

Three Dresses: conceptual and technical report

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This report documents the development of three performatic garments as a final contribution to the “Transposing an Opera” Master project at the Hochschule für Künste in Bremen, Germany. Starting from a personal interpretation of the three main female characters in Mozart’s “Don Giovanni” (K.527), three interactive dresses were created as impersonations of these women’s identities. Intimacy and desire are recurring themes throughout “Don Giovanni”; the first part of this report discusses how, by the use of wearable technologies, the project aims to inspire reflection on these issues. Each garment was developed using specific soft circuit and sensor techniques, which are detailed on the last chapter.

Conceptual development

Mozart’s “Don Giovanni”’s storyline centers around a seductive and ambitious main character and the consequences of his actions. The story is not new; the fictional Don Juan, the real-life Casanova and many other impersonations of this womanizing character had been around for centuries. However, some recurring themes that underline these stories are indeed universal: the desire for intimacy, in all of its manifestations, is a universal issue in humankind.

Based on personal observations of the opera’s storyline, where the dual and contradictory nature of relationships plays a central role, the idea for this project was developed as a further comment on how these relationships could be idealized.

After deciding to center our experiments around the three main female characters presented in the story, we then set out to explore our own personal

interpretations of their identities throughout the performance and how they were presented to the public. By analyzing specific verses and dialogues from each character throughout the plot’s development that expressed that woman’s innermost feelings, we traced our own perspective on what each female character *desired* from Don Giovanni - from physical intimacy to emotional submission or complete dedication. These feelings tend to emerge as the storyline develops, with the characters eventually expressing them in one way or the other.

Stemming from these initial observations, our main idea was to transpose the identities of each one of these fictional women into tangible experiences; by choosing garments - dresses - as a medium we hoped to bring a concrete feel to the issues of intimacy and lust that permeate the characters’ relationships. In order to do so, however, it was clear that these objects could not be simply represent the imposition of certain meanings towards a passive audience; rather, each person exposed to the dresses would be free to apply their own layers of meaning to the garments. The spectator, therefore, had to cease to be a passive element in the equation and, instead, become an *actor*.

The dresses, which impersonate the idiosyncrasies, expectations and desires of each character through the use of soft circuit techniques and sensors, demand specific sets of behaviors from the actor in order to reveal what they want to express - their “secrets”. These secrets are represented by the previously mentioned monologues and dialogues taken from the opera where each one of the women expresses her feelings towards Don Giovanni.

Each dress emits a constant faint sound: recorded samples from Theater Bremen's rendition of Don Giovanni. All of the recordings were made during the final rehearsal before the premiere of the production in the theater.

Technical issues

All of the dresses are fashioned with small hidden pockets attached to the inner side of their skirts, near the hem; each pocket fits one mp3 player. In order to play the sound files, each dress has also another pocket, small enough to fit a tiny speaker. The location of the speaker pockets changes according to the singularities of each dress. All of the speakers used have a purposely low volume, thus making it necessary for the actor to embrace the wearer and overcome their own notions of personal space in order to listen.

Elvira

The Elvira dress requires the wearer to be embraced and caressed for the actor to listen to what the wearer - represented in identity by the dress - wants to express. In order to achieve that, the speaker pocket was placed on the front side of the dress, right on the wearer's heart. Two stroke sensors were placed on each side of the upper back of the dress. A small metallic snap button made the connection between the two parts, connecting them in series. Each sensor was then connected to one of the speaker's wires.

Stroke sensors

The stroke sensors were initially based on the tutorials available at <http://www.kobakant.at/DIY/>. This technique involved layering conductive fabric with another, non-conductive fabric and then repeatedly stitching conductive thread strands through the two layers, forming something similar to fur on the non-conductive side. The conductive fabric layer underneath would connect all of the strands; this part of the sensor would then be sewn into a receiving surface, right next to a conductive fabric strip. When the strands were stroked they would make contact with the conductive strip, thus

closing the circuit.



Fig.1: discarded stroke sensors

These first versions, however, didn't fit in with the envisioned aesthetics of the dresses; a variation of this soft stroke sensor, based on the same principles of the already existing one, was thus developed substituting the strands with small tassels, also made with conductive thread.



Fig.2: conductive thread tassels

The tassels were then tightly sewn into the fabric layers by using conductive thread, creating the necessary contact between each element while keeping the tassels in place. Tassel fabric strips and their respective conductive fabric strips were subsequently sewn into the dress, completing the sensors.



Fig. 3: finished dress.

Anna

The Anna dress requires the actor to demonstrate complete submission to the wearer in order to listen to what the dress expressed. This submission is physically represented by the act of kneeling in front of the wearer and holding on tight to her waist, in an adoring position. The speaker was therefore placed in front of the dress, in the middle of the waistline. Two pressure sensors were placed on each side of the back of the dress. Again, like in the Elvira dress, a snap button was used to make the connection between the two sides. Each side was then connected to the speaker.

Pressure sensors

The pressure sensors were built according to the tutorial available at <http://www.instructables.com/id/Flexible-Fabric-Pressure-Sensor/>. The sensor consists of three sandwiched pieces of fabric. The two outer layers are conductive, while the middle layer is made with a resistive material called Velostat. Velostat changes resistance when under pressure; the bigger the pressure, the lower the resistance.



Fig. 4: sandwiched layers of fabric.



Fig. 5: finished dress.

Zerlina

The Zerlina dress requires the actor to unzip the front portion of the garment while standing behind the wearer in order to listen. The speaker was thus placed on the back side of the dress, near the neckline.

Zipper potentiometer

The sensor used for this garment was fashioned from a simple zipper with plastic teeth and an aluminum head, according to the tutorial at <http://itp.nyu.edu/physcomp/sensors/Reports/>

[ZipperSensor](#). Resistors were sewn in series with conductive thread along one side of the zipper. The zipper head made the connection from the resistive side to the other; the other side was simply lined with conductive thread. Both sides had their speaker connections at the bottom, so that the path followed by any current passing through the sensor would always have to go through the zipper head and consequently through the resistors.



Fig. 6: resistor sewn with conductive thread



Fig. 7: finished dress

Conclusion

Throughout the years, Opera has been constantly updating itself. Each new rendition of a famous piece is subjected to a director's personal interpretation, very often omitting or emphasizing certain aspects rather than others. In opera like in any other type of art, both the director and the audience apply their own interpretations to each performance; this delicate balance creates different

layers of meaning and interpretation.

The three dresses, designed with the simplicity of the "little black dress" and purposely similar to each other, offer the actor an almost empty canvas for the production of meaning.

The performative intention of "Three Dresses" also contributes to place the relationship between actor, wearer and meaning in another level: their main intention is to be worn by disguised performers who blend into the audience and subtly suggest that they want to communicate. The idea is to challenge the actor to interact in manners other than spoken language, stimulating the use of other, less conventional means of communication.

References

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