Vibe Shirt: Reflections on a Duet for Coder and Dancer

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ABSTRACT
This artistic paper explores a live coded dance performance 'Vibe Shirt', created by the author. It focuses on three aspects of the work, including the use of code as a choreographic score, the interpretations of haptic feedback within dance improvisation and the real-time compositional feedback loop created within live coded dance performance. It is meant to be a reflective discussion of the performance work, rather than an in depth analysis of the practice of live coding dance performance and hopes to raise questions rather than present new knowledge.

1. INTRODUCTION

'Vibe Shirt' is a 15-minute long duet for a live coder and a dancer. In this work a dancer is wearing a costume containing two pager motors (one on the right arm and one on the left arm). The vibrations of these motors is live coded during the performance to create a choreographic score which the dancer must interpret. The piece is normally performed with no sound and minimal lighting cues. The piece has been performed three times to date. First at the International Conference for Live Coding in Leeds, UK (July 2015), then at the Codame Festival in San Francisco, US (October 2015) and at Source 2016 Festival in New York, US (March 2016). Each performance has had a different dancer improvise movement within the piece and the live coder has reminded the same. This paper will explore three facets of the duet and the differences across performances which utilized three different dancers. This will include discussing the creation of a choreographic score for dance improvisation via code, the interpretations of haptic feedback during live performance, and the resulting compositional feedback loop that occurs during the piece.

2. Creating a Choreographic Score Via Code

The use of scores to provide instruction during performance is found across many disciplines. Within choreography and dance the score does not have to start with the movement of a body part, but may begin with an organization of instructions. These instructions may also be expressed in forms that read like commands and are interpretative. This is where an intersection between coding and choreographic scores may become apparent and performative. Programming languages comprise instructions and commands that are expressed in various forms, but represent a computational process of defining executions. 'We define programming to mean the act of extending or changing a system's functionality' (von Roy and Haridi, 2004: iv). Devising instructions to analysis and organize a system fits both the aims of choreography and code. DeLahunta puts forward the argument that there are many similarities between programming and choreography, from the scoring of possibilities to the use of algorithms to produce outcomes within a piece. 'The notion of instructions or rule setting as a way to generate dance material, as rule and instructions, called algorithms, are the executable phrases of software programs' (deLahunta, 2010: 22). He goes on to describe the interpretation of movement scores to be executed in a similar way in computer programming and dance.
'Vibe Shirt' uses a system created by the author to create a choreographic score that is technically mediated. The choreographer/coder is live coding a score in the programming environment Processing. The score is essentially the on/off of motors that are triggered via OSC messages over a wifi network. The score is then received by the dancer through haptic feedback on their arms. The live coder can send vibrations to either the right arm, left arm or both arms. They can also control duration of the vibration or enter an array that determines the rate and length of the vibrations of the motors embedded in the garment the dancer is wearing. In this system the coding of the choreography is not seen by the dancer in terms of words, but is felt through the output of the motors. The score is created on the fly and is changed in response to the performance that is unfolding. This reflects the approach that is found in many live coding performances.

Within the three performances of this work, the system changed very little and the choreographer/live coder remained that same. However, what was striking was the relationship that the live coder perceived within these performances. Both the first and third performances (Leeds and New York) were danced by performers who had worked with the choreographer before and had experiences of interpreting her scores. They were playful and created a relationship with the live coder, making the performance a duet. Particularly this was evident in the New York performance as the dancer made frequent eye contact with the live coder. In the San Francisco performance the performer had not previously worked with the choreographer. There was also a much larger audience in a very busy performance space. The dancer rarely interacted with the live coder and primarily focused on interpreting the haptic vibrations.

3. INTERPRETATIONS OF HAPTIC FEEDBACK

'Vibe Shirt' not only presents the creation of a choreographic score via coding, it also presents the challenge of interpreting that code through the use of a haptic feedback shirt. This presents a unique way of creating a choreographic score as well as an unusual sensation or experiential situation for the dancers to respond to within the performance.

The movement is not predetermined in this work. There is no set material and no instructions from the choreographer other than to respond to the vibrations. It is the dancer's who must decide what is the best approach to interpreting the system. This varied from performer to performer greatly in the three performances to date, but most dancers found that they would start with using their arms and moving the right one when triggered, or the left one when triggered. As the piece progressed this developed into traveling to right or left, or ignoring instructions. Beyond this there were individual movement choices that come across in each performance.

In the Leeds performance, the dancer worked more with the dynamics that were created in part by the length of the vibrations sent to the garment. She worked with sudden and abrupt gestures to reflect the shorter buzzing of the motors and indicated right and left quite clearly through these quick movements. In San Francisco the dancer performed much bigger movement that was less gestural or pedestrian. Because the performance had larger movements, it at times looked either set or that she was not responding the haptic feedback. It was a very different piece from the other two based upon the dancerly qualities of the movement. In New York the dancer utilized very pedestrian gestures such as fixing her hair but added a humorous element to the work. At times she made faces at the live coder, indicating in a joking way she was unhappy with the haptic signal she had just received. This dancer highlighted the issues around control and agency that the piece aims to bring into live coding.
At the premiere of 'Vibe Shirt' there was criticism that the performance did not include a projection of the textual code into the space. However, when considering the compositional aspects of the work, and how important the dancer's movements were to the interpretation of the code, it was felt that the body became the screen and the code was visible through her motions.

4. COMPOSITIONAL FEEDBACK LOOP

The overall dance composition is created through the code, haptics, dancer's interpretation, movement and then the observations of the live coder. This final step closes the feedback loop and presents a unusual choreographic approach. The idea that the choreographer can continually send signals to be interpreted and change them throughout the 15 minutes of the piece, a sharp contrast to the normal choreographic process where choreographers rehearse and refine movement in a studio to create a set movement vocabulary. This creates an emergent dance composition that is technically mediated as well as composed by both dancer and choreographer in the moment. There becomes a sense of call and response when performing the work or the feeling of participating within a jam session.

5. CONCLUSIONS

This artistic paper aimed to reflect on three performances of the dance improvisation 'Vibe Shirt'. It focused on the use of code to create a set of choreographic instructions via haptic feedback, the role of interpretation and how different dancers responded to this prompt, and the use of feedback in the performance to push the piece forward and allow a live coding methodology to be employed.

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REFERENCES