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Title: Fashioning the Voice

Research Question: How might emerging sensory technology be combined with fashion to create a new immersive experience where clothing becomes a vocal play space for the wearer?

Abstract

Fashioning the voice emerged from a starting point of exploring the connections between fashioning the body and fashioning the voice. The body is a site of construction and communication, both dressing and speaking are situated bodily practices that allow the individual to style themselves, to make themselves distinct and to respond to their environment.

Using a range of sensors that gather data from the wearer fashioning the voice seeks to mix and entwine styling the body and styling the voice through a set of garments, accessories and props that literally sing in response to the wearer.

Findlay (2016) contends that clothing intertwines with imagination, self-perception and embodied experience, to co-fabricate a sense of being-in-the-world. My research examines body/identity/performance relationships through a prototype garment: a trench coat with monitoring sensors used to harness and tease out the synergy between material clothing and internal body, potentially dissolving the boundaries of sensations in fashioning body and voice. The project engages with debates in fashion and technology to consider future of luxury, fashion and costume that furthers its power to create imaginary worlds and extend the self.

Keywords: fashion, styling, voice, sensory technology, internet of things, immersive technology

Introduction

Fashioning the voice emerged from a starting point of exploring the connections between fashioning the body and fashioning the voice. The body is a site of construction and communication, both dressing and speaking are situated bodily practices that allow the individual to stylise themselves, to make themselves distinct and to respond to their environment. Using a range of sensors that gather data from the wearer fashioning the voice seeks to mix and entwine styling the body and styling the voice through a set of garments, accessories and props that literally sing in response to the wearer.

Imagine...

As you enter the thrumming, glowing space, you see the silhouette of a sharply-defined trench coat suspended, buttons open: waiting for you to become your own, retro-futuristic Bogart/Bacall. You slide it on and the tender hiss of its arm is amplified - a glissando of sung sound courses out of the friction and movement.

You're curious, and laugh. The trench coat picks up your voice from your laughter, and when you slide the next arm on, it's your own voice that sings back. Each arm is a chorus of you. You wave them and play, and notice that the timbres and textures and pitches shift. Vibration seems to come right out of the voices and shimmer up your back in a growing patch. You pop up the collar, and percolating fizz of fabric mixes with some steely high notes. You decide to go for the hat.

As you put it on, multi-coloured lights shape a runway in front of you - you walk into it, and the hat sings too! You become a chorus of voices, yours and yet not yours, being shaped by your movements, by the heat from your body, by the tiny electrical currents in your skin. Your clothing styles your voice; your voice styles touch and vibration... In the wider building, a diaphanous gown, heavy culottes, a barbed corset, and crisply stiff gloves also capture voice and shape it. You and other audience are each other's show, and you are the stars... (Yvon, Bonenfant, 2017 – Fashioning the Voice collaborator)

The description you just read written by artist and voice specialist Yvon Bonenfant articulates a vision for an immersive, participatory experience, that entices the user into exploring the relationship between how we fashion ourselves, stage ourselves, and glory in the dramatic amplification of the fashioned self across sensory registers. This project brings together the skills of Yvon – artist, Professor of extended voice University College, Cork; Dr. Tychonas Michailidis – Research Fellow at Solent University who's work focuses on sensor technology and interactions and myself, a fashion stylist and artist to work toward making this kind of vision possible, and to learn from it.

In the first instance, we are focusing on developing a series of garment prototypes in the form of a set of trench coats animated by a range of sensors that use gyro, stretch, and light and heat to produce data. A microphone in the collar of the coats captures the wearer's spoken voice and sensors perceive the body's movements in reaction to the coat and then we use this data to shape the characteristics of the voice, that transformed through the software using the movement data radiates out from

speakers within the garment or close environment. We immerse the participant in their fashioned voice, and 'touch' them with it.

Before I show you a film of the prototype coat I'll take some time to introduce myself and my approach to this project. I work across disciplines as a practice based researcher and artist whilst also drawing upon my commercial experience as a fashion stylist and creative director for fashion. Within projects my roles often move fluidly between artist, researcher, stylist and creative director, but the interest that is common to all of my work is construction of image through the fashioned body as well exploring the experience of the fashioned body (experience of one's own body and the encounters with bodies of others). The theoretical touch points for my work range from sociology, Bourdieu and Entwistle, particularly to cultural theory.



Figure 1. Version 1, prototype trench coat in calico

The prototype trench coat has been designed based on two principles:

1. To emphasise and assist the wearer in making gestures and styling themselves in the coat. For example, the oversized stiffened collar to allow the wearer to turn the collar up with a quick dramatic gesture (known as 'popping' the collar) and a full skirt to sweep extravagantly around one's body (see figure 1).



Figure 2. The full skirt of the toile, that is designed to be swept dramatically around the bod, and the deep stiffened collar, to 'pop'.

2. To give the opportunity to capture a wide range of data from different types of sensors by placing them optimally within the coat for capturing a good range in the data from movement, heat, light etc. The current prototype has a gyro (to measure movement up and down, side to side and turning) in the corner of the hem, a gyro in each sleeve, a light sensor under the collar (to measure varying light levels), conductive stretch fabric within the pockets (measures the amount of stretch in the fabric) and a temperature sensor in the back of the collar that sits against the wearer's neck which will detect when the coat is being worn by the difference in temperature when the sensor is placed against skin.

The battery pack, which is the largest technical component to the coat is contained in a pocket within the lining that sits in the small of the wearer's back. Traditional trench coats can have a full back and sometimes with a storm flap, which allows for more air to circulate. Using this design feature has allowed for the space for the battery pack to be contained within the lining of the coat, without this being too obvious.



Figure 3. The back of the trench coat, concealing the battery pack in the small of the back

Fashion – sub research questions

In developing my own research through this collaborative project I have developed a sub set of research questions that allow me to focus upon developing a contribution to knowledge that articulates what the project does in terms of understanding the experience we are providing to a person in wearing this bespoke, interactive garment:

- How can we change the experience of wearing clothes by making them more audio?
- What happens when we connect styling the body with styling the voice?

In order to explore the voicing possibilities of the trench coat the wearer cannot be docile, a range of movement and a vocal is needed. Therefore, the coat assists and cajoles the wearer in staging and extending themselves through experimental voice that has the potential in it's performance be powerful, overwhelming, absorbing and sensual. Through making a coat with vocal qualities we extend the site of display from the aesthetic and styled body to the styled voice, making the connections between the body and the voice more apparent, as well as playing with how sensations of movement and touch can connect to sensations of speaking, singing and making experimental vocal sounds. I will explore in this paper how the research and development work I have done to date has allowed me to uncover and document ways in which the coat can impact upon the experience of the wearer.

The epistemology of the trench coat

For a well articulated explanation of epistemology (the theory of knowledge) in arts research see Borgdorff's writing on *The epistemological question* (13:2006). Our research is informed by conceptual knowledge from the diverse areas of expertise the research team bring to the project,

including: sensor technology, digital composition, dramaturgy, fashion and cultural history. In order to bring these areas of conceptual expertise together in a meaningful way through an object (the trench coat) the knowledge in the project is converged and crystallised through using a methodology that focuses on testing knowing through practical, embodied experience that is documented through video, photography, sound and project notes then further articulated through papers.

Clothing and voicing are situated bodily practices, our ways of speaking, moving and wearing are a combination of tacit and explicit gestures, inflections and pronouncements. Therefore, the primary method for the research is to stage a series of investigations that allow us to explore the coat being worn and voiced and to record that process. At this stage, this has focused on mainly the core research team wearing the coat, within the next stage of the research there will be a series of retreats that will enable us to document and analyse a wider range of public 'sponsor users' (this is a term that describes people who represent different types of groups, such as children, teenagers, 20-somethings, families) to test with the next prototypes which will be more robust versions, both technically by using harder wearing more sophisticated sensors and batteries and materially; the next coats will be made up in coated water resistant cotton gabardine fabric, the same as traditional trench coats are made from. In addition to testing with sponsor users, we also plan to work with a small group of experts from the fields of sensor technology, public art, performance and fashion, who will be commissioned to act as evaluators, assisting us in analysing both what the coat does and what we have the future potential to do with this work.

My embodied knowledge informing the coat design

In early tests with the coat that include myself and my research colleagues trying on the coat, playing with the sounds we can create and thinking about the way that we respond to the the coat through simple actions, I have begun to reflect upon more deeply the relationship I have with garments I wear in a way that preferences the sensory and tactile experience, putting on hold for the moment the consideration of clothing as a means of a discourse operating within a given field, to prioritise my thinking about the sensations of connecting the garment itself with my body. Through exploring the coat by wearing it and fashioning my voice as I do so I have become particularly attuned to the feeling of wearing the coat and hyperaware of the gestures I make that connect the coat with my body, such as pushing up the sleeves, wrapping it tightly around myself and sweeping the full skirt as I pivot on the spot. I am paying close attention to *what my body can do* in the coat, rather than the intellectual questions of *what my body is* in the coat. This approach to studying clothes has been described by Lucy Ruggerone as the "feeling of being dressed", (2016); Ruggerone situates this type of research in the field of affect studies, which originated in cultural geography and feminist theory and considers how the body when we think of it not as a representation, can be a considered as a composition of forces and approaches to [dressing] practices. (574:2016). Through the framework of affect studies Ruggerone encourages us to consider how the composition of body forces can be "capable of forming specific relations with other bodies" (574:2016), that are both material and immaterial. The other idea proposed by Ruggerone within her paper *The Feeling of Being Dressed: Affect Studies and the Clothed Body* is the possibility of anticipating what will happen when we wear clothes; we do not entirely know how a piece of clothing will look on us before we put it on, we do not know how we will feel in it, or how we will see ourselves. In considering the trench coat there is an additional layer of experience and anticipation: we do not know how we will sound and what synergy there might be

between the vocal, physical and aesthetic aspects of being and feeling dressed in the coat. The dream for this research project (because it is important for artists, designers and creative directors to dream!) is that what we are working towards is to create a rich myriad of affective possibilities, where the expressive qualities of the audio and visual body collide in a sensory spectacle for both the wearer and the audience.

Through spending time trying on the coat and video recording our testing sessions I, as the stylist/designer on the project have focused upon feeling the weight of the fabric as I wrap the coat around my body, gestures of slipping and more aggressively my pushing hands into the pockets, popping the collar and pushing up the sleeves. Fastening the belt can be considered a micro investigation in itself; I am fascinated with the dichotomy between buckling the belt and tying the belt. In belting the coat and then subsequently realising that we hadn't made the belt comfortably long enough to knot, I have refined the design for the next prototype. Tying the belt and knotting it, feels to me like both a more natural gesture as well as somehow more definitive. Reflecting on my strong desire to tie, not buckle I realise that the way I do this is informed by years of studying the way clothes are worn and knowing that within the field of fashion – from iconic films, to magazine editorial, to catwalk to on the street a trench coat belt will be tied not buckled, to convey a gesture of not following the rules.



Figure 4. Audrey Hepburn, *Breakfast at Tiffany's* 1961 Figure 5. Humphrey Bogart, *Casablanca* 1942



Figure 6. Burberry Advertising, 2014



Figure 7. Aquascutum advert, 1950s



Figure 8. Melania Trump 2017

This consideration of the trench coat belt and the way it is secured prompts consideration of how important this aspect of the coat is in the sense the wearer will have of the coat. Buckled it looks much more uniform and this harks back to the origins of the coat being a military item, versions developed by two British companies Burberry and Aquascutum and worn by the military during the first and second world wars. Buckled the belt can only be tightened around the body as far as the holes in the belt will allow it to be tightened. When buckled the belt sits flat, the end can be tucked neatly into the belt loop, the garment looks smarter. Conversely, when tied the belt can be as loose or tight as the wearer wishes it to be, it can be firmly knotted or loosely tucked. Tying also allows for the wearer to wrap the coat itself snugly around themselves, styling a more fitted and streamlined silhouette. For a woman this can further feminise the coat, through enhancing the coat's ability to accentuate both the waist of the garment and the waist of the wearer. In my experience of wearing

this and my own (non tech enabled!) trench coat I feel more feminine when the belt is tied tightly around me, this allows me to disregard the buttoning too, styling the structure of the coat to better fit my body. Early on in exploring available sensor technology we had looked at possibilities for incorporating sensors within the belt – potentially gyro sensors to capture movement in the ends of the belt, or a stretch fabric within a small panel on the back of the belt, that would generate data when the wearer tightened the belt. For reasons of limiting the initial prototype coat to using only sensors that were likely to generate the best clear data, we didn't put sensors into the belt of the first coat, but it is through this testing phase of wearing the coat I now am struck by the importance of the belt to the overall experience of the piece, the belt in my experience is one of the central details within the trench coat that provides me with a sensory experience through the way that I can assert my agency in tying it, tightening it and adjusting it, to suit not only my body but my perception of my body and sense of self in the coat, as informed by my pool of knowledge of Audrey Hepburn in the pouring rain in *Breakfast at Tiffany's* (figure 3), Humphrey Bogart on the runway being blown dramatically by the plane propellers in *Casablanca* (figure 4) and iconic Burberry advertising campaigns (figure 5). This method of undertaking research is defined as embodied, it is practice as research (Borgdorff, 2006). It is only through this embodied practice of wearing the coat and documenting the experience, alongside observing others in the coat and then reflecting upon the experience of both wearing and seeing the coat being worn that I can further my understanding of what might be required in the next iteration of the coat. Throughout the next phase of testing there is much more to be investigated in terms of how a range of other people will use the belt on the coat, as well as all the other aspects of the coat that will help us to address our research question: **How might emerging sensory technology be combined with fashion to create a new immersive experience where clothing becomes a vocal play space for the wearer?**

Conclusion

In creating a space for the inhabitation of an alternative mode of being, the dress is imbued with the power to speak into the wearer, communicating messages from cloth to skin.

(Findlay, 79:2016)

Findlay waxes lyrical about the visceral power of the experience wearing clothes. In essence this research asks how we might elevate the experience of self through transformational clothes, clothes that transcend the usual sensations of being dressed to engage other senses. In this, the fourth industrial revolution where the physical and digital are blurred and our expectations of luxury are becoming based more on experience than ownership this research proposes experimental, playful and sensory clothes as a feasible future. WGSN's *Designing Emotion* 2020 Vision trend predicts that voice will become a main interface for tech, thereby increasing familiarity and comfort with using voice features in technology, they also predict that:

Products and experiences will tap into the power of the body, offering new sensations and sense extensions, adding tech-driven superpowers to everyday objects... In short, as humans become more digital, technology will become more human.

(WGSN 2018)

Our clothes, already used as an extension, a layer upon, a means of styling, expression and to enhance functions of the body are a natural place for developing and implementing our tech driven potential be they superpowers, sublime interactions or simply weird sounds.

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