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# Sound as Signifier: Communication and Expression Through the Sound of Clothing

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SOUND AS SIGNIFIER: COMMUNICATION AND EXPRESSION THROUGH THE  
SOUND OF CLOTHING

By

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Bachelor of Commerce, University of Alberta, 2006

A thesis

presented to Ryerson University

in partial fulfillment of the

requirements for the degree of

Master of Arts

in the Program of

Fashion

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## ABSTRACT

Fashion, clothing, and dress have traditionally been evaluated on visual characteristics. This paper focuses on the aural qualities of clothing and on what is being communicated through sound. Semiotic theory, in particular denotation and connotation, discusses the ability of clothing to communicate through sound. Philosophical ideas of expression through music and sound emphasized the significance of feeling and experience in art and fashion. Five garments were designed as sound objects to explore this link between sound and clothing. The garments are featured in a video in which two musicians dance in the pieces. Musician Born Gold created an original film score from the recorded sounds of the pieces. These works attempted to direct the focus of fashion experience towards sound, without disregarding the cultural emphasis on visual aesthetics. The intention is to shift the way individuals relate to their clothing, to a fuller and more cognizant sensory experience.



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*To my dear parents*  
*Noreen and Zoltan Berkes*

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## 1. Introduction

Fashion, clothing, and dress have traditionally been evaluated on visual characteristics. From ‘dazzling’ to ‘glossy’ to ‘striking,’ the metaphors used to describe dress convey visual primacy. Style, colour, cut, and design details of dress are scrutinized and assessed, often employing frameworks of analysis that focus on considerations of race, class, and gender. Other sensorial characteristics are typically ignored, from the feel and texture, to the sound, smell, and taste of garments. This research paper focuses specifically on the aural qualities of clothing, providing a curious look at, or listen to, what is being (and can be) communicated through sound. What does clothing and fashion sound like? What does the rustling of a taffeta skirt down a church aisle, the sharp click of a stiletto heel on a marble floor, or the bright jangling of bangles on a swinging arm say about one’s social, economic, or gendered identity? What does clothing say, and how does it communicate as it moves and interacts with the wearer and the environment? Such questions will be explored in this paper through the theories of semiotics that relate to the visual and the aural.

This paper provides a deeper analysis of clothing and fashion’s ability to communicate through sound. As a primarily visual entity, this aspect of clothing and fashion has not been studied in depth. Most sound produced by clothing is incidental, occurring due to inherent properties of the materials, and the cuts and shapes of the garments and accessories. There are instances where clothing sounds are intentionally produced; examples are often found in folk dress, and in the dress of First Nations people. For example, the early 20<sup>th</sup> century jingle dress, which originated amongst the Ojibwa, was used in dance ceremonies as a healing prayer (Thiel 14-18). There are also a few historic cases where statements relating predominantly to social

class were intended, such as the slap sole shoe of the affluent in 17<sup>th</sup> century Europe (McDowell 30). A few theorists have briefly addressed sound as communication in dress, but always as an aside to analyses focusing on clothing's visual characteristics. The aural qualities of clothing are often described in fictional literature, as part of a character's development, or contributing to an atmosphere. The sound of clothing often plays a role in film as well, where congruity and incongruity of sound and image are tools for directors to play with in their storytelling. Sound is everywhere; garments and accessories are constantly speaking, attempting to communicate. Their signals are largely going unnoticed due to the "hierarchical placement of the visible above the audible" that is not just characteristic in film, but is "a more general cultural production" (Doane 322).

Since the Enlightenment there has been a privileging of sight over the other senses (Smith 14). In spite of this hierarchy of the senses, the power of sound in communicating may on occasion be more powerful than a visual signifier. Sound has the ability to escape the limitations of linear visual perspective, traveling around corners, through walls and doors, and may succeed in communicating something long before its source is seen, if it is seen at all. What may be denoted or connoted by a sound? How can the sound of a pair of shoes indicate the wearer's economic or social status? Can the sound of one's clothing cause adverse or positive effects in social situations, and why? Are there functional or emotional benefits of wearing clothing that "speaks"? How can sound enable greater self-expression through clothing?

This link between sound and clothing is explored through the creation of garments designed as sound objects. The works created through this project attempt to switch the focus of experience towards sound, without disregarding this cultural emphasis on visual aesthetics. While the works aim to be visually aesthetically pleasing from a fashion perspective, they also

function as sound objects that will provide a fuller sensory experience. This will be of interest to, and may be enjoyed by those with the sense of vision, but also those without. Although visually interesting, the greatest interest of the pieces lies in the ability of the wearer to create and perform sound, or music, through movement. Both the wearer and audience are able to experience the garments in an auditory form as the wearer moves and plays the pieces. The wearer controls the production of sound, enabling another level of experience and permitting communication and self-expression through movement and sound. Although the clothing does not “speak” as humans do with recognizable signifiers in the form of language, the overall level of sensory interaction with the garments is increased. The garments encourage engaging with fashion through a wider array of sensory perceptions, with a focus on sound, and call attention to a more holistic way of experiencing, understanding, and communicating with the world around us.

The final component of this project is a short fashion film featuring the five garments, and an original score created from the recorded sounds they produce. The ubiquitous force of music may be discussed as a means of abstract, intuitive, non-verbal sound communication (Langer 218-222). The sounds act as a new vocabulary, which the composer may arrange as they please to evoke emotion and communicate with the audience<sup>1</sup>. The film depicts two models exploring the communicative capabilities of the garments through their movements. Their experiences with the garments come through in their movements, in the sounds produced, and in the personas they assume as they engage with the pieces. The musical score accompanies their individual experiences, organizing an array of disjointed sounds and messages into a more accessible, relatable, and perhaps understandable whole.

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<sup>1</sup> See Deryck Cooke, *The Language of Music* (London: Oxford University Press, 1964)

A final note regarding the following discussions of sound and music: this research project is about the sound of clothing. The creative components of this project result in garments that produce “sounds” (some of which may be argued to be “music”), and also a short film featuring an audio compilation and organization of said sounds into what may most certainly be called “music.” Without engaging in a highly complex discussion of what is or may be called music, it must be clarified that regardless of one’s opinions of the sounds produced and the resulting composition, their purposes are the same. While some theorists discuss the emotive power of “music” and others discuss that of “sound,” this paper argues for the communicative abilities and expressive value of both sound and music as products of clothing. The creative components of this project provide unique and interactive examples of how sound and music can be produced by clothing to communicate concepts and ideas, and incite feelings, emotions, and even physical reactions.



## 2. Literature Review

### 2.1 Textual Review

A review of the ideas presented by semioticians is necessary as a foundation for this project. Much of the work focusing on fashion as communication addresses fashion as a system of signs. Ferdinand de Saussure is one of the most highly acclaimed linguists, and his theories of language and sign systems have influenced the writings of later theorists in communication. One of his most significant contributions to theories on language and communication is the sign/signified/signifier model, proposed in his *Cours de Linguistique Générale*, or *Course in General Linguistics* (1906-1911). This model originally applied to language, referring to the auditory “sound-image” (signifier) and a related “concept” (signified) to create the “sign” (Saussure 66). The sound-image did not only refer to a sound, in this case words, but primarily to the “psychological imprint of the sound, the impression that it makes on our senses” (66). Saussure presented a complex and comprehensive look at language and signs. As his work was directly and indirectly influential on a number of fashion theorists<sup>2</sup>, so too his ideas come into play in an analysis of the sound of clothing. The sounds emitted by clothing as they move and interact with their wearers and environments are not just sounds, but may also be examined as having a “psychological imprint,” referring to much more than just a physical sound.

One can certainly understand how familiar sounds, such as that of a zipper, conjure up a particular sound-image, without having to take the form of an arbitrarily assigned word. In this case, what is signified is directly linked to what is creating the sound. The sound of the zipper

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<sup>2</sup> See Malcolm Barnard, *Fashion As Communication*, Roland Barthes, *The Fashion System*, Fred Davis, *Fashion, Culture, and Identity*, Alison Lurie, *The Language of Clothes*.

(the signifier) makes one think of that garment closure that may easily be opened and unopened with a simple pulling motion (signified). It seems a less arbitrary connection of sound-image and concept than that existing within our current realms of language. There are numerous other cases, however, where what is signified is far less clear. In these cases, there may be no words in our language, no dialectical signifiers, which may describe what is being signified. In such cases, what is felt by the listener must be considered as the concept, or what is signified, even if impossible to put into words. This idea relates better to a system of communication put forth by Roland Barthes.

Roland Barthes is a semiotician who built upon the ideas of Saussure. Barthes proposed the notion of codes, which could be broken down into concepts of connotation and denotation. On a primordial level, a sign could denote a factual object or image. On a more complex level, a sign could connote various things about that factual object or image. What is connoted is highly subjective and may vary from person to person, from context to context. This is a concept that plays a strong role in the examination of meaning in sound. Following this, it is easier to understand how a sound produced from an article of clothing could communicate something, regardless of how abstract or inexplicable. The rustle of a skirt may denote a skirt, but what is connoted may be highly varied depending on the context and come in the form of a feeling, an indescribable notion beyond words.

Some of Barthes' writings focus specifically on signs and codes as they apply to sound, hearing and listening. In *Image-Music-Text* (1977), Roland Barthes identifies two types of music – the music one listens to and the music that one plays (149). Although both are active pursuits, playing or creating music has a higher level of participation in which “the body controls, conducts, co-ordinates, having itself to transcribe what it reads, making sound and meaning, the

body as inscriber and not just transmitter, simple receiver” (149). The importance of intentionally creating sound with one’s dress is explored in the creation of the sound pieces, as well as in the playing of the pieces when worn.

In *The Responsibility of Forms* (1985), Barthes provides a section entitled “Listening” (245-260) in which he discusses the role that hearing and listening play in the lives of humans. Barthes identifies three types of *listening*, described as a psychological act that is effectively more active than the physiological act of *hearing* (245). The first type is that of an alert, or a physiological indexing of sounds that not only humans do, but also animals (245). The second type of listening involves a deciphering of signs based on cultural or social codes (245). The third type of listening goes beyond a pre-existing understanding of signs; a shared understanding of meaning is achieved between the producer of the sound and the listener through an active exchange and attempt at deciphering not just what is being said (or sounded) but also considering the importance of who is saying it (246). Barthes says “to listen is to adopt an attitude of decoding what is obscure, blurred, or mute, in order to make available to consciousness the “underside” of meaning (what is experience, postulated, intentionalized as hidden)” (249). His writings are part of the few that give precedence to deciphering meaning from sounds, and not just those sounds that are part of language. In this respect, Barthes’ writings are of great value when attempting to understand how clothing can communicate through non-verbal sounds. His notions of active listening also play a role in garnering understanding from the sounds and music that may result from the five sound pieces.

Alison Lurie’s text *The Language of Clothes* (1981) also draws from Saussure and other semioticians in that Lurie discusses clothing as a sign system. Lurie’s text discusses numerous ways in which clothing “speaks” without focusing on the actual sounds of the garment. Rather,

clothing speaks through its visual qualities, and speaks about many things including social class, cultural background, political beliefs, personality traits, sexual preferences and so on. Lurie presents these ideas as “signifieds” stemming from the various visual elements of dress that represent the “signifiers.” Whereas the sign/signified/signifier model was initially used as an examination of language, which is highly auditory, this text takes a visual approach to a sign system, and does so through a close examination of fashion and clothing. The diverse ideas and analyses presented by Lurie may be used to guide the ways in which sounds can be identified as signifiers. As Lurie’s text focuses so intensively on reading visual signifiers, it may be very interesting to assess how strongly visual signifiers correlate to their respective aural signifiers, and what kind of reactions occur when the results are dissonant.

Similar to Lurie, Malcolm Barnard’s text *Fashion As Communication* (1996) presents an extensive discussion on the innumerable ways that fashion communicates. Barnard discusses how fashion communicates about the individual and about groups on such topics as culture, socio-economic status, gender, and its role in social revolution. Barnard focuses one section in his text on “Fashion, Clothing and Meaning” in which he addresses notions of where meaning may actually stem from, along with a semiological examination of clothing as communication. Barnard brings in Saussure and Barthes and ties in their ideas with his analysis of fashion and clothing. His writing provides clear examples of the application of semiology within this field.

Fred Davis also directly addresses semiotics as it relates to fashion in his text *Fashion, Culture and Identity* (1992). The first chapter entitled “Do Clothes Speak? What Makes Them Fashion?” provides a concise discussion of the ways in which clothing might “speak.” Immediately in the chapter Davis brings up the question, “...is clothing not virtually a visible *language*, with its own distinctive grammar, syntax, and vocabulary?” (3). No definite answer is

provided. Davis' semiotic discussion stays focused on the visual aspects of clothing and fashion as he discusses "The Clothing Code" (5), addressing three factors that contribute to the inherent ambiguity and uncertainty of the code. Davis defines these factors as "context-dependency," "high social variability in the signifier-signified relationship," and "undercoding," all of which will be discussed in chapter four of this paper. These same ideas may be used as an analogy in the study of sound signifiers in fashion.

Davis' uncertainty in the "language" of clothing is expressed in another question, wondering if the statements made by clothing are not "more like music, where the emotions, allusions, and moods that are aroused resist...the attribution of unambiguous meanings such as we are able to give the objects and actions of everyday life" (3). This point of view is closely linked to the philosophical discussions presented by Susanne Langer, discussed below, both of which strongly support the ideas and motivation for this creative project. Certainly it is not preposterous to suggest that the sounds produced by clothing may be likened to music, and therefore capable of inducing "emotions, allusions, and moods" that may too escape unambiguous definitions.

Although the theoretical emphasis thus far has been on semiotics, of great importance to this paper and, in particular, the associated creative works, is the significance of feeling and experience in art. Susanne K. Langer, an influential American philosopher, wrote a few key texts in which she worked at developing a comprehensive philosophy of art. Langer's seminal text *Philosophy in a New Key* bridged the worlds of linguistics and semiology with that of philosophy and aesthetics. In it Langer proposes there is an "unexplored possibility of genuine semantic beyond the limits of discursive language" (86). Under the predominant epistemological views of knowledge and semantics, Langer argues language is quite restrictive in its expressive abilities,

only capable of communicating those things that have been deemed to be genuine knowledge (86). Langer suggests, “The knowable is a clearly defined field, governed by the requirement of discursive projectability. Outside this domain is the inexpressible realm of feeling, of formless desires and satisfactions, immediate experience, forever incognito and incommunicando” (86). Such things are part of what Wittgenstein calls “the unspeakable” which Langer describes as “subjective experience, emotion, feeling, and wish, from which only *symptoms* come to us in the form of metaphysical and artistic fancies” (86). Langer argues that greater value should be given to the unspeakable kinds of meanings that we may glean from experiences with our sensory organs. The sound pieces created through this research are akin to such “artistic fancies”; they are the visible and aural products of this researcher’s emotions, feelings, and experiences. Following that, they are intended to provide others with their own new experiences, encourage interaction and lead to the creation of an assortment of “unspeakable” meanings through active listening and sound production.

Chapter IV in the text, “Discursive and Presentational Forms” (79-102), follows a rational and logical process to give equal value to the “presentational symbolism” that is present in all things other than “discursive symbolism,” which is essentially “‘language’ proper” (97). Langer argues, “Wherever a symbol operates, there is a meaning; and conversely, different classes of experience – say, reason, intuition, appreciation – correspond to different types of symbolic mediation” (97). Although not everything we experience, see, hear, touch and so on may be expressed through our vocabulary does not mean that such inexpressible things lack importance or meaning in our lives, nor that it cannot be expressed through some other medium.

Langer proposes there is “a kind of symbolism peculiarly adapted to the explication of ‘unspeakable’ things, though it lacks the cardinal virtue of language, which is denotation. The

most highly developed type of such purely connotational semantic is music” (101). In the eighth chapter, “On Significance in Music” (204-45), Langer suggests this to be so as it is the least representational art form. Within music, notes are not meant to represent anything more than a note, a tone. One may not listen to a piece of music and say that one note represents an apple and another the sky, whereas in a sculpture of an apple one may say the sculpture represents an apple, and a painted sky may arguably represent the sky. Music is ideal for studying presentational symbolism, as music must be studied as a whole concept rather than breaking it down into sequential notes. The effect of music is produced by the relationship of the notes with each other and time. Without suggesting that any sound be likened to music, on the basis of their shared aural qualities, the examination of clothing sounds may be an ideal exercise in exploring part of the “unspeakable” world of fashion.

Again, as proposed by the likes of Barthes and Davis, alongside Langer, any given sound may act as a signifier of some unspeakable notion, idea, feeling, or concept. Rather than reading fashion through the visual components of a look or a garment, as Lurie, Barnard, and many more do, this research attempts to understand how sounds can be assessed in a similar manner. The sounds produced by these pieces, and the song created through the organization of these sounds, may all act as signifiers, the meanings of which must be assessed and understood on an individual, subjective basis.

## 2.2 Creative Review

Alongside texts on communication, semiology, and philosophy, numerous artists have explored the notion of sound as it relates to clothing, fashion, colour, and textiles. Some of this work relates to the sounds heard in the production of textiles and clothing. Other artists use

sound in clothing as a means to preserve and recall memories. Some artistic projects focus on the notion of identity and how it relates to the sounds produced by the garments and accessories one is wearing. These projects are incredibly diverse, yet many arguably result in the creation of music, as unfamiliar and unconventional as it may be. Regardless if what is produced is a single sound, or an arrangement of sounds (which one may or may not call “music”), these aural products are all signifiers to be interpreted, enjoyed, and experienced.

Artist Alyce Santoro has created a woven fabric called “Sonic Fabric.” Santoro’s work literally weaves memories into a piece of cloth. Santoro loops, layers, and samples “found, created, and collected sounds,” including music that was personally inspirational and influential, to create “strange and intricate music” which she records on cassette tape. The cassette tape is woven into the form of a fabric that is 50% tape, 50% polyester threads. These found, created, and personalized audio memories may be actively recalled through the playing of the fabric using a magnetic tape head, although they are no longer distinct memories but a garbled collection of moments in time.

Santoro’s work reflects the ideas proposed by Roland Barthes and Christopher Small, displaying the importance of actively participating in the playing of music. Santoro actively “writes” the music of each piece of cloth by recording and selecting sounds to be woven into the fabric. To hear the music, one must engage with the fabric to play it, composing as one goes along. Santoro provides the musical tools for another to play and engage in an experience of sound, memory and feeling.

New York’s Studio 5050 created a pair of sneakers called “ClickSneaks” (Studio 5050). Inspired by the clicking sound of a pair of stiletto heels, Studio 5050 created a pair of sneakers that produce the sound of high heels when walking. Through the use of mounted technology – a



voice chip, speaker, amplifier, and accelerometer – the sneakers “click” with every step (Studio 5050). Studio 5050 describes the sneakers as a “flighty performance” which allows the wearer to deceptively partake in the numerous connotations associated with the sound of high heels. They describe the ClickSneaks as being “[p]art fantasy, part irony...[they] subvert both the traditional attributes of a pair of shoes, and expose the multi-layered relationship we have with our clothes and accessories” (Studio 5050). The ClickSneaks provide playful elements of surprise and humour for those who expect to see one thing but get quite another. The ClickSneaks are an excellent example of the dissonance one may experience in receiving certain visual cues, while simultaneously hearing unexpected aural cues.

Nick Cave’s “Soundsuits” are an impressive and continuously growing collection of wearable art sculptures that focus on the production of sound. Nick Cave is a visual artist who created a collection of vibrantly coloured and heavily textured suits that encourage exploration of movement and play through the mechanical creation of sound. In an interview with co-author Kate Eilertsen in *Nick Cave: Meet Me At the Center of the Earth*, Cave describes the intentions behind this collection:

“How do we read individuals? Face value can tell us nothing or everything. I love it that people don’t know what is inside of them. Every day we are forced to think about the role of identity and consciousness. That is the starting point of my work. At first you are seduced by the visceral and tactile quality. You are seduced by the adornment and decadence. Pattern, texture, and color generate mood. Add the sound that the suits make and you have an energy that reflects how we respond with our senses.” (232)

Cave’s pieces enable the wearer to explore other facets of their personality and self. The anonymity of the suit paired with the sound production capabilities encourages the wearer to

move freely and in new and creative ways. As Cave suggests, removed from the societal restraints of visual judgments, it is through the sounds that the wearer is truly able to learn something new about their self. The creative works of this project attempt to encourage such newfound experiences while also catering to visual desires of beauty.

SHOWStudio provides an example of sound exploration in fashion somewhat similar to the creative elements discussed in this paper. SHOWStudio is a fashion website developed by Nick Knight, an acclaimed fashion photographer, the intent of which is to provide a “unique platform to nurture and encourage fashion to engage with moving image” (Knight). One project, developed in 2006, explores the sounds produced by certain garments in a variety of ways. SHOWStudio describes the project “Anechoic” as “a 'collections story' that uses sound instead of visuals to interpret the essence of key garments [in] the Autumn/Winter 2006 collections by leading fashion brands” (Knight).

One component of “Anechoic” allows the user to experience the sounds of the materials through an online interactive drawing interface. The user selects the material they wish to hear, and through movement of the mouse, the sound of the material is played. Although this allows for some degree of user interaction in the generation of the sounds, the act of generation is not strongly related to the sounds produced. Nevertheless, there is value in linking senses, including scientifically proven benefits of creating links between tactile and aural cues in learning (Ricco 183). This online activity also reflects the importance of experiencing sound through the playing of it, and not only listening to it.

The larger interactive portion of “Anechoic” presents a series of short films. Each film shows the same model moving around in a particular garment from the 2006 Autumn/Winter collections. The model is filmed in a state-of-the-art recording studio, which allows for clear

capture of the garment sounds. This exercise in creativity provides a means to experience the sounds of the garments in addition to the visual impressions, which is traditionally the only way customers experience new collections online. Although this project is successful in engaging viewers in a new way - that is aurally - the videos somewhat fail to accomplish what SHOWStudio specifies their intent was. As quoted earlier, the projects aim to “[use] sound instead of visuals to interpret the essence of key garments.” By providing an accompanying video with the sounds of the garments, one cannot help but interpret the garment by the look of it. As well, the way the model is moving in the garment affects the ways in which the garment may be interpreted.

The model’s movements are very similar in every video, and appear to be directed rather than inspired by the garment and its sound potential. The movements are all sexually suggestive, regardless of what the model is wearing. The sounds communicate very little, if nothing, under the oppressive influence of the visuals. The sounds, rather, feel discordant with the movements of the model. The form of the garment, and its relation to the sound, is almost completely ignored and overshadowed by the overtly sexual, distracting, and absurd movements of the model. The “essence” of the garment, as communicated through sound, is lost under the power of the visual. Although the creative works in this project also make use of recorded sounds alongside visual recordings, a strong attempt has been made to capture genuine reactions to the sounds, as experienced by the models in the film, and by giving full creative control to the producer of the film’s musical score.

Finally, at present there are a few smart clothing designs that make use of technology to focus on sound. Such designs encourage play and interaction between the wearer, the garment, and the environment. The Serendiptichord by Di Mainstone is a wearable instrument that

encourages creativity of movement by producing various sounds dependent on the ways in which the wearer is moving. The development of piezoelectric fibres by Yoel Fink and his research team at MIT has resulted in the potential to develop clothing that can both hear and produce sound. The ability of the fibres to act as microphones and/or speakers means that clothing made of such fibres could essentially communicate things about the wearer that even the wearer doesn't know, such as health vitals (Hardesty). Technology in clothing is proving to be one way in which the sound of clothing is able to play a more prominent role in communicating.

Amongst these diverse projects there appear to be a few prominent goals. These projects strive to use sound in such a way to a) increase user interactivity with an artifact, b) provide a new experience, and/or c) encourage the generation of new concepts, ideas, feelings, and understandings, all through the experiencing of sounds. This creative project strives to accomplish all of the aforementioned goals through sound-generative fashion pieces and a multimedia fashion film, together providing numerous and innovative ways of experiencing fashion.

### 3. Methodology

The research commences with a textual analysis of theories of communication in fashion. Semiotic analysis is the driving force of the research. Many theorists in the realm of fashion have been inspired by the writings of Saussure, whose semiotic theories are the jumping point for focused fashion analyses. The writings of Malcolm Barnard, Roland Barthes, Allison Lurie, and Fred Davis are focused on. These theorists use the notion of signifiers and signifieds in their analyses of fashion. The ways in which they adapt this linguistic idea towards the analysis of fashion vary, but allow one to understand how this sign system may be adapted towards an understanding of sound as communication. These semiotic ideas are also looked at through the philosophical lens of Susanne Langer who argues for the value of the “unspeakable” reactions to works of art, including music and sound.

In the following section, these key theories and ideas are discussed as they pertain to fashion and clothing. A comparison of these theories is applied to the sound of clothing, and examples of communication through sound in clothing are described where applicable. The overall goal is to conduct a thorough analysis and discussion of how sound is and may be used as communication in clothing, alongside other expressive effects of experiencing such sounds.

This textual research occurred in tandem with the development of three-dimensional “sound sculptures” that enable a diverse exploration of communication and expression. Five women’s outfits were created, the designs of which were inspired and directed by the sounds they were to produce. In exploring Langer’s idea of music as an ideal form for connotational symbolism, the five sculptures are inspired by the sections of an orchestra: woodwinds, brass, percussion, strings, and the voice has been included as the fifth section. This link to what is recognizably a music-producing entity (the orchestra) helps to mentally situate the pieces as

musical instruments to be played. From these instruments music and sounds capable of conveying messages and emotions may be emitted.

An assortment of materials was used to create the collection. The “Woodwind” piece (fig.1) features strands of beads hung amongst copper pipes, cut to precise lengths to produce particular pitches in the key of B minor. These pitches are B (root note), D (minor third), F-sharp (perfect fifth), and back to B (perfect eighth or octave). In this piece, a conscious effort was made to produce harmonious sounds, cutting the pipes to the necessary lengths rather than being solely concerned with visual aesthetics.



Figure 1 - Woodwinds



Figure 2 - Brass

The “Brass” piece (fig.2) takes inspiration from the shiny metal of harmony balls. Known as “Baoding balls” or “Chinese medicine balls,” these large, metal spheres produce a jingling, bell sound when shaken. These balls are used as large dangling beads, releasing a somewhat airy, metallic ringing sound.

The “Percussion” dress (fig.3) is made of leather panels that flap together to create a slapping sound. Metal chain and horsehair tassels dangle from the wrists and may be used as instruments with which to hit the leather. They may also be used as brushes on the leather, much as jazz brushes are used on the stretched skins of a drum.



Figure 3 - Percussion



Figure 4 - Strings



The “Strings” piece (fig.4) features a copper-framed skirt; draped throughout the frame are 186 phosphor bronze-wrapped guitar strings. The strings vibrate and shake in the frame to produce a rattling sound. They may also be stretched under the body’s tension and plucked or bowed, much like any other string instrument.

The “Voice” dress (fig.5) is composed of numerous circle-cut layers of polyester taffeta and organza. The ruffles of the dress rub and bristle against each other to generate a rustling sound, reminiscent of leaves blowing or whispers in the wind.

These final pieces were “played” in a recording studio by the designer, where their numerous sounds were recorded. Each garment was donned, and their sound potential was explored through varied movements. Some sounds involved large bursts of energy; others used very controlled, deliberate movements to capture precise sounds. These recorded sounds were electronically mailed to an electronic music producer; he then created an

original piece of music based on his relation and experiences with the sounds. The only creative limitation given regarding the composition was a duration length between three and four minutes. Otherwise, the producer was free to use and process the sounds in any way he pleased.

The final music piece is used as the score for a fashion short film. In the film, two models



Figure 5 - Voice



are captured individually moving and dancing in the sound pieces, with each outfit being worn only once by either model. Both models are musicians in the Toronto independent music community. Musicians were selected as the models due to their strong relationship to sound and music. As individuals who specifically express themselves through their own music, they were well suited to “play” the garments in the film. The film captures the visual experiences of the models as they relate to the garments and their sounds, creating their own messages and meanings (Barthes 149). This is paired with the auditory interpretation and relation of the sounds as felt by the music producer who has had no visual exposure to the sculptures; he only “plays” the sounds through a digital process of listening, feeling, and then cutting, distorting, and creating. The sound sculptures and the final film will be displayed in an exhibit where visitors may hear, see, experience and reflect on their own generated meanings and impressions.

#### 4. Analysis and Creative Outcomes

Understanding *how* and *what* the sounds of clothing and dress may communicate are only parts of an equation. Of great importance are the acts related to *producing* the sounds, and the acts of *listening* to the sounds. The following section will discuss the value of sound production in clothing and the importance of listening, followed by a discussion of the “what” and “how” of sound in clothing.

As discussed earlier, Roland Barthes wrote on both the topics of creating music, and “listening.” Again, he identifies a difference between “hearing” which is physiological, and “listening” which is a psychological act (*Responsibility of Forms* 245). He identifies three modes of listening. The first is an “alert” and is linked to our survival instincts. The second mode is linked to the creation of language; it is a deciphering of signs based on rhythms, “on an oscillation, that of the *marked* and *non-marked*” (249), without which “no language is possible” (249). The third mode is one of shared understanding; it “does not aim at – or await – certain determined, classified signs: not what is said or emitted, but who speaks, who emits: such listening is supposed to develop in an inter-subjective space where ‘I am listening’ also means ‘listen to me’” (246). To understand what our clothing may be saying entails all three modes of listening.

The first mode of listening may be more applicable in the context of the sounds made by everyday clothing items. A child may recognize a mother’s footsteps as an indicator of her arrival. Forthcoming paragraphs discuss the second mode of listening in which signs must be deciphered. This is a more active mode of listening, alongside the third mode, which is most effective in garnering understanding from the creative components of this project. The sound sculptures and the video result in an interplay between the wearer or creator of sound and the

listeners. In this relationship the listener is considering the sounds and who is producing them, among other factors, and from this draws their own meaning. In this third mode the act of producing the sound is just as important as the act of listening.

In a chapter entitled “Musica Practica,” Barthes discusses how very different the music is that one listens to versus the music one plays (*Image-Music-Text* 149). We may experience clothing sounds as passive or active listeners, or we may actively produce sounds with our clothing, each method affecting the way in which the sound is ingested, and the meanings drawn from it. The sound sculptures created through this research permits both the reading of sounds through listening as well as the “manual” creation of them, which Barthes suggests is “much more sensual” (149).

Christopher Small champions the importance of this active participation in the creation of sound in his book *Musicking: The Meanings of Performing and Listening*. Small asserts “the fundamental nature and meaning of music lie not in objects, not in musical works at all, but in action, in what people do” (8). He says “to music is to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performances (what is called composing), or by dancing” (9). Both acts of listening and playing are important in musicking, as this act “establishes in the place where it is happening a set of relationships, and it is in those relationships that the meaning of the act lies” (13). The creative components of this project ascribe to the interactivity of musicking.

The sound sculptures are aurally interactive on three levels. While the pieces are interactive in ways related to the other senses, such as through touch and vision, this discussion will continue to focus on the aural. First, the pieces may be seen as compositions on my behalf, providing something to be played by a performer. Second, a wearer may play the sculptures.

Finally, an audience may listen to the sounds produced by the sculptures. These activities, all of which Small considers to be “musicking,” result in the construction of relationships, wherein the participants may find meaning in the expressive acts put forth.

Barthes wrote, “What is the use of composing if it is to confine the product within the precinct of the concert or the solitude of listening to the radio? To compose, at least by propensity, is *to give to do*, not to give to hear but to give to write” (*Image-Music-Text* 153). Part of the purpose of creating these pieces was to provide instruments or tools with which to create sound, to “write” aurally, and not simply be experienced in the “precinct” of the visual. Although their musical capabilities pale in comparison to those of standard musical instruments, their interest lies in their wearability. The pieces surround the wearer, their sounds being generated through the movement and actions of the entire body. These pieces are extreme examples of the ways in which the sounds of clothing may have an effect on the identity and everyday experience of its wearer.

On the first level, the creation of the sound sculptures was a process of discovery. In “composing” the sculptures materials that would generate interesting sounds were sourced. Looking to traditional instruments was a primary means of sourcing such materials. The stretched skins of drums, for example, led to the development of the percussive leather dress (fig.3). The string skirt (fig.4) was a product of the imagination, merging the pitch altering principles of a string instrument with the kinetics of the body. The horsehair detailing is an ode to the bows used to play many string instruments. Copper pipe (fig.1 and fig.5) was used as beading due to its attractive colour and shine, in addition to its likeness to materials used in orchestral instruments. The pipe also produces a bright tone when struck. The harmony balls (fig.2) were found whilst wandering through a hobby store, resembling large beads. The taffeta

of the voice dress (fig.5) was selected due to its noisy reputation. The texture of the weave gives it a soft rustling sound, but if aggressively rubbed the sound can be much stronger and shriller.

Once the pieces were constructed I played them in a recording studio to produce and capture as many unique sounds as possible. It was a somewhat systematic writing that took place, although oddly intuitive. I found myself moving freely in unusual ways as I explored the pieces and the different sounds they could produce. Thus began the second mode of interactivity, that of “playing.”

The resultant recordings of the sculptures became another tool with which to write. Passed on to a music producer, the recordings were now to be played, used in another performance. The producer took the tools given him, and created a piece of music to be shared. This style of composition and playing, using sound samples to layer and loop, is a relatively new way to create music, having its beginnings around the mid-twentieth century (Holmes 73-80). The technology has developed in such a way that it is more readily accessible than ever. An infinite number of songs may be created from the recorded sounds of the pieces. The ability to essentially customize music through selectively arranging sound samples may reflect the current trend of customization in clothing. The writing of music, of sound, permits one to explore and assert their individuality, much like one does when “composing” their outfit for the day.

The film, which features this musical track, exhibits two musicians wearing and experiencing the sculptures through sound and movement. It appears instinctual to try expressing something when given the tools; when a piece is donned the wearer naturally explores their movements in efforts to play and control what is produced from the garment. They are interacting with the pieces, playing them, performing, and sharing their experience with an audience. The uniqueness of each model comes through visually as their movements are very

idiosyncratic.

This third mode of interactivity with the sound sculptures may be experienced by almost anyone. The fashion film may be viewed online and in exhibits, experienced as a group and as an individual. Those unable to experience the film visually may still engage with and benefit from it by listening to the music. The sounds of the pieces may be experienced as the music producer has played them, or they may be experienced in isolation, as played by myself, through audio tracks. In a show setting, the pieces may also be experienced as a model moves and plays in them, creating sound and music for the audience's enjoyment or displeasure.

These levels of interaction have and will continue to result in the creation of numerous relationships wherein individuals may have new experiences with which to garner greater understandings of themselves and the world around. Small posits that "musicking is in fact a way of knowing our world – not that pre-given physical world, divorced from human experience...but the experiential world of relationships in all its complexity – and in knowing it, we learn how to live well in it" (50).

Returning to the three modes of listening presented by Barthes, the previous discussion regarding musicking and the playing of the sound sculptures relates to Barthes third mode. Most of what is experienced in day-to-day interaction is related to the second mode, which is the deciphering of signs. What may be communicated, or signified through the sounds of clothing? The following paragraphs discuss how the application of signifiers and signifieds may be understood in relation to the sounds produced by clothing.

In *Fashion as Communication*, Malcolm Barnard examines Ferdinand de Saussure's concept of semiology. He applies it to fashion, arguing that Saussure's sign need not be limited to linguistics (79). Barnard is referring to the various visual components of fashion, such as

textiles, colours, garments, and outfits, among others, as potential signifiers. He posits, “the signifier is anything that stands for or represents something else, and the signified is the something else that is being represented,” combining to create the sign (79). It is therefore logical to suggest the sounds emitted by various forms of dress may also be analysed as signifiers. This will be discussed further in the following paragraphs.

Barnard looks at garments and their components as signifying denotational and connotational meanings. Again, he does this with a visual approach (80). In a first order of signification, the lines and shapes that comprise a skirt work to denote a skirt, and in greater detail a particular style of skirt. As well, the word “skirt” itself denotes the object. What the skirt connotes is a second order of signification (81). It is the meaning garnered by an individual, beyond a factual understanding of the object itself. Connotations are arbitrary meanings, not innate characteristics of an object, but are rather a result of culture, sex, age, economic, and educational background, among other things that comprise one's life experience (83). Furthermore, connotations are shared meanings amongst those of similar backgrounds and experiences, and are open to interpretation at any moment, by anyone (83).

The same breakdown of denotation and connotation may be applied to sound. Consider the sound of a zipper unzipping. The sound denotes the object, at its basic level a zipper (although perhaps an expert would be able to determine the material, metal versus plastic teeth). It may also denote an action, that of a zipper being undone. In general, what a sound denotes to one person will likely be very similar, if not the same, as what is denoted to another. The connotations of this sound, however, will vary greatly contingent on the listener's personal experiences with this sound and the context in which they are hearing it. For example, sexual connotations, the donning of a thigh-high, patent leather dominatrix boot, may come to mind for

anyone engaged in shoe fetishism or a BDSM (bondage/discipline, dominance/submission, sadism/masochism) lifestyle. Quite differently, the sound of a zipper may have incredibly negative connotations for someone suffering sexual abuse.

It appears that sounds are subject to a high variability in connotative meaning. Fred Davis, in his article “Do Clothes Speak? What Makes Them Fashion?” addresses the ambiguity of the signifier-signified relationship as it pertains to fashion in a visual capacity. Whether considering an image, form, or a sound, they are what they are, and their denotations are generally constant. A pair of pants is to one person what they are to another; regardless of context or social grouping in so far as they are pants. This interpretation naturally varies when situated in a culture that does not necessarily recognize pants as anything so definite. So even seemingly set in stone signs have limits, rendering the “clothing-fashion code” highly ambiguous (151). Such ideas are more clearly discussed by Davis, who identifies three main ways in which the ambiguity of the visual fashion code is sustained (151). These points may be applied to the ambiguity experienced by sound signifiers as well.

Firstly, Davis lists “context-dependency” as a factor. The place, time, occasion, persons present, and even something so vague as the pervading mood will affect the meanings conferred (151). A simple example is the sound of a pair of high heel shoes walking down a hallway. Within an office, amongst professionals, the sound may connote a strong woman, perhaps even giving the wearer an enhanced feeling of power. To a misbehaved student, waiting in the principal’s office, the sound of heels down the hall may be connotative of impending punishment from an angry mother called to the matter. Furthermore, to a non-descript, isolated tribesperson that has never seen a shoe, let alone heard the sound of a shoe on a hard surface, the click of a



heel may connote something completely unpredictable and incomprehensible to those familiar with shoes.

Secondly, Davis attributes ambiguity to a “high social variability in the signifier-signified relationship” (151). Visually, based on the differences in class and social groups, garments will be interpreted differently by both wearers and viewers, and different meanings will be communicated and understood. Davis, on the whole, agrees with early social scientists such as Simmel and Veblen that it is this variance in meaning between social groups that propels fashion and its perpetual changes (151). As particular styles and fashions mean different things to different groups at different times, class structures are maintained through this division of signs. Social groups attempt to define their perpetually changing identities through a constant adaptation and abandonment of styles, which keeps fashion moving (152). It is this fluidity of meaning that gives fashion its power, albeit its ambiguity as well. Although the sound of a garment may not affect changes in fashion as the look of it may, its fluidity of meaning may be powerful in its own right, although perhaps even more ambiguous.

Davis’ third notion that leads to code ambiguity is “undercoding” (152). In the realm of fashion where the aesthetic prevails, there are no definitive codes for the signs put forward. Those interpreting signs are forced to infer and assume things, based on an assortment of cues collected from an equal assortment of places, to create messages and meanings (153). The production of fashion, which may be likened to the production of art, works in a way that when a code becomes somewhat defined and understood, fashion works against the code to “question, parody, and generally undermine it, while exploring its mutations and extensions” (Culler qtd. in Davis, 153). Davis goes on to suggest that this undermining of code does not happen spontaneously, but rather it can be attributed to the workings of industry stakeholders such as

designers, editors, critics, merchandisers, and manufacturers, who benefit from some level of control over the fashion code (153). In this light, the ambiguity of the look of fashion differs drastically from the ambiguity of the sound of dress. The ambiguity of meaning in sound, due to undercoding, is doubtfully the result of concerted efforts by the industry. It is the intangible quality of an inadvertent sound that makes it difficult to manipulate its meaning. Aural signifiers are highly ambiguous due to the intimate nature of the experience.

A rustling sound does not immediately denote a dress, or a shirt, or a coat. What is denoted becomes more vague, along the lines of “a garment in motion.” What is of greater interest with sound is what is connoted. Following Davis’ model, this will vary largely according to the context in which the sound is made or heard, to the individual’s social group and background, and any other cues that may affect the interpretation of the sound.

Proponents of Macaroni dress can provide an early example of sound signifying social class. Macaroni dress was popular in England at the end of the 18th century when young, affluent English men returned from their Grand Tour, a customary tour of Europe. Their behaviour and choice of dress displayed their snobbery and status as part of a worldly elite (McDowell 33). The Macaronis desired attention (even at the price of ridicule) as can be observed from their highly conspicuous dress. They are said to have attached iron heel clips to their shoes so they could be heard as they walked down the streets of London, calling attention to themselves even before being seen (33). In the same way that a well-tailored silk jacket could signify status, the clicking of their shoes acted as an auditory sign of wealth and social position.

Pattens, worn throughout medieval and early modern Europe, provide an example on the other end of the economic spectrum (McDowell 28). Pattens, worn as early as the 14<sup>th</sup> century and in some rural areas as late as the early 20<sup>th</sup> century, were wooden soles worn to protect one’s

shoes, and prevented the wearer from sinking into muddy, unpaved streets (Cumming et al. 151). Circa 1630, an iron ring was attached to the bottom of the sole, which provided the height and distribution of weight necessary to perform its function well (151). Those requiring the use of metal pattens in the streets of 17<sup>th</sup> and 18<sup>th</sup> century Europe were women of lower classes, typically from the country. These women had to walk in the mud to go about their day, whereas upper class women rode in carriages. In *Shoes*, Colin McDowell describes the iron rings of the pattens as causing “some irritation” due to the clanking noises they produced while walking (29). The distinct noise created by this kind of footwear immediately communicated the sex and economic status of the wearer, and could also connote a particular environment.

Pulling from the realm of pop culture and fantasy, the archetypal cowboy provides an interesting example of the communicative power of sound in dress. Within the film genre of the Western, timing, anticipation and suspense play a key role in developing the action of the plot. A typical technique, which may be used to create suspense, is the “voice-off” (Doane 321). A voice-off occurs when the audience hears a voice or sound emanating from an off-screen space (321). Although the audience may not see the source of the sound, they are able to understand who or what is making the sound due to previous and present shots, which have established the context for the scene (321). It is easy to imagine a scene where the jangling of a cowboy’s spurs are heard approaching a saloon. Tensions rise, eyes are alert, and the spectator is anxiously awaiting the action that will occur once the mysterious cowboy arrives on the scene.

The sound of spurs denotes the spurs themselves, as well as the boots on which they are mounted. In a Western, hearing the spurs also denoted that someone was arriving, which essentially connoted that something exciting was about to happen. For the audience, a myriad of other connotations surround the sound of spurs. The sound of spurs may immediately inspire

visions of the Wild West, new frontiers of civilization, and the dust and dirt of a land covered in myth. Spurs are connotative of the rugged cowboy, good or bad, riding horses and pacing in shoot-from-the-hip duels. One may also recall Clint Eastwood, an icon of the genre, along with the other heroes of Western films that represented a strong, tough, ruthless but ultimately good-hearted man; a hero.

In a memorable scene from Sergio Leone's *The Good, The Bad, and the Ugly*, in which Eastwood stars, the sounds of the spurs play a key role (headshooterch). In this scene, Eastwood is sitting in his room, cleaning his gun. The audience is privy to a group of gang members approaching the room with guns, preparing to ambush Eastwood. The careful, quick cutting of shots moves between close-ups of the spurs on the gang's feet (accompanied with aural cues), to Eastwood's face as he recognizes that familiar sound. The sounds of a Confederate army's marching feet, which are outside assembling for battle, provide a rhythmically tense soundtrack for the scene. The suspense builds, and the scene culminates in a quick shootout as the gang bursts into Eastwood's room. A victorious Eastwood, before finishing off the last attacker, nonchalantly says, "Your spurs." The sound of spurs is exemplary of the power of sound in signifying not just an object, but also signifying an entire genre, a character, a feeling of excitement and danger, and a myth.

Numerous cultural examples may be presented in which sound of dress becomes a signifier. Linda Walters' article "Sight, Sound, and Sentiment in Greek Village Dress" explicitly discusses the significance of the sounds that jewelry makes in bridal and festival dress. In Attica, gilded coins were attached to the clothing of brides and worn during festivals. Brides were transported to the home of the groom via horse or donkey, and were said to be heard coming by villagers before they were even seen (13).

The importance of sound in dress in celebration is common in many folk traditions. The festival dress of women in Greece was decorated with coins to create sounds while dancing at celebrations (Welters 13). Hungarian dancers create sounds by stomping their feet and slapping their boots, typically telling a story through their movements and interactions with each other. Other cultures, such as that of India or the Philippines, incorporate bells around ankles. The bells are used as accents to the music, and are used to communicate messages within the dance. In flamenco dancing, the movements and sounds of the feet are integral in communicating through the dance. In the documentary *Flamenco at 5:15* instructor Susanna Robledo tells the dancers to “speak with [their] feet.” Through their stamping feet, flamenco dancers communicate with the accompanying musicians, with other dancers, as well as with the audience.

In the article “Women, Migration, and the Experience of Dress,” Mary A. Littrell and Jennifer Paff Ogle discuss the results of their study of women who were raised in India, but were now living in the United States of America (121). The women discuss various aspects of dress that remind them of home, that have positive connotations associated with them. In addition to the colours and fabrics of saris, they bring up the sounds of the bangles that are popular in Indian culture. One woman describes her preference for glass bangles, although they break easily. To her, the metal ones “don’t make the sound like a glass bangle” (123). In such cases, the connotations of sounds are firmly rooted in culture, while still highly personal.

In the examples presented thus far, some offer a clearer understanding of what exactly is being communicated, such as social class, gender, or some other classification of person. Other examples are more vague. The woman who prefers the sound of glass bangles to metal is connoting something with the sounds of each. What that is, is not clear. Likewise, a bride may have a hard time defining exactly what about the sound of taffeta is so alluring. In such cases,

and in the case of this project's sound sculptures, some sounds, or elements thereof, may communicate something beyond words. This notion was presented earlier in relation to the experiences of "musicking."

How can one adequately explain with language sensory experiences, emotions, and perceptions? It must be done in the same way that one talks about music. As something so intangible one can at best try to describe a piece of music through arbitrary technical terms, and one may also attempt to describe music through the feelings and emotions that it conveys or evokes. Some musicologists and theorists are quite particular when it comes to the latter.

Descriptions of music are often ascribed feelings, as if the music itself were experiencing sorrow or happiness. In the writings of several musicologists and philosophers, including Peter Kivy, Susanne Langer, and Edmund Gurney, it is generally agreed upon that music and sound may not reasonably be described as expressing emotion, but rather being expressive *of* certain emotions. The music itself is not sad, angry, or happy, nor was the composer necessarily in such an emotional state at the time of composition. Rather the music may convey such and such emotions, which may be experienced differently from listener to listener. In this way music and sound are very personal, subjective experiences.

Philosopher and musicologist Peter Kivy presents his own thoughts on the matter, alongside numerous other viewpoints in his text *Sound Sentiment: An Essay on the Musical Emotions*. Again, Kivy's argument is that music, like any object, is incapable of actually *being* happy, sad, and so on (13). Without being absurd, however, it may be understood to mean that if one says a piece of music is sad they mean to say the music *expresses* these emotions (16). Kivy is quite concerned with semantics, and rather suggests that music may be said to be *expressive of* certain emotions (12-17). The difference again is that the music itself is not emotional. Rather,

the music is in some way capable of stirring up an emotion or feeling within the listener (the means with which music does this being an entirely different, albeit highly interesting, discussion). This way of talking about music and its effects on listeners is a logical way to discuss the effects of atmospheric sound, and in this case the sounds of clothing.

The sound sculptures produce a variety of sounds, each of which may be said to be expressive of an unending list of emotions and feelings. The subjectivity of sound and music gives these creative works much of their power. Every interaction may be different, infinite experiences may occur, with as many meanings being generated. What exactly may be understood, expressed, experienced and felt through interactions with these pieces may also belong to the realm of “the unspeakable” (Langer 86), indescribable but nonetheless real. As Langer says, “from the ineffable sphere nothing but nonsense can be conveyed, since language, our only possible semantic, will not clothe experiences that elude the discursive form” (86).

## 5. Conclusion

Music is so powerfully emotive, we find it everywhere embedded in our lives. Sound artists like Luigi Russolo and John Cage have used the sounds of cities and everyday objects to create musical compositions (Russolo). Musician David Byrne has recently calculated the tempo of London, England through field recordings of various happenings in the city – it is 122.86 beats per minute (“February 2012 David Byrne”). In a similar way, this research project strived to call attention to the sounds pervasive in our lives.

As something that surrounds our bodies, protects and promotes us, clothing has a very powerful influence on day-to-day living. The sounds emitted by our clothing is often pushed under the radar of consciousness by music from stereos and headphones, voices chattering, cell phones ringing and other environmental sounds. It is only when a sound, issued from our dress, seems oddly out of place that it is recognized, its meanings constructed and understood. The pieces created through this research are a direct call to attention of the expressive sound qualities of clothing.

By switching our focus to the aural qualities of clothing we have seen the ways in which clothing sounds can communicate. Through an application of semiotics we may appreciate what is denoted and connoted through the sounds we hear. The creative works call attention to the expressive qualities of sound. The sound sculptures were created with a focus on their sound generative characteristics. Based on Langer’s notion of presentational symbolism, the sound production abilities of these garments allow the wearer to act as a sort of musician, a player of sound, which allows for self-expression of feeling, of emotion (217). What may be understood and felt by actively playing and/or listening to the sounds of clothing may be indefinable, but this does not discount the value of the experience. Such experiences may carry forward, increasing



one's appreciation and awareness of the world around.

Where can this research go from here? Several times I have heard friends express longing for a real-time soundtrack to their life. There are moments in life when a particular song may express better, or perhaps augment what is happening at the time. Could fashion designs be directed by the sounds the clothing might produce? If we place a greater focus towards the sound of clothing could this provide another avenue with which to express our personality and individuality through clothing?

The link between fashion and music is strong. The music industry propels fashion, but also uses it as a marketing tool. A musician's image is so incredibly important; if the image may be "manufactured" and sold it is all the better for industry stakeholders. The abundance of T-shirts, hats, shoes, and so on displaying a musical artist's name or brand is an impressive tie between music and clothing. For some people their personal image is closely linked to the music they listen to. Imagine if, rather than visually displaying one's musical preferences via a band T-shirt, their clothing could play the music they loved. Even more of one's tastes and preferences would be accessible to be shared with those around, further defining one's identity.

Consider further the marketing strength of clothing that speaks not only visually, but also aurally. Music relies on fashion, but fashion relies on music to engage and evoke emotions to build brand identity and create stronger ties with consumers. What if fashion houses had theme songs or jingles? A short tune may play every time a purse opens, or a jacket is unzipped. The idea may sound gaudy, but with the right music, that brand is not only being seen, but heard. Guests at a party would instantly know that someone has arrived in a Gucci jacket. Shoppers and sales personnel in a boutique would hear the opening of a Hermès Birkin bag at the cash desk. This branding attack on our senses would be another layer in the world of conspicuous

consumption.

While such musings are entertaining, this research will hopefully encourage a shift in the way individuals relate to their clothing, and the sounds emanating from those around them. There is value in a heightened sound experience, as exhibited by the creative products of this research. Through these creative products individuals actively attempt to communicate, understand, and experience. Individuals are able to use the pieces as tools with which to achieve greater self-expression.

This research marks the beginning of what may be a complex and compelling field of fashion studies. The incorporeal quality of sound and its relation to clothing, fashion and dress as a signifier is a complex idea that leaves much room for exploration of this nebulous field. The potential for conscious inclusion of sound elements in clothing as an intentional form of communication and expression is an exciting idea, which may challenge and push levels of innovation in fashion design. With or without the inclusion of intentional sound elements, designers may creatively benefit from this new aural cognizance. Likewise, all who partake in fashion and dress may have a fuller sensory experience, beyond the visual.

## 6. Bibliography

Barnard, Malcolm. *Fashion As Communication*. New York: Routledge, 1996. Print.

Barthes, Roland. *Image-Music-Text*. Trans. Stephen Heath. New York: Hill and Wang, 1977. Print.

Barthes, Roland. *The Responsibility of Forms: Critical Essays on Music, Art, and Representation*. Trans. Richard Howard. New York: Hill and Wang, 1985. Print.

Cave, Nick, et al. *Meet Me At the Center of the Earth*. San Francisco: Yerba Buena Center for the Arts, 2009. Print.

Cooke, Deryck. *The Language of Music*. London: Oxford University Press, 1964. Print.

Cumming, Valerie, C.W. Cunnington and P.E. Cunnington. *The Dictionary of Fashion History*. New York: Berg, 2010.

Davis, Fred. *Fashion, Culture, and Identity*. Chicago: The University of Chicago Press, 1992. Print.

Doane, Mary Ann. "The Voice in the Cinema: The Articulation of Body and Space." *Film Theory and Criticism: Introductory Readings*. 7<sup>th</sup> ed. Leo Braudy and Marshall Cohen, eds. New York: Oxford University Press, 2009. 318-330. Print.

Eco, Umberto. *Semiotics and the Philosophy of Language*. Bloomington: Indiana University Press, 1984. Print.

“February 2012 David Byrne.” Living Architecture and Artangel. *A Room for London*. Southbank Centre and the London 2012 Festival, 2012. Web. 30 Mar. 2012.  
<<http://www.aroomforlondon.co.uk/hearts-of-darkness/feb-2012-david-byrne>>

*Flamenco at 5:15*. Dir. Cynthia Scott. Perf. Susana Robledo, Antonio Robledo. National Film Board of Canada, 1983. Web. [http://www.nfb.ca/film/flamenco\\_at\\_515](http://www.nfb.ca/film/flamenco_at_515)

Gurney, Edmund. *The Power of Sound*. New York: Basic Books, Inc., 1966. Print.

Hardesty, Larry. “Fibers that can hear and sing.” *MIT news*. Massachusetts Institute of Technology, 12 Jul. 2010. Web. 16 May 2011.

headshooterch. “Your spurs...” *YouTube*. 6 Apr. 2011. Web. 19 Apr. 2011.  
<http://www.youtube.com/watch?v=oQqHPnz-wIU>

Holmes, Thom. *Electronic and Experimental Music: Foundations of New Music and New Listening*. 2<sup>nd</sup> ed. New York: Routledge, 2002. *Scholars Portal*. Web. 25 Apr. 2012.

Johnson, Donald Clay, and Helen Bradley Foster, eds. *Dress Sense: Emotional and Sensory Experiences of the Body and Clothes*. New York: Berg, 2007. Print.

Kivy, Peter. *Sound Sentiment: An Essay on the Musical Emotions*. Philadelphia: Temple University Press, 1989. Print.

Knight, Nick. *SHOWStudio*. "Anechoic: The Sound of Clothes." 20 Apr. 2006. Web. 4 Dec. 2011. <[http://showstudio.com/project/the\\_sound\\_of\\_clothes\\_anechoic](http://showstudio.com/project/the_sound_of_clothes_anechoic)>

Langer, Susanne K., *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art*. " 3<sup>rd</sup> ed. Cambridge: Harvard University Press, 1957. Print.

Littrell, Mary A. and Jennifer Paff Ogle. "Women, Migration, and the Experience of Dress." *Dress Sense: Emotional and Sensory Experiences of the Body and Clothes*. Eds. Donald Clay Johnson and Helen Bradley Foster. New York: Berg, 2007. 121-132. Print.

Lurie, Alison. *The Language of Clothes*. New York: Vintage Books, 1983. Print.

Mainstone, Di. "Serendiptichord." Di Mainstone. Di Mainstone. n.d. Web. 16 May 2011. <<http://dimainstone.com/#serendiptichord>>

McCracken, Grant. "Clothing as Language: An Object Lesson in the Study of the Expressive Properties of Material Culture." *Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods and Activities*. Bloomington: Indiana University Press, 1988. Print.

McDowell, Colin. *Shoes*. New York: Rizzoli International Publications, Inc., 1989. Print.

Riccò, Dina. "Artificial Sensory Perception: Vicarious Technologies for Synesthesia." *Mediating the Human Body: Technology, Communication, and Fashion*. Eds. Leopoldina Fortunati, James E. Katz and Raimonda Riccini. New York: Routledge, 2010. 177-185. Print.

Russolo, Luigi. *The Art of Noises*. Trans. Barclay Brown. New York: Pendragon Press, 1986. Print.

Santoro, Alyce. *Sonic Fabric*. Web. 4 Dec. 2011. <<http://www.sonicfabric.com/>>

Saussure, Ferdinand de. *Course in General Linguistics*. Eds. Charles Bally and Albert Sechehaye. Trans. Wade Baskin. New York: McGraw-Hill Book Company. Print.

Sebeok, Thomas A., ed. *Sight, Sound, and Sense*. Bloomington: Indiana University Press, 1978.

Small, Christopher. *Musicking: The Meanings of Performing and Listening*. Hanover: University Press of New England, 1998. Print.

Smith, Mark M. *Sensing the Past: Seeing, Hearing, Smelling, Tasting, and Touching in History*.

Berkeley: University of California Press, 2007. Print.

Studio 5050. *Studio 5050*. "ClickSneaks." Web. 4 Dec. 2011.

<http://www.5050ltd.com/clickSneaks.php>

Thiel, Mark. "Origins of the Jingle Dress Dance." *Whispering Wind*. 36.5 (2007): 14-18. Web.

2 May 2012.

Welters, Linda. "Sight, Sound, and Sentiment in Greek Village Dress." *Dress Sense: Emotional*

*and Sensory Experiences of the Body and Clothes*. Eds. Donald Clay Johnson and Helen

Bradley Foster. New York: Berg, 2007. 7-15. Print.