

# Chapter 13. The Sound of Type: Multimodal Aesthetics

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The mind is a grammar-making device and it is difficult to turn it off.

—Susan Stewart, *“Letter on Sound”*

This chapter discusses the role of multimodal work as synesthetic work—that is, the strange activity of apprehending one sense in terms of another, as when we “see sound” or “hear images.” In this chapter we focus on an “accidental” sound project, in which a student author (Harrington) responded to a visually based assignment (set by Burgess) exploring typographic design and letterforms, culminating in a project based in sound. The resulting aural artifact, a three-track musical composition, lays bare some interesting potentials in typographic language; already strongly associated with the body in its terminology, type can clearly be thought of as having aural qualities too.

The study of typography relies on a double practice: learning to “look at” as well as “look through” letterforms to discern layers of meaning. This is partly an effect of the practice of multimodal reading, where the “modes” in this case are image and text—and in typography’s instance, the transformation of image to text and vice versa. Despite this emphasis on the eye, though, type, in its traditional terminology, is beholden to a whole metaphorical language resting in nonvisual forms of materiality. Gunther Kress’s (2000) observation that “human semiosis rests, first and foremost, on the facts of biology and physiology” (p. 184) is made abundantly clear in type’s descriptive terminologies: Letterforms have a “face,” “feet,” “ears,” and “shoulders.” Kress’s “modes of materiality” (2000, p. 190) are further evident in historically based technological terms such as “leading” (a reference to the space between each printed line on a page, achieved formerly by placing bars of lead in the gap) and “upper and lower case,” referring to the placement of “cases” of type in the drawer of the printer’s cabinet.

Given the multiple embodied modes in which type is embedded, it seems clear that any attempt to apprehend its effects fully should include the modality of sound. As an exercise in transliterating a letterform from one modality (in this case, graphical) to another (sound), multimodal composing, in the case of this exercise, embodies what Jentery Sayers (2015) and David Rieder (2017) called “transducing”: the transformation of energy from one form to another, in this case from the movement of the eye along x and y axes to the movement of sound waveforms through the eardrum. And the result of the exercise is an opportunity to participate in what Steph Ceraso (2014) called “multimodal listening”: to hear

the long and short, high and low, major and minor sounds of type and reconstruct their shapes and meanings in the mind's ear.

While Kress (2010) sometimes prefers the term “semiotic resource” to “grammar” (pp. 7-8), there is something specific to the structuring principles of grammar that makes the term useful: the idea that one can translate forms from one medium to another while retaining their analogical structure, in the same way metaphor does in literary and rhetorical writing. Susan Stewart's (1998) statement in the epigraph suggests that our minds are highly attuned to structural similarities. And indeed, when used as a way of expressing patterns, sound as a mode of alternative notation for what we see or do in the world can produce some interesting effects. We already see attempts to “visualize in sound” in other fields, notably mathematics: for example, Timo Bingmann's (2013) work on the “sound of sorting,” in which he translated commonly used computer algorithms for sorting numbers into sound. As sorting operations are implemented by comparing items against each other, Bingmann's “audibilizations” use a simple structure: “The generated sound effects depend on the values being compared. Only comparisons yield sound output” (“Usage” section). These comparisons lead to short sounds in the range of 120–1212 Hz, what Bingmann referred to as “the 8-bit game tune' feeling” (“Usage” section). Similarly, Herman Haverkort's (2018) “sound of Space-Filling Curves” creates “sonifications” of mathematical curves such that “the sound track plays the above sketch vertex by vertex, at a leisurely pace of 75 beats per minute, so it is quite possible to follow the curve every step of the way while listening” (“Background and Description” section).



Figure 13.1. Travis Harrington's cassette package for his project *The Ampeg Tape: A Musical Approximation of Typeface*.

The original assignment (not included in this chapter) was presented by the instructor (Burgess) in the context of an upper-division class on rhetorical style. One of the particular focuses of the class was on multimodality as a form of rhetorical style (*elocutio*), tasking students over the semester to produce multiple assignments (both graded and ungraded) in the form of objects, interactive games, and image/text collages. Sound, though, was mostly left unexplored in favor of haptic and visual modalities. But in the case of this assignment, the student author (Harrington) took on aurality without prompting, isolating qualities of type and mapping them onto similar qualities of sound. The resulting sound-based piece required a fluency in two literacies: one in typography and one in aural composition. Packaged finally as a cassette tape with typographical paper inserts, the work suggests to us that perhaps aural composing can go beyond the usual podcasts or soundscape recordings to include purposeful acts of transductive, multiliterate work.

In this chapter we package together the following:

- Burgess's retooled version of the original assignment that attempts to more closely investigate the "sound of type," including assessment criteria and grading rubric;
- Harrington's audio reflection, in which he discusses his composition process, interleaving his observations with the music files produced for the assignment; and
- a reflection by Burgess on the process of reworking the specifications to encourage more student submissions in sound and other nonvisual modalities.

## Assignment Prompt and Contract Sheet

### Typographic Style Assignment, Revised for Multimodal Synaesthetics

#### **Purpose**

An exercise partly in research/writing and partly in typographic interpretation.

#### **Step 1**

Choose a document or object and analyze & evaluate the visual and typographical choices made by the designer. Write this analysis up in a paper, following the appropriate specifications for your choice of contracted grade.

#### **Step 2**

Find a way to re-present your analysis in a compelling way, utilizing one or more alternative modalities such as sound, movement, or taste.

#### **Step 3**

Include a 1-page process paper as a separate page at the end of your paper. Include some brief justifications for your reinterpretation of the essay. On the due date, bring your project to class and be prepared to discuss it.

## Guidelines

*Analysis* means a thorough description and discussion of the choices made by the designer. *Evaluation* means making a thorough and critical judgment of the effectiveness of those choices. *Do both.*

In Step 2, think about the way type is constructed. Remember leading, kerning, and other ways type is spaced; the way shape and font styles elicit specific emotional responses; and the way placement and contrast of fonts and colors can speed up or slow down the eye. For example, consider the following possible mappings for sound:

- Serifs: “ornamentation”;
- Letterspacing: a wider letterspacing takes longer to read. Think about the length of the sounds you can produce: long and slow, short and quick (map to length);
- Letterweight: the “boldness” of a word (map to volume);
- Font size: try mapping to sound frequency, e.g., a large font could map to a low, booming sound; a tiny font to a high, squeaky sound.

How can you leverage an alternative modality to show how type works? See the following examples for sound and movement:

- Dance your dissertation: <https://www.sciencemag.org/news/2017/11/announcing-winner-year-s-dance-your-phd-contest>
- Dance bubble sort: <https://youtu.be/Iv3vgjM8Pv4>
- The sound of sorting: <https://panthema.net/2013/sound-of-sorting/>
- Space-filling curves: [https://web.archive.org/web/20180110113418/http://www.win.tue.nl/~hermanh/doku.php?id=sound\\_of\\_space-filling\\_curves](https://web.archive.org/web/20180110113418/http://www.win.tue.nl/~hermanh/doku.php?id=sound_of_space-filling_curves)

If the project is missing a required component in order to achieve the grade contracted for, it may be resubmitted with a voucher in the next class period. In addition to your contracted grade, I reserve the right to add a “plus” or “minus” to your assignment where appropriate.

## Contract Sheet

- I’m Contracting for an A.* I have included the following in my submission:
  - An essay, minimum 1,500+ words, which:
    - describes the document in detail
    - analyzes how each element works (what it “does” to the viewer)
    - evaluates how effective this strategy is
    - quotes three or more external sources to support my points above
    - includes a works cited page, formatted correctly in MLA, APA, or Chicago style
  - A project reinterpreting the essay, which:
    - makes use of an alternative non-visual modality (sound, smell, taste, touch, movement)

- includes an interactive component that requires the reader to engage in some way (play, open, assemble)
- incorporates citations/sources in a unique way
- A colophon, which:
  - lists all fonts and other elements used, and says where they came from
  - describes what choices I made in the project portion, and why
- I'm Contracting for a B.* I have included the following in my submission:
  - An essay, minimum 1,200 words, which:
    - describes the document in detail
    - analyzes how each element works (what it “does” to the viewer)
    - evaluates how effective this strategy is
    - quotes at least two external sources to support my points above
    - includes a works cited page, formatted correctly in MLA, APA or Chicago style
  - A project reinterpreting the essay, which:
    - makes use of an alternative non-visual modality (sound, smell, taste, touch, movement)
    - incorporates citations/sources
  - A colophon, which:
    - lists all fonts and other elements used, and says where they came from
    - describes what choices I made in the project portion, and why
- I'm Contracting for a C.* I have included the following in my submission:
  - An essay, minimum 1,000 words, which:
    - describes the document in detail
    - analyzes how each element works (what it “does” to the viewer)
    - evaluates how effective this strategy is
  - A project reinterpreting the essay, which:
    - makes use of an alternative non-visual modality (sound, smell, taste, touch, movement)
  - A colophon, which:
    - lists all fonts and other elements used, and says where they came from
    - describes what choices I made in the project portion, and why

*I understand that if I fulfill the minimum requirements in my category, I will achieve the grade I have contracted for. I understand that Dr. Burgess will be doing a word count, and that she reserves the right to add a “plus” or “minus” for excellent/sub-par work. I understand that if any component of the project is missing, the project will be returned to me ungraded for revision with a voucher.*

## Student Reflection: Seeing Differently

**Travis Harrington:** In his appearance in the 2007 documentary film *Helvetica*, typeface designer Jonathan Hoefler said, “There’s really no way to describe the qualitative parts of typeface without resorting to things fully outside it” (Hustwit, 2007).<sup>1</sup> He used this statement to reinforce a phenomenon that he described in working with his design partner: That when endeavoring to create type design together, they’d often use descriptors unrelated to type as a means to effectively communicate their aesthetic vision.

This idea of what we could call “interdisciplinary description” is not exclusive to design contexts only; we as humans tend to use abstract associations often, as a way to create contextual understanding for these objects and ideas. These associations are rooted in composite sensory experiences; they are the reason expressive literature relies on metaphor, and the reason two things as literally different as the taste of hot dogs and the smell of chlorine could imply a collective visual image of a summer pool party. Our brains operate in synesthesia far more fluidly than we consider. And these are perceptions that create human context; wedged between these perceptions and the language used to communicate them is typography.

In this instance, my professor, Dr. Burgess, wanted our class to each individually choose an object and dissect the composition of its typography for an assignment. She wanted us to make evaluations as to what the typographic composition was attempting to communicate to its audience and how effectively it did so. And then after committing these evaluations to paper, she wanted us to create an object of our own that represented the components of our chosen object’s typography and our positions on the effects it took. Because I play a lot of music in my free time, I ended up choosing my guitar amplifier. I figured that because its typography was relatively sparse and simple that it would be an easy effort to make evaluations about.

And it was fairly easy: I argued that the sparse bits of type weren’t for a lack of creativity or some kind of visual carelessness; it was a conscious decision to ensure minimal distraction from the object’s function and to create a subtle iconography between the type present and the yield of the amplifier’s function, its sound. The argument was clear enough, but I had trouble when deciding how I would then synthesize it for the object portion of the assignment. It was clear Dr. Burgess operated within a visual context when creating the assignment, but with so much of my argument founded in aural qualities, I took my chances and decided that I would create a piece of music where each part represented each of the three different typefaces in the composition and what role they played.

*[A rapid melodic sequence plays. It loops with persistent abandon, but never escalates past a vague calmness. The electronic, synthesized*

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1. The audio version of Travis Harrington’s reflection can be found on the book’s companion website.

*tonal quality of each note emphasizes this feeling; each one lands with a softened attack, as if the source is emanating from just beneath the surface of water, and decays with a diminished ripple. The sequence continues under the narration that follows.]*

This is what I started with, a synthesizer sequence to represent the amp's use of Helvetica typeface. Helvetica isn't the most immediately noticeable typeface in the amplifier's composition, but its role is the most foundational. It is the script that adorns all the functional components of the amp: the knobs, the switches, the input. So in the piece of music, I attempted to mirror this association and make Helvetica's part the representative starting point from where the rest of the piece could form.

Visually, Helvetica is a very neutral font. Its tight spacing and tall x-height give it a stern, but calm presence. And tonally, I tried to represent this in the synthesizer part: a tight, even rhythmic pattern, and a light, marimba-like timbre. I thought these sounds suited these visual components of Helvetica well.

*[A second, more complex melody begins, played on a guitar, landing somewhat abrasively against the first. This melody, although still discernibly following a consistent pattern, is far more frenetic and angular. Notes dance between short jerks and thoughtful pauses as they ring out bright and piercing.]*

This is the part that I wrote to represent the use of Eurostile Bold Extended No. 2 on the amplifier. Compositionally, this typeface is used only once to delineate the model name of the amp itself. It's placed directly under the power switch and light, giving a direct association to the amp's internal components. Because of this, I thought musically I would give this part the most complexity and character; if this typeface is dictating the nature of the amp's configuration, and the amp's configuration is what makes its functionality unique from other guitar amplifiers, then the part meant to represent it sonically should stand out as well. To further complement the typeface's visual attributes, Eurostile is a geometric typeface, and this particular weight is exceptionally heavy with wide spacing. I created an angular melody with more forceful strums and a staggered rhythmic pattern to represent this.

*[The final melody is added to the previous two, which continue playing, its notes ring as tensely and bright as the second as its presence overwhelms the piece. The lumbering, warped guitar notes pulsate and stagger over themselves, and as the piece progresses, their attack becomes more and more careless.]*

Finally, I added this part to represent the logotype of the amplifier's brand name Ampeg. The embossed badge bearing the amp's logo is the largest piece of type set in the whole composition and it adorns the grill cloth, which directly covers the



amplifier's speaker. With this presence, and the most direct association with the actual sound emitted from the amplifier, I wanted to create a part for it that sounded literally like soundwaves reverberating and pulsing. I put it at the front of the mix, the most noticeable melody in the composition and used very hard strums, letting the notes ring out into each other along with my guitar's vibrato to shift the pitch of the notes back and forth. It seems that visually, the logotype perpetuates this notion as well: It is deeply italicized, with a stunted x-height, and a pseudo-ligature that runs entirely throughout. These guitar techniques create an intertwined, slanted sound.

Most of the evaluations in my attempt to represent these typefaces through music stemmed from the notion of “grand design” in the book *The Elements of Typographic Style* by Robert Bringhurst (2013). I tried to pay very close attention to how the relationships between the type and the functional components of the amp communicated a larger message, which inevitably will result in its audience engaging with sound. But granted, these notions of design do initially stem from a visual context, and in the confines of my research, I did not really consider aural qualities of these elements until creating my music piece. But I think that a lot of these cross-sensory perceptions are instinctual: Even though I had a prior understanding of how music works and generated a lot of these representational sounds on my own, a lot of these connections I made from the visual to the aural side of type weren't necessarily musical at all. Anyone with an ear and intuition for comparison could relate a typeface's visual composition to some sound that occurs in the world. I think the important part is to remember that these visual components are trying to drive its audience to feel a certain way about what it is displaying, and that if you break it down to the raw affect, you can trace it back toward similar feelings in different sensory contexts.

*[Repeating music grows louder after the narration ends and plays on for a few more seconds until it ends on a single, lingering chord.]*

## Instructor Reflection: Retooling for Sound

**Helen J. Burgess:** One of the reasons I was so surprised and delighted by Travis's submission is that soundwriting is something I haven't really spent much time thinking about as a modality in my classroom.<sup>2</sup> Of course, I know it exists, and it's an active area of study, but I've never thought of myself as “trained in sound”—I have no musical experience or upbringing, for example. And, unless you count the burgeoning podcast playlist on my iPhone, I have no specific interest in the kinds of technologies that produce or define sounds or sound studies. So being confronted with such a submission forced me to think again about how I might be shutting out a whole spectrum of creative possibilities by not foregrounding what those possibilities might be.

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2. The audio version of Helen J. Burgess's reflection can be found on the book's companion website.



You might be asking why this assignment makes use of contract or specifications grading. I choose to use these kinds of grading strategies because of the anxieties that multimodal composing can bring up in students, who are often accustomed to simply writing a paper and getting a grade. This is a familiar literacy they've internalized over many years in high school and college. Being asked to compose in different (and sometimes multiple) media can bring up any number of anxieties about one's ability to perform in an unfamiliar mode. Even as an instructor, and you can hear, my own anxieties about expertise in unfamiliar modes shapes my understanding of the assignment. So the contract grading specifications are aimed at allowing for maximum "play," in the sense of the play one has within generic bounds.

I've provided here a retooled version of the assignment, revised along two axes. First, I provided stronger possible guidance and some examples in the prompt sheet, referring to not just sound but also dance (another modality I'm not fluent in). This work usually happens in class sessions, where we spend time discussing font styles in terms of their rhetorical and affective dimensions; but I was more careful to provide a set of correspondences or "mappings" that students could use to begin thinking about how one modality might map to another along specific dimensions. So, for example, I mapped boldness to volume, letterspacing to length, and size to frequency.

Second, I reworked the contract grading specifications to foreground the way we apprehend and engage with different modalities: using the concrete phrases "sound, smell, taste, touch, movement" and "play, open, assemble" in place of more abstract terms such as "reinterpret" and "engage."

There are some possible downfalls to providing more specific examples of mapping and modalities. I've come to see over the years that if I provide an example of a previous student's work, more of that type of work will subsequently appear (although it can be also beneficial and sometimes delicious, as in one semester where I showed a photo of a cake-related submission and received many food items in response). Why we should expect otherwise is something to consider—after all, cake, and mixtapes, and pasteboards all have their own well defined languages and genre bounds. Still, there is something exciting about introducing an assignment like this for the first time in a class—it can have unexpected outcomes and ask us to (re)consider what we're doing when we do it, both as students and instructors. Ultimately, I think, Travis's work suggests to me not only that students can have more agency, if given the opportunity, but also that instructors need to be aware of the choices that they're making: not just by forestalling certain kinds of action but by failing to recognize them as possible actions at all.

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