

THE UNFETTERED SINGER

By Derek Kwan

A report on a workshop conducted as part of Nightswimming's Pure Research program, in association with the Centre for Drama, Theatre and Performance Studies, University of Toronto. Conducted at Uoft's Glen Morris Studio Theatre, October 15, 18, 19, 2013.

Introduction

There is growing interest in the performing arts community in intersecting various disciplines (dance, theatre, opera and others) but with uneven success. Most opera singers, for example aren't asked to move very much in the course of their singing, particularly in the world of classical music, but increasingly singers are being asked to be more physical, as opera and theatre evolve towards ever new forms of storytelling integrating physical theatre and dance. Unfortunately, there is very little information on what the outer limits of physicality and singing might be and whether these limitations can be mitigated through training. This research will therefore allow us to explore some of the physical limitations of Classical singing and serve as some sort of basis from which to work to integrate extreme physical movement into opera staging.

Objectives & Goals

- Explore the physical limits of classical singers in four major areas:
 - Cardiovascular and pulmonary limits on singing
 - Limitations of body positions and poses
 - Limitations of physical movement
 - Effects of environment
- Discover personal limits in endurance, physicality and response to environment
- Expand the expressive palate for singers and directors
- Generate new possibilities for staging



Above: Michael, Teiya and Derek on Day 1

Methodology

Three singers (Teiya Kasahara - soprano, Derek Kwan - tenor, and Michael Mori - baritone) and a pianist (Stephanie Chua) gathered for two and a half days of sessions. Also attending sessions were Nightswimming Artistic Director Brian Quirt, dramaturgy intern Rachel Steinberg and Producer Rupal Shah. These sessions were divided into a number of progressive modules to test positional limits, cardiovascular and pulmonary limits, movement limits and environmental/external limits.

Benchmarks of performance were set and included a vocalise covering the singer's entire vocal range; individual arias that are challenging to that singer's capabilities and specific vocal type and that represented different styles, periods and techniques (ie. Legato vs staccato, syllabic vs melismatic); and ensemble pieces (duets, trios) for exercises involving multiple singers. The singers' objective was not to merely phonate (whisper, squeak, screech), but to maintain a quality of singing acceptable in performance circumstances. Sustainability and repeatability would also be concerns.

The repertoire chosen is listed below in the results section and the vocalise consisted of a 5-note major scale (*Do* to *So* back to *Do*), followed by a held octave leap, followed by a descending staccato arpeggiated figure (*So, Mi, So, Do*). This vocalise was then progressively modulated up a semitone and repeated as needed.

DAY 1

POSITIONS 1

After a short warm up, we started with some basic held poses. We decided to use yoga asanas as a common language from which we could draw and then alter if need be to suit our research as we were all familiar with the concepts and practice of yoga. First up was "Child's Pose" - with the singer on their knees with forehead on the ground and arms stretched in front on the ground. Teiya started us off singing "Oh Sleep, Why Dost Thou Leave Me" from Handel's *Semele*. She reported a lot of pressure on the larynx. She tried to adjust the angle and reported a strange sensation of saliva pooling in her mouth, and that she was extremely aware of the pull of gravity. The mention of gravity prompted us to try a variation to test whether it was gravity or the position: with the singer on their back with knees pulled in (to simulate a similar body position but with different pull of gravity). Teiya felt a loss of grounding for her breath and tension in her arms from holding her knees. Locking hands didn't improve the situation so we decided on a second variation: with Teiya on her back with legs supported on the seat of a chair. Teiya reported some initial difficulty hitting high notes, strange jaw sensations from gravity but then said it was easier to find high head space for resonance. As "Oh Sleep" was a very slow, sustained aria, we decided to explore the differences in sensation between the standing and the prone position with legs on a chair with a coloratura piece. Teiya sang "Der Hölle Rache" from Mozart's *Magic Flute* and she reported that she had much more control while standing, albeit with some lower back pressure. Lying down, however, was difficult as she could feel her jaw struggling to compensate for the new sensations but her back was forced to let go.

Our second experiment involved the singer standing with feet together and bending forward as much as possible with straight knees, and pulling with hands to keep the position ("Big Toe Pose"). Derek took the position and sang "Here I Stand" from Stravinsky's *The Rake's Progress*. He felt his breathing was alright, with no significant pressure in the larynx, but vocal production did sound "shout-y". As this aria is syllabic and declamatory, Derek switched to a more melismatic piece: "Traspospetti, affetiedamori" from Handel's *Rodelinda*. This was not a sustainable position, however, as breathing proved difficult and Derek felt like he had use of only 50% of his lungs. Derek then took Child's Pose as a comparison – he found it a better position, however it was hard to directionalize the coloratura and keep the flow of the line

because of the inverted gravity and change in sensation. We decided to modify the original position and experimented with a standing forward bend with knees slightly bent and in a wider stance. Derek found it easier to directionalize the line in this position, however the blood rushing to his head meant that it was not sustainable for the length of a whole aria. We then experimented with the vocalise to see if we could compare the sensations. We decided that this position is possible for short periods of time, and while gravity pulling the soft palette creates a sweet spot, making top resonance easier to find, there were other issues including pressure on the eyes (bugging out) and too much of a head rush.

The third experiment moved away from bends and into twists. We tried Ardha Matsyendrasana (Half Lord of the Fishes Pose). The singer sits on a mat and twists the torso so that one elbow is locked behind the opposite knee (ie. Right elbow locked behind left knee) and the head twisted further in the same direction. We again tried the vocalise. Derek reported some difficulty, feeling that he had less power and less energy at hand, while low notes were strange. Teiya felt good in the position and she felt that breath support was easy to access. Michael also had similarly positive feedback. With some further experimentation, Derek felt a little better with less neck twisting, which relaxed some of the compression.

Our fourth experiment was based on “Revolved Triangle Pose”. This is a standing twist where one foot is placed about 2 feet in front of the other and the opposite shoulder is brought to the knee in front (ie. Left shoulder to right knee) with one hand on the ground and the other straight up in the air. Using the vocalise, we found that this position left us fairly free to sing, though there was some neck tension. Teiya sang “Piangerò la sortemia” from Handel’s *Giulio Cesare in Egitto*. She found that her head felt very heavy and that was causing tension. She then returned to the seated twist to compare and found that she felt she had much more air supply in the seated position and that upright gravity helped her.



Above: Derek on Day 1

We then moved on to back bends. Derek first experimented with a supported back bend with his back arched over a chair and his head hanging back. He sang “Il miotesoro” from Mozart’s *Don Giovanni* and reported that he felt a huge loss of breath. In addition, his soft palette was bouncy and it was difficult to directionalize the long legato line. He returned to *Rake’s Progress* and felt it was more successful although with more breaths than usual and he reported having to use a lot of chest breathing (as opposed to diaphragmatic breathing).

At this point, we made the observation that Derek and Teiya often felt better singing in some of these positions because the loss of control and normal sensations forced them to release any ticks and unnecessary physicalizations (i.e. Habitual tension!).

Derek then experimented with a supported side bend using the desk (with head supported lower on a chair) and this was very successful. He sang “Il miotesoro” and felt that the body’s orientation in this position allowed him to relax while not allowing normal tension habits to set in. We then decided to duplicate this position for all three singers and using the stage (which was about 2 feet high) we each assumed a supported side bend position with our hips on the stage and our heads on the floor. We sang through the trio from Mozart’s *The Magic Flute*. We discovered that this position was more comfortable if the hips were allowed to move and Teiya liked the idea of constant movement in this position. Derek took this information back to a supported back arch – this time off the stage with shoulders and head on the floor and found that the movement helped that position as well. He felt in control as long as he had the flexibility to adjust and move where needed.

-LUNCH BREAK-

CARDIO & PULMONARY 1

We started off with basic cardio movement. We jogged while doing the vocalise and found that it was doable, however there was an audible pulse of pressure every time our feet hit the ground, so whatever singing would have to be timed to the pulse of the movement. We then tried “dance walks” – our interpretation of a rigid ballet walk. This was difficult as the rigidity of the engaged core affected the singing but because of the gliding movement did not affect the vocal line with pulsing.

We then moved on to jumping rope. At first Derek and Teiya attempted the Act I duet from Puccini’s *La Bohème* while jumping continuously. They found similar issues with the pressure pulses from jogging and it was an interesting effect, however decided it was unsustainable because at some point, they ran out of oxygen. Derek then tried to sing “Eccoridente in cielo” from Rossini’s *The Barber of Seville* while consciously absorbing the shock in his legs. This helped with the pulsing, however it was difficult to sustain through time (particularly the slow cavatina section). Teiya then sang “Ach ichliebte” from Mozart’s *The Escape from the Seraglio* whilst only jumping when not singing. She found that this was possible, however the coordination of the release and reset of both the rope and the vocal mechanism were very important. We felt that the timing of when to move and when to sing (but not simultaneously) was important and we discussed the potential application of this to operatic fight scenes. Derek then sang Lenski’s aria from Tchaikovsky’s *Eugene Onegin* whilst also only jumping between phrases. He reported that doing this increased adrenalin and energy and that this was sustainable, however part way through he felt he had to force lower notes as it got more difficult. We then assessed recovery time through a series of experiments involving intense bursts of cardiovascular activity, followed by singing. The first experiment was to run for a minute up the stairs in the theatre, across the loft area and down the opposite stairs in a loop, then sing an octave into that individual singer’s high notes followed by a major scale arpeggio down the

octave (eg. C5, C6 (held), G5, E5, C5). The idea was to push the amount of cardio activity to the maximum of the individual's capability, and then attempt to sing the assigned vocalise over and over until it was comfortable and doable. In all three cases, it was possible. Michael found it more difficult, Teiya and Derek were able to do it. After about 1 minute after we stopped running, we all returned to our baseline levels of ease.

We then repeated the experiment with a one minute burst of skipping. This time, we were interested in exploring the recovery time (one minute after the skipping). Michael found that his low notes had less spin (resonance) than usual and Teiya found she had to switch to her chest voice earlier and felt she had less power.

We then ran a few experiments involving holding the breath, then singing. First, we tried exhaling completely, holding the (exhaled) breath for as long as possible, then singing repeated 5-note scales (eg. C,D,E,F,G,F,E,D - repeated) on the remaining breath. Michael was able to hold his breath on average for 19 seconds and completed just over 3 scales. Derek was only able to hold his breath on average 11 seconds and completed only 2 scales. Teiya averaged 23 seconds and was able to do just over 3 scales in her middle voice (G4-D5) and roughly the same in her higher register (D5-A5). This residual breath in empty lungs was usable, but took a lot of effort to utilize.

Next we tried the same experiment but with a full inhaled breath. This time, everyone was able to hold their breaths much longer, and the number of scales also increased dramatically. Michael was able to hold his breath over a minute and to do almost 8 scales. Derek was able to hold his breath for 55 seconds before singing 9 scales, although quality suffered after the first 6. He also found that adjusting the torso helped to reset muscle tension, however his lower abdominal muscles were involuntarily contracting and twitching at the end of the breath in a way that was detrimental to the tone. Teiya was able to hold her breath for about 50 seconds before singing about 9 scales. She reported that holding the breath longer was uncomfortable as it felt as if she was bloated.

We then did a series of experiments with a timed 30 second held breath, followed by the five note scales. In general, the singers were able to sing around 8-10 scales after the held breath, with the range having little effect on the number of scales. Derek was able to sing 10 scales in a higher register (D4-A4) and noted that separating abdominal support from the act of holding the breath was helpful in then being able to engage the vocal mechanism afterwards. Teiya tried a higher tessitura (G5-D6) and was able to sing 5-6 scales. She noted that her soft palette wasn't staying high during the holding of the breath, making it more difficult to navigate the higher notes and she needed effort to maintain good vocal posture. Derek and Teiya both experimented with lower ranges (A2 for Derek and Db4 for Teiya) and both noted that it was harder to do, with the sound being muffled and pushed.

We took an interlude to experiment with throwing objects and how that might affect singing. We utilized a number of bean bags, throwing them as hard as we could (at each other) during singing. Other than the fear of being hit, we didn't feel there was any significant effect on the singing mechanism and therefore not of further interest.

We returned to pulmonary experiments with timed 10 seconds of held breath, followed by the five note scales. Interestingly, all three singers reached 8-10 repetitions, similar to holding breath for 30 seconds.

Finally, we repeated the experiment while lying down on our backs with our knees bent and our feet resting on the stage to see if this fully relaxed position had an effect. The breath was held for 13 seconds and then 5-note scales were sung until no longer possible. Teiya reached 6, Michael reached 7 and Derek reached 8.

DAY 2

POSITIONS 2

Building on the previous day's experiments, we commenced this day with inversions – various positions that required the head to be lower than rest of the body. Using a wooden board, we positioned it on the stage at a 35 degree decline. Teiya was the first to try this position. Teiya sang the vocalise and reported a strange pressure in her head because of gravity. She felt that this position didn't help her soft palette to raise (as some of the other overturned positions had) and that there was a strange interplay between her tongue and larynx that made her feel like she was choking. She also discovered that [i] vowels were easier to sing in this position than [a] vowels. Derek then assumed the same position and sang the vocalise. He also felt that [i] vowels were easier. He also reported that lifting the knees or having them bent helped in this position. He felt the same tongue and larynx tension as Teiya, however he felt very free and open in the resonance space above the ears. Michael found [a] vowels easiest, with [i] vowels very difficult, but this may have also been related to the cold he was overcoming. He felt tension in the glandular area.

Teiya then sang “Piangerò la sortemia” in this inverted position. In the slow A section, she felt that there were more overtones and that she was able to access her dolce/soft quality much easier. She wasn't able to hear herself (because of the blood rushing to her head?) and she felt the pressure differences affecting her. In the fast B section, she didn't feel connected to her support for the complicated coloratura phrases. She then tried “Regnavanel silenzio” from Donizetti's *Lucia di Lammermoor*. She felt that she had more head resonance space and really noticed when she was pressing on the tone. She remarked that this would be a good diagnostic tool to check for freeness of vocal production and in avoiding driving the sound or pressed vocalization.

We then placed the wooden plank on the stairs for a roughly 45 degree incline. This position was a bit difficult to get into and Teiya was in danger of slipping so we had to hold onto her legs to make sure she didn't slip to the bottom. She found the increased pressure from the incline caused difficulty and made it part way through “Regnavanel silenzio”. Michael sounded better in lyrical pieces than in syllabic pieces like “Non più andrai” from Mozart's *The Marriage of Figaro*. We then removed the plank and lay directly on the stairs. Teiya sang “Regnavanel silenzio” again and said that the steps helped somewhat for support and this position was easier than being on the plank. She felt quite vocally free in this position, however the pressure of gravity still made her lightheaded.

MOVEMENT 1

We then incorporated movement into the static positions. We started with Sun Salutations with the trio from *The Magic Flute*. This was to introduce the concept of continuous movement that included inversions, back bands and forward bends. We felt that the rhythm of the piece was compromised as we weren't in sync with the beat and Teiya reported that some of the positions were hard on the voice. We then scaled back and did the vocalise in each of the positions of the Sun Salutation (with no movement while singing)- forward standing bend, cobra, downward dog. We found this was an interesting way to experience the contrasts of each position and to identifying different tensions and ways to release. Since the singing was in a static position, it

was all quite achievable. Reverting back to the moving Sun Salutation, Michael and Teiya sang the duet “Lacidarem la mano” from Mozart’s *Don Giovanni* and reported that it was again difficult to coordinate. Michael felt that the breathing should be coordinated with the movement somehow and Teiya felt taxed from the movement.

We then devised another simple set of test movements that didn’t involve as much forward and backward bending: starting from standing, the singer would reach one hand forward while lifting the opposite leg up behind into a balance, the forward hand would then go to the ground while keeping the leg up in the air. The singer would then switch hands and feet and balancing on the other leg, return to standing. Teiya and Michael felt it hard to concentrate, however Derek felt it was quite doable. He sang “Here I Am” from Stravinsky’s *The Rake’s Progress* and reported that coordinating breathing was a challenge. He eventually lost the ability to coordinate the movement phrase and the musical phrase. He then tried “Dallasua pace” from Mozart’s *Don Giovanni*. He said that getting a complete breath, staying free in the throat were difficult with the movement and the constant shift of balance was affecting tension in the head and neck. He also felt an accumulated breath deficit (much like in the cardio exercises the previous day) and mounting tension as the aria went on. Michael and Teiya then tried the duet “Bei Männern welche Liebefühlen” from Mozart’s *The Magic Flute* and felt quite comfortable. Teiya then sang part of “Ach ich liebte” and reported that the motion wasn’t as difficult as going upside down and that she felt like the little boat in those pens with liquid in them that go back and forth.



Above: Michael and Derek on Day 2

We then decided to try a few configurations using three people. First we tried to suspend one person between two others, with both side people grabbing the middle person’s arms and legs so the middle person was off the ground. We found this rather difficult as we are all about the same height and it was difficult to sing with the muscularity of the pose. We then tried a plank pose with the middle person planking on the shoulders of the other two people, with hands on the front person’s shoulders, and feet on the back person’s. The two supporting people were kneeling. We sang the Magic Flute trio with each of us in the various positions and found that this was possible, however the middle person required a lot of core and arm strength and

therefore this position was not practical for an entire aria/number. Michael especially liked being in front because the arms of the suspended person were like a massage.

We then experimented with a two person “wheelbarrow” configuration: one person walks on his hands while the other person lifts the first person’s feet and walks behind. Michael and Derek sang the duet “Al fattodanlegge” from Mozart’s *Così fan tutte*. Michael felt better as the carrier and Derek felt better being the hand-walker, although he noted that a lot of core strength was needed to keep the body straight.

Continuing with movement, we tried rolling on the ground on our sides. Our first observation was that it was quite relaxing to roll back and forth while singing. Derek and Teiya sang the Act one duet “O soave fanciulla” from Puccini’s *La Bohème* while rolling. The result was a little uneven, but both singers felt quite free, although Derek noted that he felt some issues with neck tension in trying to keep the neck aligned while rolling.

We next experimented with shoulder stands with the legs straight up in the air, and shoulders, neck and back of the head on the ground with elbows on the ground as support. Michael sang “Non più andrai” and felt some blood rush to his head, as well as some neck tension, however felt it was quite doable. We then tried a double shoulder stand with two people back to back. Michael and Derek sang “Al fattodanlegge” which looked really neat, but this position was difficult to get into. The result was fairly successful, however, and they were able to complete the duet.

Derek experimented with somersaulting while singing and it was quickly decided that it was too disruptive to the vocal apparatus mostly because of the necessity of a sudden jolt somewhere in the act of somersaulting. Backwards somersaulting was slightly better, however remained problematic and was more difficult to coordinate.

All three singers proceeded to cartwheel while singing the vocalise. We all felt that this was quite relaxing. Derek then attempted to sing Lenksi’s aria from Tchaikovsky’s *Eugene Onegin* and “Il miotesoro” and found that while it was possible, the constant movement and inversions took a lot of stamina and he lost breath part way through. Teiya sang Olympia’s aria from Offenbach’s *Tales of Hoffman* and found that it was very doable as long as the cartwheels were initiated mid-phrase (ie. after singing had been initiated). Even Zerbinetta’s (from Strauss’ *Ariadne auf Naxos*) super E’s (E6) were possible while cartwheeling.

We took a brief detour to sing into an electric fan, which was fun and made for an interesting vocal effect but wasn’t particularly worthy of further exploration as no real issues or obstacles presented themselves.

Finally, we experimented with some lifts. Two singers stood back to back, hooked elbows, and one lifted the other onto her back. We experimented with singing in both positions and Derek felt that being lifted created a lot of neck tension from keeping everything aligned. This was otherwise a fairly comfortable position for singing. Michael and Derek then sang “Al fattodanlegge” while alternating between the two positions and felt that this was quick doable, particularly with some practice.



Above: Teiya and Derek on Day 2

DAY 3

MOVEMENT II

We started off the day with sequenced choreography. Michael devised a set of simple movements utilizing some of the positions and principles we had worked on previous days and incorporated them into a sequence of movements that could be looped, but not necessarily synchronized to the music in any way. This sequence involved: kneeling, arm and leg balances, pivots, arm movements, walking (forward and backward), kicks and arm movements. We started off singing the Trio from the Magic Flute with no particular timing for the movement and found that too many things were happening simultaneously. As none of us were completely comfortable with the music and the choreography had just been learned, we felt like at least one thing needed to be on autopilot – otherwise there was too much to coordinate and think about. We also started running out of breath and again the question of stamina was raised. We also found ourselves trying to plan where we would be in the choreography (by hurrying or slowing down the movement) so that certain notes wouldn't be as jarring or difficult to produce. We tried again and slowed the movement to half the speed and found that it was easier: we had more control over breath, there was more time and space to fulfill the obligation of each movement, and it wasn't as physically taxing. Because of the nature of some of the movements (pivoting on arms, rolling on back) some of the movements were still jarring to the vocal production and this did affect vocal quality.

We then devised a loop of arm movements counter to the metre of our test piece (the Trio from Magic Flute) so that we were looping a count of 5 over the music that is in 4. We found this very similar to the exercise of rubbing your tummy and tapping your head – it was difficult to coordinate two actions that were so metrically different. We decided that this was possible, but would take much training.

We returned to the sequenced choreography and this time tried to synchronize the movement with the music – this time using the vocalise in two 8 counts. We found it easier to manage because the motions were tied consistently to musical phrases and were more predictable,

however breath and stamina remained an issue. Michael noted that there has to be synchronicity and practically speaking opera is about synchronicity (of music, text, emotion and action) so there is very little need at a practical level to ever counter metre, pulse or the direction of the music. The danger of movement counter to the music is that it is counter-expressive, and risks becoming unemotional and nonsensical.

What we had been exploring up to this moment was pure movement and positioning divorced from intention and context. This had largely been a technical exercise just to see if certain things were physically possible. We decided to explore this line of thought a bit further and set up a few simple scenarios of movement where intention, action and tactics might come into play (counter to or with the intention of the music) to see if there was any affect on vocal production (ease and quality). Teiya sang “Quandom’envo” from Puccini’s *La Bohème*. Fiery Musetta’s flirty aria is set as a sensuous waltz and she is usually portrayed as a direct, confident, strong woman. Counter to this, Michael and Derek pursued Teiya as she sang and attempted to tickle her – thereby changing the context of the piece and inserting a real element of spontaneous, improvised play for Teiya to react against. Teiya found that she changed her voice, rhythm and articulation in response to their tickling as it ran so counter to the normal affect of the piece. We felt that this gave a new motion to the drama, but fundamentally altered the meaning of the piece and the meaning of Puccini’s music. Our self-conscious Musetta struggled against this imposed new meaning and at one point even defended herself with a broom to reassert her power and control. We then repeated the aria with Teiya moving about randomly, sometimes with, sometimes counter to the music (with prompts from Michael and Derek). She felt that she couldn’t help but allow the style of the motion (choppy, smooth, etc) inform her musical approach and ultimately the musical interpretation. In other words, hopping on one foot while singing this piece fundamentally changed what Puccini wrote and intended. Teiya also found it difficult to focus on the music, although it is possible that the aria was so ingrained in her a certain way it was difficult for her to break out of that interpretive habit- which brought to mind the actors’ exercise of running monologues while doing random physical acts to break psycho-physical habits and really let the text sink into the body. Finally, Teiya again sang “Quandom’envo” and this time coordinated her actions with the perceived intent of the music in exaggerated fashion – going so far as to indicate body parts, inflate mime actions and use Michael and Derek as props. This time the music was easy, clear, in style and Teiya said it “felt right”.

Derek and Michael then sang the tenor-baritone duet from Act IV of *La Bohème* while thumb wrestling and arm wrestling. This gave us another situation of real play with real time reactions and engagement with tangible objectives. Derek and Michael found it freeing. In this duet, both parties are essentially bemoaning their lost loves each to himself and the action was able to highlight the inherent but hidden competition between the two characters. The objective of winning the wrestling brought new life to the interpretations as each singer was reacting in the moment to his surroundings and the information given off by his scene partner. Both singers felt more present and responsive while at the same time the music was more spontaneous and real. We returned to a situation counter to the intent of the music and Derek and Teiya sang the Act I love duet from *La Bohème* while playing tug ‘o’ war holding a broomstick. They found that this was hard to sustain as it became about the game (winning by pulling in opposite directions) which is so counter to the scene (winning by coaxing to go in the same direction?). The physical activity was also taxing so that after a few bars both singers were breathing hard and reported high core tension.

We discussed the importance of power dynamics between characters and how that might be turned into a game to inform the way we approach a character and give life to a scene (like the

Bohème Act IV duet). We decided to explore how a modified tug 'o' war (less aerobic, but with the similar sense of give and take play) might affect this. Teiya and Derek again sang the love duet. This time they each had one hand holding one end of a broomstick and took turns leading (pushing, pulling). They felt that they automatically dropped into balanced proportions of tension while they had no difficulty singing. They felt that the movement informed the drama as it was essentially an abstraction of the subtle power plays of flirting.

Continuing to use the broomstick, Derek sang "Here I stand" from *The Rake's Progress* while being led by a non-singing partner. Derek was only to follow and was whipped around the studio, high and low, at different speeds and at the whim of the leader. Derek reported this as very freeing and that he was able to let go and just follow without having to think about why, where or how. Except for cardiovascular limitations, he felt that this was very doable. We flipped this dynamic around and Derek this time led the non-singing partner. He didn't feel this worked as well as he had to take time to decide where to lead as opposed to purely reacting to what was given to him. There was also the extra effort of trying to make the other partner move in the direction desired which took physical effort and thinking.

Teiya repeated the experiment and was led while singing "Der HölleRache" from Mozart's *Magic Flute* and reported control issues. She had trouble grounding the beginning of her phrases and was resistant to being led. "Der HölleRache" is the Queen of the Night's rage aria, while Tom Rakewell's aria is about abandoning oneself to the vagaries of fate, so this may have affected the approaches and results. With this in mind, Teiya sang again and found that with effort she was able to jettison the idea of control. Of course this was counter to the context of the piece, but it was possible to accomplish.

Michael then sang Figaro's "Non più andrai" while switching between being led and following while covering a lot of ground in the studio and reported that the movement forced him not to think about singing technique but rather to let go and tap into more of a stream of consciousness. He liked being led but felt that he needed to improve breathe management. We then took a detour to experiment with drinking water. There are times when opera singers are required to drink or eat on stage and we wanted to briefly explore the effects of the motion of swallowing on the vocal mechanism. Using the vocalise, we drank a sip of water and attempted to sing right away. Other than the coordination of breathing, swallowing and singing, this was doable. We tried with 2 consecutive sips/swallows and found that this more involved motion proved difficult as it took longer for the muscles to reset into a singing position after swallowing. Derek then sang Lenski's aria while drinking between phrases. This was possible, however the length of time it took to sip and swallow sometimes affected entrances and his onset.

We also experimented with dizziness and attempted to sing the vocalise both while spinning and after. We discovered that it was quite easy to sing during the act of getting dizzy, however the after effects were so stupefying as to make singing difficult.

-LUNCH BREAK-

MOVEMENT III

After lunch, we were joined by Michael Haltrecht, a specialist in Contact Improvisation dance. He led us through some basics of Contact Improv, such as listening with our bodies, giving and taking weight, sloughing, leading and following, and learning not to block our partners. We then did an exercise involving improvised supported jumps. We walked around and when one person felt the inclination, they would initiate a jump. The closest person would put their hands on either side of the jumper's lower back torso and provide support for the jumper, thereby lengthening the amount of time the jumper was airborne. We tried singing the vocalise while doing the jumps and found that it was possible, although the more contact the supporter had with the singer/jumper the better the results were. The support helped to cushion the landing of the singer and helped to mediate against sudden jarring in the vocal line from impact.

Next we experimented with "table tops". One person kneels on hands and knees and a second person pours their torso on the first person's back, using it as a pivot to achieve a variety of positions from feet on the floor to hands and head on the floor on the other side. This position allows for free movement of the person on top. Singing in this position was easier for the person on the bottom as they did not need to move much and the compression from the person on top was easily bearable through the strong posture of the bottom person (on hands and knees). The top person was able to sing, however the neck position and the tension caused by keeping it aligned compromised the quality.

We then experimented with free falls and leaning. Similar to the trust exercise, one singer would stand upright, then start to lean in one direction (left, right, forward or back) and the others would manoeuvre to support that position. We allowed the person to lean/fall as far as they could in one direction, before pushing them back to neutral. We also experimented with quick changes in direction, oscillating between two directions, and sudden shifts. All three of us enjoyed the feeling of suspension while singing and the freedom it gave us. There were, however, a few challenges with this exercise such as the tension that came from keeping a straight body column and the eventual onset of neck tension from working to maintain this noble position. We also found that leaning forward was not very sustainable as being supported by the chest put pressure on the lungs and decreased lung capacity.

We returned to the table tops and Teiya and Derek sang the love duet from *La Bohème*. They switched positions a few times while singing and we also took advantage of our fourth person so that both could be on top at the same time in two pairs. Derek was able to adjust to singing while being the person on top and switching the balance however Teiya had some difficulty and felt the inversions made it difficult.

We were also able to experiment with "shelves". These are similar to table tops, except that the bottom person is standing and offers a hip for the other person to slough and balance on. This position was again possible for the person on the bottom but the balancing person had a more difficult time. This position didn't allow for as much stability for the person on top (or on the bottom for that matter) so the possibilities seemed fewer, although it was faster to transition into. Finally, we decided to see if someone could full on sing while Contact Improv-ing. Derek sang Lenski's aria from *Eugene Onegin* with Michael, Teiya and Michael Haltrecht as dance partners. This was to see if the challenge of full body improvised contact movement was possible with the demands of the music. Derek felt quite comfortable and made it through the entire aria. The basic tenets of Contact Improv – not blocking, allowing free movement of partners, utilizing the body's natural centre of gravity and being able to move in one's own organic way were all very conducive to singing and dancing. Derek felt grounded and connected throughout and in control of his capabilities while at the same time responding to the other dancers around him.

CONCLUSIONS

Undoubtedly, many of the constraints that we encountered centred on individual limitations based on unique bodies, physical condition and voice type. We discussed the role of training in this work and how practice might change our perceptions of the experiments (fear) and abilities in performing them. That having been said, there were a few overarching principles that arose out of our research:

- Alignment - Positions that strained proper vocal alignment (including breath support and phonation systems), or that involved effort to maintain were less likely to be sustainable. Forms of movement (such as Contact Improv) that naturally incorporate alignment led to more interesting and more successful possibilities.
- Freedom - Activities and positions that were unusual often gave a sense of life, spontaneity and relaxation to the singer. This was often due to the singer having to free themselves from previous habits and tensions. This applied to both the technical aspects of singing as well as the performative aspects.
- Coordination - Movement worked better when organically associated with the music and complex movements were more likely to be successful when practiced and integrated, although certain activities, particularly those that involved real-time interaction and response, could become instinctual.
- Cardiovascular Condition - Many cardio-heavy activities were doable, but not sustainable over a long period due to the cardiovascular condition of the singer and the demands of singing. While this can be improved with training, at some point long periods of not taking in breath (as happens during singing) is tiring and ultimately results in an oxygen deficit and affects quality and capability. In general, however, recovery after cardiovascular activity is quite fast so it is possible to be quite active as long as it is judicious and spaced well.
- Intention - Fast movement was easier to integrate into fast moving music and slow music went with slow movement. Similarly, movements that negated the affect of the music were harder to maintain while movements that were in the style and character of the piece were easier to incorporate. As in theatre, having clear stakes and intentions brought life and dimension to the music.



One final thing worth mentioning is how easy it was to think up ways to creatively apply the movements we were generating to dramatic situations. We were constantly mentioning how a particular movement/pose/configuration would be interesting used as a staging for an aria, scene or situation already in existence in the standard repertoire. The next step then is to seek out opportunities to apply what we've learned to real opera staging and to test how much is possible in real world situations.