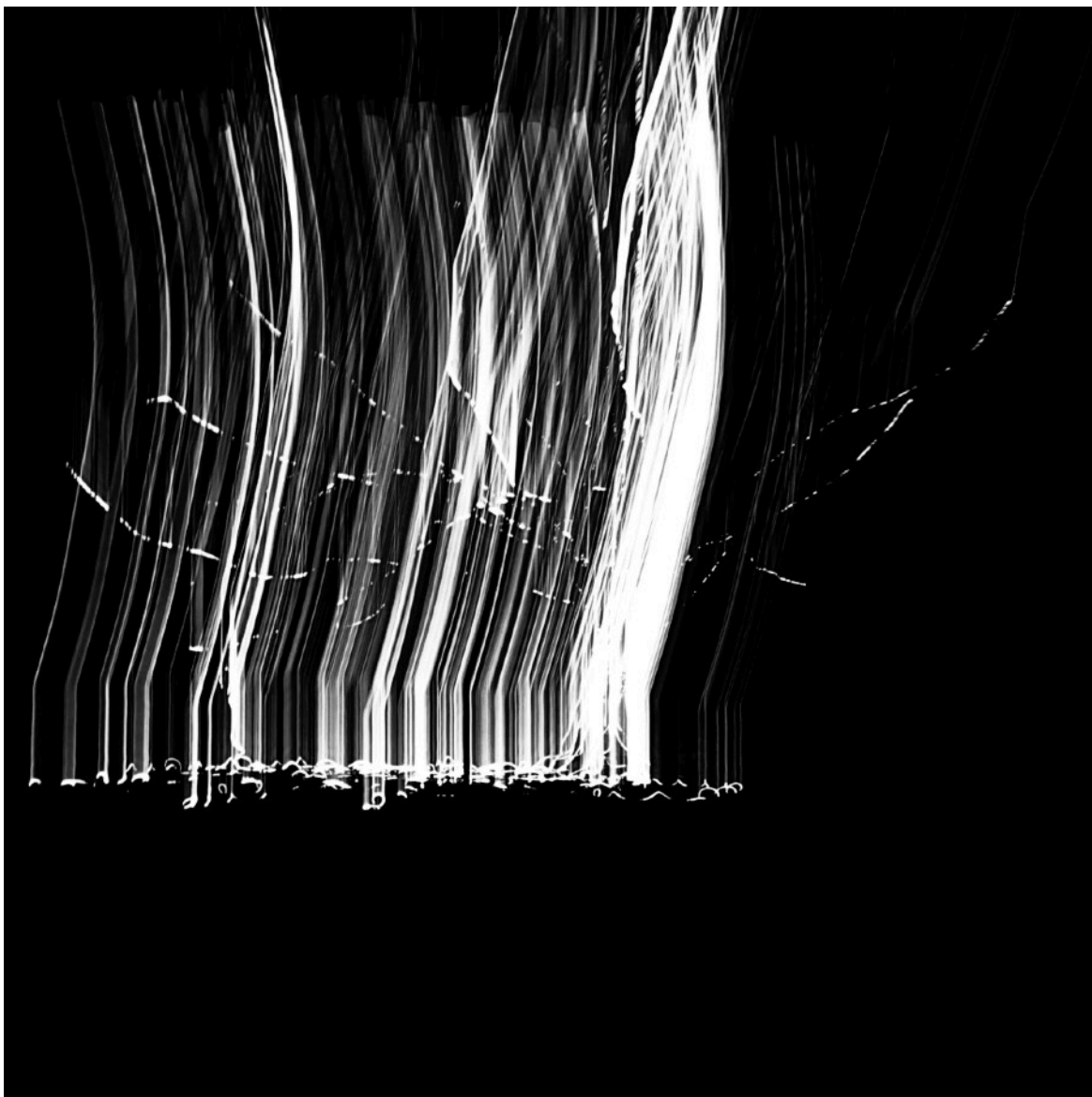# WILLIAM SAUL

really about the same
For Cello & Live Electronics

The Road Not Taken
## By Robert Frost
(underline = quoted)

<u>Two roads diverged in a yellow wood,</u>
<u>And sorry I could not travel both</u>
And be one traveler, long I stood
<u>And looked down one as far as I could</u>
To where it bent in the undergrowth;

<u>Then took the other, as just as fair,</u>
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
<u>Had worn them really about the same,</u>

<u>And both that morning equally lay</u>
In leaves no step had trodden black.
Oh, I kept the first for another day!
<u>Yet knowing how way leads on to way,</u>
<u>I doubted if I should ever come back.</u>

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
<u>I took the one less traveled by,</u>
<u>And that has made all the difference.</u>
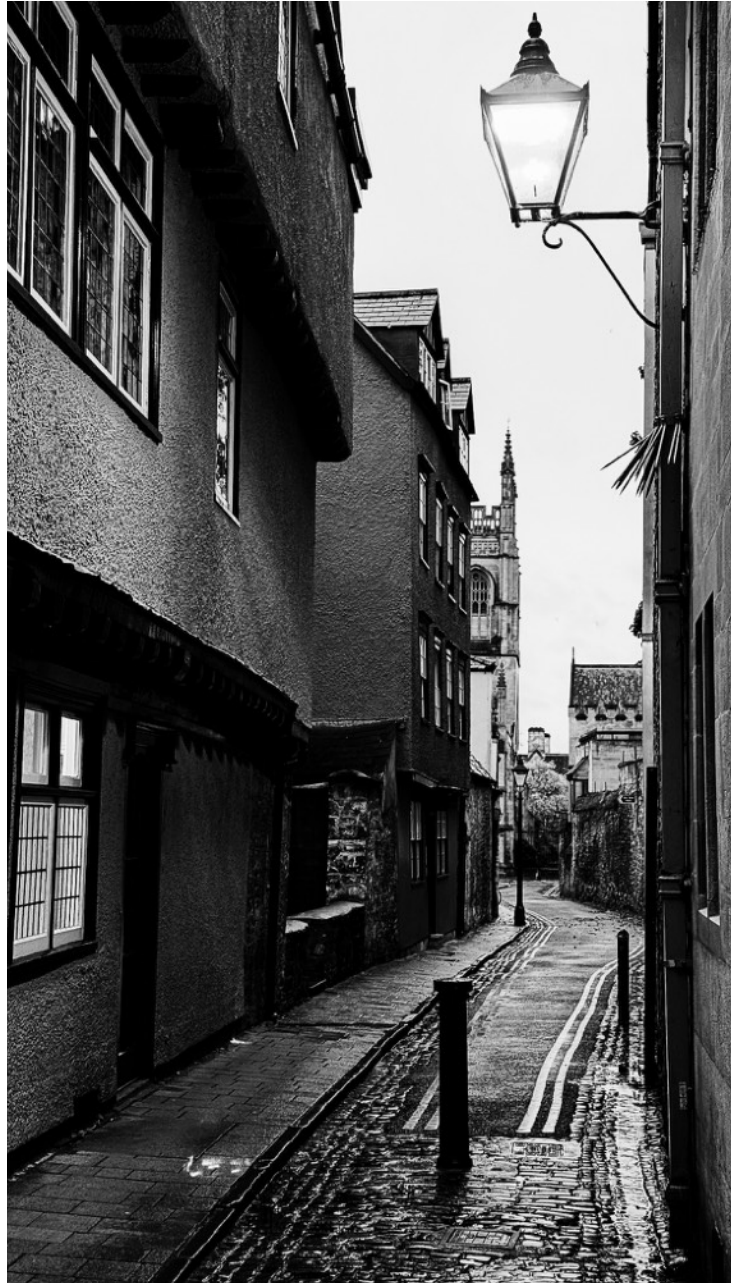
Preface

I.

When I was asked to learn Max/MSP and write a piece using it, I knew I wanted to explore its aleatoric possibilities. My initial concept centered on sonic interruptions as musical equivalents to distractions that alter our everyday rituals. However, in constructing a highly randomized system, I quickly found my tolerance for indeterminacy wavering. Without rules to govern how materials were organized or related to a larger form, the work became anarchic and foreign to me. Therefore, developing a framework to balance chance and cohesion became my primary focus.
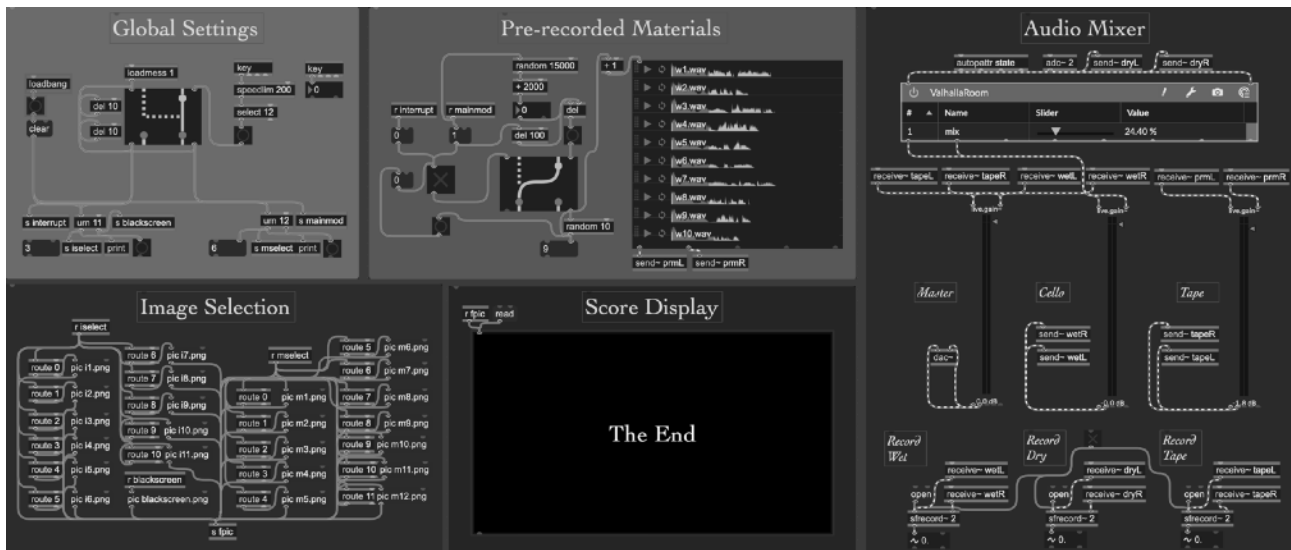
Essentially, the piece requires a cellist to read notated fragments from a laptop and switch between them using a foot pedal. I created two categories of musical 'modules,' labeled 'Main' (12) and 'Interrupting' (11), with the former characterized by homogeneity and the latter by heterogeneity. These categories always alternate, but the order of individual modules is randomized, with each only occurring once. This sequence forms the piece's structure, with consistency provided by the main modules and contrast by the interrupting ones.

To introduce a sense of uncertainty external to the performer, I also programmed Max to trigger pre-recorded tape at random intervals throughout the piece. These recordings are denoted by a bell-like transient, created from a wind chime recording, and include layered and processed spoken lines from Robert Frost's poem *The Road Not Taken*, which I will discuss shortly. Given the disparity of cello materials, I wanted the tape to act as a constant, hypnotic feature.

When a main module is displayed, Max generates a timing between two and fifteen seconds, at which point a random tape recording plays. However, if the player transitions to an interrupting module before this, the process halts. Thus, though unlikely, it is theoretically possible for a version of this piece to contain no pre-recorded tape at all. I allowed for repetition in the tape materials to elicit a variety of audience interpretations, shaped by an emphasis on particular lines. The use of the phrase "I took the one less traveled by" in popular culture serves as a case study in this phenomenon.

II.

Often misunderstood, Frost's poem is an ironic commentary on self-determinism. Adopting an almost Calvinist position, he humorously critiques the individualistic emphasis on personal choice by juxtaposing contrary sentiments:

As just as fair   *Having perhaps the better claim*
Had worn them really about the same   *I took the one less traveled by,*
Both that morning equally lay   *And that has made all the difference.*

I find this relatable to my experiences with musical indeterminism. Initially, I wanted to write a piece whose essence could be preserved across a broad range of different realizations. At the same time, I expected that these alternate versions would differ substantially, making "all the difference", as Frost says in his poem. I eventually came to realize that this was contradictory.

One might point to the 1960s American experimental scene for examples of compositions yielding extremely varied interpretations. However, I would argue that since many of these works contain such abstract and intentionally irreproducible instructions, they essentially cease to function as pure compositions. This is evident in some works by Brown or Cage, where an interpreter could reasonably claim a degree of authorship—though further discussion on this topic is warranted.[1]

While writing this piece, I discovered that my vision required a more precise approach—one reminiscent of European explorations during the mid-20th-century.[2] My aim was to create an unordered set of "mobile elements" operating within the confines of a "fixed structure," to borrow from Boulez.[3] Thus, although the piece contains randomized elements, its structure ensures that versions maintain aesthetic cohesion. In other words, they all sound "really about the same".

This was something I first intended to avoid but ultimately embraced. Dr. Jonathan Packham writes that "Openness is as much about the elements of performances that aren't planned or 'don't work'…" and while I find this intellectually tempting, I cannot fully reconcile it with my compositional intuitions.[4] In that regard, writing *really about the same* shifted my perspective on indeterminism from the philosophical to the pragmatic.

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[1] Earle Brown, *Folio* and *Four Systems*; John Cage, *Variations*, etc.

[2] Karlheinz Stockhausen, *Klavierstück XI*; Pierre Boulez, *Piano Sonata No. 3*, etc.

[3] Pierre Boulez, "Alea," *Perspectives of New Music* 3, no. 1 (1964): 49.

[4] Jonathan Packham, "Toward a Spatial Understanding of Openness," *Leonardo* 57, no. 5 (2024): 564.

Instructions

Setup

- Use a microphone to record the cello signal into Max/MSP, and a stereo pair of speakers to output the processed audio and pre-recorded tape.

- Navigate to the [dac~] object, located in the 'Audio Mixer' region, to configure I/O. Set the pre-recorded sounds by pressing individual samples and moving the corresponding fader. Play the cello fortissimo and adjust the gain to match the volume of the initial tape transient. The [autopattr state] object automatically saves the mix.

- Regarding the reverb (Valhalla Room), apply minimally and in accordance with the venue.

- Enter presentation mode and zoom until the [fpic] object (notation) comfortably fits within the computer screen. Manually reset the algorithm before each performance by triggering the [loadbang] object. This ensures that each module will be displayed.

- Connect a foot pedal via USB or Bluetooth and modify the [select 12] object in the 'Global Settings' area to match its output, indicated by the adjacent number box. If the pedal outputs MIDI data instead of key-presses, connect the following chain of objects to the bang: [midiinfo] -> [umenu] -> [midiin] -> [route 0] (replace 0 with the relevant input). This configuration allows for the usage of MIDI devices, though keystrokes are preferred.[5]

- Position the screen in front of the performer at eye level, and adjust the foot pedal to ensure ergonomic access throughout the performance.

Notation

- The approximate duration (seconds) of musical fragments is indicated with solid brackets above each part. Please adhere closely to these timings, particularly with regard to note spacing. For example, if an evenly spaced 3-note module is approximately 6 seconds in length, each note should be separated by 2 seconds. However, if notes are unevenly spaced, the equation could differ (e.g., 1" + 1" + 4", etc.). Timings should be kept within a roughly 33% margin of error.

- Though most of the notation is traditionally accessible, three modules are exclusively described using text due to their imprecise, gestural qualities. If there is any confusion about these figures, please refer to the following timestamps: 0:58 (i4), 2:05 (i5), 0:34 (i9).

- Half-harmonics, indicating half-stops/pressure, are notated with the half-filled diamond-shaped notes. "Reduced left-hand finger pressure at nodal or non-nodal points produces indeterminate sounds predominantly of overtones."[6]

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[5] The [speedlim 200] object prevents accidental doubling of keystrokes, but not MIDI inputs.

[6] Elaine Gould, *Behind Bars: The Definitive Guide to Music Notation* (Faber Music, 2011): 424.

- The trilled glissando in module i2 begins with an initial interval of E - F# (major 2nd), but gradually transitions to an interval of G - G#/Ab (minor 2nd). To achieve this, reduce the distance between the trilled notes while sliding up the fingerboard.

- Abbreviations used: RH/LH (right/left hand), s.t. (sul tasto), s.p. (sul ponticello), m.s.p. (molto sul ponticello), l.v. (laisser vibrer), and n.v. (non vibrato).

- The fermata-like symbol with four dots in module i.7 indicates an initial jeté attack.

Performance

- Begin by pressing the foot pedal once, which should display a main (m) module. If an interrupting (i) module appears instead, reset the algorithm and restart.[7]

- After completing each module, proceed using the same method. Pressing the pedal early increases readiness, but should not be done excessively (no more than 2 seconds before the next module), as it risks prematurely triggering sounds.

- The tape material is handled as follows: When a recording is triggered, pause playing immediately until the speech ends. Then, resume playing from the next note, following the interruption. To reiterate the preface: pre-recorded sounds trigger only during main modules.

- Once the sequence is complete, a black screen will indicate the end.

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[7] Due to the uneven quantity of alternating modules, the piece must always begin and end with a main module (refer to the [gswitch2] object in the 'Global Settings' panel).

Modules

(1280 x 720 resolution)

i.5

6" ca.

RH: fast tremolo bowing in a circular motion across all strings
LH: half-pressure gliss. irregularly along the fingerboard from 1/2 to 2/3rds towards the bridge

i.6

3" ca.   4" ca.

pizz. (l.v.)
I   III   II   IV

mp

i.7

3" ca.

II
III

gliss.

ff

i.8

10" ca.

half-harmonics, excessive bow pressure

sim.

f

i.9

8" ca.

RH: constant (quasi rasgueado) strumming with back of fingernails across all strings
LH: half-pressure gliss. irregularly across the fingerboard

i.10

3" ca.

IV III II I   II   III IV   *sim.*

mp

i.11

10" ca.

pizz. (inside pegbox)

p

pp
bow below bridge