



Color Hearing: Brahms' Lullaby

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Contextual Review and Concept: This mother and infant coordinating romper set utilized the concept of psychomimicry (Ridgway, 2017; Ridgway, 2018; Jonsson, 2014) to emulate synesthesia. Synesthesia is “a neurological condition in which stimulation of one sensory or cognitive pathway (for example, hearing) leads to automatic, involuntary experiences in a second sensory or cognitive pathway (such as vision)” (“Synesthesia”, 2019, p. 1). Chromesthesia is one of the most common types of synesthesia and is described as “the perception of colors when listening to music” or “hearing colors” (“Sound Synesthesia”, 2019, p. 1). This romper set was created with the intent to emulate the neurological phenomenon of synesthesia through a textile print design that can help the viewer “hear color.” This work builds upon previous design scholarship completed by Ridgway (2017, 2018). The purpose of the current work was to elaborate on the already established practice of using psychomimicry to design textile prints (Ridgway, 2018). The new design challenge was to explore a more complex piece of music with two parts: a vocal melody and piano accompaniment. Research questions included: How will two distinct parts of a song be visually depicted? When multiple notes are played at once (i.e. a piano chord), how can that be visually conveyed through a textile print? What design elements can be used to create a connection between the design process and audience?

The author used sociocultural capital (i.e. personal experiences) as the justification for the song selection for this particular project. The song, *Brahms' Lullaby* was selected by the Author due to the birth of her son. Additionally, the historic events surrounding this piece of music were used as inspiration for the design concept. *Brahms' Lullaby* (also known by its German title, *Wiegenlied*) was composed by Johannes Brahms who published the song written for voice and piano in 1868. Today, *Brahms' Lullaby* is one of the most famous and recognizable melodies; it is still used today by mothers around the world to sing their babies to sleep (*Wiegenlied*, 2019). Very few people know the story behind the song despite the song's world-wide popularity. Brahms gifted the song to his ex-girlfriend, Bertha Faber, upon the birth of her son. In fact, Brahms actually gifted the song to Bertha's husband with a note suggesting that as Bertha sang her son to sleep, “a love song was being sung to her by Brahms” (Predota, 2016). Indeed, Brahms embedded the melody to the love song that Bertha use to sing to him, when they were together, into the lullaby ensuring that Bertha would think of their romance every time she sang (or heard) the lullaby (Predota, 2016). This story and the notion of the secret love song hidden in the lullaby served as the inspiration for the creation of two garments (one for the mother and one for the baby) to represent this one song. Since the original piece of music was written for voice and piano, the mother's romper depicts the musical notes written for voice (the melody containing the hidden love song) while the infant romper contains the musical notes written for the piano. Therefore, together they visually depict the complete lullaby.

Process and Technique: The garments were created using traditional flat patterning methods. The fabrics for the rompers were digitally printed on cotton sateen using a Mutoh digital textile printer. Several samples of the textile prints were digitally printed to determine ideal color saturation and exact steam times to achieve the desired colors for the prints. The color story for the textile print also stems from historical events around the time the lullaby was written. The colors chosen to represent the notes in the textile print are based on the development and patenting of the first synthetic dyes during the 1850s/60s. William Henry Perkin patented the first synthetic dye in 1856, known as aniline purple or mauveine. In addition to mauveine, Perkin also discovered Perkin's green, Britannia violet, and a synthetic version of alizarin crimson (Resnick, 2018). The historic popularity of these bright colors around the time when Brahms' Lullaby was written is the justification for the use of variations of these four aniline colors in this design work. Furthermore, the author sought a means to help the viewing audience better connect the garments to the original piece of music, and therefore, created two additional fabrics that contain handwritten lyrics to Brahms' Lullaby (see figure 3). The author was inspired to handwrite the lyrics to reflect the hand-written note Brahms included when gifting the song. The original lyrics written in German serve as lining fabric for the mother's romper. The lyrics are hidden in the hip pockets (a nod to the hidden love song in the melody of the lullaby). The lyrics translated into English, which are commonly sung today, are depicted on the front and back bodice of the baby's romper, an outward message from a loving mother. Since Brahms' Lullaby remains popular today, the silhouette of modern-day rompers were selected to execute the design. The mother's romper is nursing friendly with straps that can easily be taken down. The infant romper is outfitted with a snap closure at the neck to easily go over baby's head and at the crotch for ease of diaper changing. Mommy and Me outfits are a current trend in the fashion industry with popular retailers like *H&M* and *Ann Taylor Loft* offering The baby romper is meant to be unisex to reflect that "infants and young children of both sexes were dressed alike" during the 1860s (Tortora & Eubank, 1989).

Print Development: The sheet music for the song *Brahms' Lullaby* was used as a guide to create the digital textile print. Both the notes and the beats of the music were coded. To emulate synesthesia, each specific note was assigned one color (see figure 1). Each note in the piece of music was assigned a color for a total range of 15 colors to represent the 14 notes and the rests (depicted in white). As mentioned, the color scheme was based on the four historically relevant colors. The remaining colors were created from the four original colors using the blend tool on Adobe Illustrator. Correspondingly, the beats were coded based on their duration. For example, an eighth note would equal a stripe in the textile print that was $\frac{1}{8}$ of an inch wide. Similarly, a whole note would equal a stripe that was one inch in width (see figure 1). For piano chords, the multiple notes were stacked vertically in the textile print in the order in which the notes appear on the staff (top to bottom; see figure 2). The result of this coding is two striped prints that represent the two parts of the song: voice and piano (see figure 2). The piano part is depicted in two lines: one for the treble clef piano notes and one for the bass clef piano notes. Each of the two striped

prints (voice and piano) were turned into repeat patterns which served as the fabric for the two rompers. As previously stated, the coded voice notes were used for the mother's romper and the coded piano notes were used for the baby's romper.

Design Contribution and Innovation: This work contributes to the growing body of design scholarship by employing a unique and novel approach for designing and implementing digital textile prints using psychomimicry. This is the author's third piece of design scholarship in focusing on psychomimicry. Psychomimicry has rarely been used by designers in the textile and apparel field but offers a fruitful area of inquiry. This work sought to examine how more complex data (i.e. the piece of music) influences the design process. In this circumstance, the author believed that two garments were necessary to visually convey the piece of music and help to tell the overall story of *Brahms' lullaby*. It would be interesting for future research to include multiple designers that are given the same song and examine how each would interrupt the piece of music into a textile print and garment. Similarly, to synesthesia, rarely will two people "experience" the music in the same way (Haack & Radocy, 1981).

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