A Garden of Roses

For Wind Ensemble

by

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A Thesis Presented in Partial Fulfillment
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ABSTRACT

A Garden of Roses is a composition for wind ensemble written between October 2022 and March 2023 during a residency with the Arizona State University Wind Ensemble. The piece was inspired by a narrative of grief and acceptance abstracted from Antoine de Saint-Exupéry's children's story *The Little Prince*, and explores the relationship between auditory perception and expectation, influenced by David Huron's *Sweet Anticipation: Music and the Psychology of Expectation*. The piece is approximately 9 minutes in duration.

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CHAPTER 1

FRAMEWORK

The initial inspiration for *A Garden of Roses* was drawn from 2 sources: *The Little Prince* (1943) by Antoine de Saint-Exupéry, and David Huron's *Sweet Anticipation: Music and the Psychology of Expectation* (2006). While I was inspired by the poetic nature of the former, the latter related to my research in auditory perception, informing many of my compositional decisions in the process. In the story of *The Little Prince,* the narrator meets a young boy (the little prince) who tells them of his adventures visiting and exploring various planets. He recalls seeing a rose for the first time, with which he was immediately enamored, as he had never known of their existence and believed it to be one of a kind. Upon visiting other planets, the little prince stumbled upon a garden full of roses and was devastated to realize that roses are actually commonplace, and his individual rose was only special because he believed it to be.[1] This narrative can be simplified into a tale of discovery, grief, and acceptance, serving as the foundation for *A Garden of Roses*. Rather than a purely programmatic approach to realizing the narrative, I intended to draw on this experience of shifting expectations sonically in the piece by exploring the relationship between perception, anticipation, and expectation.

In *Sweet Anticipation: Music and the Psychology of Expectation*, David Huron argues that expectation itself is an event in time and identifies five expectation emotional response systems that can occur in a listener including imagination, tension, prediction, reaction, and appraisal physiological systems, otherwise known as the ITPRA theory of

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[1] Antoine de Saint-Exupéry, and Richard Howard. *The Little Prince*. (San Diego: Harcourt, 2000).

expectation.[2] The biological functions that occur as a result of each response system can be separated into either pre-outcome and post-outcome, depending on when the responses they elicit occur relative to an event in time. The imagination and tension systems occur as pre-outcome responses to an event as they control one's arousal in anticipating an event and behavior to act in ways that are likely to increase the benefits of the outcome. The prediction, reaction, and appraisal response systems are classified as post-outcome responses to an event as they regulate one's formation of accurate expectations, the ability to respond to a worst-case scenario without conscious thought, and the revision of reactions with conscious thought as time moves further away from the initial event.[3] Thus, composers have great choreographic control over the pre-outcome and post-outcome of events in music that can be used to effectively guide potential listeners' reactions and perceptual attention to, during a piece. In order to manipulate expectations however, an expectation must first be established.

The Little Prince is full of establishing expectations; the prince experiences the magical moment of finding a rose for the first time after having been to many other planets before. Relating it to the ITPRA theory, the little prince utilizes his imagination and tension response systems prior to finding the rose by behaving in ways that increase the potential benefits of post-outcome events through actively traveling to new planets in search of new experiences. This particular moment of discovery is special in that it breaks the little prince's expectations of everything that he has come to know before this

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[2] David Huron. *Sweet Anticipation: Music and the Psychology of Expectation.* (Cambridge, Mass: MIT Press, 2006), 6.

[3] David Huron. 15–16.

moment. I intended to recreate this concept in the piece, using the air sound gestures that follow the opening chords to set the scene for the listener. Listeners are placed into a limited sound world of mostly air sounds before a perceptible pitch gradually emerges in the flute. More pitches of a limited collection slowly appear from the air sounds and become obscured with slight pitch-bends. As the density of events are increased, the first cascade gesture at rehearsal C emerges from the blurry texture (figure 1). This figure is meant to signify the discovery of something new from a great distance; as the little prince and the listener move closer towards it, the cascade figures unfold more quickly and become clearer in view sonically.

Figure 1: First Occurrence of the Cascade Gesture in the Saxophones

Huron insists "a stimulus is more accurately perceived when it is predictable."[4] Further, repetition is one of the most effective tools for creating predictability as it desensitizes the listener's response once they have heard a gesture repeated so many

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[4] David Huron, 14.

times and have become habituated to it. The cascade gesture consists of a descending

scalar pattern that consistently rises by stepwise motion and becomes slightly longer. The

cascade is also echoed in augmented rhythmic variations of the original gesture

throughout the lower woodwinds and brass. In addition, it accelerates rhythmically as it is

interpolated from eighth notes to quintuplets pushing the gesture forward (figure 2), and

the onset of each repetition occurs more quickly until the arrival point at rehearsal D.
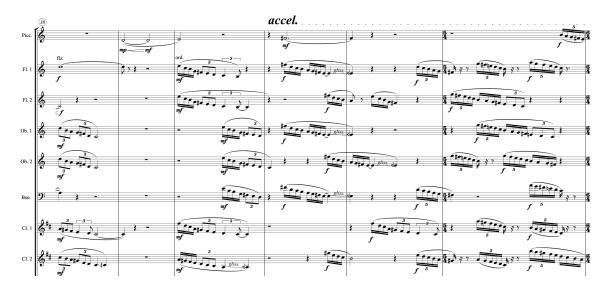

Figure 2: Development of the Cascade Gesture in the Woodwinds

Elizabeth Margulis argues that people are always listening in the future for what is

coming next and when they can predict what is coming in the music, the act of listening

"becomes a motion", linking repetition and embodiment. She also states, "familiarity

makes it possible for us to experience a sense of inhabiting external sound, an experience

which itself is pleasant, even if we dislike the music that triggers it".[5] The repetitive

element, scalar melodic contour, and rhythmic acceleration of the cascade gesture in *A*

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[5] Elizabeth H Margulis, *On Repeat: How Music Plays The Mind* (New York, NY: Oxford University Press, 2014), 12–13.

Garden of Roses creates predictability as the listener can listen "forward" and predict when the next onset of the gesture occur as well as what it may sound like. The rising range and increase in dynamics and instrumentation also contribute towards creating predictability and therefore anticipation for the moment that the music is leading towards.

Further, the cascade material emerges from the blurred texture of air sounds and pitch bending in the brass and undergoes a timbral shift with increasingly brighter orchestrations towards the oboes and flutes in the upper woodwinds as it moves further away in range from the blurred texture. The onset of each gesture also becomes timbrally and texturally clearer: initially, the cascades emerge from tight pitch clusters as seen in figure 1, then to clear doublings and eventually the single melodic lines in figure 2. This allows the cascade to be perceived more with each repetition. Huron further states "Accurate knowledge about when an event will happen allows you to remain in a restful state longer."[6] From rehearsal C to D, the predictability of the melodic, rhythmic, and harmonic soundscape work together to cultivate a relaxed state with both met expectations and anticipation as the cascade figures guide the music to a "false" climax at rehearsal D in which the full ensemble plays iterations of the cascade gesture in rhythmic unison (figure 3).
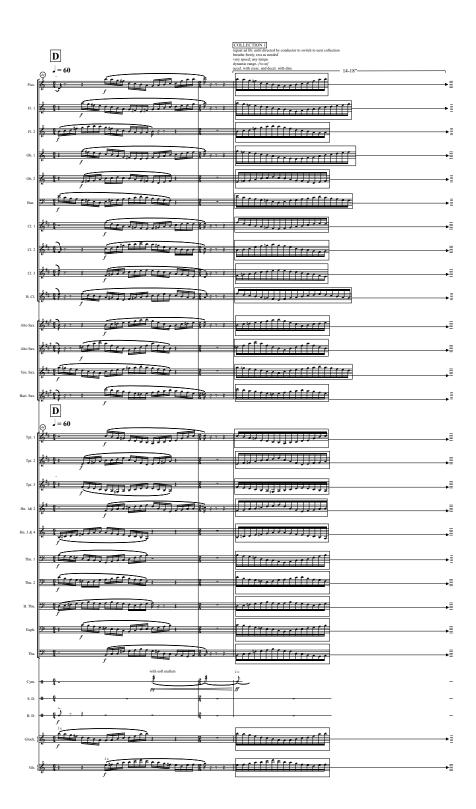
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[6] David Huron, 25.

Figure 3: Anticipated "False" Climax at Rehearsal D

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The chaotic section at rehearsal G is inspired by the grief the little prince experiences at the rug-pull-like moment of finding the garden of roses and realizing that roses are not indeed unique or special. Everything he has known from before, every expectation he has had leading up to that moment is shattered and the revelation comes as a shock for which he is completely unprepared. The little prince prince's prediction and reaction systems formed an immediate negative response to the event, reflecting his initial assessment of the experience. I intended to capture the great magnitude of this emotional response that the character experiences by recreating the disorienting nature through a dense, interwoven texture. The material at rehearsal G is completely new and breaks every preceding expectation by replacing the descending scalar melodic contour with leaps across each voice, blurring the perceived pulse with rhythmic dissonance between each part, and maximizing the full dynamic range of the ensemble as each instrument plays at their highest dynamics. Performers are instructed in the score to perform as if everyone is a soloist: the effect causes every performer in the ensemble to demand the listener's attention. This performance instruction can be likened to the story; while a single soloist (such as a single rose) is deemed special because it occurs so rarely, multiple soloists in the ensemble at once (or a garden of roses) reduce the inherent uniqueness of being a soloist.

This initial surprise this section causes due to broken expectations is created by the material that came before in rehearsal F. Huron explains that surprise represents a failure of expectation that causes an increase in attention due to the nervous system activating and that "the magnitude of emotional response is amplified when there is a

large contrast between the predicted and actual outcome."[7] Using this idea, I crafted the moment at rehearsal G to be as surprising as possible by establishing clear expectations with the preceding cascading figures: the listener is habituated to the harmonic language and material as it is reduced down to a solo clarinet playing pianissimo. This solo takes the music to the smallest possible point of focus before an elision in phrases where a sudden disruption and shift to the largest possible instrumental forces at G takes place (figure 4). A completely new distorted and disorienting texture is created and immediately the restful state that was created is broken, along with every expectation leading up to that moment. Expectations are later reestablished through familiarity as the new material in G compresses into the familiar oscillating figure, finally providing a foothold to grab on to.

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[7] David Huron, 21–22.

Figure 4: Clarinet Solo Leading into Rehearsal G

I wanted the end of the piece to be a synthesis of everything that has come before in regard to both material and expectations, much like the process of moving towards acceptance after grief that the little prince may have experienced including relinquishing old beliefs and constructing new beliefs that make sense of the experience. In this case, his appraisal response system would be used to reevaluate his initial reaction to the event as negative feelings change to appreciation and understanding. Familiarity in the piece is reestablished after the disruption of the chaotic section as material from the beginning of the piece is reintroduced and developed further through slight alterations. The opening

chords are heard again at rehearsal M; this time causing slightly less of a break in expectations as it has been heard before, though it has potentially taken on a new meaning. I liken the overall experience of the piece to a garden path sentence.

The garden path sentence phenomenon is found in linguistics and is defined by the American Psychological Association as "a sentence in which structural cues, lexical ambiguity, or a combination of both mislead the reader or listener into an incorrect interpretation until a disambiguating cue appears later in the sentence."[8] Huron gives the example: "The old man the boat."[9] The word "man" is the disambiguating cue when first interpreted as a noun rather than as the verb of the sentence. A reader is prompted to try again in order to recontextualize the meaning of the sentence. Similarly, I think of *A Garden of Roses* as a larger garden path sentence of leading expectation and anticipation astray down one "garden path", before resynthesis is needed in order to make sense of what led up to the moment of confusion and what the "correct" path truly is.

It is important for composers attempting to manipulate and understand emotional responses to expectations to note that each individual will have varied reactions to events because expectation is greatly influenced by culture in addition to biology. Huron states "culture provides preeminent environment in which many expectations are acquired and applied".[10] This aspect is very essential to the context of music and the audiences perceiving it as different styles of music have varying schematic expectations based on where it is being heard in the world. David Temperley argues that music serves to convey

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[8] American Psychological Association. "Garden Path Sentence." APA Dictionary of Psychology.

[9] David Huron, 279–280.

[10] David Huron, 3.

musical structures to listeners and that the "communicative process relies on mutual understanding between producers (composers and performers) and listeners as to how surfaces and structures are related- what might be regarded as the "rules".[11] The garden path sentence phenomenon is effective in this way because a writer and reader mutually understand the schematic expectations of English grammar being conveyed within the sentence, so the writer can alter the conventions to stray expectations. While I intended to craft and guide listener expectations in this piece through the creation of a surface based on expectation, I also acknowledge that each listener's experience will be unique based on their own culture and schematic expectations with which they perceive music. Similarly, every individual might have varied reactions and responses to the experience of finding the rose garden than the little prince did.

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[11] David Temperley. "Communicative Pressure and the Evolution of Musical Styles". *Music Perception: An Interdisciplinary Journal 21,* no, 3 (2004), 314.

CHAPTER 2

RESIDENCY EXPERIENCE

BACKGROUND

The original sketches for *A Garden of Roses* were first composed with a percussion and guitar trio in mind. However, in September 2022 I was selected to be the 2022–23 Composer in Residence for the Arizona State University Wind Bands, and decided to expand the piece for this opportunity. This award is open to all composition students enrolled at ASU and is intended to give composers the opportunity to work with either the Wind Ensemble, Wind Symphony, or the Maroon and Gold bands in developing a new work. I was awarded the residency for the Wind Ensemble; ASU's most advanced wind band, and have had the chance to work closely with DMA Conductor Dylan Rook Maddix and ASU Director of Bands, Dr. Jason Caslor. The residency officially began in October and gave me the opportunity to have three readings and two lessons with wind band guest composers. The program crucially informed my compositional process for this piece by allowing me the space and time to experiment, take risks, and iteratively workshop ideas.

READING 1

The first reading took place on October 28th, 2022, and focused on material from the first section of the piece including the air sound gestures and microtonal pitch bending. In the initial version, the air sounds were used to test the balance of the gestures between the woodwinds and the brass, as well as the differences in sound and timbre when changing consonants and displacing octaves (see figure 5). The performers were

instructed to read through the gestures three times during the reading, experimenting with different ways of blowing air and changing embouchures.

Figure 5: Reading 1 First Iteration of Air Sound Gestures in Woodwinds

I learned very quickly that woodwinds didn't have a lot of carrying power with air sounds, but worked well to color/ shade the brass that were comparatively much louder. Of the consonants we experimented with for blowing air, the "sss" consonant had the clearest concentration of sound and allowed for more dynamic control, which made its way into the final version. Further, I also observed that because performers must exert more power when blowing empty air versus pitched material due to a lack of resistance from the instrument, shorter gestures were more effective. Thus, the duration of the air gestures was shortened significantly with most gestures lasting 6 to 8 seconds in the initial reading, and then reduced to an average of 4 seconds in the final score (see figure

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6). With the adjustments to this one gesture as a result of the workshop, I was able to be more intentional in the way that I utilized the gesture and control the ways in which the air sounds interacted together and with the pitch material leading into the cascades.

Figure 6: Air Sound Gestures from the Brass Section in the Final Version of the Score

READING 2

The second reading occurred on November 28th, 2022, and was used to focus on material from the second section of the piece including the cascading scalar figures and the chordal section at rehearsal E of the final score. There wasn't as much experimenting during this reading and the ensemble read through the score I provided as written. I focused the time provided for the workshop around clarifying questions I had regarding orchestration, range, and balance. It was an important reading for moving forward in the process of learning how to approach writing a large ensemble piece. Up until this point, I was hitting a wall with the piece because I was trying to do too much at once; tackling

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creating gestures, form, pacing, and orchestration all at once by trying to write the music bar by bar for the full ensemble. The smaller issues (orchestrating pitches in the extremes of the range, not providing clear articulation, leaving pitch bends open ended although I preferred a specific effect, etc.), came as a result of not thinking intentionally about each element of the music individually. I was forced to take a step back at this point of the process and consider how I approached the direction of the piece and maximized the benefit of the next reading. Rather than writing through each measure individually in the notation software, I returned to the larger picture of the narrative and the plans I had for choreographing expectations. This helped me to focus on generating new material more intentionally on a smaller level before expanding it to the full ensemble, which set me up for success in the third reading.

READING 3

The final reading was held on February 1st, 2023, and was the most crucial workshop in developing the rest of the piece and shifting original formal plans. Material from the middle of the piece was explored including the rug-pull moment found at rehearsal G, the oscillating material at rehearsal L, and the opening chord gestures at rehearsals A and M. With the assistance of the conductor, Dylan Maddix, and guidance from Dr. Gabriel Bolaños, an important dynamic experiment took place during the rehearsal to test the limits of this material. The original iteration of the chaotic material at rehearsal G was only 5 measures total and first presented with forte dynamics throughout. When read through the first time, it sounded chaotic but lacked the maximal potential the material demanded in order to create the big surprise.

The performers were then given the direction to play as loud as they could, as if everyone was a soloist, and suddenly the effect was achieved. To test how far the material could be pushed, the performers were then instructed to read through it again at pianissimo and everyone present in the room, including the performers, conductor, and faculty was shocked. Just this one dynamic adjustment suddenly changed the entire listening experience. Dynamically the brass and percussion dominated at fortissimo while the woodwinds dominated the texture at pianissimo, but it was so much more than highlighting different instrumental sections of the ensemble. There was a large shift in timbre that seemingly gave the material another dimension and the dynamics acted almost as a filter or a mixer that could be used to EQ ensemble at will. This experience prompted me to expand those initial 5 measures into a developed section that exploited those dynamic and timbral shifts, on top of a process gradually compressing the material from leaps and imperceptible patterns into the oscillating material at rehearsal L immediately after.

This reading was also very important in that it shifted aspects of the form. In my initial conception of the piece, I planned for it to open immediately with the air gestures from which everything else would slowly unfold. However, that immediately changed after I tried the three opening chords at rehearsal A in the reading. I initially meant to try them as an orchestrational exercise to see what a big attack by the entire ensemble would sound like in the space followed by sustain. The sustain was placed in the piccolo as a held note, however it felt unfocused as there was no clear cutoff (figure 7).

Figure 7: Reading 3 First Iteration of Opening Attack Gesture

Dr. Bolaños suggested having the piccolo flutter tongue the held notes to give both the performer and the gesture more support. When the ensemble read through it again, this small adjustment transformed and focused the gesture more clearly. The breathiness of the flutter tongue prompted me to think about the ways in which it could connect to the air sound gestures and consider where this gesture could fit in the piece as well as shape it, rather than being used as a one-off orchestrational exercise. The attack gesture was developed into the final version as the opening (figure 8) and ending of the piece, acting as the material from which everything else emerges and dissipates into.

Figure 8: Final Score Version of the Opening Attack Gesture

CONCLUSION

The compositional process behind *A Garden of Roses* would not have been possible without the opportunity that this residency provided, my research into musical expectation and perception, and the initial conceptual inspiration. Each element was essential in informing my compositional process from the first sketches to the first day of rehearsals in the finished piece. Further, the residency experience has given me the confidence and preparation for working with a large ensemble again in the future as I move through the next stages in my composition career. I find that in trying to constantly understand complex life experiences and emotions, composing has allowed me the tools to dig deeper into abstracting, reassembling, and representing such ways of being sonically as in *A Garden of Roses*.

REFERENCES

American Psychological Association. "Garden Path Sentence." APA Dictionary of
    Psychology. https://dictionary.apa.org/garden-path-sentence.

Huron, David. *Sweet Anticipation: Music and the Psychology of Expectation*. Cambridge,
    Mass: MIT Press, 2006.

Margulis, Elizabeth H. *On Repeat: How Music Plays The Mind*. New York, NY: Oxford
    University Press, 2014.

Saint-Exupéry, Antoine de, and Richard Howard. *The Little Prince*. 1st ed. San Diego:
    Harcourt, 2000.

Temperley, David. "Communicative Pressure and the Evolution of Musical Styles".
    Music Perception: An Interdisciplinary Journal 21, no, 3 (2004): 313-337.

APPENDIX A

A GARDEN OF ROSES FULL SCORE

[CONSULT ATTACHED FILES]

APPENDIX B

READING 1 FULL SCORE

WE Part 1 Sketches

APPENDIX C

READING 2 FULL SCORE

A Garden of Roses Part 2 Sketches

APPENDIX D

READING 3 FULL SCORE

A Garden of Roses Part 3 Sketches

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