

# Scoring an Interactive, Multimedia Performance Work

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## ABSTRACT

The *Color of Waiting* is an interactive theater work with music, dance, and video which was developed at STEIM in Amsterdam and further refined at CMMAS in Morelia Mexico with funding from Meet the Composer. Using Max/MSP/Jitter a cellist is able to control sound and video during the performance while performing a structured improvisation in response to the dancer's movement. In order to ensure repeated performances of *The Color of Waiting*, Kinesthetech Sense created the score contained in this paper. Performance is essential to the practice of time-based art as a living form, but has been complicated by the unique challenges in interpretation and re-creation posed by works incorporating technology. Creating a detailed score is one of the ways artists working with technology can combat obsolescence.

## Keywords

Interactivity, Dance, Max/MSP/Jitter, Sustainability

## 1. INTRODUCTION

This score with descriptions of the electronic sounds, video compositing, choreography, cello tracking, lighting, costume stage diagram will enable performance of this work well into the future. A DVD with the Max/MSP/Jitter patch saved as text, the sound and video files used in the performance and video clips from various performances is included with the score. By including screen shots of relevant sections of the max patch in the score, we show which part of the interaction is most important for the artistic success of the work.

## 2. The Score

The following figures show full pages of the score. The entirety of the introductory materials (figures 1-3) is included while due to space restrictions only excerpts from the timeline of the performance are included (figures 4-6). The introduction serves to document all elements of the piece including the set, the lighting and the costumes. The timeline contains sketches of the choreography, performance instructions for the cellist and dancer, musical notation for the cellist including light and dance cues, and stills from the video showing brightness, and placement of elements.

## 3. Philosophy

A live event engages the audience in a unique way, where each member contributes to shaping the event, actively participating in its realization. In this way, the artistic experience becomes a dialectical one. Importantly, the live event implicates its audience both as individuals and as a collective. As critic Nicholas Bourriaud notes, "Each particular artwork is a proposal to live in a shared world...intersubjectivity...becomes the quintessence of artistic practice." [1] In performance, audience members engage with the artists and their creations in a collective elaboration of meaning. This component of a communal development of meaning is an essential aspect of the artistic experience. At a live event, "there is the possibility of an immediate discussion: I see and perceive, I comment, and I evolve in a unique space and time." [2] With the diminished critical distance comes an increasing emotional involvement where the participant is immersed "in a 360-degree...unity of time and place." [3] The live event is thus a site of encounter and exploration.

By contrast, the viewer takes on a much more passive role when experiencing an event through documentation. Instead of a shared site of artistic communion, the document "refer[s] each individual to his or her space of private consumption." [4] The viewer cannot participate in the communal aspect of a live performance, as the documentary forces him or her to acknowledge his or her current surroundings, separating the individual from the experience while allowing only a glimpse of it. In addition, a documentary of an event lacks the dynamism of meaning one encounters at a live event, as a document is essentially a predigested, one-sided interpretation of a historical circumstance. Documentation, no matter how thorough, is unavoidably biased towards producing a certain interpretation of the event: each image presented is mediated through the critic's lens. Here, the relationship between viewer and image is one of authoritarian promotion and reception. [4] But art exists in time and space, and its reduction to mere document subtracts something essential from it, reducing it to an object that exists within the confined parameters of the viewer's screen. Bourriaud argues that artistic form can only be realized "from a meeting between two levels of reality. For [the homogeneity of a document] does not produce [art]: it produces only the visual, otherwise put, 'looped information.'" [5]. Our score including the DVD is not a documentation of a performance, nor is it a document to be used in performance, rather it is a document to ensure repeated performances.

## 4. References

- [1] Bourriaud, Nicholas. 2002. *Relational Aesthetics*. Transl. Simon Pleasance and Fronza Woods. Paris: Les presses du reel, 22.
- [2] Ibid., 16.
- [3] Popper, Frank. 2007. *From Technological to Virtual Art*. Cambridge, MA: The MIT Press, 181.
- [4] Bourriaud, 22.
- [5] Ibid., 24.
- [6] Ibid., 24.

## The Color of Waiting

for Cello, Interactive Sound & Video, and Dance

Music and Programming by Margaret Schedel  
Choreography by Alison Roofberg  
Video Design by Nick For-Gies  
Costume and Set Design by Alra Brayman

The Color of Waiting is an interactive theater work with music, dance, and video which was developed at STEAM in Amsterdam and further refined at CEMAS in Mexico Mexico with funding from Meet the Composer. Using Max/MSP/Jitter after a callist is able to control sound and video during the performance while performing a structured improvisation in response to the dancer's movement.

This work uses animation, movement, music, lighting and video to portray various themes of expectation. The performers shift between textures of frustration and acceptance while exploring the way time unfolds when waiting for something or someone. The Color of Waiting is an experience and a mood, an abstraction exposing human intention. After a performance at Story Book University Professor Dana Seragun called it a "visual haiku within timbres of glass."

The work is divided into five sections:

- I. Waiting for Love
- II. Waiting for Inspiration
- III. Waiting for Agreement
- IV. Waiting for Something You Need
- V. Waiting for the End

Each section uses a different kind of interaction between the elements of the work thereby providing an ever-evolving framework for the performers.

### Electronic Sounds

There are only five sound files used in the piece which were created by processing recordings of rain falling on a skylight combined with a sample of a rainstick.

1love.aiff  
2inspire.aiff  
3agree.aiff  
4something.aiff  
5end.aiff

Sounds 1-4 fade in together. In the first section 1love.aiff is the most prominent. In the second section 1love.aiff fades out completely and 2inspire.aiff becomes the most present. Thus in section two, 2inspire is the loudest sound and sounds 3-4 are playing at a low volume, and in section 3, 3agree is the loudest and file 4 is playing at a low volume. Soundfile 5, which is a version of 4 with more reverb is triggered in the final section. In this way the layers emerge and disappear, until all of the sound has stopped away.

### Video Compositing

There are two video files used in the piece:

bg02.mov  
and eyeball.mov




which are composited onto an opening window. Stamping with these white columns providing a framing element.



This image is projected onto three sets of vertical blinds 2.5' wide a 6' long. These are opened slightly, giving a texture and dimensionality to the video which can be seen slightly behind the blinds.

Vertical and horizontal placement of the eyes, waves, and white columns is adjustable within the patch, enabling the projection to fit precisely on the set.



The callist sits between two columns with the computer system, and the dancer performs most of the piece on a stool or other stable object placed, the other two columns.

8

Figure 1: Page 2 of score

Throughout most of the piece the audience sees only the far left, left and middle columns of the video. The bg02 movie is divided into three columns and then put back together in three sets of four and projected.



In section four the video scans horizontally over the movie, creating a sense of lateral motion which contrasts with the rising and falling waves. The parameters change randomly, but the right edge of the left column and the left edge of the right column bound the parameters for the middle column.

The subpatch six is a thirty inlet switch which takes the video signals a,b,c etc from the patch above and allows the computer to choose a column numerically.

### Choreography

The choreography is very clearly divided into five sections. In waiting for love the movement is sensual, slow and seductive, as the dancer wades into water and draws the light up. In the second section the dancer focuses the lights on the angles of the head and face while waiting for inspiration. The third section is the only time the dancer leaves the bench; the explosive movement in the space contrasts and complements the music and the dancer's own shadow in the projection while the performers wait for agreement. In section four, waiting for something you need, the dancer must track them with the projected eyes. The final section is waiting for the end—as if and it is the end of life, the dancer lies down, exposed and open to space. Finally free of waiting, the end has come.

### Tracking the Cello

The Max/MSP/Jitter patch tracks three elements of the cello sound: volume, pitch and noise content.

The volume of the cello controls the height of the waves; in a deliberate decision to set up an opposition, the louder the volume of the cello, the lower the projection of the waves.



The noise content in the texture of the cello controls how responsive the waves are to the cello's volume. This control was added to increase complexity of the interaction.

By using Miller Puckette's fiddle~ object to track the pitch of the cello, the callist is able to control the direction the projected eyes appear to look. As the open D string the eyeball is on the left edge of the column when seen from the audience. The D two octaves above corresponds to the eyeball on the right edge of the columns.




In section four the automatic playback of eyeball.mov is stopped. Instead, the cello pitch controls which frame of the animation is shown. The smooth subpatch creates a transition between frames, so the projected eyes move gradually as the cello changes pitch.

This control only appears in section four. Until then the movie plays on a ping pong loop - scanning slowly back and forth.

### Lighting

The piece is performed in total darkness. The dancer holds a small light in each hand, using them to reveal areas of the body appropriate to the content of the section. Full illumination of the body occurs only when (like it is the beam of the projector).

### Costume

The dancer and callist each wear a sweater with horizontal stripes of black and grey. The stripes are revealed when the lights come on at the end of the piece and the performers take their bows. The grey and black costumes and glasses video are accented by a red tie on the dancer, and red fabric flowing across the cello and pooling on the floor.

9

Figure 2: Page 3 of score

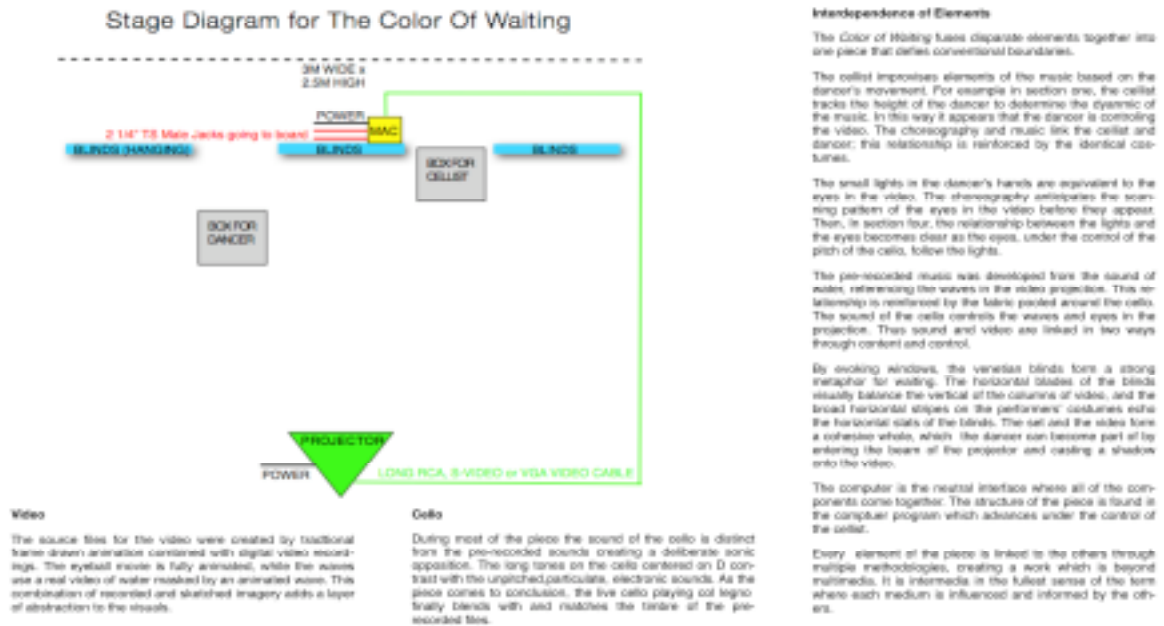


Figure 3: Page 4 of score

Hands on Knees Looking Down 	Start to Stand - Knee 	Body Faces Light Follows to Feet 	Forward Arch	Light Moves Up and Down: Fast
Slide Feet Up and Down Leg	Roll Over Feet to Feet: Feet and Back	Twist Upper Body	Change Levels	Cross Leg to Knee on Knee to Pile 
<p>Transition</p> <p>Light Moves Left Right Left Center to Reveal the Floor</p>				

**NOTES - WAITING FOR LOVE** 2-4 mins

The cellist advances through the sections by pushing a pedal marked as which changes the audio and video.

The cellist watches the dancer for the cue to advance.

If the piece is played over a quadraphonic system the cello should be in the front speakers only.

Levels for the cello and the soundfiles can be adjusted in the cello subpatch.

The columns of video should fit precisely on the set - the placement controls are in the ColorOfWaiting patch.

Cellist watches height of dancer - when dancer is low, cello plays forte, when dancer is high, cello plays piano.

Enter when electronic sound will cover softest note release when lights reveal face

Wait for columns to fade in Wait for lights to reveal face


Columns fade in 0000ms

Waves rise 0000ms


After waves have risen cello volume controls height

Soundfile 2-4-0-30% 4000ms  
Soundfile 1 0-100% 3000ms Soundfile 1 100%-0% 2012ms  
Soundfile 2 30-100% 2000ms

Figure 4: Page 5 of score


Move Back and Forth Across the Space	Long Reaching Positions Between the Video Columns	Spinning Level Changes	Reaching Toward to Top	Melt into the Water	<b>NOTES - WAITING FOR AGREEMENT</b> <span style="float: right;">2-4 min</span> Cellist should not watch dancer in this section until the dancer returns to the box. First melody should be played in synchronization with the dancer, with notes changing as dancer moves.
Transition  And Back / Turn Around / Lights Move Around / Stop One Foot at a Time / Lights Move Left Right Left Center to Reveal the Face - This Time the Body is Facing the Side					

*Improviser in this fashion adding r's and trills*




*Do not try to hold in the harmonic straight away, fish around for it and once found hold it out. On the last pass through when the dancer returns to the box, let the harmonic straight away.*

Eyes scanning




Eyes stop scanning




Soundfile 3 100%-0% 30000ms  
Soundfile 4 30%-100% 13458ms


Figure 5: Page 7 of score

Move Lights From Side to Side	Contact Upper Body	Twist Body and Stretch Legs	Returns to Sitting	Search Side to Side	<b>NOTES - WAITING FOR THE END</b> <span style="float: right;">1 min</span> This section is automated, the dancer and cellist are simply responding to the visual and audio cues created by the computer. The cellist responds to the drips in the electronic sound, trading sounds with the computer and fading out. The cellist plays col legno battuto on harmonics for the entire section letting the stick bounce less and less as the section progresses. The dancer returns to sitting when the middle column begins to fade out and drops the head when the soundfile has completely faded out.
End  Bring Lights Out Up and into the Body / Folding Over / Dropping the Head					

*col legno battuto*




1000ms




Middle column fades out 1000ms

21500 ms



Outside columns fade out 12075ms

5100ms



Dancer drops head

Soundfile 5 ends

Figure 6: Page 9 of score