, it is important that performers understand Kessner's dynamic markings within the context of the relationships described above.

Temporal Pacing

Because *Micro-Images*, *Genera*, and *Poème exotique* utilize microtonal fingerings, to which even advanced flutists may not be accustomed, effective temporal pacing could easily be neglected in favor of more accessible tempos and personal preferences. Additionally, Kessner's pieces contain many accelerating and decelerating rhythms, alternating rhythmic and unsynchronized passages, and endurance challenges in which performers might be tempted to choose tempos that feel the easiest to execute. In all three pieces, the issue of temporal pacing should be based on musical context rather than technical discomfort or the path of least resistance. Though this concept is a universal principal for any effective musical performance, it is essential to remind performers of its importance when dealing with microtonal fingerings, tuning tendencies, timbres, and contemporary composition techniques. If a flutist allows personal comfort level to dictate timing decisions, there is a great possibility that the tone colors, relative dynamics, and emotional impact in Kessner's music will not be communicated clearly. To assist in well-paced performances, this guide will highlight important temporal pacing decisions in relationship to overall performance effectiveness for each work.

"Micro-Images for Solo Flute"

Micro-Images comprises seven short movements; *refrain I, on the Greek chromatic and enharmonic genera, refrain II, scherzando, refrain III, nanologue,* and *refrain IV*.[15] Daniel Kessner writes,

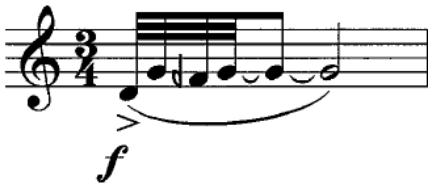
> The title of the work has multiple meanings. First of all, the individual movements are short, each providing a brief picture, as if in a tiny gallery of microscopic paintings. Further, the title brings in the association of microtones, obviously essential to the piece. Finally, there is a structural connection with Mussorgsky's *Pictures at an Exhibition*, with a recurring refrain "framing" the individual paintings.[16]

According to the composer, the piece can be used as an introduction to microtones for both performers and audiences.[17] The mixture of more traditional melodic writing and creative contemporary elements makes this a potentially accessible work for those unaccustomed to the world of new music. In order for this potential accessibility to become a reality, however, flutists should explore tone color, dynamic, and pacing decisions mindfully, so that Kessner's musical language is clearly communicated. If these decisions are made based on the musical context and not on the idiosyncratic tendencies of the flute or flutist, performances of *Micro-Images* can have great dramatic impact.

The melodic gesture at the beginning of *Micro-Images* contains three different pitches: D4, F-4 and G4 (see Example 1). If left unattended, F-4 can sound much more transparent than the other two pitches, causing unintentional emphasis on the third note of the gesture instead of the accented downbeat.

[15] Daniel Kessner, *Micro-images: for Solo Flute: 2003-2004*. Los Angeles, California: Daniel Kessner, 2004.
[16] Kessner, *Micro-Images*, Program Notes.
[17] Daniel Kessner, interviewed by author, email, March 6, 2012.

Example 1: *Micro-Images, refrain I*, m. 1



In combination with the transparent tone color, F-4 tends to be sharper than the exact half-way point between E4 and F4 which could easily tempt the performer to either raise the pitch of the G in order to hear a three-quarter step interval or to neglect the relationship between the F-4 and G4. If G4 is out of tune, the P4 interval between D4 and the G4 will be compromised, disallowing the listener to hear a crucial interval explored throughout the duration of *Micro-Images*.[18] If G4 is in tune and the F-4 is not, the incorrect interval will detract from the effectiveness of the opening musical gesture.

By taking care to match the color of the F-4 to the adjacent G4 (a denser color, more to the right of the tone color spectrum), the flutist can more authentically represent this key motive and introduce the listener to the first iteration of an idea repeated and transformed throughout the work. For most of *Micro-Images* and all of *Poème exotique,* Kessner prefers "the quarter tones [to] sound as much as possible like the regular, tempered pitches"[19] and recommends practicing the microtones in the context of their adjacent tempered pitches.[20]

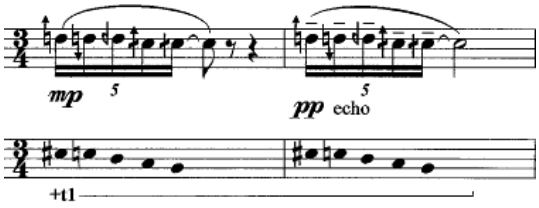
As an exception to this general rule, Kessner prefers varied timbres for the microtonal pitches in the sixth movement of *Micro-Images*.

> …there are a few places where I actually try to bring out the color and volume differences, and even delight in them. For example, in *nanologue* [sic] (still a source of considerable humor, as well as seriousness for me), [mm.7-8], the notes get fuzzier and fuzzier as you add fingers. I like that, and actually try to bring it

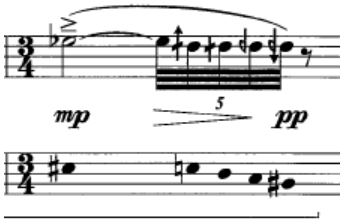
[18] This interval/motive is related to ancient Greek genera, inspiration for both *Micro-Images* and *Genera*.
[19] Daniel Kessner, interviewed by author, email, May 8, 2013.
[20] Kessner, March 12, 2013.

out. A slight crescendo, even though it's not marked, helps here. Same in [m.11], where the dynamics heighten the progressive fuzziness.[21]

Example 2a: *Micro-Images*, *nanologue*, mm.7-8



Example 2b: *Micro-Images*, *nanologue*, m.11[22]



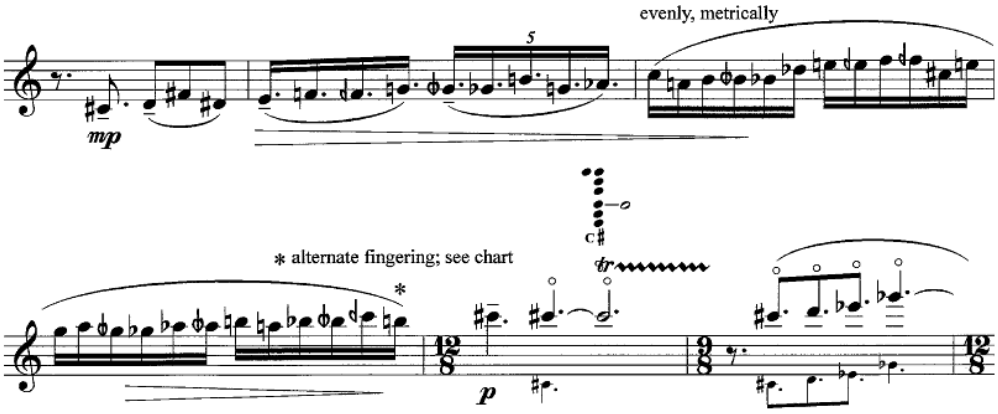
When deciding whether to adjust the microtonal timbre to match the surrounding pitches or to allow (or even emphasize) the nontraditional tone color associated with provided fingerings, Kessner recommends this universal principle, "…you have to get inside the *intent* of each passage, taken individually."[23] If the microtones themselves are the featured idea in a given passage, then showcasing a variety of tone colors is preferable. If it is clear, however, that a lyrical melody or strong rhythmic statement simply includes microtones, a homogeneous tone color approach will be more effective.

Performing an effective *diminuendo* in an ascending passage containing microtones requires an examination of the default tone colors and volumes of each pitch. Because timbres and dynamics are intimately related, differences in color can enhance or detract from an attempt

[21] Daniel Kessner, interviewed by author, email, May 8, 2013.
[22] The bottom staff refers to fingerings and the upper staff represents sounding pitches. "T2" is missing from the example. The second trill key should be held down in m.11 like the first trill key is held down in mm. 7-8.
[23] Kessner, interview.

at the gradual decrease in volume. As previously described, F-4 has a default timbre that is sharper and more transparent than the surrounding tempered pitches. Gb-4, which Kessner affectionately terms, "G love,"[24] has similar tendencies.

Example 3: *Micro-Images, on the Greek…,* mm 41-45



Unless adjusted to a darker color, both pitches are marginally softer than the surrounding tempered pitches. Typically, C#4 (the first pitch in m. 41) tends to sound naturally much softer than B4 (the second highest pitch involved in the *diminuendo*), further complicating the performer's task in Example 3.

If the performer practices slowly and mindfully, adjusting the color of both the F-4 and the Gb-4 (more to the right of the tone color spectrum) and listening extremely carefully for a consistent, gradual decrease in volume from m. 41 through m. 44, the probability of achieving the effect of a perceptible *diminuendo* at the desired tempo increases. The Bb-4 in m. 43 has a softer volume and transparent color that works nicely as the end point of the marked *diminuendo* without the need for much adjustment.

Another issue concerning relative dynamics in *Micro-Images* appears in m. 45 (see Example 3). The *piano* C#6 is written as the end of the rising *diminuendo,* but is naturally much

[24] Kessner terms G three-quarter tone flat as "G love" because the notation symbol looks like a heart.

louder than C#4. In addition to taking care with the microtones, the flutist may have to approach the C#6 as if it was marked *pianissimo* to achieve the necessary contrast. This challenge is even more complex because of the C#6 harmonic on beat 2 of m. 45. As indicated in the score, the flutist should use the fingering for a C#4 and "over-blow" (in combination with an embouchure adjustment) to achieve the two octave higher harmonic. The need to over-blow makes it tempting to play the harmonic at a louder volume, which could seem abrupt and detract from the effect of the rising *diminuendo*. In order to perform this measure as an effective and dramatic conclusion to the *diminuendo* containing microtones and a precursor to the timbral trill (which is more audible at a softer volume), the following practice steps for Example 3 are recommended:

- Perform (what feels like) the *pianissimo* C#6.
- Take a quick breath (optional).
- Perform the C#6 harmonic, listening carefully for a matching volume (with audible color change).[25]
- After many repetitions and a matching volume are achieved, add the timbral trill, listening carefully to make sure the subtle alternations of pitch are audible.
- *Work from the end:* When m. 45 is consistently achieved at a soft volume with audible color changes, begin on beat 2 of m. 44 and practice the end of the *diminuendo* through all of m. 45 until the desired effect is achieved. Repeat this task from the beginning of m. 44 through all of m. 45.
- Continue working backward until all of Example 3 is executed with an evenly distributed *diminuendo* (without disruption due to microtonal colors or volumes), culminating in a soft C#6 and an equally soft C#6 harmonic connected to a clearly audible timbral trill.

The careful attention and practice approach to relative dynamics described for Example 3 is appropriate throughout *Micro-Images*, *Genera,* and *Poème exotique* for any ascending or descending passage that includes microtones and is accompanied by a *crescendo* or *diminuendo*.

[25] Flute harmonics have a distinct tone color that is not necessarily included in the tone color spectrum on p. 6.

The practice steps described above are also meant to remind performers that great finesse is still required for musical events before or after microtonal passages, even if they do not contain microtones. Dynamics through microtonal passages and adjacent non-microtonal passages are still complex due to the effect of microtonal colors and volumes (along with necessary adjustments).

The need for thoughtfully executed relative dynamics is perhaps most apparent in *nanologue,* the sixth movement of *Micro-Images*. The composer writes,

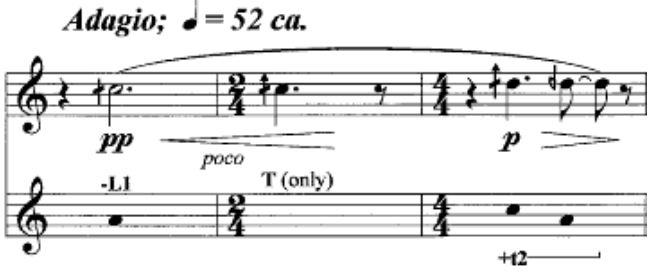
> In the context of a small piece in general, one which explores the realm of small intervals, this movement is beyond small. Within this world of slightly more than three semitones, 15 distinct pitches are employed. There is even a direct quote from a very famous piece in the solo flute repertoire, but the intervals are compressed probably beyond the point of recognition.[26]

Because the pitch range spans only three half-steps and the climactic moment occurs with an E-5 marked *mf,* fulfilling the dramatic potential in *nanologue* necessitates extraordinary attention to detail and an understanding of the relationship of dynamics in specific moments to the dynamic structure of the whole movement. Each *crescendo* and *diminuendo* requires extremely careful listening in order to communicate the dramatic impact in this miniature world. Kessner describes the drama in the opening measures of *nanologue* (see Example 4):

> The "top" of the phrase, 3rd measure…1st note, should be the most important of the phrase in the traditional sense, as it's the highest note and the top of the (little) crescendo. However, it's a seriously funky note, and it always makes me smile that such a feeble sound could try to serve as the top of the phrase…It's also VERY important…not to breathe between mm. 2 and 3 [and] to connect m. 3 with a gesture, perhaps leaning into m. 3, to make sure it sounds like one phrase. It's pure theater, but the imaginary crescendo through the rest is very effective.[27]

[26] Daniel Kessner, *Micro-images: for Solo Flute: 2003-2004*. Los Angeles, California: Daniel Kessner, 2004. Kessner revealed that the famous piece is Debussy's *Syrinx* in an email interview by the author, March 6, 2012.
[27] Daniel Kessner, interviewed by author, email, May 8, 2013.

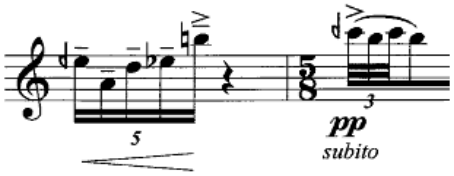
Example 4: *Micro-Images*, *nanologue*, mm. 1-3



Performance demands in *nanologue* include precise intonation of microtones, convincing execution of relative dynamics, dedication to melodic gestures, and intentional pacing. If a flutist neglects any of these issues, especially the necessities of patient timing and dedication to fulfilling the dramatic possibilities in this movement, *nanologue* could come across as an out of tune, ineffectual, sustained blur of sound. Conversely, a performance involving great sensitivity to these issues will be strangely beautiful and intensely dramatic.

In addition to the temporal pacing challenges described on p. 8, careful consideration should be given to the timing of rests throughout *Micro-Images*. The quarter rest in Example 5 can either enhance or detract from the dramatic contrast in mm.13-14. If the performance venue has a live acoustic and the performer rushes through the rest, the residual sound of the B5 could easily cover the entrance of the *pianissimo* C-6. Though this performance issue often surfaces in non-microtonal music, the microtonal color is part of the effective dynamic contrast, making it even more important to prioritize the clarity of the C-6 over the exact tempo of the rest. Though adjusting the color of the C-6 more to the right side of the spectrum is desirable, performing it with a discernibly different tone color than the B6 can aid in a more effective contrast.

Example 5: *Micro-Images*, *refrain I*, mm. 13-14

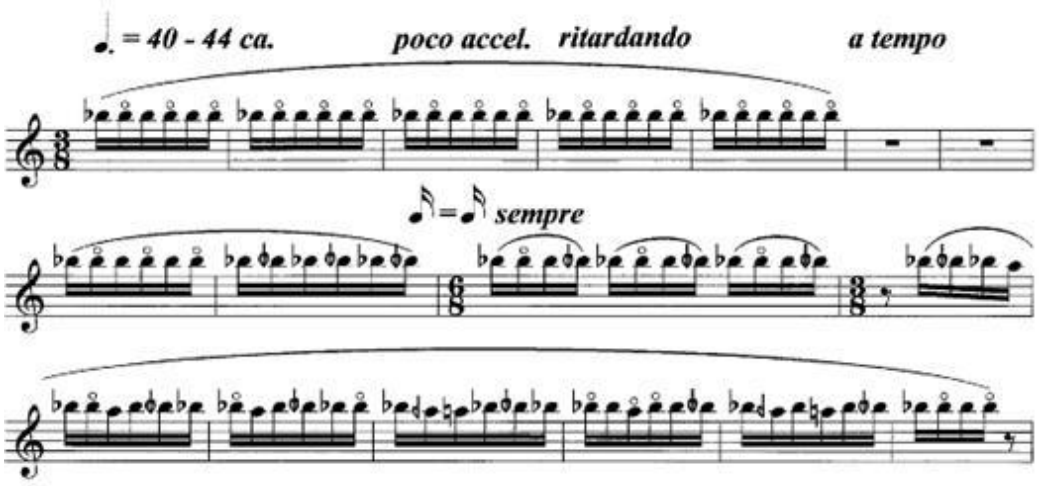


The temporal pacing at the beginning of *scherzando*, the fourth movement of *Micro-Images*, requires great care on the part of the performer (see Example 6). If performed with thoughtful timing and dynamics, the constant changes between Bb5, the Bb5 harmonic, Bb-5, A-5, A5, and the A5 harmonic can provide a fascinating display of alternating tone colors for the audience. The marked tempo of dotted quarter note equals circa 40-44 beats per minute provides a helpful guide, but tempo selection in the moment of performance should be based on venue acoustics.

Most musicians are aware that venue size and acoustics play an important role in any performance, but the alternation of microtones and other pitches give these considerations even greater importance. In a very live acoustical setting, performing the opening of *scherzando* at a slower tempo may be necessary to compensate for sounds bleeding into one another. In an extremely dry acoustical setting, a faster tempo may allow for smoother sounding transitions. In a large hall, a slower tempo may be necessary so that those audience members in the back row can still discern timbral nuances. In a more intimate setting (Kessner's preference),[28] detail is more easily heard and the performer may have the luxury of choosing a virtuosic tempo. The guiding principles for effective pacing in Example 6 and similar passages should be the audible alternation of pitches and the smoothness of the line.

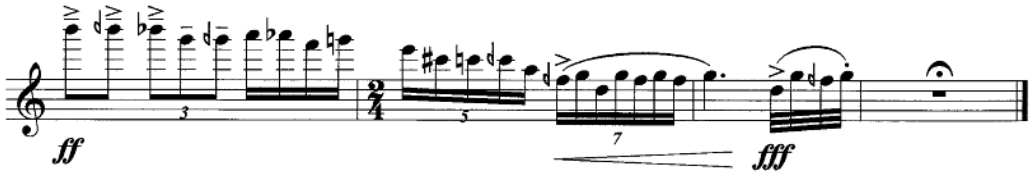
[28] Daniel Kessner, interviewed by author, email, May 8, 2013.

Example 6: *Micro-Images*, *scherzando*, mm.1-17



Another important consideration in Example 6 is the effectiveness of the silence in mm. 6-7. If the performer does not wait long enough, perhaps because of literal interpretation or thinking ahead to the next entrance (a common mistake when grappling with microtonal fingerings), the drama of the moment and opportunity to create anticipation can get lost. If, however, the performer is too indulgent with the timing of the rest and lets the momentum of the previous phrase die, the flow can be interrupted in a way that detracts from the *scherzando* feel and the overall effectiveness of this section.

Example 7: *Micro-Images*, *refrain IV*, mm. 27-30



Another notable rest is found at the end of *Micro-Images* (see Example 7). Holding the moment allows the energy of the dramatic crescendo and intensity of the final pitches, including

the F-5, to remain in the audience's memory longer, heightening the listeners' experience. In both examples, the timing of the rests can directly impact the effectiveness of the music itself.

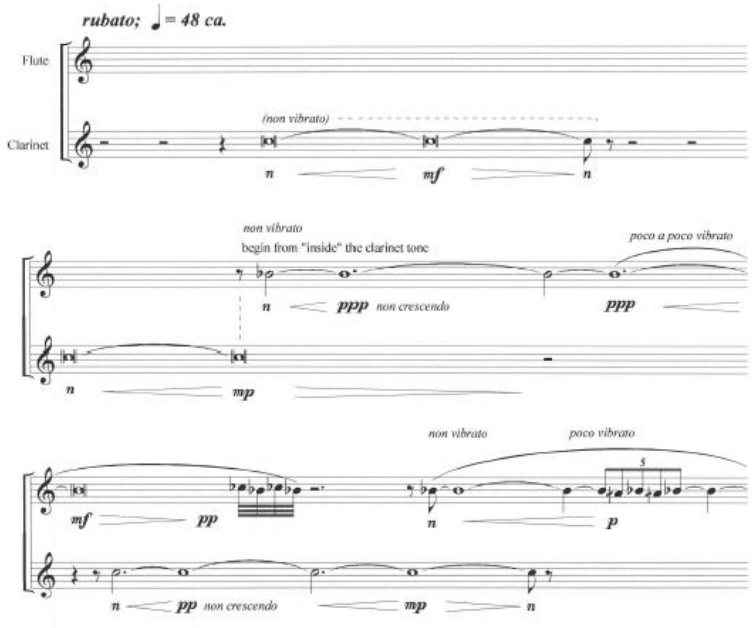
"Genera for Flute/Alto Flute/Bass Flute and Clarinet/Bass Clarinet"[29]

The changing blend of instrument timbres (flute/clarinet, alto flute/clarinet, bass flute/clarinet and bass flute/bass clarinet) contributes greatly to the beauty and dramatic impact of *Genera*. Because each instrument and instrument combination carries its own set of idiosyncratic tendencies, the performance challenges of tone color selection and relative dynamics become even more complex. Intonation is an intimately related issue and should be handled with great care (a significant challenge because of the opposite flute and clarinet tuning tendencies and limited dynamic ranges). Temporal pacing is also a difficult performance challenge in *Genera* due to unusually long, sustained pitches, marked with extremely soft dynamics, that create a mysterious sense of timelessness for the audience and endurance challenges for performers.

Like Example 6 from *Micro-Images*, the silence indicated by rests at the beginning of *Genera* "give the sounds their power and contrast." Kessner comments, "if the clarinetist…appears to begin the piece with the first actual note, he/she has committed as serious an error as if he/she had started a Mozart piece from measure 3…!"[30] Performers are advised to stay fully engaged in the performance through body language, facial expression, and any movements during rests so that they may contribute to the musical experience instead of detracting from it.

[29] Daniel Kessner, *Genera: for Flute/Alto Flute/Bass Flute and Clarinet/Bass Clarinet*. Los Angeles, California: Daniel Kessner, 2002.
[30] Daniel Kessner, interviewed by author, email, March 16, 2013.

Example 8: *Genera*, pg. 1, systems 1-3

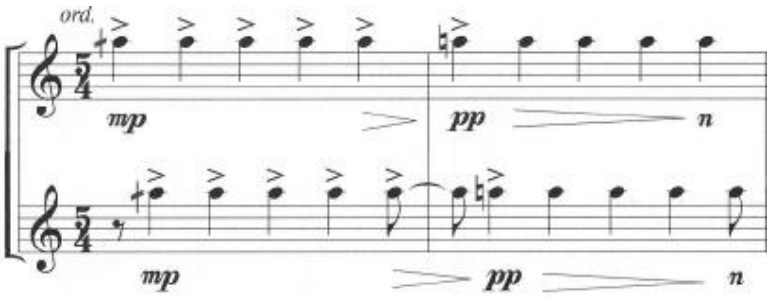


For the flutist's entrance in system 2 of Example 8, the importance of pristine intonation and matching timbre with the clarinetist cannot be overstated. The transition from clarinet to flute should be absolutely seamless and even the softest flute tone possible will not achieve this if the tuning or tone color is not in sync. It is highly recommended that performers record rehearsals of *Genera* in order to listen and assess the effectiveness of transitions like this throughout the piece. Unsuccessful transitions will seem rough and segmented while successful transitions will make it nearly impossible for the audience to tell where one instrument sound ends and the other begins.

Another potentially dramatic feature in *Genera* is the altered perception of pitch. Example 9 illustrates a moment when an altered perception of traditional, tempered pitches makes them sound microtonal. The repeated A+5 quarter notes in both parts are performed with distinct accents and occur as a major contrast to the previous section, giving them a declamatory feel. The accents and corresponding dense tone colors of the A+5 in both parts cause the A5

quarter notes in the second measure of Example 9 to seem like unfamiliar territory, though most classical performers and audiences are far more accustomed to A5 than A+5. To maximize the effect of this ironic moment, both performers should take care to match accents, volume, timbre and intonation of the repeated quarter notes.

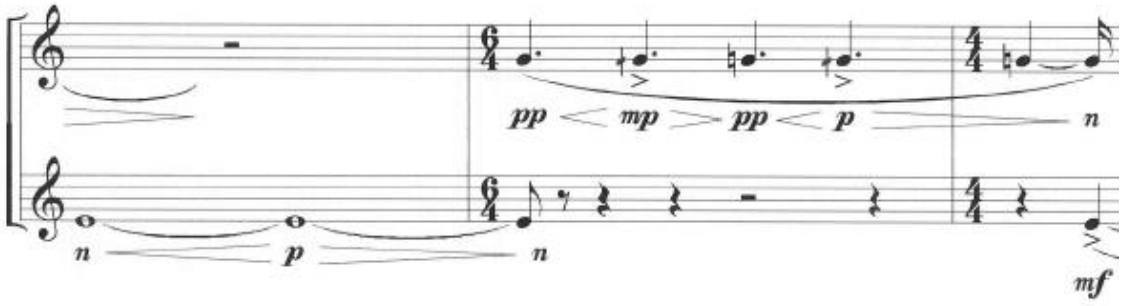
Example 9: *Genera*, pg. 2, system 1, mm.1-2



The alteration of perception is a common theme in Kessner's works, not only with time (the sense of timelessness as illustrated in Example 8) and pitch (Example 9), but with dynamics as well. This author is reminded of Lewis Carroll's *Alice in Wonderland* when performing Kessner's "larger than life" miniature dynamic schemes.[31] The *mezzo piano* G+4 dotted quarter notes seen in Example 10 can have great impact because of their musical context. After the audience has heard the clarinetist's long, slow *crescendo* to *piano* and *diminuendo* to *niente,* the *crescendo/diminuendo* gestures in the flute part can seem more intense than a typical *mp* musical event. To heighten the dramatic impact of these gestures and still remain faithful to the written dynamics, the performer must examine the default tone colors of each pitch and make adjustments that communicate clear crescendos but do not overstep the boundaries of the composer's indications. An overview of various tone color combination possibilities for m. 2 in Example 10 is provided in the table below.

[31] Just as Alice shrinks and sees small things around her as quite large, Kessner's soft dynamic ranges and use of microtones can often make ordinarily small musical events have a large impact.

Example 10: *Genera*, pg. 5, system 3, mm.1-3



Example 10, m. 2, Tone Color and Relative Dynamics Table[32]		
G4	G+4	Effect
Default: Transparent tone color associated with *pp*, in tune	Default: Transparent tone color, sharp, softer than G4	Performer might be tempted to overcompensate in order to achieve the crescendo, causing the G+4 to become even sharper, creating an incorrect interval and the gesture to be overdone.
Default: Transparent tone color associated with *pp*, in tune	Adjusted: Denser color, more in tune, more stable volume	Crescendo is more easily executed, interval is more in tune, but color change, rather than volume change, draws focus and/or the contrasting colors create too big of a volume change.
Adjusted: Denser color (default intonation flatter, but can be adjusted to in tune)	Adjusted: Denser color, more in tune, stable volume.	Crescendo is easily executed, interval is in tune and musical gesture is clearly communicated.

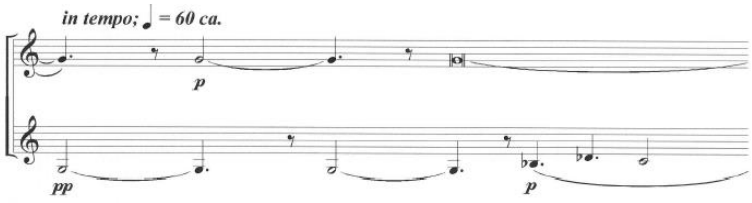
An awareness of the idiosyncratic tone colors (including the closely related intonation) along with the "natural" volume of individual microtones is necessary so that contextually based adjustments can be made. This is true not only for the previously explored examples, but for any instances of microtones surrounded by tempered pitches in *Micro-Images, Genera,* or *Poeme èxotique*. Kessner prefers the difference in tone colors between microtones and adjacent pitches to be minimized, with the exception of passages in which the tone color itself is the interesting

[32] Though the table refers to a measure from the alto flute part in *Genera*, the underlying principles are representative of a beneficial tone color approach with microtones and adjacent, tempered pieces throughout *Micro-Images*, *Genera* and *Poème exotique*.

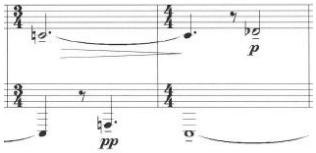
feature.[33] Performers are advised to experiment with different tone colors and select timbres that enhance their interpretation while remaining faithful to Kessner's written dynamics.

In some cases, contrasting tone colors are appropriate for identically written dynamics because of different contextual considerations. In Example 11a, the clarinetist is advised to play the *pianissimo* G3 (concert pitch F3) with a timbre more to the right of the tone color spectrum (more core sound than a typical *pianissimo*) in order to highlight the dissonant interval between the clarinet and bass flute pitches (a major second). The written dynamics still indicate that the flute tone should be more prominent, but if the clarinetist selects a timbre more on the left side of the tone color spectrum, it might prevent the audience from hearing the gentle dissonance.

Example 11a: *Genera*, pg. 6, system 4



Example 11b: pg. 9, system 2, mm.3-4



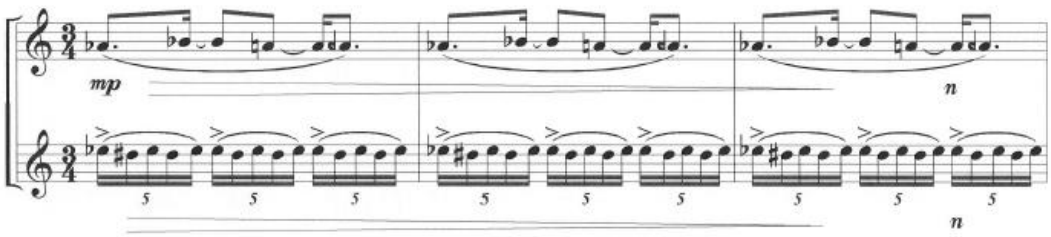
Conversely, the clarinet's *pianissimo* F3 in Example 11b might benefit from a more transparent color, allowing the clarinet tone to begin from inside the flute tone and emerge with incredible subtlety as the flutist *diminuendos*. A more hollow tone also seems appropriate for Example 11b because it occurs toward the end of the piece as it is winding down to its lowest registers and softest volumes. Throughout the entirety of *Genera*, the flutist and clarinetist

[33] Daniel Kessner, interviewed by author, email, May 8, 2013.

should select tone colors that most effectively communicate written dynamics, consonances or dissonances, and timbres that blend or contrast with the other part as needed.

As with traditional music, tone colors can be used to maximize the effect of *diminuendos* or *crescendos* in microtonal music, but the presence of microtones can make tone color selection more complex. In Example 12, A-4 is the final flute pitch in each of the three measures containing the same four note motive. Moving across the tone color spectrum (from right to left or dark to light) for the duration of the *diminuendo* is complicated because of the naturally softer color and volume of the A-4. Typically, a flute embouchure position for a particular tone color could remain the same for notes in such a small range (a major second) without the need for much adjustment. The A-4 does not fit this mold, however. If Example 12 is performed without the subtle embouchure adjustments necessary, the *diminuendo* will cease to be smooth or gradual and the effect of the flute part fading from the foreground to the background could be lost.[34]

Example 12: *Genera*, pg. 2, system 2



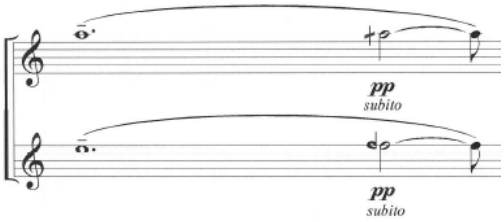
Example 12 illustrates another important issue that arises when performing microtones surrounded by tempered pitches. There is the possibility that, without careful listening and adjusting on the part of the performer, the quarter tone difference between a microtone and an adjacent standard pitch will not be heard. Especially considering the small dynamic range of *mp* to *niente* in Example 12, the A-4 in each measure could easily sound like a slightly out of tune

[34] This is assuming that the clarinetist chooses a darker color throughout and that the accents and higher register keep the clarinet part in the foreground, even though there is also a *diminuendo* in the clarinet part.

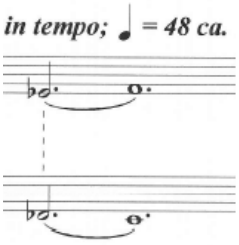
extension of A4, rather than an intentional microtone. This issue occurs many times in *Micro-Images,* especially with Eb-5. The concept of intentional intervals is an important one in every instance of microtones adjacent to other pitches.

Throughout *Micro-Images*, *Genera*, and *Poème exotique,* contextual connections can aid performers in understanding the dramatic and emotional impact of melodies and melodic fragments composed with microtones. Comparing significant moments within the piece can provide this insight. Example 13a conveys a moment in which flute and clarinet sustain a P5 interval for six beats and then rise one quarter-step to *pianissimo* microtones. A comparison with Example 13b reveals a similar musical event with a very different effect.

Example 13a: Genera, pg. 3, system 2



Example 13b: pg. 8, system 1



When asked about the opposite effects of Examples 13a and 13b, Kessner replies,

> In my mind, there is a big difference in effect between harmonies moving in parallel…versus true harmonic motion, with some sense of resolution, either by contrary motion…or by oblique motions. In the latter, there is a sense of arrival,

> while in the former, I hear more of a slide from one sound to its equal, higher or lower, which negates the feeling of motion.

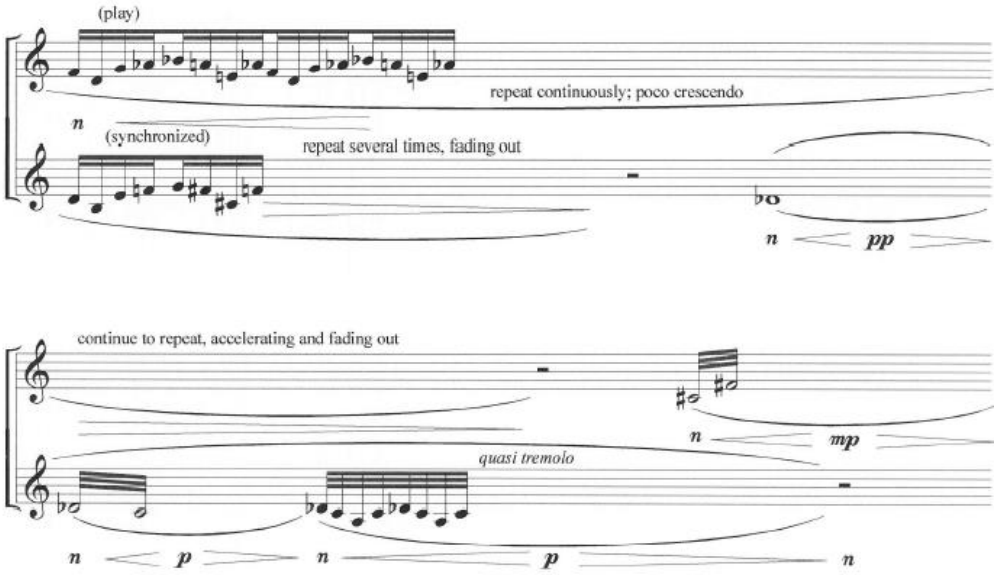
An awareness of these two musical events can and should influence a performer's approach to tone color selection, dynamics, and pacing. Rather than focus on the A+5 and the F-5 (concert Eb-5) in Example 13a simply because they are microtones, both the flutist and clarinetist should remain dedicated to the musical event itself. Similarly, tone colors, dynamics, and pacing decisions related to Example 13b should be made with the memory of Example 13a in mind, rather than taking for granted a moment in which no microtones are employed.

The execution of effective temporal pacing in Examples 13a and 13b is simultaneously a straightforward and sensitive task. In both instances, the quarter note is marked circa 48 beats per minute and a strong sense of internal pulse for both performers can greatly aid coordinating the shift between notes. Because of the microtonal fingerings and *pianissimo* dynamics in Example 13a, both performers might unintentionally move slightly early or slightly late. Clear body language and eye contact are highly recommended, perhaps with the flutist leading the transition. This is recommended for Example 13b as well, especially because the tempo here has changed from the previous section.

There are many accelerating and decelerating rhythms as well as somewhat freely paced gestures and entrances in *Genera* (as in *Poème exotique*). In almost every instance, the notation clearly depicts the relationship between the flute and clarinet parts, making it possible to coordinate entrances and key harmonic moments. In Example 14, however, the alto flutist faces the challenges of repeating the eight sixteenth note figure continuously while accelerating, fading in volume and keeping track of the clarinet part. It is highly recommended that the flutist memorize and acquire muscle memory for the repeated pattern, so that extreme sensitivity to pacing and dynamics can remain the primary focus. This section deserves ample rehearsal time

so that both clarinetist and flutist can become more adept at gauging their dynamics in relationship to the other part.

Example 14: *Genera*, pg. 5, systems 1-2



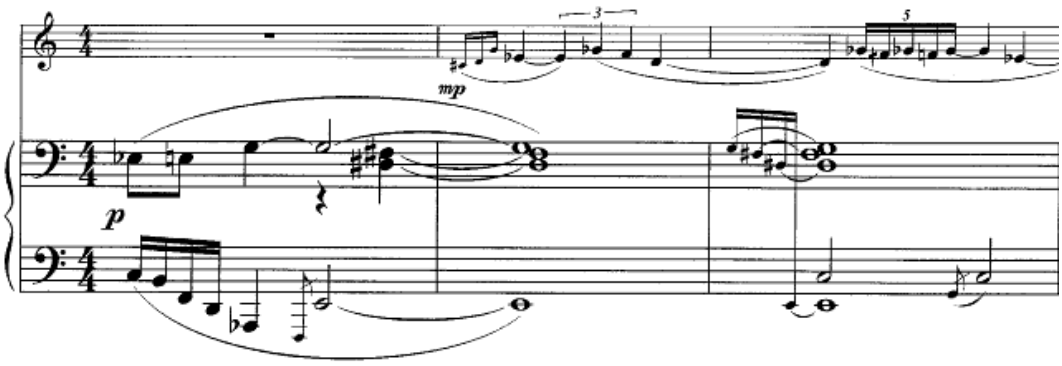
"Poème exotique for Flute and Piano"

Of the three works by Daniel Kessner addressed in this performance guide, *Poème exotique* is perhaps the best example of his ability to incorporate microtones as an essential component in the lyrical language of the flute part. The contrast of the flute microtonal color palette with the piano's purely chromatic palette is a point of interest for the entire piece. When asked about the inspiration for the title of *Poème exotique*, Kessner responded,

> I often think of dramatic melody…as speaking to the listener, rather than playing music. The beauty is that, with notes instead of words, the "meaning" is very subjective. However, the "speech" image is there, and that's where the "poème" part comes from. The "exotique" part has to do with the microtones, a more exotic way of speaking than with tempered pitches.[35]

[35] Daniel Kessner, interviewed by author, email, March 15, 2013.

Example 15: *Poème exotique,* mm. 1-3

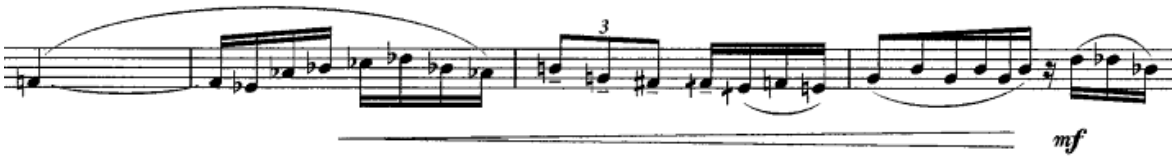


Particularly drawn to the sound of low flutes and low registers, Kessner agrees that selecting tone colors for the opening section of *Poème exotique* that are reminiscent of an alto or bass flute is desirable. In terms of the tone color spectrum described at the beginning of this chapter, alto or bass flute-like colors might fall between the left side of the spectrum (hollow/wooden) and the center (core with an air cushion). As seen below in Example 16, Kessner creates an ideal scenario for darker color possibilities by composing in the low register for both instruments. Like the description of matching the F-4 to the G4 (a darker color) at the beginning of *Micro-Images* (see Example 1), a flutist can enhance the effect of the quintuplet in m. 3 of *Poème exotique* by matching the F+4 to an alto or bass-flute like timbre of the Gb4 (see Example 16).

The technical challenges of microtonal fingerings can often distract from elements of effective music making. The switch from F+4 to E+4 in m. 30 of *Poème exotique* (Example 16) involves an awkward right hand movement. Proper hand and finger positions for the modern flute must be compromised in order to achieve this microtonal fingering shift. Even a miniscule amount of extra time needed to execute this technical challenge could affect the evenness of the

sixteenth note rhythm or distract from the necessary tone color and dynamic attention needed to achieve an effective crescendo.

Example 16: *Poème exotique*, mm. 28-31



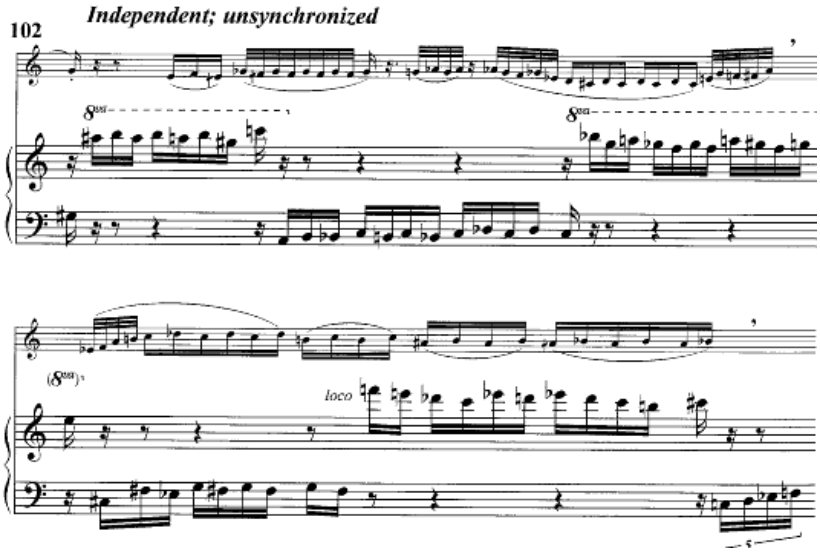
In addition to practicing the fingering switch enough to attain muscle memory, one creative approach to this challenge is to mentally divide m. 30 into an eighth note triplet plus a sixteenth note downbeat (part one) and three sixteenth note pick-ups leading into the down beat of m. 31 (part two). By practicing part one and part two with a gap in between and taking care with intentional timbres and volumes, a performer can gradually work toward joining the two parts back together to achieve a seamless line. This practice technique has many cross applications and could be beneficial to flutists seeking to increase their comfort level with microtonal fingerings.

Though many independent and unsynchronized moments in *Poème exotique* flow from Kessner's interest in "regular meter versus events happening in free time,"[36] he describes m. 102 with a slightly different spin (see Examples 17a and 17b).

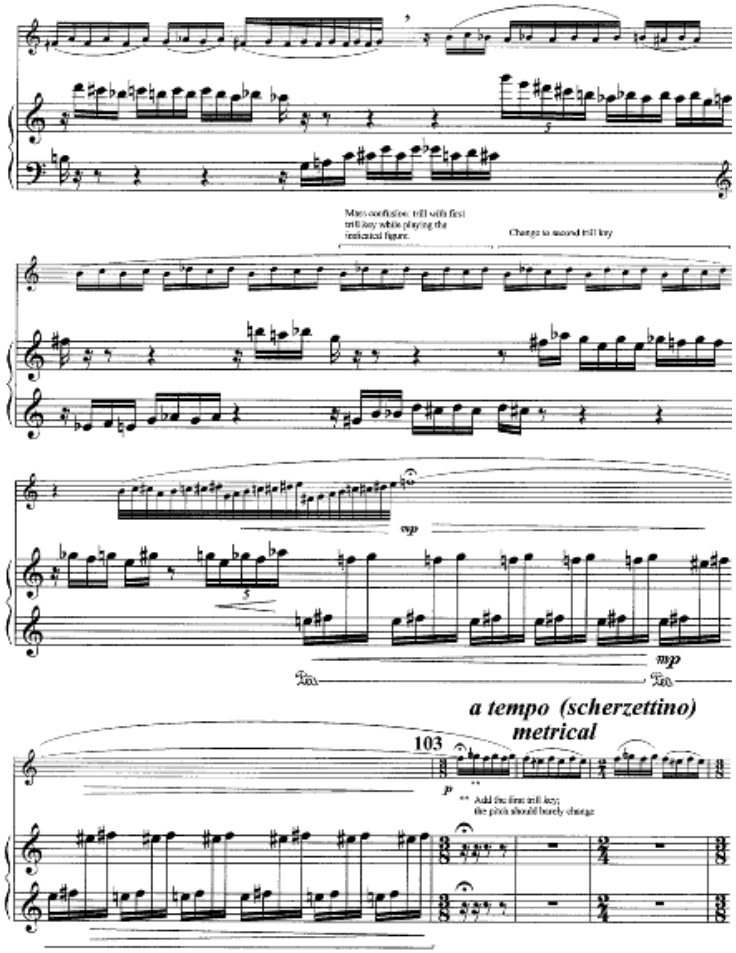
> …it should sound as if each player is playing the correct rhythm, dodging in and out of meter…I love blurring the lines between regular rhythm and metrical chaos, as well as between points of tonal focus and tonal (relative) chaos…I think this passage works most effectively if the players give the impression of playing normally-notated, highly complex rhythms, as if they are cruising through something that Ferneyhough or Donatoni might have written in their own special way! This is perhaps pure showmanship, but I think it contributes to the effect of the passage.[37]

[36] Daniel Kessner, interviewed by author, email, March 15, 2013.
[37] Ibid.

Example 17a: *Poème exotique*, m. 102



Example 17b: *Poème exotique*, m. 102 (cont'd)



In order to accomplish Kessner's ideal scenario for m. 102, the flutist should make every effort to execute the microtonal fingerings, pitches, and timbres in such a way that the rhythmic intentionality is not compromised, despite the inherent freedom in the measure. An uneven approach because of awkward technique or mismatched colors could result in a random effect, rather than the sound of a highly complex rhythm.

The conclusion to *Poème exotique* involves specific performance challenges related to tone color selection, relative dynamics, and temporal pacing. Kessner explains that the *fff* C#7 in the final measure was the starting point for his compositional process:

> …the idea for the ending came first: the bloody scream…playing as loud, high, and sustained as possible, hopefully playing straight into the heart of the listener…[38] I don't use (nor do I want to hear) a "pretty" sound toward the end of *Poème* …I want a fairly gross, bloody scream. This is no place for prissy or pretty. Give it power. [39]

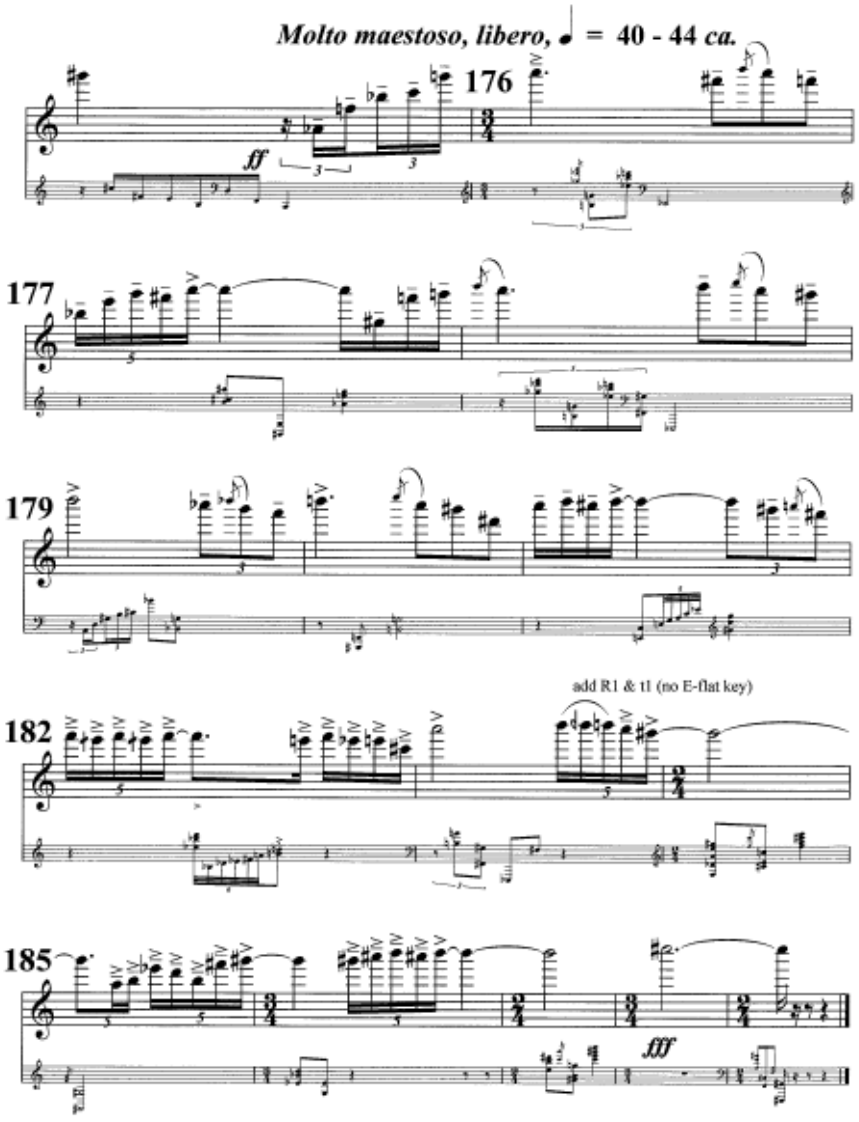
Given the quiet and mysterious opening and the terraced rise throughout the piece culminating in the "bloody scream," it stands to reason that the flutist should make every effort to achieve the most dramatic climax possible in the final measures.

The temptation to let loose and use extreme intensity throughout the final section could potentially result in an anticlimax if the flutist is overtired or has maximized his or her volume capabilities before the final C#7 (see Example 18). The physical effort involved in performing Example 18 convincingly is an endurance issue that can be handled with contextually based tone color selection and relative dynamics. During the performance itself, the flutist should stay focused on the fact that the C#7 is the ultimate goal and strategically reserve the most resonant and piercing tone color possible for that note alone.[40] For the high notes in the beginning of

[38] Daniel Kessner, interviewed by author, March 15, 2013.
[39] Kessner, May 8, 2013.
[40] Kessner expects the C#7 to be sharp in order to achieve maximum volume and dramatic impact.

Example 18, the performer can utilize tone colors and volumes (discovered through experimentation and practice) that most effectively communicate a *fortissimo* character without draining too much energy. Gradually, throughout the final measures the flutist can increase the intensity of the timbre (and, therefore, perceived dynamic) on each high note in a way that culminates in the "bloody scream" tone color in m. 189.

Example 18: *Poème exotique,* mm. 175-189



The progressive intensity of sustained high notes can be even more effective if the performer takes a broad approach to temporal pacing, allowing a call and response effect between flute and piano. Rather than a strictly literal interpretation of the high note durations, the flutist should listen for the interspersed piano part before inhaling a full breath and moving forward. The increasingly dramatic tone colors combined with a visceral call and response between flute and piano will allow the performer to guide the audience toward the climactic ending, retaining enough energy (and air) to execute the *fff* C#7 effectively. As Kessner describes, "This piece is about dramatic impact. When and if the audience feels the 'quietly dramatic' at the beginning, and then gradually gets pasted to the backs of their seats at the end, that's a successful performance."[41]

[41] Daniel Kessner, interviewed by author, email, March 15, 2013.

CHAPTER 3

CONCLUSION

The intent of this document was to guide performers through the concepts and careful preparation approach necessary for effective performances of Daniel Kessner's *Micro-Images, Genera* and *Poème exotique.* The timbral, dynamic and pacing complexities that arise when performing microtonal music were explored through representative examples from all three pieces. This author is hopeful that readers may gain a new understanding and appreciation for microtonal music and will program these works as well as other works by Kessner (see Appendix C). *Micro-Images* is recommended as a rewarding introduction to microtonal music and could be particularly helpful for flutists who are unaccustomed to microtonal fingerings. *Genera* is an excellent study in timbres and dynamics and can add a unique kind of quiet intensity to any recital program. For musicians who enjoy repertoire with a climactic ending, *Poème exotique* could easily be programmed as the dramatic final piece on a flute and piano recital.

More literature is needed to explore the detail-oriented approach necessary for effective contemporary music performances. A common assumption, especially amongst flutists unfamiliar with avant-garde music, is that extended techniques are an end unto themselves and do not demand the same kind of contextual understanding taken for granted in more standard repertoire. Through a specific examination of microtonal performance challenges in Daniel Kessner's flute music, this paper challenges that assumption and advocates a sensitive and thoughtful approach to performing *Micro-Images, Genera* and *Poème exotique* and similar works. Additionally, this paper seeks to provide helpful tools regarding the tone color spectrum and a description of relative dynamics to aid flutists and teachers in nuanced and contextually

based approaches to any piece of music. It is hoped that information gleaned in this paper may lead to more rewarding experiences for performers and audiences alike.

APPENDIX A

EMAIL INTERVIEWS WITH DANIEL KESSNER

All interviews are taken directly from unedited email exchanges with Kessner.

March 6, 2012 (*Micro-Images*)

Terri Sánchez: I was thinking about creating some mini exercises to help the performer become accustomed to reading the new symbols (like quarter-tone flat, etc.). Do you think this is a good idea or have any suggestions?

Daniel Kessner: This one is really up to the player (or teacher) studying the piece. For myself, I prefer just isolating individual passages, and playing them over and over until they are secure. Actually, since quarter-tone fingerings are not exactly "normal" for most of us, the whole piece is set up like an introduction to quarter-tones, starting with fairly easy ones (measures 1-5), and then repeating those a few times before moving on to more challenging ones. I know that helps me as a player to get into the piece. It's probably easier for the listener too.

TS: Do you have a vibrato preference for any specific parts or the piece as a whole? For instance, in the beginning of refrain I, I am tempted to use a very present, singing vibrato to bring out the *f* tied half note G, etc. I could also see it being effective as a straight tone or more subtle vibrato.

DK: I have a very traditional approach to vibrato. I think I use it as I would in any other piece. More expressive musical gestures cry out for more vibrato, etc., just like in Brahms. Your example at the beginning of the refrain is a great one -- I agree with the singing vibrato there.

TS: In your program notes, you mention a direct quote from a very famous piece of flute repertoire. I have to admit, I have no idea what it is! You were right about the intervals being compressed beyond the point of recognition. Would you be willing to let me know the source of the quote and/or how it is manifested in the movement?

DK: Ah, gotcha! Count back from the end of *nanologue* to the 6th and 5th measures from the end. The rhythm and shape might give it away. I'll give you a moment to think about it. If you still don't see it, please scroll to the end of this e-mail [interview] for the answer to the mystery (yes, I enjoy being a little cryptic sometimes).

TS: Your rhythms and tempos are very clearly indicated. Would you like to say anything about strict adherence to tempo vs. performer creativity and nuance?

DK: Again, I approach this the same as in any traditional piece. When I play the Copland *Duo*, I don't follow his tempo indications exactly. I like to take liberties, but clearly within the spirit of the composer's indications. I like players to be creative, and hope they approach my music this same way, interpreting the spirit of the indications without necessarily following every single metronome number exactly. *Nanologue*, for example, invites rubato.

TS: Did you have a particular moment of inspiration based on the Mussorgsky that prompted you to write this piece? Did that come later in the composition process?

DK: Actually, the Mussorgsky has always fascinated me as an approach to form: having a recurring refrain, which can be varied, with contrasting movements interspersed. It's not a new idea -- a take-off on the Rondo principle -- but using it to structure a larger, multi-movement work is really attractive to me. I've used it in other pieces as well, and will probably come back to it in the future. There is a lot to explore there. It wasn't a single moment of inspiration; more like a gradual realization of its potential.

TS: I like the idea that the refrains are the "frames." This, along with the title of the piece, makes me think of different exhibits - ancient history being represented by the Greek chromatic and enharmonic genera while the future or modern world is represented by the *nanologue* movement. How does the *scherzando* fit in? Am I on the right track with this?

DK: I like the images you came up with -- the "ancient history" one was definitely with me in that movement. I tend to go back and forth between being inspired by images, and then stepping back from the piece every so often to discover what I think it needs. That's where the "scherzando" came in. The refrain has a fairly dramatic mood, and there were already several slower movements. I just thought the piece needed something fast and light, in contrast to the others, hence the scherzando.

I like to think of my composing as a merging (or struggle) between the heart and the brain. In some pieces, one wins -- in others, the other, but in most of my works I think you can feel the interplay between the two.

TS: What would you like for the audience to walk away with in terms of experience?

DK: I'm a real traditionalist here. I think a player should prepare and perform this piece with the same value set he or she would use in any other piece. For the listener, I definitely realize that microtones are pretty different that what most are used to. Understanding that, I have attempted to bring the listener into a different sound world, lay out some materials that will be used a great deal later in the piece, and which should become fairly familiar, even within the 9-or-so minutes that the piece lasts, and then explore these materials, bringing the work to a satisfying close based on these materials. Yes, again, very traditional.

TS: I'm very interested in your process. Did you improvise and then capture the improvisations in notation? Did you have particular passages in your mind and then transfer them to flute or to the page? To what extent was *Micro-Images* an intellectual pursuit? An emotional pursuit?

DK: Normally, I don't do that much improvising in the composing process, other than in my imagination. However, this piece was definitely different in this regard. Before *Micro-images*, I had SOME experience with microtones on flute, but it wasn't that extensive. Before writing this piece, I really needed to become familiar and at least somewhat comfortable with the microtones and their fingerings. So, for this piece I was constantly going back and forth from the flute to the

paper and pen.
DK: I've talked a little already about intellectual vs. emotional, but I think it's clear to see that the "emotional me" comes out more in the refrains, at the end of the "Greek" movement, in *nanologue*, etc., while the "intellectual me" is clearer in the scherzando and in tricking out the ends of Refrains II & III so as to preview the movements that follow. In other words, I didn't want the Refrains to be interchangeable. Refrain II must precede the Scherzando; Refrain III must precede nanologue, etc.

TS: I'm curious if you have any favorite sources dealing with flute, contemporary music, Greek genera or even nanotechnology that might inform me as I continue to prepare the piece and write my paper. If there's anything in particular you think would be a good idea to include in my research, I would so appreciate the suggestion!

DK: Boy, it's amazing how much I've changed in this area. As a student, I read everything I could find about many aspects of music theory, tonal systems, instrument exploration, microtones, as well as aesthetics. Over the years I gradually modulated to wanting to operate more spontaneously, in a personal way, not guided by theorists. Now I read even more, but it tends to be just literature, not theory. I guess I got theoried-out at some point. Either that, or I finally realized that my balance was off, and have tried to encourage the intuitive part of me to take over. I'm actually very happy with the direction this has taken my recent work. I don't think I can ever turn the theoretical part of me off (nor would I want to), but I'm more interested now in the emotional.

TS: Finally, if there is something that you would like to share about the piece that did not make it into the program notes and I have not addressed with my questions, please feel free to let me know!

DK: Just that, in the end, it is a piece of music more than a piece of microtonal music. It must succeed (or not) as a recital piece. If players choose to perform it, it will have succeeded; otherwise ... well, it will suffer the fate of most of the music throughout history: oblivion.

And finally, the mystery quote is: Debussy - *Syrinx*! Count back, the 6th and 7th measures before the end. He does it twice, but I decided not to repeat it in this context. Once you've compared the two, you'll wonder how you didn't notice in the first place (I think).

March 12, 2012 (*Micro-Images*)

TS: It is very clear to me that sensitivity must be applied to intonation and dynamics to create the most effective showcase for the microtones and the piece as a whole. Would you mind speaking to this? Are there any words of wisdom (or words of caution!) you'd like to share - not just as the composer, but also as a flutist?

DK: Well, obviously intonation is important when you're playing Bach, Mozart, or anybody else. However, I think it's also obvious that the quarter tones won't even be recognizable if the normal,

tempered intervals are not well in tune.
You know, you asked last round if there were any special exercises I'd recommend in preparing *Micro*, or any other piece with quarter tones. I didn't think of it at the time, but there is one that I spent quite a bit of time with when I was composing the piece, and then again when I was learning to play it, mostly to get the sound of accurate quarter tones in my head.

It's simple, but effective. Just play groups of three notes repeatedly -- choose a tempered pitch, then play the quarter tone immediately above or below it, then play the next tempered pitch. For example, play E (1st or 2nd octave), then E-quarter sharp, then F -- also descending, F, then F-quarter flat, then E, listening to assure that the two intervals are really equal. Most of the quarter tone fingerings are pretty accurate, but some do need to be "favored" a little bit higher or lower (which I'm sure varies from one flute to the next as well). This exercise really works for me in getting the right sounds in my head.

For this piece in particular, practicing the "main motive" interval group, the perfect 4th divided in half, which is everywhere in the refrains, is also very helpful. In other words, play repeatedly (in either of the two lower octaves): D, F-quarter-flat, G or G, F-quarter-flat, D, again listening to make the two intervals equal.

TS: Besides the title of the piece, the movement titles and the Mussorgsky and Debussy references we discussed, were you thinking of any other images, characters or programmatic elements? (For example, measures 4-7 in "on the Greek..." seem to me like a ghostly echo and the C sharp trill at the end of the same movement sounds to me like a human cry or wail). Though you seem very open to performers interpreting your piece in their own way, I was curious if you have any "hooks" that come to mind when you've played the piece.

DK: OK, I confess, I have loads of mental images like the ones you describe when I'm composing and playing -- this piece or any other. The one you describe as a cry I think of as the wind whistling through a bamboo grove (an image given to me when I was studying shakuhachi, also in Takemitsu's description of the shakuhachi sound.

The one you describe as a ghostly echo, I just heard as an echo -- not necessarily ghostly. That one, by the way, is the essence of that movement: the same motive in two of the Greek genera, first the chromatic mode, then the enharmonic. The intervals are given in the preliminary notes before the score.

I don't recall many of them, but with nanologue there were several: "looking" at a normal melody, but through the wrong end of a telescope -- also "seeing" a normal melody that somebody sat on, that got run over by a truck, etc.

TS: I like how you described your process of venturing away from learned theory and more into your own creativity. Are there any "personal" theoretical strategies used in composing *Micro-Images* you could describe?

DK: There is one personal composing strategy that I often return to; it is not unique to ***Micro***. When beginning a new work, for some days or even weeks, I will picture a concert hall (not

necessarily the same one each time) with myself in the audience. I am about to hear a new piece for whatever instrumentation. I picture the performers coming out onto the stage (often including some of my "heroes"), and then I say to myself, "OK, what is the (not yet existent) piece that I would ***really*** like to hear them play for me?"

March 15, 2013

TS: I love the way *Poème exotique* begins with the flute and piano in low register and then journeys upward throughout the piece, culminating with the flute's *fff* high C#. It almost sounds to me like the lines are independent swirling beings, moving through time and space in multidimensional ways (rather than simply linear). Can you describe your inspiration for this overall progression of the lines?

DK: Actually, the idea for ending came first: the bloody scream (used in several earlier pieces too), playing as loud, high, and sustained as possible, hopefully playing straight into the heart of the listener. At almost the same time came the melodic idea that is used throughout: the expansion motive, by quarter tones in the flute, and of course chromatically in the piano. A few obvious examples are m. 3, 5, 8 in the flute, and m. 89, etc. in piano.

After that, it was obvious that the best way to set off and lead up to the scream at the end would be to begin low and quiet. Then came the decision to try to make the whole piece something like one long buildup to the scream. It turned out more of a terraced rise, with some peaks and valleys, but finally I think it pretty much worked in that it is almost always "on the way" to the final section.

As far as the two parts being independent, that varies a lot from one passage to the next. Sometimes, yes, they sound completely independent (e.g. m 64-70), while at other times they play as one (e.g. 82-89).

TS: When you utilize techniques like alternating 4/4 and 7/8 along with organic rhythms like triplets, quintuplets and accelerated rhythmic figures, it really blurs the sense of "where the pulse is." I read in your interview with Carla Rees that "constant perceivable meter" can bore you. What do you want a flutist to keep in mind concerning timing/pacing as he/she performs *Poème exotique*?

DK: Yes, I like very much the interplay of regular meter versus events happening in free time. I would probably be as bored with music that never has a pulse as with music whose pulse is too continuous. I love the interplay between the two. I think passages like 64-70 become more effective after having heard 47-59, where every quarter note is articulated.

As far as what the flutist should try to achieve, I would say that it's important to try to get from one rhythmic world to the other as smoothly as possible. For example, in the transition from 70 to 77, the listener should be aware that meter is being re-established, but without knowing how or when it happened -- only that it did.

Similarly, in the rhythmic chaos of 102, it should sound as if each player is playing the correct rhythm, dodging in and out of meter, so that the listener may not even know that there really is no meter, but that perhaps the rhythms are just very complex and precisely notated. I love blurring the lines between regular rhythm and metrical chaos, as well as between points of tonal focus and tonal (relative) chaos.

TS: Also in your interview with Carla, I see that you are drawn to the "magical, mystical" sounds of the big flutes. The beginning of *Poème exotique*, with its low register and microtonal colors, reminds me of an alto flute sound. Are there any similarities for you? What advice would you give to a performer about choosing a tone color for the introduction of *Poème exotique*?

DK: Yeah, I'm a low instrument, low register person. I actually studied clarinet in my university days, not flute (still have never studied flute), and gravitated immediately to bass clarinet, also contrabass. What brought me into the flute world in the first place was the bigger flutes. I don't much like piccolo, and certainly don't play it well. And yes, when I write for the flutes, I'm sure I tend to emphasize the low registers more than the upper.

The opening of Poème is dark, partly just because it is, and partly to set off the ending as well as possible. Listen to the piano sonorities at the beginning too! super dark. Yes, if you can make the flute sound like an alto or a bass at the beginning, so much the better.

TS: In *Poème exotique*, the flute and piano are often in conversation with one another. What would you like a performer to consider when examining the relationships between the two parts?

DK: I mentioned this before, but in passages like 85-89 it should sound like one instrument, one player. Both the flutist and pianist must play "inside" each other. Less obvious places where the same should be the goal: 66, where the piano takes over the flute's D-flat, 70 (middle) where the flute comes in from inside the piano's B, followed by C# and D# (no matter who actually plays these first -- could be either).

Also, though it's not part of this question, another goal of the piece had to do with counteracting a basic imbalance: that the flute can play microtones, while the piano cannot. Even though the discrepancy should be obvious in theory, I've tried in many ways to counteract it, hopefully to the point where the listener is not so aware of it.

TS: In m102 of *Poème exotique* you write that the parts should be "Independent; unsynchronized." Did you have any particular sound or visual images in mind? What advice would you give performers about the overall effect you would like this section to have on the audience? How similar is this to the unsynchronized sections in *Genera*?

DK: I think this passage works most effectively if the players give the impression of playing normally-notated, highly complex rhythms, as if they are cruising through something that Ferneyhough or Donatoni might have written in their own special way! This is perhaps pure

showmanship, but I think it contributes to the effect of the passage. When Dolly and I have played it, we're both delivering our individual figures as if we're sending it to the other, waiting for a response. It works. To the audience it should sound complex, but controlled.

In *Genera*, even though much of the music is notated without meter, rhythmically free, hardly any of it is really unsynchronized -- there is a difference. A few notes on the second system of p.4 and a few notes at the end of the first system of p.7 are about all. For the rest, even though there is little or no pulse, the sounds follow each other in a specified way, so this is quite different than the chaotic passages of Poème.

TS: What inspired the title for *Poème exotique*?

DK: I often think of dramatic melody (such as the last section of Poème, Wagner's Tristan Prelude, opening) as speaking to the listener, rather than playing music. The beauty is that, with notes instead of words, the "meaning" is very subjective. However, the "speech" image is there, and that's where the "poème" part comes from. The "exotique" part has to do with the microtones, a more exotic way of speaking than with tempered pitches.

TS: What do you listen for to consider a performance of *Poème exotique* successful or effective? What would you like performers to strive for?

DK: This piece is about dramatic impact. When and if the audience feels the "quietly dramatic" at the beginning, and then gradually gets pasted to the backs of their seats at the end, that's a successful performance. They should be as emotionally wrung out as the players at the end of the piece.

TS: Both *Genera* and *Poème exotique* seem to be about moving from the small to the large, from the low to the high. Can you describe your inspiration for having the pieces "open up" as they flow forward? Is this the complete opposite concept of *nanalogue* (in *Micro-Images*) for you or unrelated?

DK: Having a piece begin small and "open up" is certainly not new; there are thousands of pieces that do it. This process is probably among the most universal in Western music. By the way, I think Nanologue does the same. Beginning from C-quarter-sharp, it reaches its high point, all the way up to Eb by the end of p.8 (!) then pretty much all downhill from there, finishing at its lowest point of the entire movement, C-quarter-flat. The scale is microscopic, but the overall shape is pretty much the same.

One extra feature in *Genera*, though: after opening up to its largest (though not highest) point at the beginning of p.8, the upper register is gradually taken away, leaving it at the bottom of both the bass flute and bass clarinet registers at the very end.

TS: You open *Poème exotique* by instructing the performers to play "Quietly dramatic." How would you describe the opening of *Genera*? What advice would you give performers about pacing (and patience) at the beginning of *Genera*?

DK: Ah, here I was going for something very special. Normally players should "play to the audience" rather than to themselves. Here, however, my image is that the players, even though on stage, are somehow by themselves, unaware that they are in a concert hall and unaware of the existence of the audience, as if in a trance. Only the silence and the sound exist, and they are one, with no division or distinction between them. I practiced so that I could consistently sustain my first note of the piece for around 30 seconds (really fun practicing that), but also remaining aware that my thirty-second note (not 32nd note -- I love word plays) was still only a part of the continuing sound of the clarinet, which eventually takes it back over again. The two players must truly be inside of each other. There are quite a few places in Genera where this is essential. Advice to the players: slower is better. Enjoy what happens to the sound when one instrument takes over for the other.

TS: When did you first become to the *Genera*, or tetrachords, that you use in composing *Micro-Images* and *Genera*? How much is this a part of *Poème exotique?*

DK: This is funny. I read about the Greek genera as a student, but never thought to use them for anything. For this piece, and for the second movement of Micro, what I found most attractive about the Greek genera was that, even though we know the theory behind this Greek music, we know almost nothing at all about how the music sounded. We have descriptions, I think even some rudimentary notation, but no music. This left me free to invent whatever I wanted, however much or little based on the specified intervals groups. That made it fun. Nobody was in a position to tell me if I had succeeded or failed in doing something based on ancient Greek music.

March 16, 2013

Terri Sánchez: In *Poème exotique*, would you rather performers approach the changing time signatures by feeling a continuous internal eighth note "pulse" or to use your designated time signatures as implied emphasis (on the first downbeat of the measure)?

Daniel Kessner: The downbeats are definitely the more important concern here. That's how I choose meter signatures: because downbeats should feel different from other beats, more important, and therefore stressed appropriately. The pulse kind of comes and goes, but there are points of emphasis.

TS: Do you have favorite moments in *Poème exotique* and/or *Genera* when flute microtones cause distinctive harmonies with the duo instrument?

DK: Yes, especially in *Genera*. After emphasizing un-tempered intervals on page 2 and top of page 3, the perfect 5th comes like a beam of light; then when both parts move up a quarter tone and drop to *pianissimo* -- well, it's a moment I always look forward to. There's a similar one at the top of p.4, where the major 2nd drops by a quarter tone, like a Doppler effect.

DK: Two others right after this: in the 3rd measure of p.4, the minor 3rd compressing to the interval between m3 & M2; then the following measure, where you hear in order M2, large M2, then m3 (these two are obviously related).

TS: One of my thoughts for a performance guide of each of the three works we've been discussing is a close examination of your very specific use of dynamics (especially in situations where the smaller "worlds" occur - *nanologue* keeps coming to mind). What would you think of a performer assigning a specific mood/tone color/etc. to each dynamic and practicing all of the *p* (or *mp*, *mf*, etc.) sections in a piece to see how they're related? What do you think that could reveal about your process, the piece, etc.?

DK: I have to say, this is a new concept for me, and an attractive one. But, I doubt that it will reveal much about my process. However, looking at dynamics just now in Nanologue, I notice that I told you something completely wrong the other day! The high point in terms of register and dynamics is not the Eb at the bottom of p.8, but rather the E-quarter-flats in the next-to-last system of p.9, at the mf.

DK: As I look this over, the dynamic plan is clear. Both dynamics and pitch go through a series of small rises and falls, culminating with the "big moment", the only mf in the movement, followed by *diminuendo* to the last note/lowest point. I think the mp notes represent the next level down of relative climaxes, but I don't know if practicing them separately would really reveal anything significant. In this movement, the various microtones differ so much in terms of resistence, with all the bizarre fingerings. Interesting thought, though. I'll be interested to see what you have to say about this.

TS: As I practice and become more acquainted *Genera* I find myself thinking of the word "breathless." The long sustained, *pp* notes and the mysterious microtones/harmonics create such an atmosphere of anticipation and quiet intensity. Can you describe your desire for the audience and also the performer "experience" as a live performance of this piece takes place?

DK: Hm, I'd go with "timeless" rather than "breathless" -- at least that's closer to the image I was after during the first two-thirds or so of the piece. And again, I come back to the idea of the trance. For the audience, I think it should be as if they are witnessing a single trance, shared by the performers, from the outside, perhaps trying to get in and join the experience. For the players, it is their trance, and they need to be completely involved with the continuing sound, and not with playing to the audience, as they would normally do.

TS: Can you describe the power of the rests in *Genera*?

DK: Obviously, at the beginning especially, it is the silences that give the sounds their power and contrast. If the clarinetist, for example, appears to begin the piece with the first actual note, he/she has committed as serious an error as if he/she had started a Mozart piece from measure 3, or something like that! Same for the 4-and-a-half beats of rest between the first two notes. The piece must begin with 5 beats of silence, and there must be around 4-and-a-half more between the first two notes. There are fewer important silences later, but they are still important, e.g. bottom of p.7.

DK: If you'd like some fascinating additional reading on the subject (if you can find any extra time these days), you should read Toru Takemitsu's collection of essays, *Confronting Silence*. This book changed my life, and certainly changed the way I play. It may do the same for you.

May 8, 2013

Terri Sánchez: What advice would you give to flutists about the idiosyncratic tone colors and volumes of the microtonal fingerings you've provided? What adjustments might they need to make?

Daniel Kessner: Interesting question, as the answer is not the same across all of the three pieces. In most of Micro-Images, throughout all of Poème, and through *most* of Genera, the quarter tones should sound as much as possible like the regular, tempered pitches. This obviously takes some adjusting on some notes, while others act pretty normally (such as F-quarter flat). By the way, this F-quarter flat was carefully chosen to be part of the main refrain theme in Micro just because it sounds so normal.

However, there are a few places where I actually try to bring out the color and volume differences, and even delight in them. For example, in Nanologue (still a source of considerable humor, as well as seriousness for me), 2nd system, 2nd & 3rd measures, the notes get fuzzier and fuzzier as you add fingers. I like that, and actually try to bring it out. A slight crescendo, even though it's not marked, helps here. Same in the 3rd system, 2nd bar, where the dynamics heighten the progressive fuzziness.

Actually, the opening phrase has a similar case. The "top" of the phrase, 3rd measure of the movement, 1st note, should be the most important of the phrase in the traditional sense, as it's the highest note and the top of the (little) crescendo. However, it's a seriously funky note, and it always makes me smile that such a feeble sound could try to serve as the top of the phrase. (I try to smile only during the following rest, rather than while I'm trying to play it.) It's also VERY important, not only not to breathe between measures 2 and 3, but to connect to measure 3 with a gesture, perhaps leaning into measure 3, to make sure it sounds like one phrase. It's pure theater, but the imaginary crescendo through the rest is very effective.

By the way, there is a *great* example of this theatrical element in Webern's 6 Bagatelles for String Quartet, Op. 9, 5th movement, measures 2-3, violin I. It's pizzicato quarter notes at 8th = 40! First of all, there's absolutely nothing you can do even to sustain a pizzicato note for that long. However, on top of that, the first note carries a crescendo -- yes, pizzicato crescendo! I have seen it. If the player leans, you believe! It is extraordinary.

Another interesting case in in *Genera,* page 5, 3rd system, 2nd bar. The G-quarter sharp is also a way fuzzy tone. Doing the indicated crescendo into it seems to heighten the effect, as you paradoxically grow into a weak tone, then *diminuendo* into a normal, stronger one. I love the effect of that color change, which is inevitable, and do all I can to bring it out.

DK: Also, in the alternation of 2nd octave G, normal and harmonic, near the end of page 3 in Genera (similar cases also in both *Poème* and *Micro*), trying to match the tone colors would defeat the idea of using the alternation in the first place. The idea, of course, is to have the color (and possibly pitch) change. Here it should not be minimized.

Lesson: you have to get inside the *intent* of each passage, taken individually.

TS: What would you like performers to know about the unique color palettes you've created in all three pieces?

DK: Probably nothing terribly profound here, as long as a player really listens to the sounds of each passage -- as above. Throughout most of *Poème*, for example, there is no unique color palette desired -- just normal-sounding quarter tones. However, in a few places, something is indeed done with colors, e.g. p. 11, 2nd system, also p. 13, bottom system. I hope that the differences will come out of practicing each passage and realizing the sounds inherent, and therefore intended for each.

TS: How important is the pacing in each piece? What would you like flutists to keep in mind when moving between movements, time signatures and/or different timbres?

DK: Pacing is probably no more or less important in my music than in much contemporary music, and for that matter all music. For example, in the two extended cadenzas in Messiaen's Le Merle Noir, some gestures simply require more time than what is indicated in the rhythmic notation. The same is true (for me) in Debussy's *Syrinx*. Played strictly in tempo, it becomes a much less interesting piece. Some passages seem to imply a fairly straightforward rhythm, observing exactly what is notated. Other passages (again, my opinion) would die a miserable musical death if they are interpreted literally, strictly.

My music is no different. Each player must discover what is to be played pretty much as written, and what needs more or less time. Pacing is a critical element of the interpretation of all music.

By the way, I don't like seeing great breaks (stopping to cough, or swab out the instrument) between movements of anyone's music, not just my own. The music must continue during the spaces between movements. Differences in the time taken between movements can be used to great advantage.

TS: What motivates you to write in limited (sometimes extremely limited) pitch and dynamic ranges? What should performers keep in mind as they select specific volumes and timbres within these parameters?

DK: For me, severely limiting resources can be a great resource in acting as a setup, providing maximum contrast for other passages when the limited materials are suddenly (or even gradually) left for something really extreme. I don't think the opening of *Genera* would work if the entire piece were like that. However, that purposely small opening provides a great point of departure for many things later in the piece.

DK: Another example: *nanologue* would be a disaster as a stand-alone piece (again, my opinion; many other composers have written long-winded pieces on similarly limited materials). However, between more active and dramatic movements, I think it provides a very effective contrast and break from the intensity of the refrains.

For the player, if you try to expand the dynamic range of *nanologue*, say by cheating on the early mp markings to mf, or the later mf marking to f or ff, you risk ruining the contrast between that and the other movements. You have to keep the larger picture in mind, which has to take precedence over the temporary ardent wish to play a particular note louder, such as the one and only mf in the middle of page 9. I did actually think long and hard about dynamics in that movement, perhaps more than in the others.

TS: What advice can you give performers to help them avoid over-interpreting or underinterpreting your score markings? In a crescendo from *ppp* to *pp*, how subtly or overtly should this transition be performed?

DK: That's a great example. If the composer indicated a crescendo from ppp to pp, I (as a player) would crescendo only enough so that the audience could barely recognize that a crescendo has indeed happened -- no more than the minimum a listener could recognize. This is obviously a very subtle issue, changing dramatically according to the size and acoustics of the hall, the distance from the audience to the player, etc.

At the other end of the spectrum, I don't use (nor do I want to hear) a "pretty" sound toward the end of Poème. I know players who can do a beautiful high C-sharp (I cannot). The same is even more true of the B just before it. Even though it is a much more controllable note, I don't want to hear control there! I want a fairly gross, bloody scream. This is no place for prissy or pretty. Give it power. Play it like a clarinet would sound in that register. I hesitate to use the word "ugly," but after all, how ugly can a flute really sound? (A clarinet can do a lot worse in this regard.)

I should probably mention that I much prefer that these particular pieces of mine, especially Genera, be played in a small hall with live acoustics. When I have performed them in such halls, I feel I can do the most with each sound, shaping and sculpting it to achieve its maximum effect, and the audience will actually hear it and respond to it. I have always felt completely connected with halls and audiences. I played in a literary club in Portugal about a year and a half ago. People were seated within five feet of me. I thought this would freak me out, but it provided an amazing opportunity to do more than usual with each tone in certain passages. Those listeners were hearing everything at point blank range, and I think I took full advantage of it.

May 9, 2013 (*Poème exotique*)

Terri Sánchez: I am tempted in the beginning (different moments in 1-16) to take a slightly more expansive approach to some of the rhythms (the quintuplet in m. 8 for example). How crucial is it to keep returning to quarter note = 64 after the accelerating rhythms?

Daniel Kessner: The idea is to move smoothly and unnoticeably in and out of the tempo and regular rhythm. While the rhythm is generally free in the entire passage, in order for the contrast

to work, the music must keep returning to something fairly metrical and fairly in tempo. So, places like the first 3 beats of m.10 should be pretty strict. However, when I write the particular rhythm you mention, the 8th note quintuplet, I usually intend it as something that works against metrical clarity, so sure, have some fun with it. Just please make sure that there are some returns to rhythmic clarity and tempo along the way. Part of returning to something like quarter = 64 is to keep the passage from becoming an Adagio, which is not the intention. Again, the idea is to establish a meter & tempo, then move in and out of it along the way.

TS: The three-quarter tone flat A at the end of m. 7 has a default tone color quite different than the Gs on either side of it. Could you speak specifically to how much you do or don't want it to affect the Gs and vice versa? (Your reference to the microtones sounding like the standard pitches in *Poème exotique* was a bit different than my original concept. I'm hoping by asking you about a specific example it will reveal even more about your thought process with this subject).

DK: I confess, that's a tough one. I can't recall how I played it (and don't even want to listen to check). However, I think I would prefer that the color/volume difference be minimized here. This particular passage is more about the play of intervals -- the gradually expanding motive. The quarter tones that follow are really good ones (in other words, they sound pretty normal), so I think you should try to make the A-love as similar to the Gs as possible.

That said, I didn't specify in the score, and I'm always open to different interpretations, so if you have other ideas about it, that's fine too.

TS: Do you want the *mp* marking at the beginning of m. 10 to be a *sbmp*? Or should the flutist start much softer in 9 to arrive at *mp*?

DK: Hm, that looks like a mistake. As I look at it now, and play it in my head, I'm thinking that it should be mf at m.10. I don't want a drop in volume in m.9, but I still want a crescendo there, so probably just a slightly larger point of arrival in m.10, then back down.

TS: Do you envision a tone color transformation in the long G in mm. 34-37 as well as a volume decrease?

DK: I hadn't really thought about that, but I guess it's implicit. The G goes from motivic importance at its arrival, to becoming a background event as the piano part takes over, then re-emerges as motivically important for the last few notes -- an interesting apparent contradiction as it diminishes. Anyway, I don't have any specific advice there, but I look forward to hearing what you do with it. (Did I do anything there on the recording?)

TS: In m. 47 and m. 48, the low C sharps might be a tempting place to use a dark, rich, resonant color (a habit of many flutists in the low register, simply because they can). Can you speak to your tone color preference on both C sharps, especially considering the contrasting forte coming up in 51?

DK: Not sure if my answer is going to sound contradictory here, and again I'm not checking my recording to see what I did. However, I want these two measures to sound like one continuous

line between the flute and piano, but still with the C#s sounding like downbeats, and like the slightly more important tone, being the only one that's sustained. Anyway, no, I don't want two of those giant low notes -- just a slightly more important member of a single melodic line. (I hope I didn't contradict that with my performance!)

TS: Measures 61-62 is an example of a decrescendo that might not be consistently decreasing in volume because of the altered color/volume of the microtones. How carefully should a flutist consider the role of the microtones within the decrescendo?

DK: Here it's definitely an issue. Playing it back in my head, I don't think the E-quarter flat in 61 needs special attention, but the A-q-flat in the next measure definitely does -- a little extra lean or push is necessary to prevent a sudden drop in presence.

TS: Can you shed light on your use a dotted eighth note and the accelerating/decelerating rhythm and perhaps offer a suggestion for effective pacing?

DK: I actually thought about the difference between starting accelerating groups with an 8th versus a dotted 8th. Adding the dot is my way of telling the player to take just a little extra time on that note, and perhaps stress it slightly, like first notes of a rhythmic or melodic group in Chopin's music.

TS: Is your use of *ppp* in m. 70 to prompt the flutist to come from inside the pianist's sound?

DK: Yes, definitely. I also wish I could achieve the same when the piano takes over a couple of the flute notes in the same passage (the Db in m. 66, the D in 71), but unfortunately a piano can't really do that.

TS: Measure 74 through 96 and also measure 102 (and of course the *Scherzettino* at 103) remind me of *Scherzando* in Micro-Images. Can you discuss your use of different timbres revolving around particular pitches?

DK: Yes, those two passages are obviously quite similar in intent. I see (hear) the alternation of colors on a single pitch as the ultimate small interval. To cite the obvious progression, you can move from the semitone to the quarter-tone to the color-changing unison, and it sounds to me like a logical progression; same for the reverse.

While it may sound like a contradiction, I would recommend no color change for the semitone, minimizing the color change in the quarter tone, and then emphasizing the color change in the alternating unison. I think that gives the progression the clearest presentation.

TS: Measures 100 and 101 are written without any microtones. Though they are marked piano, I find myself tempted to play more cantabile (and perhaps too loudly) because of the more standard writing. Can you offer some insight to aid in contextual understanding of these measures?

DK: No, I really intend these as fleeting, *scherzando* material. I know, even including the piano part it is like a diatonic oasis in an otherwise chromatic and microtonal maze, but I don't really want it to stick out. Again, I hope I didn't do something completely contradictory in my performance!

TS: What is your preference for the intensity of the beginning of the F natural fermata at the end of measure 102 as compared to the piano crescendo? Can you offer thoughts about blending and balance here?

DK: I really want the flute & piano to become one instrument here. This is obviously in spite of the fact that the piano can't sustain at a constant volume, while the flute can't hammer a note like the piano. Still, it's clear from the pitches, the convergence to the chromatic cluster E-F-F#, then to the single tone F, then re-expanding next measure.

The two players should strive to reach exactly the same level, though at different times. Even though it's impossible, they should play as one sound here.

TS: I find mm. 147-149 a memorable moment in the piece. Do you hear it as jazzy? Like a human cry? What inspired this moment?

DK: Yeah, I enjoy playing that one. Actually, I thought of it as a disintegration. The earlier expanding motive is being taken apart, totally losing its pitch center, crashing and burning. At first I had a *diminuendo* in 149 to help it go flat, but then decided that I wanted to bring it out, not in spite of but because of the pitch drop! It should sound positively degenerate! I guess a cry of anguish.

TS: The climbing passage in mm. 164 and mm. 165 reminds me of the passage beginning 8 from the end in *on the Greek chromatic and enharmonic genera* in *Micro-Images*. I find the ascending pattern with different timbres comes across as virtuosic and impressive if done well. What are your thoughts on these passages?

DK: Yes, you nailed it here. I keep thinking that most microtonal music is slow and meditative, partly because it's so difficult to play faster microtonal passages. The ones you cite were definitely created to provide some microtonal virtuosity.

TS: I know that you want the C sharp at the end to be visceral and not a "pretty" tone. On the high G sharp in m. 184, many flutists would be tempted to add the middle and ring fingers of the right hand for tuning purposes. Would you rather them not? What are your tuning preferences for the ending of *Poème exotique*?

DK: Yeah, I'm definitely struggling to keep as much of that last passage in tune as possible. I'm pretty sure I added those r.h. fingers when I played it (hope it helped). I don't have any trouble playing rough and gross no matter what fingerings I use, but that may just be me and the flute. (Did I ever mention that I came to the flutes pretty late in life? After studying many other instruments, I kind of declared myself a flutist when I was in my late forties.) I guess what I'm

saying is that intonation is important to me, and I think better in-tune fingerings help, while the register and dynamic level should make it sound bold and rough enough.

However, by the time you get to the C#, it's so far in register from the piano part that it doesn't seem to matter as much. Then all bets are off; just blow your heart out.

May 14, 2013 (*Genera*)

Terri Sánchez: At the very end, in the bass flute part, if the performer loses tone, would you rather them fade to silence early or let the residual whistle tones and air sound remain?

Daniel Kessner: Sure, that's one solution; and/or pretend like you're still playing. Again, the theatrical aspect is there, so why not use it? The last few bars are really an "I can play quieter than you" contest. I had originally thought of extending the piece another couple of bars with mimed notes, but that seemed like to much -- or too little, I suppose!

TS: At the top of page 8 in the bass flute part, there is a decrescendo to *niente*, but for me, key clicks were very noticeable. How do you feel about the key click sound being louder than the tone toward the end of the decrescendo?

DK: The key clicks are fine here, and will help bridge the transition from bass flute to bass clar -- the crossfade on the unison, which is the main point.

TS: Top of page 8 after the forte C in the bass flute part, how essential is it that the clarinet comes in right on time with the *niente* D? Would you rather it be on time or make sure the sound is as soft as possible?

DK: Dynamic level is more important than being on time here, of course. The listener shouldn't really be aware that the bass clarinet is even playing until the bass flute begins to *diminuendo*.

TS: For clarification, each time the flute and clarinet have a shared rhythm on long, sustained notes without a decrescendo or *diminuendo* written, are you wanting them static? A subtle feeling of leading forward? How do you feel about tapers?

DK: Here, I didn't want any tapering, but rather clear changes from one instrument to the other (in contrast to the many cross-fades).

TS: How much "air" in the sound is okay? What are your thoughts in general about air surrounding the clarinet tone?

DK: I wouldn't really try to minimize the "air" component of the tone, especially at the end of the *diminuendo*. Don't emphasize it either, but it should definitely be part of the picture.

TS: How much flexibility is there dynamically after the first 3 measures of page 4 (no dynamics for the rest of the page)?

DK: Oh, I think you should still do a normal amount of shaping each phrase. It should all be in the general range of "p," but not flat-line.

TS: On page 5, line 2, "quasi tremolo" - we just wanted to double check that the clarinet continues playing after the 8 thirty-second notes (in a tremolo).

DK: Oh yes, that's not clear in the score. In later pieces, I have extended at least one beam to make it clear. Anyway, yes, clarinet figure should continue until the rest.

TS: Top of page 4: What do you think of "bell tone" accents? Should they be "very clear" like measure 2 of page 2?

DK: Yes, I like nice, clear accents, but the flute still needs to match them in strength. Clarinet can obviously win that contest, but I want them equal.

TS: One of my favorite discoveries during our rehearsal was the strong presence of difference tones in many sections. Any thoughts?

DK: Definitely, enjoy them! My favorites are on p.4, starting in m.3, where they get pretty intense. This of course varies a lot according to the room. Have you tried it in a small practice room? Ouch.

TS: Could you compare/contrast p. 3, beginning of system 2 to the beginning of p. 8?

DK: Yes, interesting question. In my mind, there is a big difference in effect between harmonies moving in parallel [e.g. p.3/sys2, p.4/mm.1-2 (Doppler Effect), p.4/middle of sys2] versus true harmonic motion, with some sense of resolution, either by contrary motion [p.7/sys4, p.8/beginning] or by oblique motion [e.g. p.9/end of sys2 to sys3]. In the latter, there is a sense of arrival, while in the former I hear more of a slide from one sound to its equal, higher or lower, which negates the feeling of motion. Other interesting resolutions (to me) are the decorated ones on p.7, last half of sys 1.

APPENDIX B

TRANSCRIPT OF EMAIL INTERVIEW WITH CARLA REES

May 11, 2013

TS: I know you have performed *Micro-Images* on your Kingma System Alto Flute. Have you performed it on a standard flute? What advice would you give flutists about incorporating the microtonal fingerings on their standard flutes?

Carla Rees: I've performed it on C flute but I only play on Kingma system instruments (C, alto & bass). Main advice would be to treat them the same as any other fingerings - learn them well, listen particularly carefully to intonation and try to get as good a tone as possible.

TS: Can you discuss the tone color differences between standard pitches and microtones on your Kingma alto? What are some of the idiosyncrasies?

CR: There are no tone colour differences, and that's why it's so great! So many composers have to put up with tone colour changes that they don't want, just because that's all the instrument can do. With the Kingma system you can choose to make colour changes using alternative fingerings or with embouchure/resonance, but it's the choice of the player, not imposed by the instrument. most composers I've spoken to prefer the evenness of tone, given the choice.

TS: Dynamics play an important role in *Micro-Images*, especially in the *nanalogue* movement. What are your thoughts on performer versus audience perception of dynamics? How important was contextual understanding of dynamic schemes to you when you prepared to perform *Micro-Images*?

CR: Dynamics are important in all repertoire, but in some, including much of Dan's music, I see them more as intensity of sound. Projection and dynamics are two completely different things (or can be) and you can work with both. This is particularly important in the nanologue movement. Audience perception - hmmm - I guess it shouldn't always be a conscious thing for the audience but it's more important to engage them with the expression overall.

TS: Do venue acoustics and audience size alter your approach to dynamics, tone colors and/or pacing (especially concerning microtonal passages)?

CR: Of course! Every performance is subtly different, depending on the venue, the mood of the audience etc.

TS: What appeals to you most about *Micro-Images* in performance? What kind of feedback have you gotten from audience members?

CR: It's a well written piece which uses microtones effectively, and Dan has a great way of structuring music so that it always seems to 'make sense', to me as a performer but also to an audience. I play microtonal music most of the time so it's not so unusual in that sense for me or my usual audience (Dan also made a microtonal version of tous les matins for me)

TS: If you had to describe Daniel Kessner's music to flutists who are unfamiliar with his works, how would you characterize it? How would you describe the color palettes Kessner employs by mixing microtones and standard pitches?

CR: I don't necessarily see the microtones as colours - but that's because I play them on instruments which are made for microtones. There is a big difference for me between alternative fingerings for colour changes (which he often uses, in a similar way to Takemitsu) which are sometimes microtonal, and microtones which are there for melodic or harmonic reasons (which I'd deliberately play with the same tone as the standard pitches) I'd describe his music as well written, with a good understanding of the instruments he's writing for. His music is considered, and well constructed, with room for expression. All reasons why lots of people should play it!

TS: Please share any thoughts you have about performing microtonal works. What advice do you have concerning the expressive qualities and performance challenges associated with them?

CR: This is a big question because it's something I do all the time - I could go on for hours about details - but in essence it's not really any different from playing any music - play the music to the best of your ability, don't let the technical problems get in the way of the expression, and above all, intonation is everything. Microtones are NOT out of tune notes - they are precise pitches which can be heard distinctly and deserve to be treated with respect!

APPENDIX C

CHRONOLOGICAL LIST OF DANIEL KESSNER'S FLUTE WORKS

1969 Equali I; 4 flutes, vn, va, vc, cb; 13 minutes
Premiere: 9/16/70; Radio VARA Chamber Orchestra, Francis Travis, cond.; Gaudeamus International Music Week, Hilversum

1971 Interactions; flute, cello, piano, and tape; 11 minutes
Laureate: Queen Marie-José International Composition Prize, Geneva, Switzerland, 1972
Premiere: 5/25/73; François Perret, Philippe Mermoud, Suzanne Husson; Concerts de Merlinge, Switzerland

1975 Solennité; bass flute, viola & percussion; 9 minutes
Premiere: 9/24/75; Lisa Edelstein, Pamela Goldsmith, Timm Boatman; L.A.

1980 Ancient Song; alto recorder, viola & prepared guitar; 12 minutes
Premiere: 6/27/81; Randal Rosenfeld, Douglas Perry & Stephen Wingfield; Guitar '81, Toronto

1985 Circle Music I; piano and solo instrument (fl, ob, cl, vn, va); 6-9 minutes
Premiere: 5/13/86; Gretel Shanley (fl.) & Paul Kim; New York

Circle Music II; flute and guitar; 6-11 minutes
Premiere: 11/29/88; Andrea Wiseman & Robert Cooper; Baton Rouge, LA
Publisher: Columbia Music Co; distributed by Theodore Presser, 1992
Recording: B & B Duo; Julie Burkert & Ron Borczon; Centaur Records CRC 2234 (1995)

1988 Two Old English Songs; soprano, flute, viola & guitar; 16 minutes
Premiere: 5/4/89; Lisa Stidham, Daniel Kessner, Pamela Goldsmith, Ron Borczon; Los Angeles

1991 Studies in Melodic Expression

Seven Studies for Solo Flute; 14 minutes

Distributed by Theodore Front Musical Literature; www.tfront.com

1993 Shades of Pastel; alto flute & prepared guitar; 9 minutes

Premiere: 4/9/94; Daniel Kessner & Ron Borczon; Los Angeles

Distributed by Theodore Front Musical Literature; www.tfront.com

Simple Motion; alto flute & piano; 10 minutes

Premiere: 10/18/93; Daniel Kessner & Dolly Eugenio Kessner; New York

Distributed by Theodore Front Musical Literature; www.tfront.com

Recording: "In the Center; Daniel Kessner at Forfest"; Daniel Kessner and Dolly Eugenio Kessner; Capstone Records CPS-8704 (2002)

1995 Symphonic Mobile I; flute choir; 16 minutes

Premiere: 5/7/97; ensemble conducted by Daniel Kessner; Los Angeles

Distributed by Theodore Front Musical Literature; www.tfront.com

1996 Cantiones duarum vocum; for two instruments of similar register; 6 minutes

Original version: alto flute and violin

Version for two flutes or two alto flutes

Premiere: 8/10/96, Daniel Kessner & Piotr Kajdasz, Céret, France

Distributed by Theodore Front Musical Literature; www.tfront.com

1997 Divertimento; flute, alto flute, vibraphone, & piano; 8 minutes

Premiere: 11/19/97; Laura Murphy, Daniel Kessner, Kevin Murphy,

Dolly Eugenio Kessner; Los Angeles

Distributed by Theodore Front Musical Literature; www.tfront.com

Tous les matins ...; solo bass flute; 9 minutes

(also version for quarter-tone bass flute 2007)

Premiere (original version): 2/25/98; Daniel Kessner; Padua, Italy

Premiere (microtonal version): 7/14/07; Carla Rees; Nottingham

Distributed by Theodore Front Musical Literature; www.tfront.com

Recording: "In the Center; Daniel Kessner at Forfest"; Daniel Kessner; Capstone Records CPS-8704 (2002)

1998 Celebrations; flute & orchestra; 10 minutes

(also version for flute & wind ensemble 2006)

(also chamber version for flute, string quartet, piano & percussion 2008)

Premiere: 6/26/98; Sarah Rumer; Jugendorchester "Nota Bene";

Lukas Martin Meister, cond; Zurich, Switzerland

Distributed by Theodore Front Musical Literature; www.tfront.com

2000 Prière et scherzo; bass flute & piano; 6 minutes

Premiere: 6/18/99; Daniel Kessner & Dolly Eugenio Kessner; Kromeriz CZ

Distributed by Theodore Front Musical Literature; www.tfront.com

Recording: "In the Center; Daniel Kessner at Forfest"; Daniel Kessner and Dolly Eugenio Kessner; Capstone Records CPS-8704 (2002)

2001 Nuance; bass flute & viola (also version for alto flute & violin); 10 minutes

Premiere: 6/27/02; Daniel Kessner & Zdenka Vaculovicova; Kromeriz CZ

Distributed by Theodore Front Musical Literature; www.tfront.com

Stream; bass flute/flute/alto flute & harpsichord; 11 minutes

Premiere: 6/27/02; Daniel Kessner & Dolly Eugenio Kessner; Kromeriz CZ

Distributed by Theodore Front Musical Literature; www.tfront.com

2002 Genera; flute/alto flute/bass flute and clarinet/bass clarinet; 10 minutes

Premiere: 3/10/03; Daniel Kessner, Gareth Davis, Padua, Italy

Distributed by Theodore Front Musical Literature; www.tfront.com

2004 Micro-images; solo flute; 9 minutes

Premiere: 10/29/04; Carla Rees; London

Distributed by Theodore Front Musical Literature; www.tfront.com

2005 ... from primitive sounds; flute, violoncello, & percussion; 13-14 minutes
Premiere: 10/5/08; Los Angeles
Distributed by Theodore Front Musical Literature; www.tfront.com

2006 Natural Cycles; bass flute and piano; 11-12 minutes
Premiere: 6/8/07; Daniel Kessner & Dolly Eugenio Kessner; Modica, Sicily, Italy
Distributed by Theodore Front Musical Literature; www.tfront.com

2007 Canto; flute quartet (including piccolo, alto flute, & bass flute); 12 min.
Premiere: 3/4/09; rarescale Flute Academy; London
Distributed by Theodore Front Musical Literature; www.tfront.com

2008 Poème exotique; flute and piano; 8-9 minutes
Premiere: 6/21/08, Daniel Kessner & Dolly Eugenio Kessner; Kromeriz CZ
Distributed by Theodore Front Musical Literature; www.tfront.com

Alternate version: le poème moins exotique; tempered pitches only,
no quarter tones (2011)

Sonatina Bassa; bass flute and piano; 9 minutes
Premiere: 8/2/09, Daniel Kessner & Dolly Eugenio Kessner, Paris
Distributed by Theodore Front Musical Literature; www.tfront.com

2009 Music in Uncommon Modes; shakuhachi, quarter-tone bass flute & guitar;
17 minutes

Dances, Version for Flute/Alto Flute and Guitar; 12-13 minutes
Distributed by Theodore Front Musical Literature; www.tfront.com
Premiere: 11/16/12, Carla Rees and David Black, London.

2009 Epigraph Sonata; flute and piano; 13 minutes
Premiere: 8/5/10, Daniel & Dolly Kessner, Bergen, Netherlands
Distributed by Theodore Front Musical Literature; www.tfront.com

2010 Macro-modal Suite, for Flute and Double Digital Keyboard (Harp); 17 minutes
(in preparation)
Lament; version for Flute/Alto Flute/Bass Flute and Electronic Sounds;
9 minutes
Premiere: 11/6/10, Carla Rees, Rarescale Premiere Series, London
Distributed by Theodore Front Musical Literature; www.tfront.com

2011 A Serene Music; version for solo flute, alto flute, or bass flute; 7 minutes
Premiere: 8/12/12, Carla Rees, NFA Convention, Las Vegas.

2012 Tableaux, for bass flute and guitar; 11 minutes

2013 (hot off the press) Alto Rhapsody, for alto flute and piano; 8 minutes
Premiere tentatively scheduled for August 24 or 25, 2013 in Céret, France,
by the Duo Kessner

BIBLIOGRAPHY

Andrews, Ian. “Miniature Sound: Notes on a Soundscape for a Radio program on Nanotechnologies.” *Essays in Sound* 1, 1992.

Artaud, Pierre-Yves. “Aspects of the Flute in the Twentieth Century.” *Contemporary Music Review* 8, no. 2 (1994): 131-216.

“AWARDS.” *Composer USA* 17, no. 3; 6 (2011).

Barcelona, John. "Tone Color and Intonation." *Flute Talk* (September 2004): 32.

Bousted, Donald, 2003. “An Empirical Study of Quarter-tone Intonation.” *Contemporary Music Review* 22, no. 1/2: 53-85.

Brokaw, Roberta. *Performance of Extended Flute Techniques of the Twentieth Century Based on Aspects of Traditional Flute Technique.* DMA Dissertation. Indiana University, 1979.

Coltman, John W. 1996. "Just Noticeable Differences in Timbre of the Flute." *CAS Journal* 3, no. 1: 26-33.

Dick, Robert. *The Other Flute: a Performance Manual of Contemporary Techniques.* New York: Multiple Breath Music Co, 2011.

Dick, Robert. *The Other Flute: Tone Development Through Extended Technique*. Multiple Breath Music Co., 1986.

Fabiani, Marco, and Anders Friberg. 2011. "Influence of Pitch, Loudness, and Timbre on the Perception of Instrument Dynamics." *Journal of the Acoustical Society of America* 130, no. 4: EL193-EL199.

Fox, Christopher. 2003. “Temperaments, Tonalities and Microtonalities; An Introduction.” *Contemporary Music Review* 22, no.1/2: 1-2.

Fox, Christopher, (Ed. And Intro.). 2003. *Contemporary Music Review*. XXII/1-2 (March-June 2003): Microtones and Microtonalities. Abingdon: Routledge Abingdon, Oxfordshire, United Kingdom, 2003.

Fox, Christopher. "Hybrid Temperaments and Structural Harmony: a Personal History." *Contemporary Music Review* 22, no. 1/2 (March 2003): 123-139.

Garrison, Leonard. 2010. "Colorful Musical Performance." *Flute Talk* 29, no. 8: 25-27.

Griffiths, Paul, et al. "Microtone." *Grove Music Online*. *Oxford Music Online*, http://www.oxfordmusiconline.com/subscriber/article/grove/music/18616.

Kanno, Mieko. "Thoughts on How to Play in Tune: Pitch and Intonation." *Contemporary Music Review* 22, no. 1/2: 35-52, 2003.

Kessner, Daniel. “Daniel Kessner, Composer, Conductor, Flutist.” Daniel Kessner. http://daniel.kessnerfamily.org/home (accessed March 5, 2012).

Kessner, Daniel. Interviews by author. Email interviews. March 2012-May 2013.

Kessner, Daniel. *Genera: for flute/alto flute/bass flute and clarinet/bass clarinet*. Los Angeles, California: Daniel Kessner, 2002.

Kessner, Daniel. “How Does a Composition Become Part of the Permanent Repertoire?” *Composer USA*, no. 2 (2011): 1-2

Kessner, Daniel. *Micro-images: for Solo Flute: 2003-2004*. Los Angeles, California: Daniel Kessner, 2004.

Kessner, Daniel. *Poème exotique for Flute and Piano: 2008.* Los Angeles, California: Daniel Kessner, 2008.

Kessner, Daniel. Unpublished studio recordings of *Micro-Images.* 2013

Kessner, Daniel. Unpublished concert recording of *Poème exotique*. 2013.

Kessner, Daniel, et al. *Chamber and Solo Works.* [Baton Rouge, La.]: Centaur, 2011.

Kinder, Keith. “When is a Fortissimo Not a Fortissimo, or, Am I Playing Too Loud?” *Canadian Winds/Vents Canadiens* 7, no. 1: 14-17, 2007.

Krell, John C. *Kincaidiana; A Flute Player's Notebook*. Culver City, Calif: Trio Associates, 1973.

Lehman. “Natural Cycles/Genera/Toccatta…” *American Record Guide* 75, no. 3 (2012):119.

Louchouarn, Bruno. *Moment to Moment: An Interdisciplinary Meditation on the Emergence of the Musical Experience*. University of California, 2003.

Mac Erlaine, S. *Microtonality as an Expressive Device: an Approach for the Contemporary Saxophonist*. MM Dissertation. Dublin Institute of Technology, 2009.

Maltz, Richard. "Microtonal Techniques in the Music of Harry Partch and Ben Johnston." *Music Research Forum* 7, 14, 1992.

Mandelbaum, Joel. 1967. “The Isolation of the Microtonal Composer.” *American Society of University Composers: Proceedings of the Annual Conference* 2, 107.

Monier, Shelly L. *Three Works for Flute by Ian Clarke: An Analysis and Performance Guide*. DMA Dissertation. The University of Nebraska-Lincoln, 2010.

Moore, Thomas. "What Do You Do When a Semitone Is Too Big?" *International Trumpet Guild Journal* 31, no. 3: 74-75, 2007.

Morris, Robert D. “New Directions in the Theory and Analysis of Musical Contour.” *Music Theory Spectrum*, Vol. 15, No. 2 (Autumn 1993), 205-228.

Oliva, Michael et. al, *Moss Garden; A Rarescale Sampler*, Rarescale Records, CD, 2008.

Peck, Donald. "Tone Colors and Articulation." *Instrumentalist* 50, no. 2: 20, 1995.

Ramirez, C. *The soloist's path to optimal musical communication.* Diss. Rice University, 2012.

Rees, Carla. “Contemporary Music and How to Approach It.” *Flute* (20454074) 30, no. 4 (December 2011).

Rees, Carla. “Microtones and Big Flutes: An Interview with Composer Daniel Kessner.” *Flutist Quarterly* 34; no. 1 (2008): 28-32.

Rees, Carla. “Eva Kingma and the Quarter-tone Flute.” *Pan: The Flute Magazine* 26, no. 4:23-29, 2007.

Julian Rushton. "Quarter-tone." *In Grove Music Online. Oxford Music Online*, http://www.oxfordmusiconline.com/subscriber/article/grove/music/22645.

Takemitsu, Tōru,Yoshiko Kakudo, and Glenn Glasow. *Confronting Silence: Selected Writings.* Berkeley, California: Fallen Leaf Press, 1995.

Wye, Trevor. *Practice Books for the Flute*. London: Novello, 1999.

Yih, Annie K. 2006. “Connecting Analysis and Performance: Practical Issues for Developing an Effective Approach – A Case Study.” *Chopin in Paris: The 1830s*: 215-236, 2006.