**Buried in the Mix: Touring Sound Technicians, Sonic Control,
and Emotional Labour on Cirque du Soleil's Corteo**

by © Jacob Danson Faraday

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Abstract

This dissertation investigates the lives and labour of the sound technicians who work on Cirque du Soleil's arena show Corteo, a large-scale, highly structured, corporate touring production. On Corteo, the sound technicians are charged with the faithful recreation of Cirque du Soleil's proprietary sonic product, including the music, sound effects, and character dialogue, as established by the director, composers, sound designer, and other senior members of the creative hierarchy. The sound technicians manage the constant variations in musical performances and venue acoustics, interventions that should be largely invisible and inaudible. They also manage the feelings of the musicians and each other by engaging in diverse modes of emotional labour. Different groups—sound technicians, musicians, acrobats, and audiences—listen to the show in an ever-shifting, holistic way. The people in these groups understand that the sounds they make during a performance—with instruments and speakers or with laughter and applause—are integral to the show. Sound in the arena becomes an affective web of sources to which each group simultaneously listens and contributes. Sound technicians are sensitive to emotion and affect, and this sensitivity is part of the job. I show that the sound technician's technical work, emotional labour, and affective sensitivity are vital to the sound design, despite being 'buried in the mix.' Corteo's mode of touring evinces the underlying privilege and power of even low-level employees like sound technicians, as well as Cirque du Soleil's broader capitalistic priorities and labour practices. Through the case study of Corteo, this dissertation contributes to a growing body of literature that demonstrates that workers at any level in a corporate hierarchy make essential contributions to a final product, even if their labour is obscured by neoliberal logics. Grounded in ethnographic methods and informed by the author's own experience as a Cirque du Soleil sound technician, this research includes participant observation and interviews with sound technicians, musicians, creative production staff, and audiences.

Acknowledgements

I would first like to thank Corteo's sound department and musicians. Momentum for this research was driven by these energetic, generous, and hard-working people I had the privilege of touring with. A special thank you goes to Christian and Davie, who were always excited to share, both on and off the record. Thank you to other Corteo and Cirque du Soleil (CDS) colleagues who kindly gave their time for interviews. Thank you to the many CDS administrators who helped facilitate this project.

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Chapter 1: Introduction

> The city of Sophronia is made up of two half-cities. In one there is the great roller coaster with its steep humps, the carousel with its chain spokes, the Ferris wheel of spinning cages, the death-ride with crouching motorcyclists, the big top with the clump of trapezes hanging in the middle. The other half-city is of stone and marble and cement, with the bank, the factories, the palaces, the slaughterhouse, the school, and all the rest. One of the half-cities is permanent, the other is temporary, and when the period of its sojourn is over, they uproot it, dismantle it, and take it off, transplanting it to the vacant lots of another half-city.
> Italo Calvino, *Invisible Cities*

During a performance of Corteo, the audience is immersed in sound as part of an intersensory circus spectacle. The musical accompaniment of this Cirque du Soleil (CDS) touring arena show, replete with rich crescendos and profound silences, emphasizes the action on stage and heightens the dramatic tension. From the luxuriantly decorated set, the acrobats and clowns provoke waves of applause and laughter. The accented, multi-lingual narration of the impassioned protagonist conveys moments of joy, nostalgia, and loss. Sound fills the arena and draws audiences in for an intense, emotional experience. When Corteo performs, each of Corteo's four sound technicians listens to the show in a different way. Together, they are charged with the hidden tasks of managing Corteo's complex sonic infrastructure and of focused, specialized, professional listening.

Embedded in the audience, Christian, the head of the sound department,[1] is at the front-of-house (FOH) mixing console. Following a set of cues, Christian uses his ear to create the aesthetic, affective blend of music, dialogue, and sound effects that the audience hears. He listens

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[1] See appendix B for a list of Corteo's other technical departments.

for the subtleties of each performer, striving for the perfect balance of instruments in the music, and the perfect balance of music and dialogue. Christian knows the music as intimately as the musicians themselves, and can anticipate and accentuate improvised solos, harmonies, dynamics, and even humour. He can, in turn, hear the sound of the audience as they react and can look around the room to see their faces.

Davie, the assistant head of sound, is backstage at the monitor console, managing the dedicated, individualized monitor mixes for each of the eight musicians and one of the characters. He listens to the mixes, one by one, with their deliberate, instrumental weightedness—Stephane, the violinist, has more violin in his mix than that of Alex, the drummer, for example. He is also listening for requests for mix adjustments from the musicians as they perform. Davie can't see any of the musicians; these terse requests are always verbal and remote. He is stationed in a relatively busy backstage area, but is aurally isolated, wearing custom, sound-suppressing headphones called in-ear monitors (IEMs), like the ones the musicians are wearing on stage. Almost everything he hears comes from the monitor console.

Walking calmly but decisively through the seating areas, Charlie, a sound technician, listens to the space. He is densely surrounded by people, much more so than Christian (see figure 1). People notice him, since he is usually the only person moving around compared to the thousands who are seated and stationary, but he is quiet and moves carefully, so his presence is not too intrusive. He is listening to the FOH mix, not for the balance of the instruments—that's Christian's job—but for the *quality* or *tonality* of the sound of the speaker system, or PA, in the arena. Does it sound crisp and clear and full throughout the arena? Too muddy? Too harsh? He can decide and, with his laptop connected wirelessly to the system, can remotely adjust the PA's

overall equalization (EQ) settings as Christian mixes.[2] The job of calibrating the PA for the

space, or 'tuning the room,' began on the previous evening during load-in. Charlie is putting the

finishing touches on that work, now that there is an audience.

Figure 1: A pre-show view of the stage (note FOH at the bottom of the rake)

From his small, orderly workstation, tucked into a dimly lit and out-of-the-way corner of

backstage, Dylan listens to the wireless microphones. To ensure a performer's microphone is

working before that performer goes on stage, he unmutes it on his mixing console and watches

the digital level meter flicker. Unfiltered, unprocessed sound fills his ears. His console is for

testing and diagnostics only—not even the other sound technicians can hear what he hears.

Dylan's soundscape spans one microphone at a time, devoid of reverb and removed from the

sonic subtlety of the FOH or monitor mixes.[3] When testing a microphone on his own, he holds it

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[2] See appendix B for a short glossary of terms, including EQ.
[3] Jonathan Sterne and Tara Rodgers associate unprocessed recorded music tracks with femininity: "raw tracks can be cast as feminized, passive material to be actively controlled via specialized technologies and techniques of the

close to his mouth and produces a quiet "*tsk–tsk–tsk*" sound that can easily penetrate any backstage noise.[4] If he is testing an *in situ* microphone that a performer is already wearing, Dylan might hear bits of a performer's conversation, idle whistling, quiet breathing, or the rustle of a costume being adjusted. He might also hear sounds that are around a performer: the muffled clunk of a cart getting rolled into place, or a distant clapping or chanting pre-show hype-up ritual of acrobats. Musicians also use wireless microphones; Dylan can listen to Stephane tune his violin before the show.

The four sound technicians are largely independent and solitary. From time to time throughout the performance, Charlie will visit Christian at FOH and Dylan will visit Davie at monitors, but each technician's work space is invisible to the other's, obscured by dense, forty-foot-high curtains. Most of the limited contact between sound technicians is remote, through brief verbal exchanges on a devoted communication channel, similar to the one that links Davie to the musicians.

Of Corteo's four sound technicians, Dylan's aural experience of a performance is probably the most abstract. He is not necessarily *listening* for any of the specific sounds he hears; while the other sound technicians listen for balance, musicality, specific instruments, and tonality, Dylan listens for *signal*, clean and under control. Hearing a performer's voice is best, but other sounds will do, so long as those sounds are unperturbed by the sharp, electric pops that might indicate a broken cable or a loose connection; unaffected by an intermittent, gravelly wash of static that might indicate a weak wireless connection; and free of the clipped, grinding rasp of distortion that could indicate over-amplification or a poorly placed microphone.

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masterful composer/producer" (2011, 37). Interestingly, Dylan's position, which I discuss in more detail later, is considered to be the least specialized; it is an entry-level position for young sound technicians.

[4] This sound is a lingual, ingressive, denti-alveolar click, transcribed as a single pipe symbol: | (International Phonetic Association 2015).

Chapter 1: Introduction

An understanding of both sound as signal and strict sonic control are fundamental to the work of Corteo's sound technicians. Whether in a municipal hockey rink or a massive metropolitan NHL arena, each performance of Corteo must meet the exacting standards of the CDS brand. These notions of signal and control are the invisible scaffolding upon which the sound technicians hang things like musicality, balance, and tonality. Christian, Davie, and Charlie listen to a premiere differently because they perform their 'sound-as-signal' tests before the show, while Dylan has to perform his tests during it. Assessments of sonic control are ongoing for the sound department, regardless of position. The aim for Christian and Charlie is, for the most part, to control sound in the arena space, while Davie and Dylan tend to think about controlled sound more locally, input by input. Each mode of thinking about sonic control serves a larger aim of obscuring the sound technicians' work to preserve the emotional impact of the circus soundscape, which serves to keep audiences intimately and intensely engaged.

This dissertation is about the four sound technicians—and to a lesser extent, the eight musicians—who toured with Corteo from 2018 to 2019. I examine how they talked about, thought about, and worked with sound on tour. I discuss how the social lives and professional practice of the sound technicians intersected on tour with CDS's creative corporate hierarchy. Corteo's sound technicians and musicians are relatively low-level CDS employees, charged with the faithful recreation of Corteo's proprietary sonic product: the music, sound effects, and character dialogue, as established by the director, composers, and sound designer. The sound technicians had supervisors—a lot of them—to make sure they followed the guidelines. To negotiate the performance and maintenance of Corteo's sound design, as well as the sometimes conflicting desires of individual musicians, the sound technicians engaged in different modes of emotional labour. Building on Arlie Hochschild's work (2003), I discuss four modes of

emotional labour—service, hyper-service, stoic, and communal—in relation to the sound

technicians' daily work. I also examine issues of mobility, cosmopolitanism, race, and gender.

Corteo's mode of touring evinces the underlying privilege and power of even low-level CDS

employees like Corteo's sound technicians, as well as CDS's neoliberal assumptions and labour

practices.[5] Beyond the specific case study of Corteo, this dissertation contributes to the growing

body of literature that demonstrates that workers at any level in a corporate hierarchy make

essential contributions to a final product, even if their work is obscured by neoliberal logics.

I situate CDS touring sound technicians as members of the creative team in an important

corporate community that is a key driver of the global trade of sound and spectacle as a product.

Like most large-scale tours, Corteo is a highly social, constantly mobile, professional space that

depends on communication, emotional labour, and compromise, but is framed in a competitive,

sometimes aggressive, masculine workplace. Like any CDS tour, Corteo is, at its foundation,

deeply corporate and hierarchical, with employees, managers, supervisors, department heads,

and executives who fit tidily into the company's sprawling organigram. By examining the work

and daily life of Corteo's sound technicians, I argue that the style of touring, the divisions and

modes of labour, and the notion of sonic control are fundamental to the conception and delivery

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[5] In using the term "neoliberal," I am following anthropologist Elizabeth A. Povinelli, who centres her definition of the term on the primary tenets of a free-market economy: "the privatization and deregulation of state assets, the territorial dispersion of production through subcontracting, and a shift in tax policies that favored the rich" (2011, 17), as well as allowing the market to determine a worker's wages, employment benefits, and so on, instead of group bargaining units (e.g., unions). Neoliberal thinking aligns with CDS's labour practices is several ways: CDS workers are non-unionized and can be subcontracted (e.g., fly-ins; see "My Positionality" section in this chapter and chapter 5). Strictly speaking, fly-ins are seconded, but it amounts to the same thing: one company (i.e., fly-ins) providing a wage- and benefit-isolated service for another company (i.e., the tour), by which I mean fly-ins do not earn the same wages or enjoy the same benefits (e.g., health insurance) as full-time tour personnel, though they may do the same work; CDS tours depend on subcontracted labour (e.g., trucking, catering, local labourers); CDS maintains several divisions around the world through which touring workers are employed, presumably to benefit from the most favourable tax laws; CDS maintains multiple partnerships with other large corporations for sponsorship and investment capital (see footnote 6 in this chapter). I should note that CDS's reliance on subcontracts is typically not to the same degree of traditional rock and roll touring, where each technical department (e.g., sound, lighting; see appendix B) could be subcontracted by a different company. On Corteo, all the technicians (and most other tour personnel) are CDS employees in one way or another.

of the Corteo's proprietary sound design.

Cirque du Soleil and Corteo

Established in 1984, CDS is an entertainment production company that focuses primarily on live

circus performance. Before the COVID-19 pandemic forced CDS into bankruptcy in 2020

(Montpetit 2020), the company employed approximately four thousand people and had an annual

revenue of approximately US$1 billion (Deb 2017). CDS has been restructured and will remain

dormant until pandemic restrictions ease. In 2015, the Montreal-based company became a

multinational corporation when it was divided and sold to several investment firms.[6] In its pre-

pandemic structure, CDS had two main divisions that governed its approximately forty live

shows, the touring shows division and the resident shows division. Within the touring shows

division, there were two subdivisions: big top and arena. A big top is a large canvas tent that

CDS (and countless other traditional circuses) tours with; arenas are typically municipal

multipurpose sports arenas (e.g., the Bell Centre in Montreal). I focus on one of the four touring

shows in the arena subdivision: Corteo.

Corteo was originally created for big top, like most CDS arena shows, and toured in the

big top format from 2005 to 2015. It was then redesigned and remounted as an arena show,

which premiered in 2018. CDS has been remounting big top shows for arena since 2007; Corteo

was its seventh remount.[7] Corteo is a typical CDS arena tour: it travels with about one hundred

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[6] A 60% stake was sold to TPG Capital, an American equity firm; a 20% stake to Fosun, a Chinese investment firm; and a 10% stake to Caisse de dépôt et placement du Québec, a Canadian fund manager. A 10% stake was retained by CDS co-founder Guy Laliberté (Peterson-Withorn 2015).

[7] Other arena remounts were Saltimbanco, Quidam, Alegria, Dralion, Varekai, and Ovo. Crystal is an arena show that was not remounted; it is an ice show and was created specifically for hockey arenas. Big top shows sometimes temporarily install in an arena setting, but these are not permanent remounts. They are short-term special runs. The most common arena-type venue for a CDS big top show is the Royal Albert Hall in London, UK. Sometimes arena shows will temporarily return to big top as well, as Quidam arena did in Seoul, South Korea, in 2015, but this is rare.

people and about twenty truckloads of gear, and usually visits a new city every week.[8]

Remounting a big top show as an arena show is a years-long process, involving new designs and

purchases (often with the original design personnel as consultants); trainings, stagings, and

integration of new acts and performers; development of show-specific safety procedures;

developing touring schedules; and thorough documentation. For the purposes of the touring

sound technicians and musicians, the remount began with rehearsals at CDS headquarters in

Montreal, from October 2017 to January 2018. Rehearsals continued in a Quebec City arena

(January and February 2018), with a 'soft opening' taking place in March 2018 in New Orleans.

The tour proper began in Milwaukee on 25 March 2018. Corteo toured North America until

August 2019; it began a European tour in September 2019.[9] As I outline below, I was present as

a worker and researcher for approximately six months of the North American tour.

Corteo is the story of a man who dreams of his own funeral. Accompanied and guided by

angels, he traverses his dream: he relives parts of his childhood, meets old friends and lovers,

and finally ascends (by bicycle) to the light, whatever that may be. Though Corteo is highly

acrobatic, it is also rather theatrical, by which I mean its narrative is more or less clear

throughout the entire show. As is typical with CDS shows generally, Corteo's narrative is less

developed than one would expect in a play, for example, and its theatricality derives from

recurring characters and themes, such as death and nostalgia, as opposed to an explicit, coherent

plot. Many of the acrobatic acts are only loosely connected to the overall arc of the show;

thematic connections can also be vague at times. There are also recurring musical themes, as I

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[8] The weekly schedule is generally stable: Tuesday is load-in for technicians and some administrators (performers have the day off); Wednesday to Sunday are for performances; Sunday is load-out and travel; Monday is 'dark'—a day off for everyone. People often refer to Monday (and Tuesday for performers) as the weekend.
[9] Though a regional tour plan may span years (e.g., North America), the tour is broken up into ten- to twelve-week 'legs.' Each leg is followed by a two-week tour break during which tour staff are provided with return travel home. Staff can choose what to do with their tour break. Some people use the two weeks for tourism, for example.

discuss in chapter 2. A performance lasts for approximately two hours and includes a twenty-minute intermission. There are about twelve acrobatic acts, which usually last about five minutes each, and about eight clown acts, which last from about one to seven minutes each. There are also several short, theatrical transitional scenes, which stitch the main acts together. These are usually less than a minute long. Each act and transition is carefully choreographed and meticulously timed. Corteo has room for small, nightly adaptations, but generally speaking, each act remains the same from performance to performance.

Musical improvisation is an important element in the show. Throughout each performance, the musicians improvise in prescribed 'solo sections' of compositions, but they will also improvise structurally to allow for moment-to-moment changes in the stage action, such as a missed acrobatic trick or a dropped juggling club. This may mean repeating or extending a section. These structural improvisations, which have always been essential to circus music , are decided on-the-fly by the bandleader; the rest of the band must follow the bandleader's verbal cues, as I discuss below.

I describe several main acts—'Trampoline Beds', 'Tissu', 'Planche', 'Aerial Pole', 'Juggling', 'Helium Dance', and 'Tournik'—throughout the dissertation. I discuss these acts specifically because they exemplify issues such as the invisible labour of the sound technicians and technological sonic control. These acts also exemplify the sonic strategies Corteo employs to emotionally connect with audiences, such as emphasis of danger—through brief moments of silence, for example—and intelligibility of character dialogue. Some of these acts are high-energy displays of athletic and acrobatic virtuosity, with similarly high-energy and virtuosic musical accompaniments. Others are gentler and more emotive.

Chapter 1: Introduction

Corteo's sound department and band are hierarchical in structure, following a corporate framework of managers and supervisors that is consistent across other touring CDS shows. The sound department consists of a head of sound (HOS), an assistant head of sound (AHOS), and two technicians. The HOS is responsible for maintaining the audio infrastructure on a technical level, and for maintaining the original sound design on an artistic level, and is more or less free to divide labour as needed. For example, the HOS might manage the larger-scope projects, such as staff scheduling and annual budgets, while the AHOS might take care of day-to-day projects, such as repairing equipment and training new staff. The technicians are responsible for their own aspect of the infrastructure (e.g., wireless microphones and band gear), and report to the head or assistant head as needed. Corteo's sound technicians are:

- Christian, head of sound, who is mainly responsible for the FOH mix and the PA
- Davie, assistant head of sound, who is mainly responsible for the monitor mix
- Dylan, the RF (radio frequency) technician,[10] who is mainly responsible for the musicians' equipment and the wireless (i.e., RF) equipment
- Charlie, the PA technician, who is also mainly responsible for the PA

On Corteo's first performance in a new city—the premiere—each sound technician takes on their primary role: Christian at FOH, Davie at monitors, Dylan at RF, and Charlie working with the PA. These positions are known as 'show tracks.' Dylan, for example, will 'do' or 'run' the 'RF track' for a premiere. The show tracks are a list of cues and actions a technician must carry out during a performance to have a complete, successful show. An example of a cue from the RF track would be moving a wireless microphone from one performer to another at a specific time and at a specific place backstage. It is important to note that the sound technicians regularly rotated tracks for non-premiere performances. Christian and Davie both mix FOH; Christian and Charlie both work with the PA; everyone mixes monitors and does RF. The primary

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[10] On Corteo, RF indicates the workstation where the wireless (i.e., radio frequency) microphones are housed and where the RF technician (i.e., Dylan) mainly works.

responsibility for those positions remains with the primary technician, regardless of who does the track. Each technician could execute the cue lists and make minor adjustments according to the exigencies of a particular performance (e.g., replace a broken microphone), but any major changes in any position would first be discussed with—and probably undertaken by—the primary technician.

The band has a bandleader, an assistant bandleader, and six other musicians. The bandleader is responsible for following the action on stage and 'calling the show'—giving verbal cues to the band—for every performance.[11] The bandleader is also responsible for the sequencer files for the computer playback system (Ableton Live) and keyboards both to maintain the original sound design and composition, but also to ensure show continuity. For example, when a band member misses a performance, a pre-recorded backup audio track of their part is played. The assistant bandleader also calls the show as a backup for the bandleader and will usually do so once a week. The bandleader is the band's direct supervisor and is involved in any disciplinary action that involves the musicians. Corteo's instrumentation is as follows:

- Roger, the bandleader, plays keyboard
- Phil, the assistant bandleader, plays (mainly) soprano, alto, and tenor saxophones, as well as clarinet and keyboard
- Alex plays drums and percussion
- Bobby plays upright and electric bass
- Camille[12] plays guitar and accordion
- Stephane plays violin
- Alain is the male vocalist
- Aurelie is the female vocalist

The above personnel were the central figures in Corteo's day-to-day sound work on tour.

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[11] Calling the show is essentially 'conducting' the band by giving verbal cues (e.g., starting songs) over a headset microphone in a 'talkback' and communications audio loop that only the musicians, sound technicians, and FOH stage manager can hear. The front-of-house (FOH) stage manager also calls the show, but gives verbal cues (e.g., starting acts) to technicians and other stage managers.
[12] Camille is a pseudonym. I discuss ethics protocols below.

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With few exceptions, I did not interview other performers (e.g., acrobats), other technical

departments (e.g., lighting), or other staff (e.g., company manager). While other tour personnel

may rely on sonic cues during a performance (see chapter 2), they largely do not have a voice in

how those cues should sound, nor do they regularly participate in the management of sound

equipment. Though other groups, such as acrobats or local labourers, may have a stake in or an

informed opinion on Corteo's sonic product, I restricted my interviews outside Corteo's sound

technicians and musicians to the following people to maintain a direct connection with the sound

technicians and their work:[13]

- Jean-Michel, Corteo's acting sound designer (Corteo's original sound designer was Jonathan Deans); this is not a touring position, though Jean-Michel did visit Corteo on tour occasionally
- Mark, Corteo's artistic director; this is a touring position
- Geert, Corteo's 'Whistler' character, and world-champion, virtuoso whistler
- Cliff, Corteo's former head of sound
- Pierre-Luc, Corteo's assistant production manager and former CDS sound technician
- Ana, a sound technician on a CDS big top show[14]

Corteo's technical and creative hierarchy for sound, then, can be represented in a chart, with the

director, composers, and other senior show creators at the top, followed by a managerial level,

and the sound technicians and musicians below (see figure 2).

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[13] During my fieldwork, I thought interviewing local labourers was logistically untenable, due to the fast pace of the work and the constant travel. However, upon reflection, I think conducting brief public intercept-type interviews (see "Project Overview" section in this chapter) with local labourers would be possible; there are always lulls, even during the busiest load-out.

[14] Ana is the only person I interviewed who did not work directly with Corteo; she had the opportunity to work on Corteo, but chose to take a big top contract instead. As a CDS employee, but not a Corteo employee, she provides an interesting insider/outsider perspective. Further, she is a PA tech and understands—indeed, relishes—arena work.

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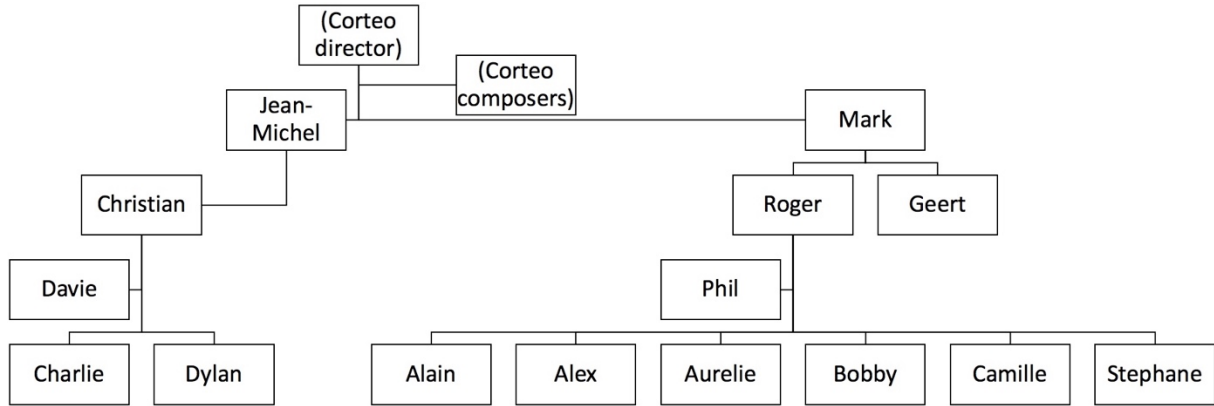
Figure 2: Corteo's technical and creative hierarchy for sound

Corteo's physical layout in the arena is unique amongst CDS shows. The stage divides the arena in two halves, so audiences sitting in each half can see each other across the stage while watching the show. The musicians are divided into four band pits placed around the stage (see figure 3).
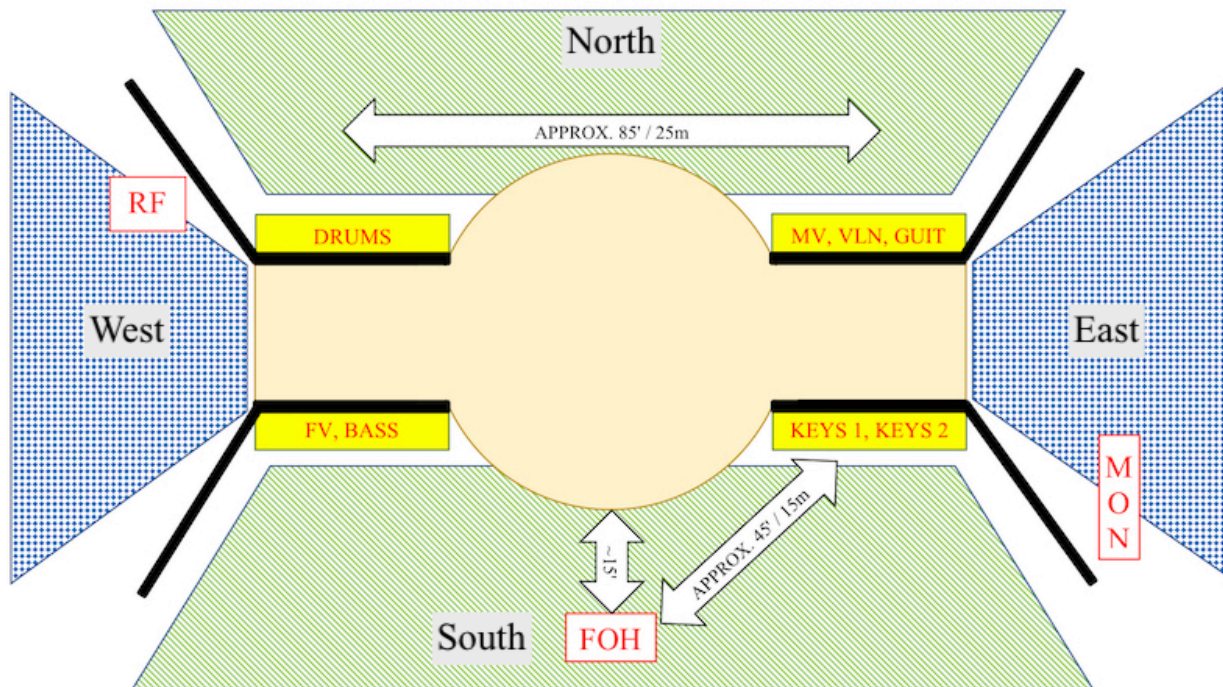
Figure 3: Corteo's layout. Areas shaded in green stripes are seating; blue squares are backstage

Alex (percussion) is on his own; Alain (voice), Camille (guitar/accordion), and Stephane (violin) share a pit; Aurelie (voice) and Bobby (bass) share a pit; and Roger and Phil, the two bandleaders, share a pit. Five of the eight musicians are mobile: they play from their pits for some acts, and for other acts they are on stage with wireless microphones. Only the two bandleaders and the bass player stay in their pits for the whole show.

There are three main stations for the sound technicians during the show, marked in white boxes in figure 3, while the musicians' pits are marked in yellow boxes. Cardinal directions are marked in grey boxes.[15] The thick black lines indicate curtains, which impede sightlines. For example, Christian, at FOH on the south side, cannot see monitors (MON), where Davie is often stationed for a performance, or RF, where Dylan is often stationed. Christian would likewise not be able to see the drum pit or the male vocalist/violin/guitar pit on the north side. Lines of sight are likewise impeded for almost all audience members. Most people seated on the south side cannot see the musicians seated on the north side and vice versa. An exception would be someone seated on the arena floor close to a pit. For example, a person sitting next to Roger and Phil (Keys 1 and 2) could look diagonally across the stage and see Alex's drum pit. Any musician who comes on stage, as most of the musicians do, is clearly visible to both sides.

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[15] These cardinal directions—north, south, east, west—are an arbitrary convenience for this study only. Corteo uses traditional theatre directions—upstage, downstage, stage left, stage right—but in a way that could confuse discussions of the show from the audience's perspective. On Corteo, north is stage right, south is stage left, east is upstage, west is downstage. For example, Alex's drum pit is downstage right; monitors is in the upstage backstage; FOH is on the stage left side of the house. For the purposes of my dissertation, I will refer to the cardinal directions as marked in figure 3 when necessary. Arenas sometimes do employ cardinal directions in their floor plans and architectural drawings—riggers will often use local cardinal directions during a load-in—but in those cases, the directions are always oriented as closely as possible to actual compass points; they are not arbitrary as they are in figure 3. If an arena designates a north wall, for example, it will actually be on (or near) the north side of the building. Some arenas affix a giant N, S, E, and W to their walls to make the local system easier to navigate for touring crews.

Chapter 1: Introduction

Sound Technicians at the Circus

Sound, including music and dialogue, is crucial for Corteo. In its carefully calibrated sonic environment, the live sound technicians manage the affective performance experience for audiences and performers alike. Corteo's sonic components are integrated and mediated by the sound technicians, who work to transform a different arena into an intimate sonic space each week. Corteo uses music to emphasize the action on stage and create an emotional connection with an audience. To make these connections, drama, tension, narrative, affect, and notions of authenticity (as well as satire of same) are conveyed through music and sound. Almost all the sounds that do this emotional work are amplified by the sound technicians for audiences. Corteo's mode of touring makes thousands of seats available for every performance in each arena, a space that was not designed for efficient or euphonic transmission of sound. Simply put, sound technicians manage the necessary amplification and distribution of sound on a CDS show. Their work is essential to a performance, but unless there is a disruption, it goes largely unnoticed. Sound technicians' labour remains, as it were, buried in the mix.

The work of sound technicians in music production is becoming more widely understood, both popularly and academically. Backstage narratives with sound technicians appear on television from time to time (Crowe 2016; Ztélé 2013) and on countless online videos (e.g., Sennheiser 2019a; Waves Live 2013). Contemporary scholars view sound technicians as important, collaborative, creative figures, but the role of the *live* sound technician remains largely unexplored.[16] There are notable exceptions, however. Communications scholar and

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[16] Scholarly analyses of sound technicians and creative practice have been taken up in recording studios (Bates 2016; Diamond 2017; Horning 2004; Kealy 1974; Meintjes 2003; Moehn 2012; Porcello 1996; Scales 2012; Théberge 2004), radio (Waterman 2006), sound design (Parolini 2017), film (Wilkins 2016), composition and production (Iverson 2017; Miller 2014; Scales 2012; Veal 2007), improvised rock (Reeder 2014), and video games (Cheng 2014). Music scholars also discuss the aesthetics and cultural meanings of recorded "liveness" (Diamond 2017; Meintjes 2003; Porcello 2005; Scales 2012; Théberge 1997).

ethnographer Christopher Dahlie (2018), and ethnomusicologists Boden Sandstrom (2000) and Whitney Slaten (2018) provide important examinations of the work of live sound technicians as it intersects with class, gender, and race.[17] These scholars are themselves live sound technicians and draw heavily on their own experience to inform their work. My work is similar in this respect but is distinct because I follow a particular team of corporate employees on a long-term, large-scale, company-mandated tour, rather than, say, a summer festival or a one-off arena concert.

Despite these insightful scholarly contributions, the social and institutional norms that devalue the hidden work of live sound technicians remain dominant. As I discuss in chapter 3, a sound technician's labour on Corteo is deliberately rendered invisible by a corporate creative hierarchy that places the composer and sound designer—people who are almost never on tour— at the top, and the sound technicians below. Erasure and invisibility are recurring themes with this mode of touring and in this dissertation. Invisible technical labour and obfuscation of technology have always been central to traditional theatrical design. Corteo's technology and technicians are hidden from audiences, but not just because of theatrical convention. CDS follows a hierarchical, capitalist practice that erases and anonymizes mere technical labour, as a sound technician's work is sometimes construed.

I aim to make sound technicians and their work more visible. In part, I seek to fill in the lacunae in CDS press coverage and other popular media that focus almost entirely on performers, creators, and costumes (e.g., Bilefsky 2020). CDS's self-produced films and coffee table books all but eliminate their own technicians from their own narrative.[18] As a circus company, CDS

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[17] Richard Ames (2018) and Nicholas Reeder (2014) also acknowledge that the live sound is male dominated.
[18] Examples of CDS's near-total erasure of technicians span decades (Adamson 2012; Babinski 2004; Cirque du Soleil 1993; Payette 1989; Vial 1999).

seems to come by this behaviour naturally, however, as traditional circus companies have always marginalized support workers and segregated them from performers due to their low status (Childress 2018; Offen 2010). Examining marginalized technical labour at CDS is an appropriate and effective setting, since CDS is so popular and high profile (see Leroux 2014).

Scholars have examined what it might mean for show business if producers 'pulled back the curtain,' so to speak (Hunt and Melrose 2005; Schechner 1985; Schmidt 2013). On the surface, what seems to be at stake is an audience's ability to easily and effectively suspend disbelief. If audiences were to see the work that goes on backstage, they might see performers on stage not as vibrant, lively characters with an engaging story, but just as people in costume reciting lines, or as people whose status as performers is suddenly ambiguous. But, as Alice Rayner (2002) asserts, suspension of disbelief is an act of will for audiences even when technicians and technology are already hidden. The greater risk for audience members of Corteo (and similar shows) is pulling back the larger curtain of CDS's corporate hierarchy and capitalist production models. A sincere valorization of technical labour challenges the primacy of 'immaterial labourers' of the elite creative class, such as designers, directors, and composers (Rantisi 2013), in cultural production as the sole purveyors and privileged gatekeepers of creativity. In the case of music production, this requires a fundamental shift in how music is understood and how labour is valued. The tools, resources, and processes of production *are* the music (Devine 2019; Sterne 2003; 2012a; Vagnerova 2017), just as much as the actual sounds and performance of those sounds are. The technical, 'material' labour of Corteo's sound technicians, for example, can be creative, collaborative, improvisatory, and emotional, and, moreover, is inextricable from Corteo's affective sonic product and musical performances.

Chapter 1: Introduction

My Positionality

I am a former CDS sound technician. I worked mostly as a 'fly-in'—a part-time contract

worker—from 2011 to 2019. I had a three-year stint as a permanent, full-time worker on a single

arena show from 2013 to 2016, and was the head of sound on that show for the last six months of

that period. Fly-in contracts were usually less than a month long but could last up to six months.

Initially, my fly-in contracts would be back-to-back on different shows around the world; after I

started my PhD program in September 2016, the contracts were sometimes a year apart. I worked

on multiple touring shows, both arena and big top, as well as at the expansive CDS rehearsal

studios at the Montreal headquarters.[19] Before working with CDS, I did freelance shift work as a

technician for about nine years, a formative experience that I discuss in chapter 5.

My experience as a CDS sound technician led me to this project in many ways. I have a

wide professional and personal acquaintance on different CDS shows, which includes

technicians in all departments, musicians, and other performers, as well as administrators,

designers, and subcontractors (e.g., caterers, truckers). I was comfortable proposing this project

to CDS executives as well as Corteo's sound technicians and management. My proposal for the

project to CDS executives and administrators was facilitated by three things in particular. First, I

have institutional email addresses (i.e., [. . .]@cirquedusoleil.com; [. . .]@mun.ca), the use of

which would have automatically legitimated any correspondence with administrators to some

degree, beyond its actual content. Second, in my initial email proposing my research project to a

CDS vice president (details below), I included a résumé that listed all the shows I had worked on

as well as my direct supervisors and the production managers for each show. The VP would have

known the production managers well and could have easily asked them about me. Third, having

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[19] I worked on the following shows: Amaluna (big top), Corteo (big top and arena), Kooza (big top), Ovo (big top
and arena), Quidam (arena and one-off big top), Saltimbanco (arena), Totem (one-off arena).

been an employee, I have signed CDS's standard, indefinite confidentiality agreement. Any

private or confidential information I have come into contact with while at work is perpetually off

limits for publication. It would have been ethically off limits in any case, but this document made

it legally binding. The confidentiality agreement, however, does not eliminate my ability to be

critical of CDS. The terms of that document are not so broad that it precludes discussing the

working practice of Corteo personnel, nor does it preclude me from drawing conclusions on

CDS's own publications (e.g., Babinski 2004), as I do in chapter 5.

During my fieldwork on Corteo, I had a stake in the creative product. I worked as a PA

technician and ran show tracks. The musicians performed with equipment that I set up and

tested. The sound technicians used speakers and cables that I had repaired.[20] Increasingly,

ethnographies of sound technicians are by scholars who have a similar stake in a creative

product.[21] Eliot Bates, for example, determined that being invested in the object of his research

(in his case, Turkish recording studio work) was not just desirable but essential for his project.

He writes, "I discovered that there was no way that I could conduct long-term observations of

recording work without being somehow integrally involved with the process" (2016, 24). Given

my background with CDS, I think I could have conducted *some* informed observations on Corteo

without having been as involved as I was—without a stake in the process. I knew the job already:

I understood the work, the schedule, the politics, the divisions of labour, the music, the travel,

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[20] I was relatively autonomous when doing work for the show. I was given a project by the head of sound or assistant head of sound, such as speaker repair, and would simply report back when the task was complete. This is a common tactic for the division of labour in a touring CDS sound department. A technician's skills and aptitudes are determined usually through casual conversation with the department, then (usually) autonomous assignments appropriate to those skills and aptitudes begin to flow.

[21] Often, the scholars are themselves sound technicians (live or studio), writing about their own experience (Bates 2016; Dahlie 2018; Porcello 1996; Scales 2012; Sandstrom 2000; Slaten 2018). David Grubbs (2020) writes about his experience as a studio musician who works closely with sound technicians. Alan Williams (2012) writes from the perspective of studio musician and recording technician. According to Dorinne Kondo (2018), ethnographies of theatre productions by similarly invested scholars are uncommon.

and the constant change. But I agree with Bates. My observations were deepened and my relationships with the sound technicians and the musicians were enriched because of my involvement with the show. I felt a mutual trust and respect with them.

My technical experience and CDS acquaintance left me uniquely positioned to conduct this research. It was 'insider research,' to be sure, but further, it was what Jodie Taylor calls "intimate insider research," in which "pre-existing friendships (close, distant, casual or otherwise) evolve into informant relationships" (2011, 8). When I arrived on the show, I found I knew about fifteen people on tour, having worked with them on other CDS shows. Four of these people became research participants. Many people I met during my time on Corteo arena have become friends, the sound technicians in particular. There was an air of professional coolness with some people on tour, since they knew I was there temporarily and for my own ends, but for the most part, it was a warm experience.

My embodied knowledge of the job of a touring CDS sound technician deeply informed my research. It guided my interviews and observations. It facilitated my integration into Corteo's sound department as a participant-observer. Throughout this dissertation, I have chosen to allow my own on-the-job experience to emerge because it is that experience that led directly to this project. My pre-CDS technical background led to a job with CDS, which then led to gaining unparalleled access to Corteo as an ethnographer and sound technician. My analyses of the sound technicians' work, approaches to sonic control, modes of listening, and modes of emotional labour, as well as Corteo's musical and sonic materials have informed—and been informed by—my own critical listening positionality, which is a "self-reflexive questioning of how race, class, gender, sexuality, ability, and cultural background intersect and influence the way we are able to hear sound, music, and the world around us" (Robinson 2020, 10). I would add language to this

list (though perhaps that is included in "cultural background" for Robinson). The working language for all staff on CDS touring shows is English. My own upbringing in a verbal, Anglophone household helped me integrate on tour and quickly understand what was expected of me.

I discuss the issues embedded in critical listening positionality throughout the dissertation, drawing extensively on my own experience in two sections in particular. I provide a first-person account of preparing to mix FOH in chapter 3, and I examine my own musical and technical background in chapter 5. Writing in this way helps demonstrate how deeply I am implicated in my research setting; my perspective as a former CDS sound technician informs the entirety of my research. By drawing on my own experience, memories, and intimate knowledge of the CDS arena tour setting, I am situating my role in my fieldwork. I was fully integrated in Corteo's sound department because of my experience. Indeed, at times I was essential—the department would have struggled without my involvement. When I draw on my own experience, I do it purposefully to add to stories that could not be told otherwise. My goal is to convey information about the context in which Corteo's sound technicians are working that could not be acquired from interviews or observations. My understanding of this work and of this context comes from embodied and technical knowledge that is the result of a years-long implication in CDS touring. To obscure my embodied and technical knowledge would be to obscure one of the most important relationships my research participants and I had: our working relationship.

Project Overview

I was integrated as part of Corteo's sound department as a sound technician for approximately six months during the 2018-2019 North American tour. I was perfectly transparent with CDS and

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with Corteo touring staff when preparing for fieldwork and when on tour. Everyone knew the focus of my project and what research methods I proposed, which were, primarily, formal interviews and participant observation. All research participants on Corteo provided informed consent in writing before I engaged in any research activity.

I first sought permission to pursue this research from one of CDS's vice presidents in October 2017. The VP replied with initial support within days of my enquiry, pending the resolution of certain particulars, such as liability insurance. To manage the details, I began to correspond with numerous CDS administrators and managers. With CDS's administration, I discussed the project and provided the paperwork they required. This process continued sporadically until fall 2018. Though the process was long, it was never onerous. The people I corresponded with, including the VP, were enthusiastic and generous from the first. While CDS has a long history of granting access to researchers,[22] I believe my own positionality facilitated my access significantly.

While waiting for CDS's approval, I secured approval of my ethics proposal from the university. I provided the CDS administrators with a condensed version of my project proposal and copies of my informed consent forms for research participants. Though I had the required health insurance and liability insurance (both furnished by the university), and the necessary immigration status for a North American tour (I am a dual Canada/USA citizen), it was ultimately decided by CDS administration that I would be hired as a part-time employee on a limited contract for the duration of my fieldwork. Having been a CDS employee since 2011, this

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[22] CDS is at the heart of a number of doctoral dissertations (Boudreault 1999; Mahy 2005; Paul 2012; Rivard 2007; Stephens 2012). Other scholarly researchers have focused on CDS as an institution (Leslie and Rantisi 2011; 2019; Morency and Needles 1998; Rantisi and Leslie 2014). CDS has also granted access to journalists (Babinski 2004; Cirque du Soleil 1993; Vial 1999; Ztélé 2013) and other corporations (Anonymous 2007; 2014; Sennheiser 2019a; 2019b; 2019c) as part of a larger marketing/visibility strategy.

was the most expedient solution. It simplified access to venues, hotels, and high-security tour conveyances (e.g., chartered airplanes). It also provided CDS with a means to pay me a wage for any show-specific work I might do on tour, which is something the company insisted upon. During my fieldwork, I was paid for any time I spent actually working for Corteo. Each week, I would discuss my research schedule with Christian; if I was free to help, or if the sound department needed help, I would do a shift and submit a timesheet to Corteo's production manager. Paid duties consisted primarily of show tracks and repair work (e.g., soldering cables), but I regularly helped with load-ins and load-outs as well.

Effectively, I was hired for Corteo by my interlocutors. Cliff, Corteo arena's original head of sound, initiated my first contract, which was for part of the Corteo remount and rehearsal period (2–22 January 2018). Cliff and I had worked together on different shows and are friends outside of work. He knew about the groundwork I was doing for my project, though at that point nothing had been confirmed or approved. The second, longer contract (25 September 2018–24 February 2019), was initiated by Corteo's new head of sound, Christian, whom I met during the first short contract (see figure 4).

Figure 4: Contract and research ethics approval summary

For the first contract and the first part of the second contract, I was there to work.[23] Corteo's sound department was short-staffed during these times and they hired me to help fill that gap. I received ethics approval for my research on 31 October 2018, so I used the first six weeks of the second contract (25 September–1 November 2018) to introduce the idea of my ethnographic study to my colleagues on tour. I did not collect research data during this time: no fieldnotes, recordings, or interviews. However, this preliminary period of fieldwork was essential to establishing myself as a skilled, experienced, and hard-working member of the team. In November 2018, I distributed my participant observation informed consent forms to the four sound technicians and eight musicians, and began a second period of fieldwork that would continue until 24 February 2019. Throughout my fieldwork, I worked alongside the sound technicians, helping with load-in and load-out, mixing monitors, repairing equipment, and making operational suggestions for the department.

Participant observation was at the foundation of my research, as I worked very closely with the sound technicians and musicians. I travelled with the tour by bus or by plane to each new city. I was lodged in the same hotel and ate my meals in the same catered dining hall at each venue. I attended nightly performances, engaging with technicians, musicians, and audience members at different points before, during, and after the show. I was onsite as an active researcher for approximately one hundred performances of Corteo, from November 2018 to February 2019. This is not to say that I watched each performance. More often I was backstage somewhere, observing, assisting with the show (e.g., mixing monitors), having conversations,

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[23] The first ten weeks of the second contract were enabled by the School of Graduate Studies' paid internship program, for which I received course credit. This facilitated my time on Corteo by allowing me to maintain my student status while working.

and taking photographs, videos, and audio recordings.[24] I witnessed—and audio-recorded—

countless conversations amongst sound technicians, or amongst sound technicians and

musicians. I also recorded backstage conversations that I myself was participating in, sometimes

in my role as a sound technician and sometimes as a researcher; recording in either context was

acceptable amongst the sound technicians and musicians. Because the sound technicians were so

much more involved in and more accustomed to my research, I felt most comfortable recording

conversations amongst the sound technicians.

When conducting dialogic interviews (Bruce Jackson 1987), I tended to order them

loosely following Corteo's built-in hierarchy at first (i.e., starting with Jean-Michel, the sound

designer, Christian, the head of sound, and Phil, the assistant bandleader). This was not

necessary, but it seemed appropriate. Knowing the boundaries of each worker's position in the

hierarchy helped determine the scope of each interview. I conducted twenty-six formal

interviews with nineteen people; I interviewed each sound technician at least twice. These

interviews took place in hotels, cafes, in the arena after a performance, backstage, in transit to the

next city, or via Skype. Each interview lasted between one and three hours; most were just over

an hour long. All but one of my formal interviews were one-on-one, for which I recorded only

audio. One formal interview was a three-person group interview, which I recorded with audio

and video.

I also conducted ten of what I call 'working' interviews. These were formal, pre-

arranged, one-on-one interviews as well, but they took place while the sound technicians were

actually working: doing load-in, mixing at FOH, mixing at monitors. I make a distinction

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[24] Throughout the dissertation, I include photographs of the sound technicians and musicians, all of whom provided informed consent allowing me to do so. I have also included some photographs that show people who did not provide informed consent (e.g., other tour staff, local labourers). I anonymized these people by obscuring their faces and other characteristics (e.g., figure 31).

between these and the traditional 'sit-down' interviews because the focus of interview questions

and data collected was informed by the context and activities of that moment. Similar to Harris

M. Berger's research participant who actually played guitar to determine his own experience of a

recorded song in "phrase-by-phrase detail" (1999, 176), the working interviews I conducted were

significantly complemented by the fact that the sound technicians had their hands on the gear and

their ears in the show. I recorded these interviews with a mix of audio and video. Sometimes I

was able to follow someone as they walked around the venue, camera rolling. During

performances at FOH, I mounted the camera in a fixed position to capture the sound technicians'

faces or their hands on the FOH console. I recorded their voices separately; I outfitted the sound

technicians with a lapel microphone that was plugged into a small digital audio recorder that they

pocketed during the interview. This separate audio-video method was very effective since I was

always able to hear the sound technician's voice clearly over the loud show music. During these

interviews, I stood behind and to the side of the person mixing sound. Most importantly, I was

out of their way in this position—mixing FOH is stressful and I didn't want to impose unduly.

Further, from this position, I could see what they were doing and could speak directly in their

ear. This last detail is important: I could make myself heard during the loud sections and be

discreet enough to not disturb audience members during the quiet sections of the show.

Once, I set up my camera at FOH during a performance for a quasi-training session at

FOH between Christian, the head of sound, and Davie, the assistant head of sound. I arranged

this video recording with them in advance. I was elsewhere in the house at the time, but they

agreed to start and stop the recording at the appropriate times. I had mounted my camera on the

FOH console to capture their torsos, hands, and faces, and asked them to start the video

recording just before the performance began. I did not use the lapel microphone for this

recording. I could hear their voices, though sometimes they were thoroughly drowned out by the show music. It is a rich video: the two sound technicians discuss details of the sound and of their practice throughout the performance. I consider this recording to be a kind of working interview *in absentia*, since they were effectively interviewing each other about their work without me. I draw on this recording in chapter 3.

To ascertain the audience's relationship with Corteo's sonic product, I conducted public intercept interviews (Flint et al. 2016) with anonymous audience members. (Interestingly, this part of the project was suggested by the CDS VP that I contacted for my initial permission to conduct the research; it had not occurred to me to approach the public when I first imagined the project.) I spoke to fifty-four people in eight cities, sometimes individually, but more often in small groups of two or three (the largest group was five). To help establish my connectedness to CDS and my legitimacy as a researcher during these public intercept interviews, I wore a black, long-sleeve, CDS-branded shirt and wore my Corteo ID laminate around my neck on a CDS lanyard. I carried a small clipboard in one hand and my audio recorder in the other. Approaching a person or a small group, I introduced myself and said that I was doing research for my PhD. I asked if they would be interested in answering a few questions and, displaying my audio recorder, asked their permission to record their responses. I only approached adults. These interviews lasted for approximately two minutes each and consisted of at least three predetermined questions, but I sometimes improvised one or two quick follow-ups depending on the responses. I did not ask their names, ages, gender identities, or any other personal information. At the end of each interview, I presented the participants with a business card that had my contact information and the university information. On the back, the card had the university's standard ethics compliance statement with the research ethics board's contact details

(see appendix A). I pointed this statement out to most public intercept participants and very briefly explained why it was there. All the public intercept interviews took place on venue concourses during intermission. I did not approach anyone in their seats. I viewed the seats as temporarily private, rented space for the duration of the show and did not want to impose on that space. I did not approach anyone after the show either, as I did not want to impose on people who were trying to leave the venue.

Some interviews—formal and public intercept—were conducted in French. My own English translations appear in the body of the text, while the original French transcriptions appear in footnotes.

Theoretical Approach

To discuss the work and relationships of Corteo's sound technicians on tour, I aim to put ethnomusicology into dialogue with organization theory, emotional labour, and sound studies. Further, I draw on theoretical approaches to sonic space and professionalized space to discuss how sound, audiences, sound technicians, and performers (including musicians) interact. Taken together, these theoretical frameworks allow me to discuss CDS's corporate identity and its proprietary approach to sound in the context of Corteo's professional sonic practices on tour and lively backstage culture. I begin this section with a theoretical discussion of space as an organizing principle for my dissertation chapters.

Spaces: I organized this dissertation largely according to spaces within Corteo's performance venue: an arena. The following three chapters—In the House, Front-of-House, and Backstage—take their titles from spatial arrangements touring staff use, arrangements that are crucial to the

production and performance of shows like Corteo. 'In the house' refers to the audience seating area and to the experience of *being* in the seating area; 'front-of-house' is the position in front of the stage, usually surrounded by public seating, where the sound mixing console is placed, and where the FOH sound technician works during a performance; 'backstage' is the working area behind the proscenium, and is permanently hidden from an audience's view. Traditional theatrical production uses a design paradigm that masks technology and technicians, and is predicated on spatial divisions, both concrete and symbolic. Backstage, for example, is an actual physical space, but it *represents* the things, people, and activities that audiences must willfully ignore to successfully suspend their disbelief for the sake of the narrative being enacted on stage. Writing of backstage, Erving Goffman states that "It is here that the capacity of a performance to express something beyond itself may be painstakingly fabricated; it is here that illusions and impressions are openly constructed" (1959, 112). Backstage is where tangible work takes place to facilitate the representational work that occurs on stage (Rayner 2002; Schmidt 2013).

Most of the spaces I use to organize my dissertation are private spaces—specifically, private *listening* spaces—of privileged access. The boundaries of each space are marked by separate, mutually constitutive soundscapes. Backstage, for example, is marked, in part, by the sound in the house: backstage begins where sonic coverage of the PA ends. The sound of the seating area also helps distinguish that space from the arena's concession stands, bathrooms, and hallways, for example. Meanwhile, the sound of the PA obscures for an audience the countless conversations and preparations that make up the backstage soundscape. Corteo's sonic product transforms an indistinct acoustic space (i.e., an arena with a bunch of seats) into a series of privileged, private, commodified, affective sonic spaces. This is what Jonathan Sterne calls "a proliferation of sonic spaces *within* a single space" (2015, 115, original emphasis). One such

private sonic space is the speaker cabinet itself, accessible only to engineers and sound technicians; another is the arena, which, apart from showtimes, is accessible only to Corteo and arena staff; a third private sonic space is the individual seat, accessible only to a ticketed audience member during the few hours that the house is open for a performance. Corteo's sound is designed to envelop and engage audiences in their seats, which are, in effect, rented and privately accessed and occupied for the duration of the show. The different classes of Corteo's listeners are distinguished by access—by what they may or may not hear.

Corteo's private listening spaces are also ephemeral, following a long history of mobile performing arts. Traditional circus in particular is founded on the notion of near-constant travel and ephemerality.[25] Circus labourers—roughnecks and roustabouts—would work all night, and when morning came, a colourful big top tent would be standing in what was, just the day before, a non-descript vacant lot; the tent would disappear in the same way. Other less logistically demanding genres also thrive in ephemeral performance spaces: community theatre, buskers, even contemporary, avant-garde sound artists may rely on a temporary 'stage' (see, for example, J. Bell 1999; Harrison-Pepper 1990; Ouzounian 2006). In Corteo's case, the physical infrastructure remains after Corteo leaves town. However, while the area used for backstage might still exist, *backstage*—the inhabited, sonically delimited workspace—does not. The movement through these (and other) spaces is the spatial link to chapter 5. From the empty room to the open road, the imaginary spaces of travel, touring, and privileged mobility emerge as organizing principles on a global scale.

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[25] Many circus scholars address travel and ephemerality (K. H. Adams and Keene 2012; Bouissac 1985; 2012; Childress 2018; Davis 2002; Offen 2010; Parker 2011; Ross and Shapiro 2017; Stoddart 2000; Tait 2005; Whiteoak 1999).

Chapter 1: Introduction

I draw on ethnomusicological and anthropological literature to guide my discussions of sound and space. Scholars compellingly demonstrate the social implications of physical, sonic resonances in specific spaces. Matt Sakakeeny (2010) analyzes urban space and sound at their intersection with race and class. Brandon LaBelle's *Acoustic Territories* also focuses on sound in urban space, tracing "the soundways of the contemporary metropolis, rendering a topography of auditory life through a spatial structure" (2010, xx). Building on LaBelle's work, J. Martin Daughtry (2015) theorizes the acoustic territories of wartime Iraq. Focusing on the US global war on terror, Suzanne G. Cusick (2008; 2013) examines the effects of acoustic torture on POW detainees. Guided by this body of work, I examine how physical spaces impact social interaction through sound, and shape the kinds of sounds that are enacted on Corteo. I also show the ways a space can influence how people listen to sound and engage in sound making. Georgina Born (2013) provides a detailed survey of sound and space scholarship, both tangible (e.g., architectural) as well as metaphoric applications (e.g., 'pitch space' of post-tonal music theory). Sterne (1997) also discusses sound as an architectural device to separate one space from another. Architectural approaches to sound and space are particularly relevant to this dissertation. In their weekly calculations for the PA, Corteo's sound technicians delimit spatial divisions within an arena with great care. As I mention above, the dissertation's structure is informed by spatial divisions. Louise Meintjes (2003) provides a unique model, as she spatializes her analyses of sound narrowly through a specific recording studio space and broadly, using "Overseas" as an imaginary 'elsewhere' space. Similarly, I move from a tightly focused discussion of situated conduct in specific spaces, such as mixing a performance at FOH, to the institutionalized cosmopolitanism and global mobility of CDS as a company.

Organization Theory: The CDS corporate structure is fundamental to the decision-making process at every level on tour and influences most aspects of life with Corteo, from the sound design to the salad bar. I use organization theory to frame those many influences, and the workers' various responses to them. While CDS has long been a corporate and hierarchical entity with a vast bureaucracy and apparently clear division of labour, the company has become even more focused on profit and efficiency since its sale to multinational investment firms (see Leslie and Rantisi 2019). Organization theory is crucial to my analyses of these bureaucracies, hierarchies, and divisions of labour.

Throughout the dissertation, I draw on organization theory to distinguish between CDS's public-facing, company-wide policies, such as its branding, and its inward-facing, on-the-ground practices, such as how Corteo's technicians arrange their backstage work areas. This is the difference between CDS's organizational *identity* and its organizational *culture*; I explore how those two concepts intersect on tour. Both concepts are "defined in terms of shared understandings and beliefs" about an organization (Hatch, Schultz, and Skov 2015, 57), and both concepts are enacted by internal actors (e.g., employees, management) through a broad range of behaviours, processes, and symbols (McCarl 1985). However, organizational identity is the external understanding of an organization, as perceived by external actors (e.g., customers), and as projected toward external actors by internal actors (e.g., with advertising; cf. Hochschild 2003). Organizational culture, meanwhile, is the internal understanding of an organization, generated, perceived by, and maintained by internal actors. Organizational culture governs how individuals work together in an organization. The influence of corporatization on CDS has been examined (Leslie and Rantisi 2019), and elements of organization theory have been applied to the analyses of other creative industries and institutions (Born 1995; Hesmondhalgh and Baker

2011; Parker 2011; Wynn 2015). An example of how organizational identity and culture intersect

and impact technicians on Corteo is through CDS's commitment to hiding technicians and

technology from the audience as much as possible. To this end, CDS's organizational identity—

its global, publicly visible policy—insists that technicians always wear 'show blacks'—tidy,

long-sleeve, all-black clothing—during a performance. A part of CDS's organizational culture

that corresponds to this policy is how technicians choose to police each other backstage when a

technician does not adequately comply.

Emotional Labour: Emotional labour is at play amongst workers, between workers and clients,

and between workers and management. Emotional labour "requires one to induce or suppress

feeling in order to sustain the outward countenance that produces the proper state of mind in

others" (Hochschild 2003, 7). In other words, emotional labour is the internal management of

emotion that someone does to influence another person's emotional state. Hochschild's

description continues, emphasizing the 'outward countenance' aspect, and distinguishing

between emotional labour and emotion work:

> I use the term *emotional labor* to mean the management of feeling to create a publicly
> observable facial and bodily display; emotional labor is sold for a wage. [. . .] I use the
> synonymous terms *emotion work* or *emotion management* to refer to these same acts done
> in a private context. (2003, 7, original italics)

Hochschild makes the distinction between emotional labour and emotion work, which is private,

use-value work that everyone does in their daily lives for any number of reasons (e.g., managing

emotions amongst family members). Emotional labour is the "management of feeling" that is

part of a person's job (e.g., with clients) by explicit training or by convention, as a flight

attendant might be trained—and expected—to be cheerful and friendly to passengers. Emotion

work, on the other hand, is the management of feeling in everyday life. It is important to note

that Hochschild considers emotional labour to have exchange value in the Marxist sense. This means that workers exchange their emotional labour for a wage.

In primarily theorizing service industry work, Hochschild argues that emotional labour is gendered female because of the assumptions, power structures, and cultural hierarchies that are in place in that industry. The standardization, systemization, and professionalization of service industries is an extension of home-based, unpaid, nurturing emotion work that has come to be expected of and presumed to be innate to women after centuries of subjugation by men. "The world turns to women for mothering," she remarks, "and this fact silently attaches itself to many a job description" (2003, 170). Beverley Skeggs similarly aligns gendered labour with cultural rewards and expectations. She writes: "if men deploy aspects of femininity to make them more caring managers they are rewarded, if women employ femininity in the same way, they are just seen to be doing what they are expected to do." (2004, 55). Beyond the gender of the actual worker, however (cf. Sedgewick 1995), the gendering of labour is primarily an indication of power and dominance, and can be further tied to race, class, education, ethnicity, sexuality, and ability (Duffy 2016; Johnson 2017; Kotiswaran 2011; McRobbie 2011; Momsen 1999; Price-Glynn 2010; Vagnerova 2017).

The sound technicians' work on Corteo hinges on emotional labour in two ways. First, sound technicians perform emotional labour to better provide the tour services for which they are responsible. By building and maintaining the audio infrastructure on tour, the sound technicians provide a service for the band and other performers, the audience, and the backstage touring personnel. Sound technicians are expected to treat these groups as a service industry worker would clients. This creates an unequal power dynamic through the unequal distribution of show business prestige (Hesmondhalgh and Baker 2011). Sound technicians regularly adjust their

emotions when working with these 'clients' (e.g., to calm a performer, or to get more information about an equipment malfunction). Second, sound technicians suppress frustrations or worry in order to manage the stresses of responsibility. By calling this emotional labour, I am expanding on Hochschild's ideas. Though Hochschild most thoroughly theorizes the importance of emotional labour for women, she does note that men too have a socially constructed emotional role to play: "the private task of mastering fear and vulnerability" (2003, 163). She marks this as a private task of emotion *work*, not exchange-value emotional *labour*, but in the context of Corteo's touring sound technicians, it is part of the job. As I show in chapter 3, male-gendered, stoic emotional labour is crucial to remote communications amongst sound technicians (e.g., FOH and monitors), and between sound technicians and musicians.

Further, stoic emotional labour emerges as an important strategy for workers when managing life on tour. Neoliberal labour practices can cause workers to view challenging working conditions (e.g., long hours, little sleep) and high expectations (e.g., 'the show must go on' ethos) "not as conditions of employment but as moral virtues" (Kuhn 2006, 1339). This distorted view shifts the focus from the profit generated by the labour to the manner in which that labour is carried out. If the practice of silent, stoic stress management is viewed as a means of mastering vulnerability and fear for the sake of the job, my research positions my cis-gendered, male interlocutors as enacting one kind of emotional labour that is often gendered female (service), and another kind that could be gendered male (stoicism).

Sound Studies: I draw on sound studies to theorize the use of Corteo's audio infrastructure. Steeped in science and technology studies (STS), sound studies aligns with contemporary ethnomusicology through the key tenet of reflexivity. The aim of sound studies, according to

Chapter 1: Introduction

Sterne, is to "produce and transform knowledge about sound and in the process reflexively attend to the (cultural, political, environmental, aesthetic . . .) stakes of that knowledge production" (2012b, 3–4). A researcher's positionality to knowledge production, technology, and sites of inquiry, is of central importance to, and has a direct bearing on, the knowledge produced. Ethnomusicologists have adopted sound studies (or associated STS analytical principles) to problematize, for example, technological interventions in fieldwork (Feld and Brenneis 2004; Wissler 2009; Zemp 1988), recording studio technology (Bates 2016), narratives about musical instruments (Bates 2012), and ethnomusicology itself (D. Wong 2014).

Sonic control is a dominant theme throughout this dissertation, with conversations about control repeatedly emerging in my interviews with sound technicians and musicians. The sound equipment Corteo uses is designed and deployed with the aim of strict acoustic control, uniform sonic distribution, standardization, efficiency, and repeatability. Corteo's sound design is conceived and realized in such a way that, ideally, the show should sound the same from any seat, in any arena, in any city. Uniformity of sound distribution is accomplished with more or less success in part by attempting to inhibit the local, reverberant sonic signature of a given venue. Corteo's approach to sound thus subscribes to what Emily Thompson (2002) calls "modern sound": an efficient, commodified signal that represents an engineered mastery over an environment. Thompson writes: "Clear, direct, and nonreverberant, this modern sound was easy to understand, but it had little to say about the places in which it was produced and consumed" (2002, 3). Modern sound is separate from its setting; it is centred on the isolation of a distinct sonic signal and the elimination of extraneous noise. For Sterne (2003), modern sound requires modern listeners. His theorization of modern audile technique renders listening as a distinct and practical sensorial activity, one of cultivated aural awareness. Sterne writes: "Speaking generally,

audile technique articulated listening and the ear to logic, analytic thought, industry,

professionalism, capitalism, individualism, and mastery" (2003, 95).[26] Modern sound and

modern audile technique contribute to an understanding of sound-as-signal, and are with us in

every recorded song, radio broadcast, telephone call, and concert. Dorothea Baumann (2011) and

Barry Blesser and Linda-Ruth Salter (2007) provide interesting foils for my work. Like Labelle

(2010), these scholars discuss aural architecture as a planned conversation between sound and

space, but with spaces designed to complement and enhance the sounds generated and

experienced therein. On Corteo, sound technicians are charged with eliminating the local

acoustic of an arena, which was likely not acoustically designed for a show like Corteo in the

first place, to make way for Corteo's proprietary sonic product.

Organization theory, emotional labour, and sound studies form the basis of my theoretical

approach in this dissertation. Of the three, I expand on theories of emotional labour most

thoroughly. Organization theory primarily provides a vocabulary and framework to discuss and

describe Corteo as a corporate workplace. Sound studies, meanwhile, provides a framework to

discuss Corteo's implementation of sonic control. Sound for Corteo's sound technicians is at

once emotional and practical, scientific and intuitive, proprietary and personal, improvisatory

and strictly contained. Importantly, these theoretical frameworks do not assume social cohesion,

but instead explicitly address conflict. Organization theory presupposes in its definitions that

organizational identity (generally corporate level) and organizational culture (generally worker

level) will be different and often contradictory (Hatch, Schultz, and Skov 2015). Emotional

labour is largely based on the practice of manipulating emotions and emotional responses.[27]

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[26] Michel Chion argues that there is a "lack of any real aural training in our culture" (1994, 33), but more recent sound studies scholars, including Sterne, would, I think, disagree.

[27] David Hesmondhalgh and Sarah Baker (2011) note that emotional labour helps creative industries workers negotiate the emotionally taxing, exploitative, and precarious nature of production work.

Chapter 1: Introduction

Sound studies often shows that technologies and artifacts themselves arise from politically contested grounds, and that conflict is built-in and maintained, despite a technology having an appearance of a finished product (Sterne 2003). Similarly, Born rejects the idea of inherent, "organic," community-oriented socialities of music, and allows for "difference, contradiction, and antagonism" (2012, 274; cf. Hesmondhalgh and Baker 2011). This stance is crucial for my work because I consistently observed, and sometimes felt, conflict and animosity amongst the sound technicians and certain other touring staff.

Chapter Summaries

In chapter 2, I discuss Corteo's sound mainly in relation to the audience. The title, In the House, is a term used on tour to denote the arena's public seating area. I draw on public intercept data, interview data, and circus scholarship to discuss how sound contributes to the emotional connections Corteo audiences feel to the show. I show that Corteo's musicians, audiences, and sound technicians—through musical performance, applause, and amplification—contribute to and sense what I call 'the energy in the room.' In chapter 3, I examine the FOH mix—what audiences hear from the PA—and how Corteo's FOH sound technicians think about and work through hierarchical directives of the sound design. I show FOH as a space and the FOH mix as a sonic product to be distinctly masculinized, built upon both sonic and emotional control. Building on Hochschild (2003), I theorize a male-gendered, stoic-type of emotional labour. Chapter 4 expands the discussion of emotional labour by moving it backstage. Using the development and maintenance of the musicians' monitor mixes on Corteo as a case study, I discuss a service-type of emotional labour, the type that Hochschild richly theorizes (2003). I also theorize a communal-type of emotional labour that is enacted for day-to-day living on tour.

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In chapter 5, I take up some of the broader issues that emerge from being on tour, such as

cosmopolitanism and the romanticization of travel. I discuss my own background as a technician

and musician and use that as a starting point for a critique of mobility and Corteo's mode of

touring. I also examine the impact of touring on the sound technicians and musicians. In chapter

6, I conclude by examining ways this dissertation could be employed by CDS to re-examine how

the company values its workers.

I also provide ethnographic descriptions of load-in and load-out on Corteo. Corteo's

sound technicians consider load-in and load-out to be, in many ways, the most important times in

a weekly tour cycle (so do I). Davie remarked:

> In my head, I always think load-in and load-out is a *big* part of the job. [. . .] I see load-in
> and load-out as the big picture. In the middle is the show and everything. It's the meat
> and potatoes. Load-in and load-out is all your organization skills put to the test: your
> routine and how you do everything; how well everything is labelled; how well you do
> your job; how well you communicate with everyone. It's all of your skills put together.
> During the week [i.e., the performance period] is all the fine tuning. (Interview with the
> author, 7 Feb 2019)

For Davie and the others, load-in and load-out are physically and emotionally taxing events that

require ingenuity, skill, teamwork, and stamina. It is a distinct way of working, unlike any other

moments of labour I examine in the dissertation. Audiences never see this process; indeed, most

performers and administrators never do either. A description of a load-out follows chapter 5; a

description of a load-in is next. With these depictions, I show how Corteo's infrastructure

expands and collapses behind the scenes. I aim to convey a sense of how the sound department

inhabits a space; how that space moves from completely new and unknown, to inhabited,

delimited, and controlled; and how the space is then abandoned and ultimately forgotten over

time.

Chapter 1: Introduction

Taken as a whole, the chapters of this dissertation show two things. First, Corteo's proprietary sound design, which is credited to senior members of the creative hierarchy, and is part of a larger, affective intermedia environment, depends entirely on the sound technicians' many forms of hidden labour. Second, their labour, be it situated in a specific physical workspace or in an idealized, notional workspace of touring, is deeply embedded in a neoliberal, corporate framework that prioritizes profit, efficacy, control, and worker anonymity.

Load-In

Stepping onto the empty arena floor at 7 a.m. on load-in day, Christian, Corteo's head of sound, is already listening to the space. He perceives the reverb decay time and, to some degree, the frequency response with his ears; sometimes he'll clap to instigate these audible interactions of sound and venue. Other sounds—or perhaps the presentiment of other sounds—he perceives with his eyes: hard plastic chairs, high glass walls, cement pillars, corrugated steel sheets on the ceiling. Rigid reflective surfaces like these can play havoc with the amplified signal he'll be generating from the four twenty-foot-high columns of speakers he's getting ready to hang. He also knows that when the house is full of people, a lot of the reflective chaos will be absorbed and diffracted by the soft, irregular shapes of clothes, skin, hair, and so on. He is a sonic soothsayer. For now, and for the next hour, Christian will be able to work quickly and quietly; most of the other ten or so people on site are doing the same. Soon will begin the sharp, ubiquitous clanging of several tonnes of aluminum truss being assembled by hammer and pin, and hoisted into the air.

To properly fill the seats with a clean, clear signal from the PA, Christian takes several measurements of the room (see figure 5). Standing in the centre of the floor and facing one of the flat sides of the arena's seating areas, he points the beam of his laser distometer, or 'disto,' at the first row of seats. He's holding the measuring device waist high, as if he were a character in a Western, shooting from the hip. This will make the numbers a bit easier to manage; the invisible line from the device to the first seat is almost perfectly horizontal.

Figure 5: Christian examining the disto at the centre line

The next measurement is to the top of the first rake of seats, that is, the top of the lower bowl.

This time he measures the distance and notes the angle of the device when it casts its beam—

there is an inclinometer on board. He repeats these measurements for the upper bowl: distance to

first seat and angle of device; same for the last seat. Christian is affixing a side view of the arena

into a two-dimensional Cartesian grid. With these numbers, he can plot the seating areas in the

speaker manufacturer's predictive software—silently filling the space with imaginary sound—to

calculate how exactly he should position the PA for precision, efficiency, and control (see figure

6).

Load-In
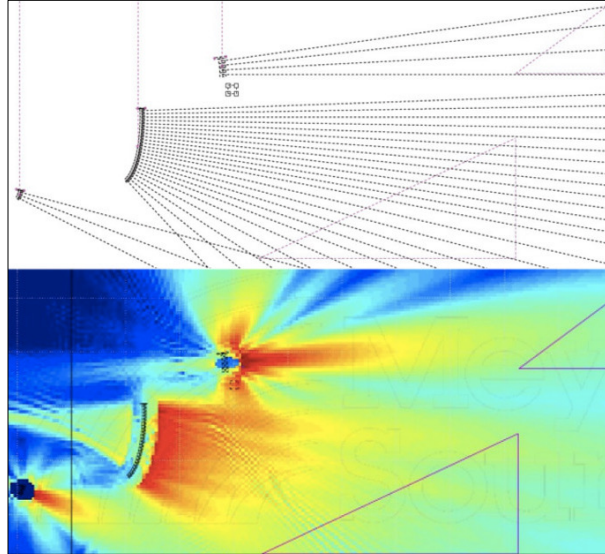
Figure 6: A sonic prediction for Corteo's PA generated by Mapp XT (Meyer Sound 2019)

The arena begins to fill up with people and equipment. The other sound technicians—

Davie, Dylan, and Charlie—have arrived by now. The team exchanges a few words of friendly

chit-chat, interspersed with pre-shift practicalities:

> "How was your day off? Found a pretty good ramen place."
> "Where's catering?"
> "I've got a couch in my room this week!"
> "Been to the hotel pool yet? It's nice!"
> "Radios? Lockers?"

Corteo's technicians arrived at that week's hotel in the wee hours between yesterday and the day

before. They had gotten on a bus after finishing load-out in the last city and settled into their

seats for a long drive. Yesterday, their only guaranteed day off this week, was spent sleeping in,

finding food, and exploring the new city, then getting to bed early to be ready for today: the

longest, dirtiest, most tiring day of the week. The sound technicians know they'll be trudging

around the arena all day, lifting, pushing, and dragging heavy, fragile things. In the afternoon,

they'll be crawling under the stage and maybe scuttling through the dark, filthy, 'no-man's land'

under the bleachers to make surreptitious cable connections between bits of gear. For now,

though, they'll look for breakfast, collect their radios, and deal with those other things when it's time.

Toast, coffee, helmet, boots, then on to the arena floor. Wordlessly, the sound technicians divide into their established sub-teams: Christian and Charlie on the south side of the stage, Davie and Dylan on the north side. Though they'll regularly talk over radio on the sound department's channel, the two sub-teams might not see each other again until lunchtime. The curtain that divides the arena in two is already going up and each team has plenty to do. Stacks of carefully wrapped speakers are starting to arrive, still cold from their truck ride from the last city. The speakers Corteo uses would have been matte black when they shipped from the manufacturer, but they have since been painted and decorated to blend in with the set. "The PA is funny because it's bright gold," Christian remarked to me one evening. "Is it invisible, or is it bleedingly obvious? I don't know."

Like all of Corteo's gear, the speakers are ferried by a huge team of anonymous day-labourers from the local area. After a bout of pointing and waving and please-and-thank-you-ing with the local workers, the four heavy, eight-foot-tall stacks of subwoofers, or subs, and the approximately two dozen smaller stacks of mid- and high-frequency speakers are pushed into place around the arena. Each sound technician duo, north and south, assembles one side of a symmetrical system (see figure 7). Each side has two main line arrays of speakers, left and right; a cluster of subs in the middle; smaller line arrays of 'delay' speakers for the arena's upper bowl (the 'delays' are closer to the audience than the other speakers; to align the sound from the two sets of speakers, the output of this set must be delayed by several milliseconds); and two clusters of surround speakers, hung over the lower bowl seating area.
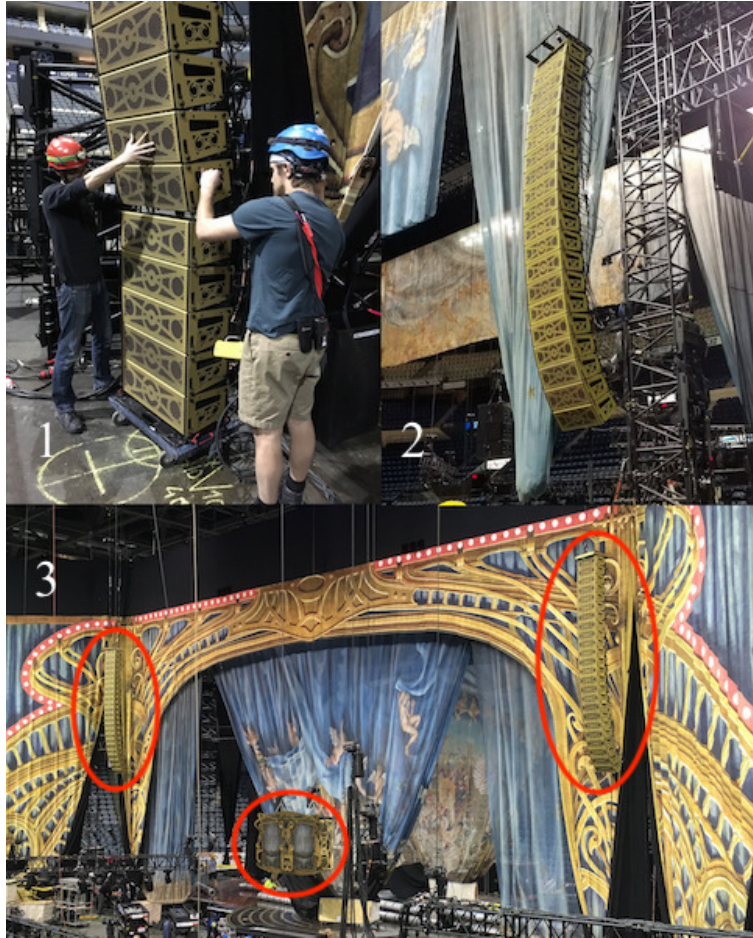
Figure 7: 1. Charlie (left) and Christian flying the mains; 2. A mains hang; 3. One side of the main PA and subs

As the technicians work, the sounds of the morning continue into the afternoon. Unrelenting but not unpleasant or especially loud—that is, if one can stay away from the truss assembly—the sounds follow the waves of activity around the arena. Acting as a kind of continuo for the day is the dull clank of steel and the shrill ping of aluminum; the grinding squeak of heavy-duty wheels; the sharp snap of spring-loaded road case handles; the thick smack of a three-pound plastic mallet against stubborn stage panels; the smooth woosh of thousands and thousands of feet of rubber-coated cable being dragged into place; the voices of workers and technicians echoing around the empty seats; the distant beeping of the forklifts reversing in the loading dock; the radio calls, embellished by static.

Load-In

Once the speakers are hung, the sound department divides once more, taking on one-person tasks, such as front-of-house (FOH) or monitor console setup, and band pit assembly (see figure 8). Three of the sound technicians spend the next couple of hours in a welcome, calm solitude as they methodically work through their respective tasks. This is also a time when each sound technician can make small improvements to the equipment they work with. Charlie might take an extra thirty minutes to improve the labeling on the keyboards; Davie might pre-emptively replace an old but not-yet-faulty cable before it has the chance to fail during a performance; Dylan might prepare a new backup headset microphone for one of the performers.
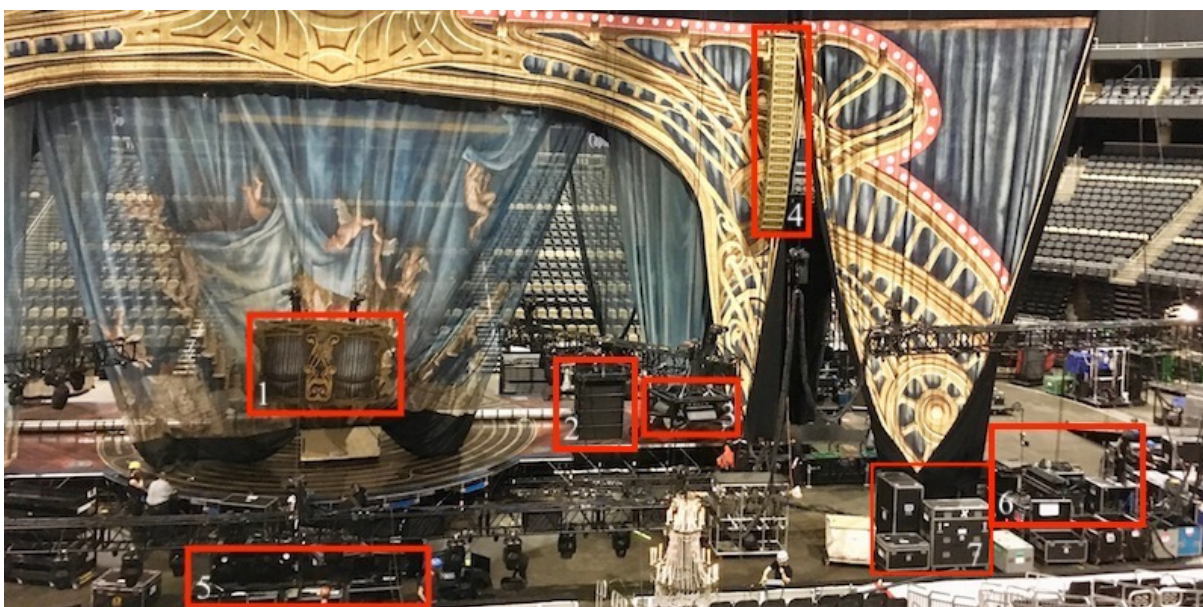
Figure 8: 1. Subs; 2. Delays; 3. Surrounds; 4. Mains; 5. FOH; 6. Monitors; 7. Band gear (keyboards)

The arena floor is still full of people and bustling with activity, and Christian, as head of sound, is the first point-of-contact for any inter-departmental negotiations that may come up. His project of setting up FOH is continually interrupted with radio calls and in-person conversations. Perhaps rigging, for example, is slower than usual, or maybe there is a peculiarity with the venue that requires the sound department to adjust their routine.

Load-In

Eventually, the modular, systematic, meticulous, solitary tasks each sound technician has been performing coalesce into a functional, inter-related system of musical instruments, mixing consoles, speakers, microphones, computers, transmitters, receivers, and signal processors. Linked by analogue and digital signals barrelling down a host of different cables in a variety of data transfer protocols, the sound system materializes, appendage by appendage, and, by about 5 p.m., is ready to speak.

"Good for line check?" asks Christian over the radio.

Confirmation from the others is swift. Each person is eager for this phase of the load-in to be finished. After line check, Davie can go home (i.e., to the hotel). Dylan grabs his in-ear monitors (IEMs) and proceeds to the bandleader's pit (see figure 9); Davie listens from monitors backstage, and Christian from FOH. Corteo's line check is a one-by-one test of about sixty channels of audio, usually one channel for each instrument (e.g., alto saxophone, female vocal microphone, snare drum).
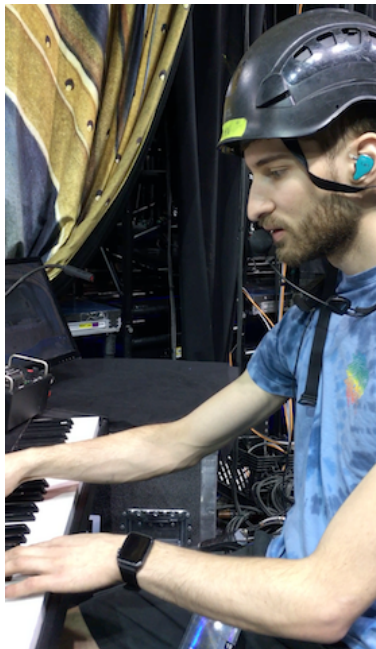
Figure 9: Dylan during line check (note his IEMs)

The purpose of the test is to make sure that the system, at its most basic, is functioning properly. A line check asks two simple but very important questions: 1) Do the instruments and microphones work? and, 2) Is the signal routed correctly? (In other words, is sound coming from and going to the right place?) If, for each channel, the answer is 'yes' for both questions, the line check is successful. If not, a series of ruling-out-the-problem troubleshooting procedures is enacted. Line check is a straightforward success this time. His work done for the day, Davie heads for the 6 p.m. shuttle back to the hotel. Dylan stays to work on the wireless equipment; Charlie and Christian stay to finish working on the PA.

A new set of sounds fills the arena. Many departments are finished for the day, so the industrial sounds of construction are gone. They have been replaced by the sound of finishing touches: the whir of a vacuum cleaner rolling over the warm-up mats backstage; the steady conversation of the lighting technicians speaking quietly on headset as they focus their lights; the flap of folding chairs being set out on the arena floor. These small sounds prevail until Christian and Charlie, after a quick dinner break in catering, make it back to FOH.

With the aid of a handful of ultra-precise microphones and a computer (see figure 10), Christian and Charlie begin calibrating the PA, or 'tuning the room.' Using equalization (EQ) and other signal processing techniques, they adapt the sound of the speakers to correct any deficiencies in the frequency response of the arena. To determine what those deficiencies are, Christian and Charlie fill the house with the rich "*shuuush*" of pink noise (as opposed to the bright hiss of white noise). This sound will characterize the next hour or so as they make adjustments and perform tests. Some adjustments are routine, such as time-aligning the signal of one set of speakers to that of another set. Other adjustments require a bit of experimentation. This week, there is a muddiness to the sound that can be balanced by reducing some frequencies

while gently boosting others. The goal is to produce a clean, clear, evenly distributed signal for every audience member.

Figure 10: Signal processing software at FOH

Once their detailed analysis and correction of the room's sonic signature is complete and the computer's response looks suitable—that is, even and balanced across the audible frequency spectrum—Christian and Charlie play a recording through the PA. They have a few go-to songs—one is "Morning," by Beck (2014). Christian chose that song because it is a well-produced, richly orchestrated pop song with instruments that showcase certain frequency bandwidths: voice, acoustic guitar, bass, drums, and percussion. He has been tuning PAs with "Morning" for years.

They play it loud, at show level, and listen to how it sounds in the room. This is a song they know well; they know how it *should* sound. For high frequencies, for example, they're listening for the wash of cymbals, the attack of the acoustic guitar, the clarity of certain consonants like '*t*' and '*s*'. They walk through the house—very dark because the lighting technicians are still working on stage—occasionally sitting in seats, occasionally traversing an entire row. Relying

on their ears and not a computer, they confer once or twice on what they hear. Christian 'describes' the sound by mimicking it with his voice (cf. Porcello 2004).

"Yeah, it's okay, but I find it a bit . . . *hongh—hongh—hongh* . . ."

To make this breathy, nasally sound, Christian loosely cups both hands together and covers his face. With the back of his tongue up near his soft palate, he vocalizes through his mouth and nose. The result is a simulation of an over-emphasis of mid-range frequencies that he hears in the singer's voice in the recording as it plays through the system. Christian and Charlie make a few more tweaks to the EQ. Confident they have the PA and the local acoustic under control, they head to the 9 p.m. shuttle, ready for tomorrow's premiere.

Chapter 2: In the House

> "Styles change," Daniel said. "Mr. Vanbrugh's theatre, there, is nothing like the theatres of your boyhood: it's all indoors, and ornate beyond description, and the actors are imprisoned on a stage, behind a proscenium."
>
> "Stay, I've been to a few such," said Jack. "I could not hear a damned word. My ears are ruined; too much early horseplay with firearms."
>
> "Your ears are fine. *No one* can hear what the actors are saying, in a place like that."
>
> Neal Stephenson, *The System of the World*

I have only rarely entered a Cirque du Soleil (CDS) arena show by the main entrance. Of the hundreds of performances I've attended, worked on, or observed, almost all of them have begun for me from backstage. During my fieldwork, however, I did walk through the front doors once. I got a ticket scanned and, a jacket bundled under my arm, I explored the crowded arena concourse. I smelled the tangy aromas that mingled from a half-dozen concession stands to form an odiferous united front of sweet, salt, and fat. Everywhere I looked I saw people—young families, couples of all ages, larger groups of twenty-somethings. The sound of thousands of individual, quiet meanderings reverberated in the high, cement hallway that circumnavigated the venue. People moved in all directions: entering the seating area; looking for food and drink; progressing through the bathrooms, whose layout was reminiscent of an industrial processing plant of some kind—in one door, out another. Though the concourse seemed crowded to me, the venue was operating at about 20% capacity. For an NHL hockey game, for example, this arena could seat more than twenty thousand people. For this show, there were about four thousand. Corteo does not open all the seats because the stage is not visible to large parts of the arena's

seating area. Instead, those closed-off sections are used for backstage areas for performers and crew. This leaves wide areas empty of people, light, and direct sound from the PA.

A CDS arena show cannot compare to a CDS big top show, as any CDS devotee will tell you. Arenas are not as intimate, since the distance from the stage to the 'cheap seats' (e.g., upper bowl) is much greater than it would be in a big top. Arenas have high, industrial-looking, bare-beamed ceilings, unlike the low, swooping, colourful canvas of a big top. Arenas are often inescapably associated with sports, hung as they are with local paraphernalia—regional pennants, retired jerseys—and giant scoreboards. Indeed, CDS arena shows are often installed on top of hockey ice, insulated by thick fibreglass panels, as opposed to a bare cement floor. Arenas have countless doorways and entrances, and innumerable sources of light, making a true, theatrical blackout impossible. They are also saturated by crass, apparently random branding (e.g., Little Caesars Arena, Bell Centre, FedEx Forum, PPG Paints Arena).

In its design, Corteo manages these limitations well. The show is unique amongst CDS arena shows in the way it divides the arena into two entirely separate seating areas. Audiences are often ignorant of the other side until the main curtain rolls up several minutes into the show. All other CDS arena shows place the stage in the middle of the floor, with audience members wrapping around nearly 270º. Because Corteo's set takes up so much floor space, the stage feels closer than it actually is. The wings of the proscenium arch, made of densely decorated curtains, angle towards the audience, suggesting walls. Two large, rococo chandeliers glow directly overhead, effectively 'lowering' the ceiling and contributing to a feeling of physical intimacy (see figure 11).

Figure 11: A pre-show view from the north side of the house

When I entered the seating area, the sumptuously decorated, gilt PA was immediately noticeable. On this show, the PA is a set piece as well as a sound source. It is big, but not overbearing, suggesting that the sound of the show might have similar characteristics. Other sound sources, though they cannot readily be seen, are the arrays of surround speakers, mounted in black steel frames above the chandeliers—the chandeliers are actually hanging *from* the surrounds. The seats were dark compared to the stage. A sea of heads descended, row after row, down the steep rake of the arena's lower bowl. Tranquil walk-in house music played quietly from the surround speakers, clearly audible over the murmur of the audience. For those audience members who have not spotted the surrounds, the lyrical melodies must seem to be emanating from thin air. I know this walk-in music to be a playlist of CDS songs from other shows; similar playlists have been provided for CDS's touring shows for years. To a casual listener, however, the background music is decorative but functional sound that helps mark the seating area as a special space, a new space, a private, sonified, curated, privileged space, an intimate, immersive

space that will soon be a site of many fantastical wonders. For me, the set is a fantastical wonder already. It seems incredibly large—a logistical impossibility—but is so inviting and mysterious that I can't help but feel drawn in. The steep rake contributes here; I feel compelled to move forward and down. The density of the audience helps too; gazing straight ahead at the set is the easiest way for me to not feel like I'm impolitely staring at other people, for they are everywhere and extremely close (some audience members obviate this potential awkwardness by gazing straight down at their phones). Even at this early stage in the evening—that is, before the show even begins—audiences are supposed to start to feel absorbed and emotionally connected to the world of Corteo.

In this chapter, I discuss ways in which sound allows for a sensitivity to, establishment of, and maintenance of an audience's emotional connection to Corteo. First, the sound is fundamental to what I'm calling the energy in the room, a phrase that sound technicians, musicians, and audience members often used in our interviews. This is an ethereal aspect of a performance of Corteo that seems to indicate the intensity of an emotional connection. Musicians often spoke about feeding off the energy of an audience, the main indicator of which is the sound that audience makes. Audience members, meanwhile, reported feeling energized and emotionally charged by the music. They also fed off each other's sounds; some learned how and when to make sound (e.g., applaud) by listening to others in the crowd. The front-of-house (FOH) sound technicians also mentioned being excited and energized by the crowd and the music. More specifically, they spoke about their ability to interpret and directly intervene in the energy in the room through the FOH mix. The musicians, the audience, and the FOH sound technicians are crucial elements in this sonic network of affective feedback loops that contribute to the energy in the room. Second, I outline three specific sonic strategies CDS employs to establish an

emotional, affective connection with Corteo's audience during a performance. The strategies are: using live musicians, an emphasis on danger and the conquering of danger, and what I call sonic orientalism. My discussion of these strategies is grounded in the theoretical work of circus scholars and is illuminated by interview data with Corteo's sound technicians and musicians, as well as by public intercept data. Finally, I discuss invisibility and inaudibility as part of a theatrical design paradigm that hides technology and technicians from audiences in order to facilitate and maintain an audience's connection to a narrative or performance. The sound in the house reveals and intensifies the shifting valences of visibility and invisibility among musicians, sound technicians, and audiences. Sound in the house simultaneously obscures and reveals, removes and emplaces; attention is drawn, displaced, and distracted in different ways; sonic cues encourage multiple interpretations, causing anxiety in some and elation in others. Because of the sound, audiences, musicians, and sound technicians can become both more and less visible to one another and even to themselves. I begin by briefly discussing audiences as agentive, modern listeners (as opposed to passive victims of spectacle) and provide a multivalent interpretation of the sounds audiences make.

A Listening Audience

The advent and widespread adoption of low-profile wireless microphone technology on Broadway in the 1990s—technology that is essential to Corteo's sound design—prompted a volley of pessimistic assertions from some theatre professionals. Many producers, sound designers, and musicians of the day believed that because of this new technology, audiences would be reduced to a merely 'hearing' audience, rather than a 'listening' audience (Burston 1998). Wireless microphones, they claimed, would render spatial relationships between

performers on stage and audience members in the house irrelevant, as the quality of a performer's voice would remain unchanged in the PA no matter where the performer was or which way they were facing.

These anxieties were not just about unchecked technological advancement. At their core was an assumption that audiences were bewildered, mystified, or duped by bright, blaring spectacle (see Debord [1967] 1994), but recent studies depict audiences as agentive and self-aware.[1] The anxieties of these theatre professionals also demonstrated a misunderstanding of *how* people listen at a large-scale performance, like a Broadway or CDS show. Listening is a cultivated, cultural activity for audiences (Bovet 2011), who, through the course of day-to-day activities that are inculcated by modern audile technique (Sterne 2003), have developed and nurtured listening as a skill. Audiences will—or are, at least, expected to—focus the bulk of their aural attention towards the stage. There exists here a supposedly clear distinction between undesired sound (noise), such as a cell phone ringing, and sounds that should be foregrounded (signals), such as music and dialogue (White 2011).[2] Audiences are assumed to be able to prioritize some sounds over others.

Corteo's audiences often know what is expected of them sonically when they attend a performance. If an audience member is unsure how or when to sonically engage in a performance of Corteo (e.g., with applause), they often learn by observing—and listening to—other audience members and adapt their sonic participation accordingly. Though agentive,

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[1] Audiences attend theatre, concerts, and other events for a number of reasons, including enjoyment, supportive and oppositional political activism, identity construction, and community-building (Behr et al. 2016; Briziarelli and Armano 2017; Jensen-Moulton 2016; Lopez 2003; MacAloon 1984; Tomlinson 2013; M. Williams 2014).
[2] Noise has been richly theorized in relation to race (Rose 1994; Sakakeeny 2010; Stoever 2015), Indigeneity (Robinson 2020), class (Sterne 2003), gender (Rodgers 2010), nation-building (Ochoa Gautier 2014), and capitalist political economies of music (Attali 1985). Circus scholar Paul Bouissac uses a signal-noise metaphor to describe circus generally: "the channels conveying a circus performance are practically noiseless, that is, they are totally filled with relevant information to the point of creating an overload" (2010, 25).

audiences may unconsciously reassert the expectations and assumptions of socially constructed forms of difference, such as class and race, simply by clapping at the right time. For circus, it is typical to applaud at the end of an acrobatic act, for example, but this response is neither inherent nor neutral. For an audience member to 'just know' how to 'properly' respond to and enjoy an artistic presentation requires a kind of "class-centrism" (Bourdieu 1968, 591), one that can reinscribe racial hegemony.[3]

Audience sounds cannot always be simply and neatly defined as unwanted noise or complementary sound. The sounds in the house at Corteo are nebulous and multivalent. Some sounds that Corteo's audiences make, like applause and laughter, are welcome, and indeed encouraged, even though they often obscure or mask privileged sonic material, such as music and dialogue. I provide an example of this encouraged masking later in this chapter. Other sounds an audience makes may be unwelcome, to be sure (e.g., a ringing cell phone), not because they mask privileged sound, but because they distract attention.

At times audience members are explicitly surveilled and spoken to by the performers on stage. They are urged to cheer, jeer, and catcall, and performers make a joke of 'incorrect' or tepid sonic responses to these calls. For example, Mauro, the main character, will make fun of cheers that are not loud enough during an impromptu on-stage soccer game with another character. Corteo's script has Mauro speaking to his opponent but making joking asides to the audience:

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[3] Dylan Robinson shows how the "terms of engagement" in Western art music performance are replete with race- and class-based assumptions (2020, 7; see also André 2018; Thurman 2019). Paul Gilroy cites criticism of Wynton Marsalis's *Jazz at Lincoln Center*, which some see as a venue for the "reification and commodification" of notions of (and responses to) black expressive culture (1993, 97). In her discussion of racialized listening, Jennifer Lynn Stoever states that the "binary hierarchy of proper/improper marks one border of the sonic color line; the socially constructed divisions between sound/noise and quiet/loud mark two others" (2015, 12); these sonic hierarchies apply to audience sound, such as laughter and applause. Dorinne Kondo, writing about theatrical performance, asserts that "Laughter and enjoyment—not equally distributed in the audience—can promote consent to [racial] hegemonies" (2018, 11).

> "Your team: USA!" (or whatever country the show is in—this always elicits loud cheering);
> ". . . my team: Spain!" (Mauro's country, which gets essentially no cheers, nor is it supposed to—that's the joke)

For Corteo's audiences, 'noise' is sometimes welcomed and 'sounds' are not always complementary. The sounds an audience makes—solicited or otherwise—combine with Corteo's sound design, musical compositions, and stage performances to make up the sound of the show in the house. The soundscape in the house is crucial to the sonic, affective experience of the audience, sound technicians, and musicians.

The Energy in the Room

The energy in the room can mean two things when speaking about sound; both are relevant for my discussion here. First, sound is physical. Sound waves are energetic propagations of molecules in space that exert physical pressure on our bodies.[4] The bigger the wave—that is, the greater the amplitude—the louder the sound and the greater the pressure. Sound is heard, and its characteristics interpreted, in a diversity of ways (Howe 2020). A sound wave can be transduced, for example, by a listener's ear or by an electrical device such as a cochlear implant.[5] Sound can also be felt. Bodies respond to the physicality of sonic energy: tissues and liquids and air resonate within us in sympathy with sonic energy, and are deeply impacted during Corteo's loud, sonically intense performance.[6] One audience member described Corteo as "loud in a good way" and that the music is "surrounding the whole audience [and is] all-encompassing" (interview

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[4] Sound waves have definite wave lengths (e.g., the note C1, or 32 Hz, has a wavelength of about one metre).
[5] See Mara Mills' (2012) disscusion of the history and politics of cochlear implants.
[6] Corporeal vibrations of sound have been explored by scholars of war and torture (Cusick 2008; 2013; Daughtry 2015; Friedson 2019), sound art (Eidsheim 2015; Ouzounian 2006), and deaf studies (Friedner and Helmreich 2012).

with the author, 14 Dec. 2018). Another audience member said that the sound lets "you get the full experience. You feel it. It's really in your body" (interview with the author, 7 Feb. 2019).

The physicality of sound is also leveraged to delineate Corteo's spatial relationships. For traditional circus music, before electronic amplification, simple loudness was important, both to draw audiences in before the show and to reach spectators in a big top tent (Baston 2016). With the greater acoustic control that comes with sophisticated amplification systems, varying degrees of loudness can be used to delineate physical boundaries and enforce spatial or architectural relations (LaBelle 2010; Sterne 1997). This is true on Corteo; delimited sonic spaces abound— the most obvious ones are the divisions between backstage, the house, and the arena concourse. In the house, Corteo's sound technicians "cover" the seating areas with sound not just by aiming the speaker arrays and adjusting the levels of different frequency bandwidths, but also by precisely and meticulously adjusting the time, within fractions of a millisecond, at which the actual sound waves will physically hit the ears (and bodies) of an audience.

A second meaning of 'energy in the room' relates to affect. Affect is the intensity of an embodied response to an affective stimulus, such as Corteo's music; it is felt as the feeling of having feelings. The affect, or intensity, of the energy in the room during a performance of Corteo is directly influenced by sound. On Corteo, the priority for the musicians, sound technicians, and artistic staff is to create an affective setting where audiences can experience the intensity of their feelings, though it does not matter to Corteo's staff what specific emotions individual audience members feel. An audience member, for example, might experience affect as the intensity of feeling moved while watching Corteo's evocative final scene in which Mauro rides his bicycle through the air and 'into the light' (i.e., ascends to heaven) with the entire cast volubly bidding him farewell over richly voiced organ music. The loud, funeral music; the

voices of the cast members; the reverberation of the space once the long-held chord ends; and the applause of other audience members shape the feelings that people experience. It is important to note that while Corteo's musicians and sound technicians work to create an affective setting *for audiences*, they are themselves subject to that setting as well. They experience the affect of a performance, along with audiences, as the energy in the room.

Affect is the intensity of feeling feelings, not the emotions associated with those feelings. Affect and emotion are related an intertwined but distinct. "Emotion is qualified intensity," writes Brian Massumi, "the conventional, consensual point of insertion of intensity into semantically and semiotically formed progressions, into narrativizable action-reaction circuits, into function and meaning. It is intensity owned and recognized" (2002, 28). Emotion is an expression of the "capture and closure of affect" (Massumi 2002, 35), and is defined privately and individually. In other words, emotions, such as sadness or joy, derive from affective experiences and are only named by the person having the experience. Affect, on the other hand—what is described as "public feeling" by some scholars (see Gray 2020), and as "emotional response," "emotional connection," "emotionality," "heart," or "feeling" by my interlocutors—is not contingent on fixed emotions, such as sadness or joy. Indeed, named emotions can only be experienced *after* an affective experience. Terms like 'emotionality' are used colloquially to describe affect. I adopt affect theory here because an analysis of the *intensity* of a feeling aligns with my ethnographic interview data. Again, the specific emotion is not important; my main concern here is to demonstrate that audiences, sound technicians, and musicians feel *something* from the sound and from each other, and that this mixing of feelings, affect, intensity, or emotionality is constitutive of the energy in the room. This is a feedback system of feeling, what LaBelle would call a "network of psycho-emotional force" (2010, 168).

Chapter 2: In the House

The energy in the room shifts according to the actions and desires of the people within the

system: how the musicians perform and the sound technicians mix; how an audience responds

(e.g., with laughter or applause); how the musicians and sound technicians are communicating

privately through their talkback or coms loops; how the musicians are communicating with each

other with improvisation, interplay, and musical inside jokes.

Sound technicians are cognisant of the energy in the room and are sensitive to their role

in managing it for audiences. Ana, a FOH sound technician on a different CDS show, described

the relationship between sound and room energy:

> I think for you to be at the top of your game as a sound mixer, you also need to be in
> touch with not only what the musicians are doing tonight, but what the audience is
> responding to tonight. And I think some crowds, like the Friday night or Saturday night
> crowd, you could probably push it a little bit louder. But the Wednesday night crowd if
> you do that, you're just going to make noise. It's not going to enhance their experience if
> it's just super loud. It can be as much as half a decibel difference. Very subtle, but you
> can feel the energy level changing in the room. (Interview with the author, 9 Apr. 2019)

For Ana, the nebulous notion of room energy can be reliably perceived and can be manipulated

in a precise, measurable way. Using sound, she seeks to enhance an audience's experience by

responding appropriately to the musicians and the audience itself. This is not just sonic energy or

loudness as she noted; room energy does not necessarily correlate to volume (i.e., sound pressure

level). Indeed, simple, indelicate loudness can distract audiences from the show and can

therefore sap energy from the room. The energy in the room is affective it is the intensity of an

audience's emotional response. Jean-Michel, Corteo's sound designer, discussed the energy in

the room, but specifically how it changes the way musicians play, and how that affected him at

FOH. He remarked:

> with the audience reacting, it's going to give you a different show, a different result from
> day to day . . . because the Sunday mornings are a different crowd than the Friday
> afternoon or Friday night when everybody comes from lunch or dinner with a nice bottle

of wine. The musicians, they feel that. They get the energy, and they suck it up and then they give a different performance. (Interview with the author, 7 Dec. 2018)

Both Ana and Jean-Michel spoke about the interplay of the different 'sources' of room energy: the audience, the musicians, and themselves at FOH. They noted that the different sources fed one another and were indeed constitutive of one another. They also remarked on the weekly cycle of audiences, implying that Friday and Saturday crowds are more apt than 'school-night' crowds to respond to—and elicit—energy in the room. They felt this energy, responded to it, and contributed to it. For Davie, the energy in the room could also act as a barometer for his own performance at FOH if he was not feeling confident or secure:

> If I'm questioning myself at front-of-house, what I start looking for is crowd response. [. . .] If they're responding to the show normally, then I can relax a bit. In the end, it *really* matters what they [the audience] think. If they're having a good time and it seems like their response is what it normally is to the show, then really I should relax and everything's fine. (Interview with the author, 4 Jan. 2019)

Davie used room energy and audience reaction to guide his work at FOH, and, like all the FOH sound technicians I interviewed, characterized himself as equally receptive to and contributing to the energy in the room through their interactions with sound.[7]

Audiences also understood themselves as receiving and contributing to the energy in the room. They listened to the music and to each other both to draw from the energy in the room and to contribute to that energy; some listened for sonic cues for how to contribute. Audiences' most common contributions was through their applause and laughter, which many audience members saw as an expression of encouragement for the performers. Audience members sometimes drew from and contributed to room energy with physical gestures, such as waving; some even got up and danced.

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[7] David Hesmondhalgh and Sarah Baker (2011) found that in smaller music venues and clubs, observing audience reactions was not always a reliable way to gauge audience engagement.

Some were more moved by other people's reactions to an act than by the act itself. For instance, one person commented on the magic of hearing children's voices in the audience during the 'Helium Dance' act. In this act, the Clowness character, played by a woman who is about three feet tall, promenades through the house amongst the seated audience, suspended by several enormous helium balloons (see figure 12).

Figure 12: The Clowness standing on Mauro's outstretched hand during Helium Dance

She is buoyant, counter-balanced by the balloons, so most audience members can easily support her weight with their hands. In the house, she leaps from person to person, each forming a kind of platform with their hands against which she can kick off. She wears a wireless microphone hidden in her costume, so her voice is clearly audible as she calls out encouragingly to the audience, laughing with pleasure when she is able to leap especially high. She also lightly teases and cajoles when someone pushes her in the "wrong" direction. This is part of the act; Mauro, the protagonist, is on stage imploring her to return, while she is out in the house, having too much fun to stop. The lighting in the house is dark blue with mottled white highlights, dim enough that the focus remains on the Clowness, but bright enough so audiences can discern other individual facial expressions in the crowd. The music, a minor-key jazz waltz, is gently motive

and improvisatory, like the act itself. The quiet violin, accordion, piano, and (occasional)

contrabass solos are preceded by an improvised modulation, devised and called out to the band

on-the-spot over talkback by the bandleader (e.g., "Okay, let's go to C minor with Steph

[violin]."). It was in the context of this act that one person mentioned hearing the voices of

excited children:

> It's a part of the show to hear people laughing when the woman was in the arena, walking
> through the air with the balloons. It was magical to hear children shouting, "Yeah! Over
> here!" Without that, something mysterious in the show is lost.[8] (interview with the
> author, 7 Dec. 2018)

For this audience member, the sound of the audience itself was an integral part of the show and

added to the intensity of their experience. Contrary to this understanding of audience sound,

some audience members thought that making sound generally, including applause, would be too

distracting and dangerous for Corteo's performers. Others were nervous about clapping at the

wrong time and deliberately listened to and watched other audience members to learn how to

sonically participate 'properly.' However, most people remarked that audience sound was an

important part of the experience. As one person put it, "If I wanted to have peace and quiet, I

would have stayed home in my living room!"[9] (interview with the author, 7 Dec. 2018). Some

understood audience sounds as a kind of affirmation that showed that the rest of the audience

was as engaged in the performance as they themselves were.

Other audience sounds beyond applause and laughter contribute—and are integral to—

the energy in the room. Silence, for example, can also build tension in an already energized

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[8] "Ça fait partie du show d'entendre les gens rire quand la fille se promenait dans la salle avec la balloon dans l'air.
Ç'était magie d'entendre les enfants crier: « Ouais ! Viens par ici ! » Sans ça, ça enlève quelque chose cachée du
spectacle."
[9] "Si je voulais avoir la paix, je resterais chez nous dans mon salon!"

room. An audience member described a specific moment of silence that occurs approximately

twenty-five minutes after the show begins:

> The silent parts I find really special, especially when they light up both sides of the audience and for the first time you fully see the other side. You know that [the other side is] there but [when you see it] you go, "Oh, shit!" [impressed, in awe]. It's really quiet, and it becomes really intimate, and it draws it all in. (Interview with the author, 11 Jan. 2019)

The moment they describe follows about twenty seconds of a Baroque-style church organ toccata

that builds, with rallentando and crescendo, to a loud, densely voiced *tierce de Picardie* chord

that audiences can feel physically pushing against their bodies. The stage lights are then

suddenly aimed at both sides of the audience for a moment while the stage plunges into darkness

(see figure 13). The loudness of the chord corresponds with the brightness of the light. The

chord, after being held for several seconds, fades away in a long (mostly synthesized) reverb tail.

In the reverb decay and ensuing silence, the lights on the audience fade to black and a dim light

illuminates the stage, where an acrobat, two musicians, and three costumed angels have appeared

as if by magic.

The contrasts between loudness and silence, light and darkness, contribute palpably to the

energy in the room. While there are intersensory connections throughout Corteo (e.g., the music

follows the action on stage), the integration of the visual, aural, and corporeal in this moment is

especially striking. There is an apparently involuntary physical reaction amongst audience

members to the intensity of the sound, depth of the ensuing silence, and brilliance of the light.

They squint, breathe deeply, stare ahead in stupefaction, gasp, or even turn away. As the focus is

unexpectedly turned upon the audience itself, audience members are forcefully reminded of their

own bodies and the thousands of other bodies in the house.[10]

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[10] The first time the two sides of an audience are revealed to each other occurs near the beginning of the show, a few minutes before the first acrobatic act. The stage-wide translucent scrim rolls up on both the north and south sides of

Figure 13: A dark stage and well-lit seating

It is in this moment that the 'Aerial Pole' act is prepared. This is a slow, sensuous pole

dance in which the pole itself seems to be airborne. The pole flies smoothly around the stage—it

is attached to a steel cable and an automated winch controlled by an automation technician at

FOH—as the nearly bare body of a female aerialist grasps onto it in various poses and postures.

Alain, the male singer, is onstage with Camille, the guitarist and accordionist; they are the

soloists for the quasi-flamenco accompaniment. The aerialist's movements emphasize the body,

eliciting a kind of corporeal sympathy when watching circus acrobats and aerialists. Peta Tait

describes this sympathy:

> Viewing pleasures or anxieties arise from the fleshed motion of flying action that evokes
> a body momentarily freed of everyday limitations, its muscular solidity carried away by
> invisible 'lines of force'. This suggests kinetic pleasure from a fleshed perceptual
> awareness that defies the weight of a lived body and the density of its habitual identity
> patterning. (2005, 151)

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the stage; the move is emphasized by a musical crescendo and an intensifying of the stage lighting. However, in this initial reveal, the opposing audience is lit by reflected stage light. During the moment presented in figure 13, the stage lights are turned on the audience directly.

The pleasure of *viewing* an aerialist's body suspends an acknowledgement of that aerialist's aches and exertions, their sweaty palms and cold feet. Instead, audiences feel, through "fleshed perceptual awareness" the joy of the sensuality of an aerialist's apparent weightlessness, however temporary that weightlessness may be.[11] The movements of an aerialist's body draw audiences in somatically and multisensorially.

There are numerous other silences throughout Corteo (see chapter 3), some of which align with the traditional circus music tropes of tension-building drum rolls and chromatic runs to heighten the sense of danger (Baston 2016). Silences are not always energetic, however. When I watched the show from sparsely attended seating areas in upper balconies and far from centre stage, I found the silences isolating, and felt that they sapped what little room energy was present. I was able to discern the source of each clap, laugh, and gasp. The sounds were exposed and, since sound is how I as an individual audience member interacted with the show and with the strangers around me, I felt equally exposed and uncomfortable. It made me not want to participate. I found in those cases that room energy could be localized within the arena.

From a distance, the energy in the room became just one more thing to observe as part of a large-scale intermedia spectacle, rather than a thing to participate in and contribute to. Closer to the stage and closer to the centre, where I was more densely surrounded by people, my own sounds melded with the sounds of those around me. Participating in and contributing to the show anonymously (*asonymously*?) made it more fun and more likely for me to participate and contribute; I felt less inhibited and more immersed in the energy in the room. Feeling engaged by the room energy is not just a matter of being enveloped in the intimate, calibrated sound of the

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[11] Scholars note similar kinds of corporeal sympathy and sensuality when listening to a voice (Barthes 1977; Dolar 2006; Eidsheim 2015; Rahaim 2012).

PA. There can be sections of an arena that are significantly less energized; there is often a correlation between proximity to the stage, density of the audience, intensity of room energy, and higher ticket prices.

The energy in the room can be sensed differently at different points in the show. Roger, the bandleader, remarked that memory, audience "tranquility," and musical cohesion amongst the band members changes how he feels the energy in the room:

> There are parts towards the end of the show you can feel the audience's response and it brings a lump to my throat just about every night. As we get towards the end of the show, so many memories come back to me personally, having performed this show during some very tragic moments in my own life, and knowing that people in the audience are probably experiencing the same thing, it makes a difference to how we perform. It's a beautiful attachment. If the sound is right, the feel is right, and the tranquility in the audience—as if everybody is being taken in by this moment—as a performer, it's just easier to put my heart into what it is I'm playing. And I feel it from the other musicians as well. And Bobby, the bass player said, "Man, this moment is just so beautiful, it gets me every time." And we're talking about a *bass player* here for heaven's sake, you know what I mean? [*laughs*] I really feel the heart in the band. As we play around with the dynamics in the house or in our in-ears, I get the sense that we just all gel together to create these emotions. It's a beautiful feeling. (Interview with the author, 18 Jan. 2019)

Here Roger was speaking of the final scene in which he plays the organ accompaniment for Mauro's ascent to heaven by bicycle. He noted that the energy in the room can change how he plays. When he feels intensely moved, he performs with more personal, emotional intensity, which is in turn felt by—and affectively impacts—the audience, the sound technicians, and the other musicians. Like Roger, Ana acknowledged the sound technician's role in creating these affective moments through sound, and, also like Roger, she relishes these moments and her sensitivity to them:

> When I'm mixing front-of-house sound specifically . . . I have a direct impact on how the audience is experiencing that show. It can either take them out of the moment or it can keep them in and help them to really experience the story and the emotion that we're trying to tell at that moment. That's what I love the most about my job: when I look around and I see that everybody is engaged with what's happening. (Interview with the author, 9 Apr. 2019)

Here both Roger and Ana noted that a strong connection with the audience through the music validates their professional work and contributes to their own deeply personal connection to the show. The intense emotionality during certain moments, created together by the band playing the music, the audience audibly responding, and the sound technicians adjusting the dynamics (both in the house and from backstage at monitors), is an important part of the energy in the room. Affective connections with an audience are emphasized by the energy in the room, but Corteo also has deliberate strategies for making those connections. I now move to a discussion of three such strategies.

Making an Affective Connection

Through music and sound, the sound technicians and musicians facilitate and foster an audience's connection to the show. This happens continuously throughout the performance in ways I outline below. While Mark, Corteo's artistic director, is careful to leave room for a breadth of emotional interpretations, it is clear that he thinks an affective connection of some kind is one of the goals of Corteo:

> I don't think we can be too prescriptive of what we do. If we say, "These are the emotions I want you to feel," you're excluding a lot of people that are sitting in the audience. This show has toured all over the world. It has toured to people with different cultural backgrounds, different language groups, and a whole different set of subjective information that they come into the show with. We have individuals coming in of all ages and backgrounds. If we are too prescriptive in our intent, I don't think it will work. There needs to be a bit of looseness to the emotions. (Interview with the author, 23 Jan. 2019)

Mark is not prescriptive about an audience's felt emotions. He believes that the intensity of a feeling matters more that the feeling itself. Mark also intimated that what an audience member brings with them emotionally will impact how they connect with the show, just as Roger brings his personal experience of loss to his performance of the final scene. As a starting point for these

affective connections, each audience member should be absorbed by the show's fantastical, intermedia 'world' and be immersed in sound. Like all CDS shows, Corteo's incidental music should be part of a cinematic soundscape. Lynda Paul writes that "music is used by Cirque du Soleil in part as a mood enhancer, similar to the way it is often used in film, as a non-diegetic mode of 'setting the scene,' providing to all onstage visuals a sense of underlying affect" (2012, 65). The story and music should seamlessly and cinematically flow into and from one another, with the music in perfect synchrony with the stage action.

Corteo, like most CDS shows, uses live musicians to help connect with audiences. The music itself is important; during most of my public intercept interviews, someone effectively said, 'the music adds something to the show.'[12] For many audience members, the music and sound improved the overall experience of attending a performance of Corteo. Some people went further, remarking that the liveness specifically made watching the show "more worthwhile than just listening to a recording" (interview with the author, 7 Feb. 2019). Still others felt the live musicians made the show more impressive and feel more authentic. In this context, authenticity refers to what Helen Stoddart calls "spectacle of actuality" (2000, 80). In circus performance, people on stage are, for the most part, actually doing what they appear to be doing. The woman really is floating over the audience suspended by nothing but a bunch of balloons. The juggler really did do a backflip before making the final catch. That acrobat is actually doing a handstand atop an unsupported, twenty-foot ladder. Those really are live musicians playing the music.[13]

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[12] Of the twenty-two public intercept interviews I conducted, eighteen, or 78%, expressed this kind of idea.
[13] For a CDS show like Corteo, the spectacle of actuality is further wrapped in representational theatrics: the performers are doing handstands and backflips but are simultaneously representing characters from a script and presenting a contrived narrative. For example, the handstand atop the ladder in Corteo is a real handstand, but it represents that character's overcoming of obstacles so his love and admiration for another character in the story might be requited. However, the same acrobat performing a handstand backstage atop the same ladder is just doing a handstand.

People on tour also believe that live musicians allow for a unique connection with the audience through sound. When I asked Mark, Corteo's artistic director, why Corteo had live musicians, he simply said, "It's better!" (interview with the author, 23 Jan. 2019). Mark elaborated; he spoke about the importance of the band being able to follow the action on stage, interact with the audience, and add to the energy in the room with a solo. In a separate interview, the assistant bandleader, Phil, also remarked on the value of live musicians for the audience's experience of the show:

> I think and I hope Cirque du Soleil realizes how precious it [live music] is, and how much it steps up the quality of the show to have a live band. All those little details we talked about [closely following and adapting to stage action], I really think the audience notices, and I think that it fits *perfectly* with what is happening on stage. It's impossible to have this with a computer or with sequencers. (Interview with the author, 17 Jan. 2019)

Phil thought the show itself was drastically improved with live music and that audiences can recognize the higher calibre of performance. As both Phil and Mark stated, on Corteo—as in traditional circus—the musical accompaniment must align with the action on stage.

Synchrony between music and stage action is a centuries-old, fundamental element in circus to which audiences respond positively, and indeed, have come to expect. The audience members I spoke to often mentioned how Corteo's music was "timed perfectly," and that it matched the mood or scene. A small group of audience members remarked:

> "The music definitely intensified it [the experience of the show]."
> "Yeah, definitely."
> "And the movement of the bodies and the synchronization of the sound, and the climax of how everything worked together with the sound and the movement. It was like a feeling that you have." (Interview with the author, 31 Jan. 2019)

Building on Paul Bouissac's (1985) and Kim Baston's (2016) work, I call the apparently perfect alignment of music and stage action an illusion of synchrony, which is successful when audiences are unaware that (or cannot discern whether) the musicians or the performers on stage

are leading. The show becomes a single, seamless, intersensory product, which, as Phil noted, is only possible in circus with live musicians. True synchrony is illusory because one element is always following the other. Sometimes the band follows the stage action, sometimes the people on stage follow the music; who is following whom can shift from moment to moment. The musicians are particularly focused on following the stage action closely and precisely, but some acrobats try to follow the music closely too. Ideally, the notion of leadership, be it from the band or from the stage, disappears entirely for audiences—the music and the physical gestures should seem perfectly synchronized. Intellectually, audiences may understand that true synchrony is illusory (*somebody* must be leading!), but Corteo's *apparent* synchrony is affective, and audiences consistently responded positively to it.

By framing the synchrony between music and stage action as illusory, I am emphasizing a unidirectional notion of time and experiential influence. My theorization of an illusion of synchrony implies an irreversible sequence of events (e.g., the acrobatic tricks and associated sonic emphases), and an equally sequential mode of perception for musicians, acrobats, and audiences. I frame it this way to reflect the musicians' descriptions of "tightness" between the band and the performers, and the behind-the-scenes work that goes into achieving this tightness. To facilitate moment-to-moment tightness on Corteo, leaders do emerge and important sequences of activity are established. However, "recollections, retentions, protentions, and anticipations which interrelate the successive elements" (Schütz 1951, 88) significantly influence the *perception* of this tightness, or synchrony.[14] An audience member might perceive a synchronous music-action event because of their own expectations and memories, as well as the context of perception. For audiences, the various influences on the perception of synchrony may

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[14] Harris M. Berger (1999) applies the notions of protention and retention to the perception of musical tonality; Matthew Rahaim (2012) applies these notions to melodic vocal performance.

operate dialogically in a network of individualized feedback loops. Audiences might expect that the music and stage action be synchronized, an expectation that could make the synchrony seem less illusory.

Stephanie Jensen-Moulton, following Michel Foucault, discusses the synchrony of music and gesture in CDS shows as a form of sonic discipline. She asserts:

> The gesture and obedience of the bodies on stage are inextricably linked to the music's disciplinary force. Music and body operate as one in Cirque's human geography; if an artist misses an acrobatic cue, the live band repeats the musical gesture until that extraordinary body has performed its architectural function. (2016, 213)

There are many instances during a performance of Corteo in which the band may repeat a phrase to make room for a missed trick (e.g., a dropped juggling club).[15] Building on Jensen-Moulton (2016), I think of these moments of repeated physical gesture, in which musicians are prepared to extend a particular musical section to allow for a dropped club, for example, as a kind of *passive* musical discipline. In such cases, music is not an unyielding, metronomic taskmaster, but a flexible, personalized accompaniment, ready to push, be pushed, or sit idle, depending on what is required. Precise, strictly timed coordination between the band and the stage is not necessarily the focus in such moments. Instead, the larger framework and overall progression of the act is the main focus: musical section A is followed by musical section B, the transition to which is cued by the completion (or repeated failure) of trick X. This musical and gestural script is more algorithmic than strict or precise. This script is what Foucault would call an act's "*time-table*": its "rhythms . . . particular occupations . . . [and] cycles of repetition" ([1977] 1995, 149, original italics). There is room to move within the temporal structure to align the length and position of musical phrases with nightly variations of physical gestures.

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[15] CDS shows typically allow performers three attempts for most tricks (e.g., juggling). Other more dangerous, physically demanding, or time-consuming tricks might be abandoned after a single attempt.

On Corteo, an act's musico-gestural timetable constantly develops through several phases of communication. During the early arena remount rehearsals for Corteo, for example, many of the performers didn't know the band would (or could) follow their act so closely, or if they did know, they weren't exactly sure how it would work. Phil noted that in general, circus performers are used to practicing with an unchanging playback track only, and it takes time for them to acclimatize to performing with a live accompaniment. Using juggling as an example, Phil described a phase of implicit communication amongst the band and the performers on stage:

> In the beginning, these acts were provided with music. They're training with that music. It's almost good that they don't realize that we can adapt so much! But they eventually do. They realize that, "Oh, okay, if I drop my [juggling] clubs, they're actually going to wait for me." And then they realize how *amazing* it is! Some people actually listen to the music, and they're building their acts and the way they choreograph all the tricks in a musical sense, a little bit. (Interview with the author, 17 Jan. 2019)

The way Phil described the rehearsal and performance process indicates that music is not a strict, disciplinary force. Musicians are watching and performers are listening, implicitly communicating with each other with their own means: music for musicians, gesture for performers. Phil believes a performer's musical awareness is essential to sustaining the illusion of synchrony. He implied that performers are not explicitly told that the band will follow them no matter what, but once they realize this is the case, they will adapt their act accordingly—that is, adjust the act's timetable—to more closely align with the music. At this stage in the rehearsal and performance process, internal communication between Phil and Roger becomes essential. They constantly discuss the show and are able to enhance the illusion of synchrony—or tightness—in certain moments by adjusting the music slightly. Phil remarked:

> We talk about this, me and Roger, always. "Oh, you see that it's been five shows that he doesn't really finish his trick [before] we go to that section. What if we just added two bars?" And it's just like that. We say, "Okay, in the next show, I'll try it." And we don't even have to tell the band, really. We just *do it*. If your call is clear, everyone follows, especially now that we know the music so [well]. We play it every day. We have that

> flexibility. No one is freaking out if we stay two bars on a section. That's how we polish and make it as tight as possible. (Interview with the author, 17 Jan. 2019)

Here Phil described an idealized scene when he and Roger communicated with each other to determine a solution to an asynchronous moment in the show. They then communicated with their cue calls to the band to execute that solution, leaving the performer on stage out of the discussion. In cases like this, the band can adjust the timetable of the act independently to improve the illusion of synchrony. However, sometimes Phil needs to discuss a solution with the performers themselves, for example, to manage moments when the band and the performers had been mistakenly following each other. Phil elaborated:

> I can talk with juggling [for example] every week: "Hey, do you feel like you're waiting for me, because I'm waiting for you!" Sometimes it's this, you know? They're waiting for the music but then you're waiting for them to do the trick. "Oh, okay, so you're actually waiting for me! Okay, so I'm just going to *go*!" And then, the next show—*aie* [impressed]—it's even tighter! (Interview with the author, 17 Jan. 2019)

In this case, the music was understood as an *active* disciplinary force by the performer—they thought they had to strictly follow an established musical structure. With another small adjustment of the act's timetable, however, music can again be understood as a passive disciplinary force, one that has a definite, but flexible, structure. Small breakdowns in the illusion of synchrony like the ones Phil described are usually imperceptible to the audience, but by working with an act through various phases of communication, the musicians and the performers on stage can tighten each performance, which ultimately strengthens the affective connection to the audience.

Music on Corteo can be an active disciplinary force as well, in which performers on stage must follow the musical phrasing. Though still working within a timetable, an acrobatic act may have certain gestures whose specific timings are defined by music. The precise timing of specific physical gestures is what Foucault calls a "*temporal elaboration of the act*," in which "a sort of

anatomo-chronological schema is defined" ([1977] 1995, 150–51, original italics). With a temporal elaboration of a gesture, bodies must move in a certain way at a particular time, following "an obligatory rhythm, imposed from the outside" (Foucault [1977] 1995, 151). If this temporal elaboration is neglected or ignored, there are definite, observable consequences. In Foucault's example, soldiers would not march in-step and their collective movements would be inefficient. For Corteo, the illusion of synchrony would be momentarily shattered, and audiences might become disconnected from the show.

I observed an example of music as an active disciplinary force on Corteo during the introduction of the acrobatic finale, 'Tournik.' Tournik is a male group act centered around an matrix of six high-bars, like the ones used in competitive gymnastics. At the beginning of the act, the leading acrobat must leap up and grab one of the high-bars at a the end of a specific musical phrase. This is an important moment for the band and for the music. There is a key and tempo change, and Alain, the male vocalist, sings a melismatic improvisation over two chords that are emphasized by a dramatic, percussive sound effect. The music leading up to this physical cue is a recurring minor-key organ theme that audiences will have heard several times by this point in the show. The theme has a steady, tonally predictable chord progression (see figure 14), but the cue deliberately disrupts it (see figure 15).[16] In bar 12, the music moves directly from the third iv-chord to an entirely different piece for the Tournik act itself. For the abrupt transition to make musical sense, it has to come on a specific beat. Here the musical phrase is more important than the arbitrary timing of individual acrobats. When this cue was not synchronized, Roger, the bandleader, would notify a stage manager or Mark, the artistic director, who would then discuss

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[16] I included chord numerals in this transcription because the theme is transposed each time it occurs. The key in the transcription is from Corteo's CD (Cirque du Soleil 2005). The transcription is significantly simplified for clarity.

the cue with the acrobat in question.[17] This was not a case like those described above, in which the acrobat or the band could adjust the timetable of the act slightly to tighten up the performance. In this case, the musical phrasing and transitions are predetermined, and the acrobats must conform to that moment of temporal elaboration. Failing to do so leads to an intervention with an authority figure, but more importantly, it reveals a breakdown in the illusion of synchrony.

Figure 14: The full recurring theme, composed by Maria Bonzanigo, 2005

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[17] I should note that performers are not disciplined or punished for missing this kind of cue. Instead, the artistic director or a stage manager will usually watch a video with the performer of a show in which the cue was executed correctly so they can learn the timing.

Figure 15: The Tournik transition with the bar-grab cue marked in red

Roger and Phil both spoke passionately in interviews about adhering to the musicality of the compositions and being able to finish musical phrases once started. Roger in particular took on the job of defending this musicality when it was compromised or threatened by a performer's missed cue or a director's re-staging of an act. He elaborated:

> There was a point way back in the beginning [during Corteo's original big top creation in 2004] when [the director said], "Well, you know, when this happens [e.g., a visual cue], do this [a musical cue], and when this happens [a different visual cue], do that [a different musical cue]!" It could be sudden. And we were dealing with compositions that had very, very long musical phrases and I gave the example—I remember singing to Daniele [show director, creator] and a couple of other people that were working with him:
>
> [Roger sings "Happy Birthday" with stilted, irregular rhythms, missing notes, and unfinished words]
> *Happy birth——you,*
> *Happy birthday tooooo—*
> *Happy bir—*
>
> I said, "Does that make sense to you?"
> He said, "Well, no, of course not."
> "Well, that's what you're asking us to do. When we start a musical sentence, a musical phrase, we have to finish it. Otherwise, it doesn't make any sense, because you're just cutting into a sentence."
> That made an impact back in the day and eventually people started realizing, "Okay, as long as the music does have long phrases, let us finish off those phrases." That is still

> being instilled into some of the artists [e.g., acrobats]. Fortunately, some of the music which was changed since the beginning—because we had other composers come on and take various different roles—they use shorter phrases, which are a lot more interchangeable, so we can move around a bit more and we don't have so much with that problem. (Interview with the author, 18 Jan. 2019)

Here Roger shows how compositional phrase lengths can influence the degree to which music acts as an active or passive disciplinary force. Long phrases in circus compel acrobats to move in a certain way at a certain time. Roger, as bandleader, sees this as a problem. The director clearly wanted an algorithmic, timetable approach to the music ("When this happens, do that"), but that only works when the musical phrases are initially composed with that in mind. Long phrases cannot be coherently moved, condensed, or interchanged, which makes it more difficult to follow the action on stage. With long phrases, performers are instead forced to follow the music—as they must at the beginning of Tournik—because an "obligatory rhythm, imposed from the outside" is already established by the music (Foucault [1977] 1995, 152). Again, Roger and Phil's commitment to musical phrases, timetables, and 'temporal elaborations' is centered around the maintenance of an illusion of synchrony. For many audience members I spoke to, synchrony between music and movement had a meaningful, affective impact, and provided the audience with a way to connect with Corteo and its sonic product.

A second sonic strategy for affective connection centers on the use of music to emphasize danger with dramatic tension and release. This, too, is a centuries-old trait of circus music (Baston 2016; Whiteoak 1999). Several audience members I spoke to remarked on the tension in the music specifically:

> When there is a more intense moment, the music will accentuate and accelerate. It helps a lot to keep people a bit more in the show. [. . .] We feel when something is coming up, so it keeps us on the edge of our seat.[18] (interview with the author, 7 Dec. 2018)

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[18] "Quand il y a un moment plus intense la musique va s'accentuer, s'accélérer. Ça contribue beaucoup à garder les gens un petit plus dans le spectacle. [. . .] On sent que quelque chose que s'en vient, fec ça nous tient un petit plus sur le bout de notre siège."

> I think it [the music] is a huge driver. Oh, for sure. That makes it very intense. You're already nervous. It heightens the really exciting moments. You know it's about to really drop and it's cool. (Interview with the author, 11 Jan. 2019)

> Each thing that came up, you could hear the music and tell that something was coming. (Interview with the author, 16 Feb. 2019)

Some musicians felt the same about the tension in the music. Both Roger and Camille, the guitarist/accordionist, spoke in separate interviews about being physically close to the audience in their band pits, and how that proximity accentuates the moments of tension and release for them as performers. Roger remarked:

> Being on this show and in the situation where the musicians are actually part of the show and in the audience, I really love to look around sometimes when I know there's a surprise coming up and see how people jump, or if something funny is about to happen, whether intentionally or not, just judging the audience's reaction. (Interview with the author, 18 Jan. 2019)

Similarly, sound designer Jean-Michel spoke about enjoying a pronounced audience reaction to sonic tension during his time on tour as a FOH sound technician:

> By pushing a fader, a little louder, a little softer, you know—push the snare for one second for a snare hit. Is it going to make it more dramatic? Is it going to make a bigger impact? Are people are going to jump out of their seats and say, [gasps] "Oh, he almost died!" just because you pushed that one element? (interview with the author, 7 Dec. 2018)

In these interviews, the audience members, Roger, and Jean-Michel all pointed to intense, visceral connections to the action on stage through sound during a performance. The stage action creates tension through the presentation and subsequent mastery of danger. The sound, as everyone pointed out, emphasizes that tension, making it even more exciting. Audiences often know when something exciting is going to happen on stage, thanks to the music. However, while tension might be high during an acrobatic act, the expectation is that the tension will be released and whatever danger was presented will be conquered. Audiences understand that they will

likely not witness an accident or an injury on stage. Despite the intensity of the affective

connection to the music through the presentation of risk, ultimately audiences are made to feel

fundamentally safe by Corteo's performance frame.

A third strategy for affective connection through sound is what I call sonic orientalism.

This is sound that signifies the exotic and simultaneously normalizes audiences, making them

feel secure in the face of that exoticism. Here I am building on circus music scholars Baston

(2016), who examines *musical* orientalism in traditional circus, and Jensen-Moulton (2016), who

examines cultural appropriation and racial erasure in CDS music specifically. I expand on their

discussions by addressing verbal sounds as well as musical ones. Traditional circus often used

'exotic' musical tropes—'oriental-sounding' parallel fifths, 'savage-sounding' percussion,

'Middle Eastern-sounding' modes—"as decorative features" within a Western classical musical

framework (Baston 2016, 126). Exotic musical elements were also used to bolster and

aestheticize the authenticity of 'exotic' circus performers. In traditional circus, for example, an

Asian acrobat might be accompanied by Chinese musical tropes, no matter where the acrobat

might actually be from; or a lion-taming act might be accompanied by "'primitive' highly regular

drum rhythms" to emphasize a racist trope of 'African-ness' (Baston 2016, 126).

The aestheticization of ethnic authenticity in circus is founded on widespread racist,

exploitative, coercive, orientalist, and cruel practices in traditional circus in their display of

racialized people as "savages, cannibals, and missing links" (R. Adams 2016, 240). More

recently, CDS used appropriative tactics to aestheticize authenticity in their depictions of

Indigeneity (Batson 2012; Fricker 2016). Framed as performance, circus allows audiences to

observe and emotionally engage with Otherness without feeling threatened by it.[19]

Just as exotic bodies are rendered palatable for audiences by the stage-as-frame, so too

are exotic sounds. In her analysis of CDS music, Jensen-Moulton argues that CDS appropriates

music from around the world and, in so doing, erases ethnicity, race, and nationality. She writes:

> These musical erasures normalize the audience in the same way that extraordinary bodies
> reinforce bodily normativity at the midway freak show. [. . .] The music itself becomes an
> extraordinary body, commanding a kind of aural equivalent of staring. (2016, 211)

Both Baston and Jensen-Moulton assert that circus music specifically can help audiences to feel

safe when confronted with such extraordinary sights and sounds. By adopting, appropriating,

sanitizing, and amalgamating 'exotic' musical features, circus music "equalizes the audience

members in their outsider status, normalizing them and 'curing' any musicocultural differences

that may have existed prior to the show" (Jensen-Moulton 2016, 222). By collectively

encountering exotic music and recognizing it as such, an audience's musical normativity, which

presumably does not include regular aural consumption of the exotic musical tropes presented

during a circus performance, is reinforced and their connection to the show is strengthened.

Corteo does not heavily engage in overt, appropriative, exoticizing musical tactics like

those I describe above. There is some apparent sonic appropriation: a Brazilian-sounding samba

and two pieces that are heavily inflected by flamenco aesthetics. Interestingly, the samba, which

occurs during one of Corteo's funeral procession scenes, struck a different chord with some

audience members. This scene, which is about two minutes long, oscillates between a ponderous

dirge and a festive, celebratory samba parade. The cast shifts from a forlorn, dimly lit march

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[19] Kinds of Otherness audiences might encounter at a circus include 'freakishness,' queerness, racialized people, and exoticized ethnicities (R. Adams 2016; Batson 2012; Bouissac 2012; Lindfors 1983; Tait 2005; see also R. G. Thompson 1996).

from one side of the stage to the other, to a lively, joyful dance, with jubilant singing and multicoloured lighting that sweeps and strobes on stage and in the house. After a stern admonition from the show's top-hatted, whip-cracking ringmaster, the Whistler ("This is *supposed* to be a *FUNERAL*!"), the cast hurriedly re-forms the line and resumes their lugubrious procession.

While a celebratory funeral parade may seem exotic to audiences in historically white, Protestant regions of North America, such as the eastern seaboard—indeed, the Whistler says explicitly that funerals shouldn't be joyful—many people, particularly in the American south, were made to feel at home by the lively musical treatment of the main character's funeral march. For example, three Latinx audience members called it "a very Latino burial," while two Cajun audience members described it as "French style". Corteo's director, Daniele Finzi Pasca, is Italian, so there is a possible Catholic connection between these cultural claimants. Instead of developing an inter-audience connection through their shared, 'unexotic' musical normativity, as described by Jensen-Moulton (2016) and Baston (2016)—for example, recoiling from or being affronted by joyful singing at a funeral parade—these audience members had a personal connection directly to the content of the supposedly exotic sonic material.

Sonic exoticization on Corteo emerges primarily in the dialogue and song lyrics.[20] Corteo performers speak some dialogue in their native languages. During performances, I often heard character dialogue in Italian, Spanish, French, Dutch, Japanese, and English. Song lyrics, meanwhile, are mostly non-semantic Italianesque syllables, which CDS describes as an

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[20] Comprehensibility in song lyrics can have deep sociopolitical and aesthetic ramifications for performers, producers, and listeners (Berger 2003). Cece Cutler (2000) shows how the linguistic features of English-sounding syllables with no lexical meaning in French pop convey an essential notion of English speaking; C. K. Szego (2003) discusses the affect, meanings, aesthetics, and politics that emerge for Native Hawaiian listeners who cannot (or can only partially) comprehend Hawaiian *mele* lyrics.

"invented language" (Cirque du Soleil 2005). Audiences are not expected to understand these languages. The intention is instead that the audience connect to the affective performance of the dialogue by listening to tone, inflection, and delivery, and attending to the context.

Other CDS shows adopt this sonic strategy with multilingual character dialogue. For example, Totem (2010) had dialogue in English and Italian, with song lyrics in Wendat, sung by a Huron-Wendat First Nation performer. During my time on the Saltimbanco arena tour, there was a performer who spoke the florid introductory remarks live in the language of the country (or region) the show was in. This was always very well received by audiences. She learned the lines (e.g., welcome ladies and gentlemen, etc.) in each language by rote; CDS provided her with basic recordings of the 'welcome' text, and she rehearsed with them every day while she rode the stationary bike backstage. The more common practice is to order professionally translated recordings from a voice-actor and localization service, and those recordings would be played directly over the PA during a blackout before the show started. CDS's on-stage multilingualism acts as a testament to the company's claim to cosmopolitanism and authenticity (see chapter 5).

CDS has long been known for the use of non-semantic vocables for dialogue and lyrics instead of intelligible language (Harvie and Hurley 1999). In her ethnography of CDS resident shows in Las Vegas, Paul observes that "Cirque makes only limited use of any linguistic signifying system (that is, in the form of comprehensible lyrics, spoken words, or narrative voices), adding greater weight to the auditory material that comes in the form of music" (2012, 168). Of the CDS shows I've worked on, five, including Corteo, have employed some kind of invented language. Of these, three—Amaluna (2012), Ovo (2009), and Saltimbanco (1992)— used an obviously invented language that was usually characterized by an exaggerated, cartoonish vocal delivery (e.g., squeaky, screechy, growly). Here the extreme Otherness of the

sound of the dialogue normalizes audiences in two ways. First, an exaggerated delivery normalizes the presumably measured verbal delivery of most audience members. Second, through its nonsensical-ness and non-semantic-ness, this invented dialogue normalizes common, intelligible, comprehensible language amongst regional audiences. In North America and in many other parts of the world, English is a common language for disparate communities. CDS's depiction of unintelligible language as cartoonish, clownish caricatures normalizes English speakers in the audience while making speakers of other languages incomprehensible and outlandish, even grotesque. This aligns with Baston's (2016) and Jensen-Moulton's (2016) theorizations of musical orientalism by using sonic performance (in this case, verbal) to signify an exotic Other. The invented-ness of the language on Quidam (1996) and Corteo was much more ambiguous. Quidam, like Corteo, used an unexaggerated, Italianesque invented language, particularly for song lyrics, which were usually delivered in a *bel canto* style. It was not cartoonish gibberish that was clearly devoid of lexical meaning, but more sedate; its lexical meaning could be *presumed* by listeners, if not actually understood. At first, it was unclear even to me as a sound technician listening to the show every day that the singers were using non-semantic vocables, the delivery was so convincing.

When Corteo begins, intelligible speech is immediately established as an important narrative-driving device. As the lights go down, the audience hears Mauro's disembodied voice over the PA (it is a recording), clearly audible over a sparse organ melody. He states in English (French in Quebec) that he had a dream of his own funeral, and implies that the show will present a narrative of that dream. Directly after that monologue we see the Whistler character alone at centre stage, lit by a single white spotlight on an otherwise dark stage. We hear him speak, welcoming the audience to the show and referring to that week's city by name. Clearly

audiences are supposed to pay attention to and understand the spoken words of the characters.

While much of Corteo's dialogue is intelligible English for certain key moments in the show,

there is a directive in the sound design that the dialogue need not always be intelligible.

Characters may drift into other languages at will and FOH sound technicians are instructed to

"bury" character voices in the mix (i.e., make other sounds more prominent) at certain points in

the show in order to emphasize the unintelligibility. Mark, Corteo's artistic director, described

why he thinks this works for Corteo in particular:

> If [you are] writing a book or a piece of theatre that had a set script, you can be more
> clear and more defined in exactly what you're trying to get across. I think we're working
> in often a nonverbal art form. It is verbal with Mauro [the main character]. [. . .] He says
> in English [what] we need to communicate to the audience, and [for] what's not essential,
> he can go off [verbally improvise] in Italian or he can go off in French, because a lot of
> times we can see and read his emotions without understanding the words. And we can do
> that sometimes better without understanding the words, because this is not a piece of
> theatre that was written with a defined text to take the audience to this point and that
> point, but it's a journey. (Interview with the author, 23 Jan. 2019)

For Mark, intelligibility, audience comprehension, and language choice are secondary to the

affective connection that is elicited by the presentation of the dialogue itself. Corteo makes

emotional gestures and verbal brush strokes that are left to the audience to interpret.

As Mark noted, full intelligibility for Mauro is not always part of the artistic direction or

sound design. For Davie, Corteo's assistant head of sound, however, Mauro's intermittent

unintelligibility is "weird." Thinking from the perspective of an audience member, Davie

believes there's no way for audiences to know that they aren't *supposed* to understand Mauro's

sonically buried, multilingual dialogue. "Okay," he said, "we [CDS staff] know that, but as an

audience member, you're like, 'What the fuck? What is he saying? Am I supposed to be listening

to him?'" (interview with the author, 9 Feb. 2019). Similarly, when Christian was first mixing

FOH, he would try to make Mauro more intelligible because the mix as he learned it sounded

wrong to him. As he put it, character voices can sometimes be "buried in the mix," while at other times, those same voices are "front and centre, and the music is right down" (interview with the author, 11 Jan. 2019). For example, during the 'Trampoline Beds' act, which is the second acrobatic act of the show, Mauro, the main character, arrives in a bedroom full of laughing, shouting children who are having a rambunctious pillow fight that is punctuated by leaps, flips, and handstands. Mauro makes it clear that this is a flashback to his own childhood by saying very clearly over the up-tempo music, "When I was a little child, I used to go to my grandmother's house . . ." His dialogue continues, but it gets increasingly buried and unintelligible. Christian said that according to the artistic director and the sound designer, he had been lowering the music too much, which was detrimental in its own way. He then learned that full intelligibility of Mauro's dialogue at those points in the show actually contravenes the sound design. Christian remarked:

> For a while there I was pulling it back even more to give him full intelligibility, but then the artistic direction was, "Actually, no. He's just kind of rambling. If you catch some words, it's good. Half of it is Italian anyway." And actually, having the music too low was more detrimental than not understanding what he said. Which is funny because to me, in my head, that actually doesn't compute because I like speech intelligibility. But ultimately, in my position, I'm dictated to by a higher power in terms of the actual design. (Interview with the author, 29 Dec. 2018)

Christian's prioritization of speech intelligibility, even though the speech was an improvised mix of English and Italian, was overridden by the corporate authority of the artistic director and the sound designer. Both Christian and Davie complied with the directives once they knew the artistic vision of the creative hierarchy, but it was clear that the decision to make Mauro's dialogue oscillate between intelligible and unintelligible didn't make sense to them, even after months of mixing it "correctly," and according to the design. Christian, meanwhile, discussed the

multilingual nature of Corteo, where performers are encouraged to speak their own language in certain points of the show:

> I find I tend to over-mix voices [make them too loud] if they're in a different language because me understanding them has got more to do with "Can I hear them clearly enough?" [. . .] Truthfully, parts like this where he [Mauro] is speaking French, I'm probably mixing him two dBs hotter [louder] just to make him *seem* intelligible to me. (Interview with the author, 29 Dec. 2018)

Christian is an Anglophone, like most of CDS's audience members in Canada and the USA. His own intellectual desire to understand what is being said, even though he doesn't speak the language, becomes embodied in how he listens and how he mixes (i.e., how far he physically pushes the fader on the console).

Christian and Davie spoke about intelligibility in relation to the sound equipment specifically. They both believe that a headset microphone, like those worn by Mauro, the Whistler, and the singers, is better for important dialogue. However, they think that hidden hairline and lapel microphones, like those worn by secondary and tertiary characters, look much better, and it's worth the sacrifice in signal strength and sonic clarity—hidden microphones are further from the speaker's mouths—for less important characters and dialogue. This notion of sacrificing signal for the sake of the visual aesthetic on stage is part of a traditional theatre design model that insists that technology and technicians be hidden from the audience. Having discussed some strategies for establishing affective connections, I now move to invisibility, which is a strategy for maintaining those connections.

(In)visibility, (In)audibility

Sometimes the affective relationships between audience, musicians, and sound technicians are predicated on invisibility and inaudibility. The theatrical design model that hides technology and

technicians from audiences is firmly embedded in Corteo's sound design and in the work ethic of

the sound technicians. Indeed, Charlie, a sound technician, drew a great deal of satisfaction in his

work on Corteo because of this ethic of invisibility. He believes that the vast, spectacular

experience of a show like Corteo is made more magical when set against the veiled technical

production methods and the invisibility of his own labour. He made the comparison between

working on Corteo and for a convention, where the actual work may be very similar, but the

connection to that work is vastly different:

> Putting on a show that generates awe in an audience is creating magic. There are people sitting in that audience . . . who have literally no idea how you managed to accomplish that thing. Being a part of that, creating that magic, was really valuable to me for a really long time. When I was working conventions, I really missed that. I was doing basically the same work, I was putting on a presentation of some sort, but there is something different between presenting Corteo to three thousand spectators and presenting the annual meeting of corporate ethics and compliance. You can't compare the feeling of being a part of something like Corteo. [. . .] You get a paycheque back from [convention work]. That's all you get. (Interview with the author, 13 June 2019)

Charlie's own connections to the show, his work, and the audience are bolstered by the awe an

audience feels, by the magical clash between attention-grabbing spectacle and mysterious,

behind-the-scenes obscurity.[21] He sees this as a positive return he receives from the experience

of doing that work, an 'emotional paycheque' of sorts. I return to this notion in chapters 4 and 5.

    In the theatrical model of hidden processes, inaudibility is also very important to sound

technicians. Sound reinforcement technology (e.g., microphones, speakers) should be sonically

transparent (Slaten 2018), which means they should not unduly change the tonality, or 'colour',

of the sound. A listener should hear the voice, for example, not the microphone.[22] Mixing at

FOH should likewise be subtle and unobtrusive. Musical transitions between acts should go

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[21] Martin Parker (2011) discusses circus as a unique blend of logistics, technology, and mysterious magic.
[22] There are plenty of sound reinforcement technologies that are employed specifically for the extra-tonal quality they lend to a sound (e.g., the 'warm' sound of a tube amplifier).

unnoticed by the audience. Davie noted that audiences often aid in masking the seams in the

sound design with their applause:

> The applause covers up the big music transitions to me. They're clapping, they're
> clapping, they're clapping, and when they're done clapping, all of a sudden there's this
> soft music. I think that helps a lot, and I think about that a *lot*. (Interview with the author,
> 9 Feb. 2019)

In Davie's example, applause could be understood as noise, since it masks "significant,

privileged material" (White 2011, 200)—that is, the music—but Davie hears it instead as

complementary sound. The aural masking effect of audience applause allows Davie's transitions

at FOH to be perceived *by audience members* as seamless and magical. An audience's applause

is thus crucial for the audience's own affective connection to the show's music. This transitional

seamlessness is akin to the illusory aspect of apparent musical and gestural synchrony: the

transition is not necessarily seamless, but it is perceived that way.

In addition to the musical transitions Davie described, in-show troubleshooting should be

done inaudibly. During a performance, any problems with the sound equipment should be

managed as quickly and as unobtrusively as possible. Usually, this can be accomplished if the

musicians and sound technicians are able to communicate effectively about the problem. Once,

when I was watching the show from the arena floor (i.e., close to the stage), Mauro's microphone

stopped working just before he came on stage. The microphone's radio transmitter and the

receiver backstage lost connection, so the sound technicians mounted another microphone inside

Mauro's shirt, keeping it out of sight. After a couple of minutes, I could tell that something was

different; Mauro's voice was slowly getting quieter as the microphone slipped further and further

down his shirt. I learned the details of the problem only after the show ended and I spoke to the

sound technicians. The last-minute solution enacted by the sound technicians was so quick and

so effective that even though I was sitting up close and knew the show very well, I didn't notice

that there had been a problem at first. It was a short scene, and Mauro was soon able to leave the

stage for a longer-term repair. In this case, the temporary solution was likely imperceptible for

most people in the audience, so they would not have been unduly distracted.

Troubleshooting during a show is not always smooth, however, and sometimes a problem

becomes audible for unexpected reasons. Dylan, a sound technician, described a repair he had to

perform during a show. A monitor screen fell off its mounting bracket in the drum pit. Alex, the

drummer, notified Dylan over his talkback microphone, and Dylan left backstage to attend to the

problem, where he would be visible to hundreds of audience members. Dylan remarked that "the

sound that the monitor would have made when it fell off of the bracket was probably

catastrophic. So anybody [audience members] seated nearby was like, 'What the hell was

that?!'" The sound of a monitor crashing to the ground, while bad, was not Dylan's main concern

at the time, however. It was clear from the way he told the story that he had not heard that sound

himself. Even if he had heard the crash, there was nothing he could have done about it. His focus

was instead on remounting the screen discretely so as to not become a distraction himself. He

remarked:

> You kind of have to pretend like nothing is going wrong because the audience can pick
> up on that. They'll see that [and think], "Oh, there's technician there. What are you
> doing? Is something going on?" You don't want to distract them from the show that's
> going on in front of them. So the way I approach it is I just want to be the least distracting
> as possible. I'm wearing all black, I'm going to blend in with everything. Even the way
> that I'm walking. I'm not running, I'm not acting hectic, or like I've got a place to go.
> Just a cool, calm, collected walk out there [to the pit] and I'll approach whatever is going
> on with some sort of confidence. [. . .] Because that's rule number one, you don't want to
> distract the audience from what's happening on stage. (Interview with the author, 5 Feb.
> 2019)

Dylan noted that beyond his inconspicuous black clothing, there is a way to move, to carry

himself, to adjust his behaviour when in front of an audience, so he does not become a

distraction. Dylan continued, stating that he works to mask his feelings of stress so he

'emotionally' blends into the background. "In the moment, it's *so* stressful," he said, speaking generally of troubleshooting in the house during a performance, "and you're putting all of your effort into being calm and cool and collected." This, I argue, is a form of emotional labour for Dylan. His apparent calm is enacted for the sake of the audience members who will inevitably see him. Dylan wants audience members to be unconcerned about his presence, so that he might vanish from their notice. It is important that he not impose upon an audience's affective connection to the show. I see this as an embodied mode of the stoicism that is expected of Corteo's sound technicians—and of technicians in general.

Being unobtrusive would be important for any technician in any theatrical genre (e.g., Broadway), but it is an especially interesting work ethic in circus. With its characteristic emphasis on the mastery of danger and risk, circus can create a feeling of intensely exhilarating anxiety when watching backflips and handstands on stage, for example. Circus is exciting to watch because there is a risk that a trick *could* go wrong, but it usually doesn't. Dylan's presence in the drum pit, on the other hand, might instill a sense of annoyed, distracted, or confused anxiety in audience members who are suddenly presented with a failure at a site where there had been no apparent risk. While Corteo's sound technicians see each band pit as replete with dangers and risks of breakdowns and failures, an audience member likely would not. The actual repair in Dylan's story was accomplished with relative ease; after some fumbling in the dark, he reattached the screen to its mounting bracket. The equipment he was actually manipulating (i.e., the screen) was perfectly silent, but in performing this repair, he kept hitting the 'Mark tree' bar chimes with his arm. Had he not been trying to be silent and unobtrusive with the equipment he was working with, he would not have hit the noisy chimes in the way he did. Dylan attempted to work in silence so he would not distract audience members from the performance. In so doing,

his work became inadvertently and inappropriately audible—and thus visible—to the audience. Like so many in-show troubleshooting situations, this example became a funny story for Dylan to tell, though it was nerve wracking at the time.

Like Corteo's technicians and technology, audiences can also oscillate between visibility and invisibility, between presence and absence, for the sound technicians and for audience members themselves. In public intercept interviews, some audience members reported being so engrossed in the show and immersed in the sound that they momentarily forgot that there were thousands of other people in the audience with them:

> Actually, when I hear the laughter, it reminds me that I'm not the only one watching. Because I totally get transported and I'm like, "This is my show! It's for me!" But then other people are laughing and I'm like, "Oh, wait, it's theirs too." (interview with the author, 14 Dec. 2018)

I think that this person's feeling of being transported is, in part, an affective phenomenon, where the intensity of the experience draws most of a spectator's attention, but I think too that the physicality of the sound also contributes to the erasure of other audience members. I imagine the PA as large-scale "orphic medium": it masks non-show noises in the arena with show sounds; maintains audience concentration on the stage action through sound; and prevents a spectator's personal aural space from being "penetrated by the uncontrolled sounds of strangers" (Hagood 2019, 76), in this case, other audience members.

Audiences can disappear for sound technicians too, even for those mixing at FOH. In the sound department, it is easy to compartmentalize sound-related tasks and become focused on load-ins and load-outs, on improving the kit or the stage setup, on facilitating the work of the musicians, on repairs, or on the sound of that week's venue. Unlike Dylan's example above of troubleshooting during a performance, where the audience was the eminent consideration of his

repair effort, most troubleshooting, problem-solving, and repair work happens backstage and outside of showtimes. The notion of audience can easily disappear entirely at these times.

The notion of audience is necessarily present for Corteo's sound technicians when tuning the PA. When tuning—that is, aiming, aligning, and calibrating the speakers for the shape and sound of a venue—the sound technicians think of the sound of the show from an audience's auditory perspective. They walk around the seating areas of the arena and listen to music. They listen for clarity, even sound distribution, and a pleasing response of frequencies (e.g., not too "harsh") and reverberation (e.g., not too "boomy"). For example, when Christian would sit in a particular seat or walk down the raked arena stairs, he would put himself and his ears in the place of an audience member who would themselves be sitting in that seat or walking around during a performance. By the time he finished "walking the room" however, the PA would be mostly tuned, and he would no longer have to think about the specificities of the audience's perspective very much, if at all. At that point, the notion of audience could begin to recede into his own mental background.

To manage a potential disconnect from the audience, FOH sound technicians try to reconnect to audiences during the performances in various ways. When he worked as a FOH sound technician, assistant production manager Pierre-Luc had a strategy to keep his FOH mixes personal and audience-centred. At the beginning of a performance, Pierre-Luc would pick one person in the audience and symbolically, tacitly, anonymously mix the show just for them.

> A trick I had when I was mixing was, I would pick a guy every night saying, "I'm mixing for you." Not just to see a crowd of people and feel detached from the house. I would always pick one person: "If I make it sound good for you, everybody else will be happy." (Interview with the author, 9 Feb. 2019)

Pierre-Luc tried to move beyond a self-contained, disconnected mixing experience. This anonymous person he mixed for each night was an embodiment of his commitment to "giving

the customers the best experience. There's nothing more important than that" (interview with the author, 9 Feb. 2019). This practice made mixing personal for Pierre-Luc. In a related but more empathetic strategy, Davie, Corteo's assistant head of sound, regularly imagined what it's like to hear the show for the first time. He does this to try to focus on what is important sonically for someone who will only hear something once:

> It's easy for me to *try* to put myself there, but to like actually do it, like, it's hard because I *know* what's coming up, I *know* what [faders] I'm most likely going to start touching on the song. [. . .] But the audience only sees the show once. I want them to hear the violin when they should, I want them to hear that bass line when they're supposed to, so I try to be there, like, when the bass solo is going, not turning it up *as he* does it but do it *before* he does it. Does the audience pay attention? I don't know. But at least I feel like I'm trying to make it a better experience. (Interview with the author, 9 Feb. 2019)

Here Davie described imagining "fresh" ears to hear significant sonic details but using his own experience to draw those details out at the right time and in the right proportions. Dylan also described a similar approach to mixing FOH. When he is mixing, he imagines that he occupies a space where he is part audience member, part musician, part performer, part technician, and part invisible and "in the shadows" (interview with the author, 5 Feb. 2019).

Corteo's sound technicians recognized that being too focused on the technological elements of the sound system could cause a disconnect between themselves and an audience. Audiences could recede from their immediate attention, and the priority of remaining sensitive to the energy in the room, for example, would be diminished. Audiences would then become just a murmuring, shuffling, laughing, clapping, occasionally camera-flashing, sentient mass that would only really need to be considered further if something went wrong, such as microphone feedback or equipment failure. In such a situation, the failure *and* the repair would have to be hidden from the audience. While the *notion* of an audience might disappear for technicians from time to time, an actual living, breathing audience composed of agentive individuals is always

present by their contributions to the energy in the room. This energy is felt by the sound

technicians and musicians, who then use that feeling to inform their own contributions to that

energy. The affective connections made through sound amongst audiences, sound technicians,

and musicians feed back into one another, building the connections further. Corteo uses

specifically sonic strategies to enable those connections: the use of live music and a devotion to

the illusion of synchrony, the emphasis of physical risk and the mastery of that risk, and sonic

orientalism through music and language. While these strategies have been widely employed by

traditional circus, they are successful on Corteo as well.

Chapter 3: Front-of-House

> A signal from Mordis and the music got louder: loud music distracts them,
> they're less likely to rampage with their ears full of sound.
> Margaret Atwood, *The Year of the Flood*

This chapter is about front-of-house (FOH) and the development, performance, and maintenance

of Corteo's FOH mix. The FOH mix is created by the sound designer and represents a sonic

conception of the show's composed musical score, its character dialogue, and its sound effects.

To mix FOH—a one-person job undertaken by a FOH sound technician[1]—is to operate the FOH

mixing console, that is, to control what the audience hears from the speakers (i.e., PA) by

adjusting the balance of the instruments, voices, and sound effects. Digital sound mixing

consoles, like the one on Corteo, can be programmed with presets, or 'scenes,' for different

songs or song sections (Dahlie 2018; Mulder 2015b). These scenes can then be recalled by a

FOH sound technician as part of a sequential cue list,[2] which is divided into separate acts and

(usually) named according to a primary apparatus (e.g., the Juggling act, the Hoops act, the Tissu

act).[3] The FOH mix is developed over time in consultation with the composers, directors, the

bandleader, and the acrobatic coaches. It is then taught to touring sound technicians who trigger

the pre-programmed cues and make the appropriate fader adjustments at the correct moment so

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[1] I use the term FOH sound technician; other widely used terms include FOH engineer, operator, and mixer.
[2] On Corteo, scenes at FOH are triggered with MIDI messages from a separate LCS CueConsole CC2-TP module, which is a proprietary, networked, programmable bank of configurable buttons (e.g., a "GO" button to trigger the next cue). This is a common setup for CDS shows.
[3] Like Broadway shows, CDS shows are divided into two halves, also called acts, which are separated by an intermission. The context of the word's use determines which definition of "act" someone is using on tour.

they can faithfully recreate the sound design. Ideally, the show should sound the same, night after night, city after city, country after country, year after year.

I also discuss FOH as a space. For the sound department, FOH is the place where the FOH console is placed and where the FOH sound technician works during a performance, but other departments are there as well. Because of this, FOH is a big place. The sound console, which is itself about six feet wide and three feet deep, is just one of several at FOH. Lighting, automation, and stage management have FOH consoles too, each with multiple computer monitors. All told, the FOH area is easily twenty feet wide. It is made less imposing and less visible by the low, black curtains that surround the area; the dimmed-down level of the countless LEDs; and the all-black clothing of the operators working there. Despite this, FOH is clearly visible from any seats on the south side of an arena and many seats on the north side. I argue that the space and the FOH sound console are gendered, male and female respectively.

I begin with a description of pre-show preparations from my own perspective, starting thirty minutes before a performance. This is a composite narrative with a degree of fictionalization and anonymity.[4] In this narrative, I act as FOH sound technician, which is something I did not do on Corteo. This section draws from my own experience of hundreds of similar pre-show periods on the two Cirque du Soleil (CDS) arena shows for which I did mix FOH.[5] Though I am blurring the lines between fiction and nonfiction here (see Kisliuk 2008), the inclusion of this kind of performative writing is valuable in this context. I do not aim to

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[4] Composite narrative draws on multiple sources of data to present a single story. It is a qualitative research technique that is often used to ensure anonymity in ethnographic descriptions of private situations, such as corporate settings, health care, and politics (Devine 2019; Wertz et al. 2011; R. Willis 2019). In this composite narrative, anonymity is not my primary concern. Instead, I aim to present a "complex, situated account" (R. Willis 2019, 471) of a typical pre-show period for a FOH sound technician on a CDS arena show. (Many features of this composite narrative would be similar for other show genres, companies, and venue types, such as a dance show for a local company in a small theatre).

[5] I mixed FOH on Quidam for hundreds of performances from 2014 to 2016, and on Totem for about forty performances during a temporary arena conversion in 2017.

amalgamate my experience with that of Christian and Davie, for example, but instead aim to provide a sense of the anticipation and tension, the pressure and responsibility, as well as the mundane predictability and routine of preparing for a show. What I describe is a unique moment of performance for a FOH sound technician. It is constrained and scripted, but it is also intensely personal and riddled with private anxieties, largely taking place in plain view of an audience and under their occasional scrutiny. I adopt a first-person position in this context because I seek to convey the embodied sensations of this distinctive period in a workday, which is something I could not do from Christian's or Davie's perspective. Moving to the FOH mix itself, I discuss its development and its ambiguous status as a reproducible sonic product. I then draw on interview data to describe how Corteo's sound technicians think about mixing FOH. I understand FOH as an acutely masculine space that is built upon both sonic and emotional control. I close the chapter with a discussion of CDS's corporate creative hierarchy. Drawing on interviews, I examine the oversight and criticism of Corteo's sound design and the sound department's work at FOH.

At the Five

　　"Hello channel one—this is thirty minutes to the top-of-show, thirty minutes."
The stage manager's voice, thin and reedy through the radio, crackles into my right ear from the black, plastic speaker-microphone extension, sometimes called a "biscuit," sometimes called a "parakeet," that is clipped to the collar of my t-shirt. I can feel its densely coiled cable pressing into my back as I sit in catering (on tour, "catering" is synonymous with "dining room"). The cable traces a diagonal path from the speaker-mic on my right shoulder to the radio clipped to my belt on my left hip. I like this radio-and-peripheral placement. Radio calls can be important—

indeed, they can be life and death—and this way, I can keep the volume low but hear clearly, while also being able to speak directly into the microphone. In a pinch, I can even operate the radio hands-free, jamming my chin into the 'talk' button on the side of the biscuit and bracing the plastic housing against my shoulder.

Most people have left catering by now—the performers ate earlier to leave time for makeup and costumes—but there is a dull murmur of conversation and a clatter of the cheap cutlery against indestructible plastic plates beloved by institutional caterers everywhere. Mine is not the only radio I hear. Every technician and administrator wears one clipped to their clothes, and each person has a subtly different way of wearing it. Their own unique configuration is a familiar and comforting physicality to this intangible sonic lifeline amongst the tour's non-performers. As the announcement comes through, hands dart to volume controls. Some people have come from backstage and adjust the now-too-loud voice to this relatively quiet setting; others have come from nearly silent administrative offices, so they make the voice louder to thwart catering's clamour.

The calls will come thick and fast now. By calling the thirty, the voice tells me that the strangely frenetic two-hour lull between soundcheck (usually 5:30 p.m.) and showtime (usually 7:30 p.m.) is coming to a close. It is a lull because significant changes to the equipment (e.g., replacing parts), programming (e.g., making new console presets), or physical layout (e.g., band pits) are generally not allowed because any change must be thoroughly tested—in a soundcheck, for example—before putting it in the show. Moreover, any work projects must be both silent and invisible to audience members, who start streaming in to find their seats at 6:30 p.m. when the house opens. It is frenetic because there are still hundreds of other things to do with that time everyday apart from eat dinner, like wade into the sea of broken cables, headsets, radios, and

speakers that need repair. People in catering start pushing back from their tables, collecting their cups and plates, and putting them in the bus pans that the catering staff habitually leave on a table near the exit. I do the same. I'm mixing FOH tonight, so I still have a few minutes to get ready. As I leave, a few other tour staff members trickle in, apparently having waited for the thirty. They aren't working the show and will be on the 8:05 p.m. shuttle back to the hotel.

"Fifteen minutes to the top-of-show, fifteen minutes."

Backstage, technicians are gathered near their lockers. Ragged, well used work shorts and sweat-stained t-shirts and tank tops, flecked with sawdust, paint, grease, or solder, according to the wearer's métier, are swapped for show blacks (i.e., long-sleeve black shirt, black pants, black sneakers), which look comparatively pristine, though they were tugged out from a cramped locker. Looking around backstage, I see performers in costume and technicians in headsets milling around, chatting, handling props and set pieces, preparing for their first cues. The sound of the "walk-in" house music is audible through the curtain, an assurance that the audience will not hear the conversations and preparations backstage. Triggering the walk-in music playback was the last thing I did at FOH after soundcheck and fading it out will be the first cue I take before the show begins. I run through the first few cues in my head, a few of which I'll take on the stage manager's "Go." Following a "Go" is rare for a FOH sound technician. Once the show starts in earnest, I'll be on my own. Certainly, I can read the cue list from the digital read-out on the console—I triple-checked the list before eating—but I've long since abandoned my own notes. I'm off-book, playing from memory. Dressed now in my show blacks, with a headlamp around my neck and pockets replete with emergency rubber gloves, a Leatherman multitool (still in good shape after decades of hard use by my father and now me), and laminate ID, I make my way to the curtain that separates backstage from the three thousand-strong audience.

Chapter 3: Front-of-House

"Ten minutes to the top-of-show, ten minutes."

Walking through the curtain into the house, I get my first glimpse of the audience and they get their first glimpse of me. I'm exposed on the long walk from backstage to FOH, traversing sections of barren, unseated floor space, then rows of chairs, and small clusters of people who seem in no rush to sit down. I choose a path to elicit the least notice by my presence, since I and my work—technician and technology—should be obscured so as to not distract audiences from the show. I gaze ahead, walking steadily and purposefully, making eye contact when I must, but trying my best to render myself invisible. My show blacks and my radio are a dead giveaway, of course, but hopefully my impact on the people who perceive me will be fleeting.

I like to go out at the ten. Other FOH operators won't be out for another few minutes, so this gives me time to check the cue list (again), settle into the space, and get a sense of the room now that there are people in it. I step behind the low, curtained stanchions that mask the nest of cable connections and battered-looking road cases. I can feel eyes on me in earnest now. It is one thing to step out from behind a big curtain in the distance, but it is quite another to step behind a barrier, penetrating an obviously specialized inner sanctum (cf. Meintjes 2003, 84–85) that is hidden in plain sight (Zerubavel 2015). The complex-looking console, the esoteric hand movements across the banks of colourfully lit faders, the screens and buttons and knobs, the unmistakeable expensiveness of the equipment, and the attendant responsibility that comes along with managing that equipment—these elements are clearly visible to anyone seated behind me, which is to say, nearly everyone.

The other technicians and the calling stage manager have arrived at FOH now and are securing and testing their com headsets—a comfortable headphones-and-microphone combination. I reach for my coms, which takes the shape of an old telephone handset, a design

that has not changed since the 1970s. Mixing a CDS show while wearing a headset would be

inappropriate—how could you hear properly?—and unnecessary, since there are so few cues that

come over coms from the stage manager.

     "Five minutes to the top-of-show, five minutes."

That is the last call to come over radio. All calls and conversations will happen on coms from

this point on. At the five, everything should be set and everyone—cast and crew—should be in

place. The show version is reiterated, the performer line-up is summarized.

     "Three minutes to the top-of-show, three minutes."

The coms handset is still pressed against my face. When I put it down again, I will make sure I

can find it in the dark or grab it without looking, like the windshield wiper controls of a car. I

look down for my other local landmarks: faders, buttons, headphones, talkback mic. I don't

remember standing up out of my chair; I won't sit down again until intermission.

     "Two minutes to the top-of-show, two minutes."

Technical departments check in with the stage manager, confirming personnel and their

readiness for the show. I speak for myself, as well as for the two sound technicians backstage,

one at the monitor console and one managing show microphones.

     "One minute to the top-of-show, one minute."

The stage manager spits out a set of sweeping, scripted "standbys," briskly reciting the many

inter-departmental cues that will conspire to start the show: "*Standbyhousetofiftyandblackout,*

standbywalkinmusicfadeandpreshowannouncement, standbyartistupstageentrance, standby . . ."

Even though I have heard the script countless times before, I listen carefully to the calls. What

little talking I had to do before the show is over now. If all goes well, I won't have to talk—I'll

just listen—until the end of the first half. I check the cue list for the *n*th time. I reach out for my

"Go" button with my right hand, holding the coms handset in my left. I feel for the button's sharp, industrial-strength plastic edges. This button will propel me through the cue list, triggering about one hundred cues over the next two hours. I stabilize the middle finger of my right hand one centimeter to the right of the button, butting my index finger against the button's raised edge, but pressing down against the steel chassis of the console itself. This is my standby position, safe from the nerves and jitters of an itchy trigger finger. Only two small, deliberate movements of my finger in response to the stage manager's "Go" will make me activate that button now: an up-and-over-the-edge movement to the centre of the button, followed by a sharp, forceful push. The ambient music will fade from the house, as will the ambient conversations, the rustle of coats and snacks and handbags, the powering down and silencing and airplane-mode-ing of cell phones, the seat-finding and ticket-stub verifications. I will hold my breath in the terrifying, loaded silence before the first syllable of a character's dialogue and the first note of a musician's performance. Everyone in the room will be primed for the show in that silence, but I won't be sure it will actually happen until I hear those things. I run through the first few cues in my head . . .

>*"Music, GO."*

My index finger makes two small, deliberate movements. I hold my breath. The show begins.

The FOH Mix

As this account illustrates, there is a great deal on a CDS show like Corteo that is tightly prearranged. The stage manager has a script, the musicians have a score, the acrobats have blocking, the FOH sound technician has a cue list. The role of a FOH sound technician is to recreate the sound design as faithfully as possible for every performance. This includes many

sonic parameters, such as volume or loudness, which is usually discussed alongside decibel (dB)

measurements, frequency response, timbre and tone, and signal processing (e.g., reverb,

compression, equalization).[6] The mix, as enacted by Corteo's sound technicians, was established

by the sound designer, a higher-ranking CDS sound professional, and was then handed down to

the sound technicians as a set of largely preprogrammed cues and predetermined fader

adjustments. Scene changes and musical transitions were automated as part of the console

programming at FOH, and any minor changes during a performance, such as more or less

volume for an instrument or voice, would generally not exceed two or three dB.

Discussing the development of the sound design itself, Corteo's sound designer, Jean-

Michel, outlined why there needs to be a degree of rigidity in the sound design when a show

goes on tour. He explained:

> When you send a show to a sound mixer, an operator [i.e., when the sound design is complete and ready to go on tour], you hope that that person is going to understand that those choices were made between the composer, the sound designer, the director of the show, even sometimes the coach and the artist on stage. Some of the acts, they need to be able to communicate. Sometimes we give them a little break in the music so they can scream at each other and say, "Okay, we're going to do this trick, it's now!" So if you push the music, you can put people in danger. These are all choices at some time as a sound designer, you need to respect and you hope that somebody is going to keep doing those and say, "Okay, I'm there to operate, to respectfully accept the design the way it is." But it's not always that easy. Lots of people [FOH sound technicians] come and say, "Oh, I'm going to make it a little bit my way." There is a way to do it. But changing a mix? It's not really the way we want it for Cirque. (Interview with the author, 7 Dec. 2018)

Jean-Michel noted that the FOH operators, or mixers, were not privy to all of the different

conversations and negotiations about the sound design during the creation process. Critical

decisions about the sound design were based on those conversations and it would be

inappropriate for an operator to ignore those details. To add weight to this view, he evoked the

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[6] See Jonathan Sterne and Tara Rodgers' (2011) and Mara Mills' (2012; 2020) disscussions of the cultural and political dimensions of signal processing.

standards and institutional desires of CDS as a creative, hierarchical corporation. Pierre-Luc,

Corteo's assistant production manager and former CDS sound technician, outlined why

consistency in the FOH mix outweighs a FOH sound technician's personal taste. While Jean-

Michel rightly pointed to safety issues around sound and acrobatics, Pierre-Luc pointed to the

sheer number of times a CDS show will perform:

> As the front-of-house mixer, my first thought mixing a show was the audience, but especially in a company like Cirque where you have hundreds and hundreds and thousands of shows [i.e., performances] in the life of a show,[7] you need to keep it consistent. You protect the design. You work *for* the designer with the bandleader to protect what was created. It's not just do whatever you want because you like it with more snare than the guy before. That's not the goal. It is to keep consistency and to give everyone [e.g., musicians] what they need to have that consistency. That's the main goal. It's sometimes hard to keep, because you want to try new things—you think it's better but it's against the concept of the show or the design itself. So you need to sometimes fight your own taste. (Interview with the author, 9 Feb. 2019)

By speaking of the demand for consistency in the sound design, Jean-Michel's and Pierre-Luc's

discourse represents CDS's public-facing organizational identity. The CDS brand insists that the

show sound the same from city to city so different audiences have the same experience. They

also touch on CDS's internal organizational culture around maintaining consistency through

hierarchical policing of the sound, or personal policing of the creative and aesthetic tension that a

FOH sound technician might feel when they have to "fight [their] own taste." These two

strategies, which emerged repeatedly on Corteo, represent how a private group of CDS

employees have chosen to work internally toward the goal of sonic standardization for the sake

of the public-facing brand.

 Ostensibly, the FOH mix is a reproducible, scripted, and programmed set of cues; a

uniformly distributed sonic product that is projected into the audience; a unilateral creation of the

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[7] At the end of my fieldwork period in February 2019, Corteo had been performed approximately four thousand times. This includes ten years as a big top show (2005–2015: usually seven to nine performances per week) and one year as an arena show (2018–2019: usually six to eight performances per week).

sound designer. Here, an operator could be understood as an amanuensis, mimicking the scripted moves of the sound designer, triggering automated transitions, and following musical and verbal cues. The mix, however, is more like a bounded set of parameters and thresholds that a FOH sound technician aims for, rather than a rigid script. Corteo's sound design acts as a kind of musical score, with the bandleader and FOH sound technicians somewhat sharing the duties of conductor. Without straining the metaphor too far, the bandleader directs the execution of musical ideas, while the FOH sound technician emphasizes those ideas with dynamics and other adjustments. For example, to compensate for changes in a musician's playing, a venue's acoustic, or an audience's response, FOH sound technicians must make subtle adjustments to the prescribed cues in order to maintain sound design fidelity from night to night. I argue that while the FOH mix may appear to be an inert, repeatable sonic product cast from an ideal creative original, it is continually creative and collaborative, and the status of its originality is ambiguous.

What exactly is being reproduced during a performance of Corteo is not always entirely clear. Unlike many rock and pop performers who seek to reproduce their albums and recordings on stage (EventElevator 2014; Harper 2015; Mulder 2015a; 2015b), Corteo's arena sound design has little to do with the official Corteo CD, a fact that left guitarist/accordionist Camille bemused. She remarked: "I wonder if the musicians, the [sound] technicians, if everyone has listened to the album. I think that would be good, because it [the CD] is the foundation of the music" (interview with the author, 19 Feb. 2019).[8] She went on to observe that the musicians and sound technicians on Corteo never discussed the official CD (this is true of the other CDS shows I've worked on as well), and one of the musicians didn't know there was a CD in the first place. The CD, a tangible, unchanging, and easily referenced record of a composer's conception of

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[8] "Je me demande si les musiciens, les techniciens [de son], si tout le monde a écouté l'album. Je trouve que ça serait bien, parce que c'est comme la base de la musique."

their own work, one that is not subject to capricious venue acoustics or inconsistent performances, is absent from the touring sound design, which seems counterintuitive. For Camille, Corteo's musical and sonic authenticity is in the recording; for others, it seems to be elsewhere. Contrary to those performers who seek to recreate their albums on stage, CDS's live stage productions, with their modest instrumentations and orchestrations, are fully created before album production even begins. That happens later, far from the live show, with different goals and aesthetics, a different team of engineers, producers, and arrangers, and ultimately with less music (Blair Jackson 2006). During album production, music from the live show is re-orchestrated and re-recorded for many more musicians than would be playing during a live performance. The CD recording of Corteo, for example, used a thirteen-piece string section (Cirque du Soleil 2005), while the live show has a violinist, a bassist, and an array of synthesizers. It also used a professional choir, while the live show uses the acrobats as a chorus that sings, claps, and vocalizes unamplified from the stage. The recorded music is *reminiscent* of the show music, not the show music itself, and apparently not the "foundation of the music" either, as Camille had assumed.

Like a film soundtrack that is sold separately after the film's release, Corteo's CD does not attempt to establish an authoritative standard for how those compositions should sound. As in film (Chion 1994; Gorbman 1987), the music will change for a live performance: the levels are adjusted to make way for dialogue, sections of a composition move and are abridged or extended, and sound effects interject. These aspects are removed, "toned down . . . [or] softened" on a CDS album production (Blair Jackson 2006, 136). Corteo's CD repackages a smaller selection of Corteo's music to blend in with other listening scenarios and with the personal narratives of the consumer beyond the live show (cf. Bull 2007). CDS's album producers have a

particular eye on longevity, presumably to keep the interest in CDS shows alive. They want consumers to be listening to show albums for years, perhaps long after the details of their experience of the live show have been forgotten.

As is often the case in film, a close association between sound design and narrative is important for CDS. Sound designer Jean-Michel, Corteo bassist Bobby, and Ana, a sound technician from a different CDS show, each commented on the cinematic tendencies of CDS music during interviews with me, while Guy Caron, an early CDS artistic director and collaborator, stated in a published interview that CDS music is expressly cinematic. For Caron, "the big secret of Cirque du Soleil is that we created shows like a film. We thought it should be edited and scored like film. If you take the music out, you don't have a Cirque du Soleil show" (Babinski 2004, 64). Film music, according to Claudia Gorbman, bonds "shot to shot, narrative event to meaning, spectator to narrative, spectator to audience" (1987, 55). Similarly, Corteo's FOH mix bonds the show structure to itself (e.g., scene to scene, act to act), and people (i.e., audience, musicians, technicians, other performers) to the story and stage action, as well as to each other during a performance. Owing to Corteo's liveness and its exaggerated sense of danger through acrobatics, the network of sound-based affective relationships amongst groups of people is broader than that of a film. These bonds, I argue, show that one of the things Corteo's FOH sound technicians reproduce during a performance is the sound design's ability to tell the story of what's happening on stage. This reflects CDS's cinematic approach to music. Jean-Michel provided an example of how storytelling can emerge from Corteo's music and sound design:

> Why do the drums need to be more predominant? Because in the juggling act [for example] every cymbal crash works with an action on stage. If you don't have those, it's not the same act. That's when you need to fine tune those elements and say, "Okay, we need two or three dB more of overheads," because it's not musical, it's visual. The drums tell the story of what's happening on stage. [. . .] Sometimes the drums are going to sound

loud because it's not a drum anymore, it's the storyteller. (Interview with the author, 7 Dec. 2018)

Jean-Michel's example of the juggling act is straightforward. Alex, the drummer, punctuates each of a series of challenging, rapid-fire catches with a crash cymbal hit, which clearly accents that particular visual cue. The musical composition and the sound design in this act are thoroughly enmeshed, as a score and sound design tend to be in film (Kulezic-Wilson 2020). The storytelling in Corteo can also be more abstractly affective, like the ponderous funeral procession and dirge that quickly becomes a joyous samba street party, or the transitional Baroque-style organ toccata that Roger, the bandleader, plays during a blackout between two acts, and which ends with a deep, reverberant hush. Here and elsewhere, silence, or a sudden absence of a specific instrument can emphasize stage action and affect.

Another example of affective, narrative silence is during the Planche act (i.e., teeterboard). Staged as a duel between the men of two noble families, à la Romeo and Juliet, the Planche act showcases low-tech acrobatics with jumps and flips. Equally low-tech and sparse is the musical accompaniment. Standing on a narrow strip of rotating stage, Alex plays a single, medium-sized tom on a low stand, circling the acrobats with his drum while standing perfectly still. Two larger drums are roundly walloped by acrobats who, along with the rest of the cast, are on stage as village spectators. Alex's drum is amplified somewhat, but since it and the other two drums are the only instruments being played at that time—the rest of the band is tacit—the direct, unamplified sound from the drums can easily reach the far seats of a small arena. The loud, pulsing drum line is counterpointed by the cast-as-chorus's insistent, syncopated clapping and monosyllabic chanting, egging on the duelers. As the men flip high above the stage, the drumming, clapping, and chanting suddenly cease mid-phrase (see figure 16), leaving nothing to hear but decaying reverberation, the squeaks and thuds of the teeterboard apparatus, and the

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collective, cringing, visceral gasp of the audience.[9] The aggressive, rhythmic accompaniment—as well as the audience's nervous, relieved laughter and applause—resumes only when an acrobat touches down on the teeterboard; the rest of the band resumes playing only when the most dangerous aerial section of the act is over.

Figure 16: A momentary silence during the Planche act (note Alex on the edge of the stage with an arm raised)

The music of the Planche act evinces many of the hallmarks of traditional circus music (Baston 2016): it is loud and percussive with an emphatic rhythm; it is dramatic and closely follows the action on stage; and it builds tension through highlighting danger, then reinforces the mastery of that danger. The drum and, importantly, the drum's silence become storytellers; the sound design helps tell the story of the duel, bond audience members, musicians, acrobats, and the FOH sound technician to that story, and bond different groups of people to each other in an affective sonic space.

Affect, EQ, storytelling, and console presets are fundamental parts of the sound design assemblage that seem to be more or less immutable depending on the day. What, then, is the

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[9] Paul Bouissac (1985) and Peta Tait (2016) discuss visceral audience reactions to aerial circus acts.

"original" sound design? What specifically is being "faithfully reproduced" night after night by FOH sound technicians? The fact that the FOH mix was designed to be reproduced changes how the "original" was conceived and produced.[10] Indeed, according to Jonathan Sterne, "reproduction does not really separate copies from originals but instead results in the creation of a distinctive form of originality [. . .]. The possibility of sound reproduction reorients the practices of sound production; insofar as it is a possibility at all, reproduction precedes originality" (2003, 220–21). In the case of the actual sound of Corteo's FOH mix, this distinctive form of originality manifests in the convergence of the FOH console's precisely recalled presets and sound file playback—what Walter Benjamin (1968) would call "mechanical reproduction"— and the nightly variations and aberrations in the live performance. For example, Christian and Davie have to be especially vigilant when mixing the voices of Corteo's secondary and tertiary characters. They are played by people—usually a rotating lineup of acrobats—who are not trained to project their voices. Christian feels he can't insist that people start projecting. "Especially the people who've done it for ten years," he remarked, "it's not something that I can rewrite easily. So sometimes the easier solution is actually dealing with it on my end as much as I can" through careful EQ and constant, attentive fader adjustments. He also has particular characters he listens for each night whose voices "set the level" for all the other characters. He remarked:

> If [the Clowness] is, let's say, three dB quieter, the whole thing gets three dB quieter. But if she's really loud, I'm like "Cool!" And it's not that I want to be louder, it's just more that I don't want to have to worry if I want to push things for dramatic effect. (Interview with the author, 9 Feb. 2019)

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[10] See Mark Katz (2004) and Sterne (2003) for discussions of how prevailing musical aesthetics and production techniques changed to facilitate the exigencies of early recording and broadcast technology.

Further, the FOH mix reproduces a set of conditions based on what Sterne calls the "social and cultural location" of its reproduction (2003, 221). "Sound fidelity," he writes, is "more about enacting, solidifying, and erasing the relations of sound reproduction than about reflecting on any particular characteristics of a reproduced sound" (2003, 274). As I discuss below, to reproduce the FOH mix is to reproduce notions of "good" sound, sonic control, and corporate oversight in a deeply gendered, technocentric space.

Mixing FOH

At FOH, a sound technician's job on Corteo is "to replicate the sound design to the fullest extent," said Christian during an interview (29 Dec. 2018). "To the fullest extent"—a slippery phrase—indicates the room for fluidity, negotiation, compromise, improvisation, and experimentation on the part of the FOH sound technician within the highly structured space of the FOH mix. Small details, personal creative touches, and individual priorities and methods vary from person to person, but according to Boden Sandstrom, a FOH sound technician is primarily in service to "the musicians, the audience, and the producers" (2000, 297). In the case of Corteo, the "producers" would include the entire CDS corporate creative hierarchy (e.g., the sound designer and composers). For Whitney Slaten, his "primary responsibility [as a FOH sound technician] was to ensure that the sounds created by the performers were not only audible, but also *musically intelligible* to the audience, and reflective of the expressive intentions of their performers, regardless of the distances separating audience and performers" (2018, 87, orginal italics). Both Sandstrom and Slaten were discussing outdoor summer festival work, but the job is the same as that of a CDS sound technician: to make available someone else's affective sonic product to an audience. I want to briefly underline the *job* aspect here. Both Sandstrom and

Christian point directly—and Slaten indirectly—to the moneyed supervision that is implicit in a

FOH sound technician's work. If a producer, band, or sound designer does not like what they

hear in the house, they can insist on a change—of sound or of personnel. I discuss corporate

oversight of Corteo's FOH sound technicians later in this chapter.

Though the FOH mix has numerous prescribed elements, CDS sound technicians contend

there is more to learn than just pushing a button or moving a fader at the right time. Mixing FOH

takes "finesse," said Ana, a sound technician on a different CDS big top show, and "takes years

to really learn" (interview with the author, 9 Apr. 2019). Similarly, Christian discussed

musicality as a parameter that cannot always be pre-programmed or left to an algorithm. He

remarked: "this board can't do what I'm doing with my hands on faders as musically as I want it

to be. That's it. There's no way to automate that" (interview with the author, 9 Feb. 2019). On

Corteo, scenes at FOH are recalled on the console to an initial state that approximates the

appropriate fader levels for a given section of a given song. A FOH sound technician will then

fine-tune the mix, making (hopefully) finessed, musical adjustments based on what they hear

from moment to moment. Other professional FOH sound technicians rely on automation

specifically for the finesse and musicality it affords. John Cooper, FOH sound technician for

Bruce Springsteen, said in an online video:

> I get to be intimately involved in the music, which is really my goal. That's the great
> thing about . . . automated consoles and the things we get to do now. People would
> contend that you have been taken out of the mixing because of all the electronics and all
> the tools, and I contend it's just the opposite. You don't spend the last thirty seconds of a
> given song thinking about the first thirty seconds of the next song. You can do that with
> the push of a switch as far as statusing of a particular song—fader levels and that sort of
> thing. It really allows you to get back to mixing the music. (Waves Live 2013)

For Cooper, simply recalling fader levels is not mixing *per se*, so the decision to automate such routine processes is ultimately a musical one.[11] It allows a FOH sound technician to focus on the music rather than performing basic recall tasks. When computerization and automation came too close to essential musical elements, however, Davie, Corteo's assistant head of sound, became wary. Recalling his previous work with Disney On Ice touring productions, he remarked:

> I find that having a live band is less stressful than running a show with tracks [i.e., recorded audio playback], because with tracks you're at the complete mercy of the computer crashing and freezing, or the computer doing something weird. Here [on Corteo], if one musician has a problem, at least the show can go on. It's not a show stopper. As soon as Mickey stops talking [during a Disney On Ice performance], it's over! [. . .] In a sense it's almost the same here. What stresses all of us out the most? Ableton [the sequencer software Corteo uses]. The computer. If there was no computer, there'd be a lot less stress. (Interview with the author, 9 Feb. 2019)

For Davie, working with live musicians, as opposed to only computers, made troubleshooting easier. Davie's emphasis on show stability demonstrates a concern for musicality. Live musicians might extricate themselves from a technical problem in a musical way—a guitarist might revoice a chord to account for a broken string, or a saxophonist might play a missing melody to account for a faulty violin pickup—while a crashing computer never could.

That CDS sound technicians speak of musicality is not surprising. Music and sound effects are central storytellers for CDS (along with lights, movement, costumes, and so on), much more so than character dialogue. Though some dialogue can be important on Corteo, for example, speech intelligibility is seldom prioritized in the mix (see chapter 2). Dylan, one of Corteo's sound technicians, contrasted Corteo with his previous work in musical theatre, where music was almost always "secondary" to dialogue (interview with the author, 19 Jan. 2019). His cues on a musical theatre show would be visual (e.g., stage entrances and exits) and script-based,

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[11] Recording engineer Karen Kane was an early proponent of automation in sound consoles (Reynolds 1995). See Edward R. Kealy's (1979) discussion of technical versus creative mixing in recording studios.

whereas on Corteo, his cues are almost all according to the music (e.g., the end of a piece or musical phrase). A FOH sound technician's musical and aesthetic sensibilities become important when executing the types of cues a CDS sound designer creates.

A FOH sound technician's notion of musicality is related to, but distinct from, their notion of "good" sound. Broader contemporary understandings of "good" sound are raced and gendered, and have their foundation in modern sound reproduction technologies and listening practices of the late nineteenth and early twentieth centuries, such as radio, recording, amplification, and telephony (Sterne 2003). In their design and typical aesthetics of usage, these technologies are imbued with a hegemonic notion of white masculinity that asserts calm, controlled authority and purports scientific objectivity.[12] When creating and presenting a show like Corteo, CDS assumes (safely, I think) that designers, sound technicians, and most audience members will have these broad ideas of modern sound technologies embedded in their approach to the FOH sonic product before they show up—for a conceptual design meeting, for a load-in, for a performance—including notions of 'transparent' technology and sonic mastery of a space.

Discussions of "good" sound on Corteo were not discussions of "good" music. Notions of "good" sound pertained to the quality of that sound and its behaviour in space, not to the musical content with which it is imbued. A saxophone can still sound "good" to a sound technician, for example, even if they don't like what the saxophonist is playing. Indeed, in their own definitions of "good" sound, many freelance FOH sound technicians adhere to the aesthetic of whatever

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[12] Jennifer Lynn Stoever argues that "dominant listening practices discipline us to process white male ways of sounding as default, natural, normal, and desirable" (2015, 12). Michael Veal (2007) shows how Jamaican dub aesthetics contested and defied the "clear," "natural" conventions of recorded sound.

musical genre they're working with (Sandstrom 2000; Slaten 2018).[13] This, I believe, is similar to Christian's and Davie's stated adherence to Corteo's sound design.

To describe "good" sound, Corteo's sound technicians often used words like clear, clean, natural, and transparent—terms that are roughly synonymous. Using "pure metaphors" like these is common for sound professionals (Porcello 2004), and these words in particular are used to describe a widely adopted standard of "good" for live, recorded, and broadcast sound (Slaten 2018; Sterne 2003; 2012a; E. Thompson 2002). When Christian used terms like "natural," however, he sometimes qualified the usage. Speaking about the sound of character dialogue, he remarked:

> I think most people [FOH sound technicians] try and do the same thing, which is provide a natural image. But it's natural in the sense that—I suppose it's not really natural—it's just how you'd expect someone to sound with a microphone on them. (Interview with the author, 29 Dec. 2018)

Here, Christian, realizing the problem with the term "natural," which, like "good," is shot through with assumptions and erasures, pointed to what Sterne (2006) calls "the dream of verisimilitude." An assumption of the dream of verisimilitude is "that greater definition is the same thing as greater verisimilitude" (Sterne 2006, 4).[14] The precise vocal articulation and intelligibility that is afforded by a microphone is not a realistic representation of a person's voice when that person is speaking from centre stage, one hundred and fifty feet away from a listener's seat in the upper bowl of an arena, for example. The voice should sound quieter and should sound muffled and dull as high frequencies dissipate, effects which would be even more pronounced if the speaker were facing away from the listener (Burston 1998). Instead, the voice

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[13] Recording studio scholars have noted similar genre-based notions of "good" sound (e.g., Bates 2016; Kealy 1979; Meintjes 2003; Scales 2012).

[14] Michel Chion (1994) and James Lastra ([2000] 2012) provide related discussions about verisimilitude, fidelity, and intelligibility in sound reproduction.

sounds crisp, clear, and balanced with the music. Christian problematized sonic representation even more explicitly while talking about the sound of the drum kit, which, due to Corteo's set design that splits an arena in two, is hidden behind curtains and on the far side of the stage for half the audience: "No one on this [south] side sees a drum kit the entire show. But it still needs to sound like a drum kit, and not a drum kit *over there*" (interview with the author, 29 Dec. 2018). "Good" sound for voices and instruments is, in this case, high definition, but that definition does not reflect greater verisimilitude.

The examples of character voices and the drum kit demonstrate how "good" sound on Corteo should be divorced from spatiality and strictly controlled *as signal*. For Corteo's sound technicians, the local acoustic and architectural reverberation of an arena is an impediment to the sound design and can destroy their clean, clear modern sound. Emily Thompson discusses architectural reverberation in relation to modern sound specifically. She writes:

> Reverberation, the lingering over time of residual sound in a space, had always been a direct result of the architecture that created it, a function of both the size of a room and the materials that constituted its surfaces. As such, it sounded the acoustic signature of each particular place, representing the unique character (for better or worse) of the space in which it was heard. With the rise of the modern soundscape this would no longer be the case. Reverberation now became just another kind of noise, unnecessary and best eliminated. (2002, 3)

Corteo's sound technicians regularly discussed reverb in the sense that Thompson outlines, as an unwanted noise derived from and generated by the venue, and as something to be controlled or eradicated.[15] They also discussed it in relation to the FOH mix as a creative enhancement that is electronically synthesized, adjusted parametrically, and judiciously applied to voices or instruments *per channel*, creating one acoustic space after having eliminated another (cf. Doyle 2005; and Sterne 2015). This proprietary approach to reverb on tour—eliminating the local to

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[15] There are countless music venues that lend an aesthetically desirable reverberation and frequency response to a performance or recording (e.g., Baumann 2011).

make room for the contrived and synthetic—represents strict control over sound, space, and signal.

In separate interviews, each of Corteo's sound technicians determined that they acquired an understanding of "good" sound by listening to and playing music, as well as attending live shows (e.g., rock bands). Both Davie and Cliff emphasized the value of musical training and experience for sound technicians when thinking about "good" sound. Davie remarked:

> There's plenty of sound techs who are good and they don't play instruments. That's fine, but for myself, and for the guys I know who have played instruments, their head is just in a good place when it comes to mixing and what sounds *good*. (Interview with the author, 4 Jan. 2019)

Davie and Cliff relish the embodied musical knowledge that comes with playing an instrument. They know what it is to practice, to focus on musical details, and to make minute tonal adjustments on an instrument. Further, they have an appreciation for what the musicians are doing in performance. This knowledge is directly transferable to mixing and other aspects of a sound technician's work.

Corteo's sound technicians also drew on their own past technical work to inform how they thought about "good" sound. Having access to different equipment, working with different ensembles, and discussing their work with fellow sound technicians were all important elements in their own determinations of "good" sound. For Davie, discussing sound with other sound technicians was also a useful way to manage uncertainty and self-doubt:

> Getting other sound guys' opinions is really good because they might give you an idea, or tell you why they don't think it sounds right. But they're going to tell you *why*, they're not going to say, [speaks in whiney voice] "Oh, there's something I just don't like." They'll say, "This sounds bad because of *this*: your EQ, or your compressor, or just your level. If you bring it down, here's your chain reaction and why this'll sound better." The experience of having sound people around you and sharing your ideas gives you confidence in your mix and, I guess, makes you think, "Yeah, okay, I can make it sound good, and this is why." (Interview with the author, 4 Jan. 2019)

In discussing "good" sound with others, Davie learned to more effectively produce it. Christian and Pierre-Luc also acquired their understandings of "good" sound in part through discussion, but they emphasized their conversations with sound designers as being particularly formative.

Scholars have shown that the activities Corteo's sound technicians enumerated as aesthetic guides for "good" sound are male gendered: playing in bands (C. P. Wong 2011), going to live music gigs (Cohen 1997), having access to sound technology and working as sound technicians (Born and Devine 2016; Sandstrom 2000), and conferring with other sound professionals who are usually also men (Diamond 2005; Scales 2012). Christian and Davie, FOH sound technicians and guitar players both, have spent their personal and professional lives trying to perform "good" sound by listening to, talking to, and working with men who are themselves trying to perform "good" sound. Good sound is enacted through a series of aesthetic, commercial, technical, and social choices, most of which have been shown to be gendered male. My own experience as a musician and technician resembles Christian's and Davie's own. My music-making groups were mostly white and male, my rock-concert-going experiences were mostly to see white men perform (and in the case of Western art music performances, to hear white men's compositions), and my work experience in sound has been almost exclusively with white male colleagues. These musical and technical experiences have certainly informed my aesthetic choices as a FOH sound technician. I argue, then, that a performance of Corteo, for example, is a performance of a version of "good" sound, and thus a performance of a certain kind of white masculinity. As Davie himself acknowledged, mixing FOH is an explicit broadcast of a FOH sound technician's accumulated sonic experience:

> Music, experience, sharing information with people, conversation—yeah, those things I think give you the credentials to say to thousands of people: "This is what sounds *good*." (Interview with the author, 4 Jan. 2019)

Mixing FOH on a show like Corteo reinscribes gendered and raced aspects of "good" sound by making audible—and indeed, amplifying—countless sonic decisions made by countless white men, routed through a FOH technician: a conduit, a node in a vast, masculine aural matrix, an assemblage of technology, access, and performance. Like other aspects of gender (Butler 1990), mixing FOH is performative. By broadcasting what they think "good" sound is, Corteo's sound technicians are instilling a masculine notion of "good" sound in listeners, including themselves.[16] This notion of performing masculinity emerges later in this chapter in my discussion of stoic emotional labour.

Listening to the FOH Mix

FOH sound technicians aspire to mix musically and with finesse, and they adopt a musical mode of listening that allows for subtlety, nuance, delicacy, infinite variation, and personal expression. Like Ana, who said it takes years to learn to mix with finesse (see above), Jean-Michel, who was himself a touring sound technician for CDS, described a sustained period of sonic exploration after he "learned" a mix (i.e., memorized and mastered the prescribed cues). He described how, as a FOH sound technician, he would listen musically and relationally. By working within the bounds of a sound design, he would find ways to emphasize sonic elements for musicality and affect. He remarked:

> You start mixing only looking at faders and numbers [i.e., treating sound design dB guidelines as figures to be precisely followed]. Then you start mixing looking at the stage and you understand the relation between the music, the performance, and the audience. And then you start gauging this, saying, "Okay, can I, as a sound mixer, get more reaction or less reaction by the way I'm doing the mix?" Not with changing it and saying, "I'm going to redo the way the drums sound and re-EQ everything." No, just by pushing

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[16] Writing about the group of women she helped train as FOH sound engineers and the generalized, observed differences between how men and women mix FOH, Sandstrom notes that "Our experiences as members of a marginalized group [women] helped us not only to identify with the performers' need to communicate their music and its meaning but also, as sound mediators, to contribute to the process to the best of our abilities" (2000, 300).

> fader, a little louder, a little softer. You know, push the snare for one second for a snare hit. Is it going to make it more dramatic? Is it going to have a bigger impact? Are people going to jump out of their seats and say, [*gasps*] "Oh, he almost died!" just because you pushed that one element? (Interview with the author, 7 Dec. 2018)

For Jean-Michel, treating the sound design as a stable, unchanging set of cues and simplistic, decibel-based fader movements was not desirable. In addition to compensating for changes in a musician's performance, for example, making small adjustments to the mix could intensify an audience's experience using the extant materials and infrastructure of the sound design. However, this musical mode of listening is understood as an addendum, a mode that is built upon, subsequent to, and less important than other more practical, instrumental, and masculine modes of listening.

Just as the acquisition and performance of notions of "good" sound are male gendered on Corteo, so too are characteristic FOH modes of listening. I agree with Slaten (2018), who argues that mixing FOH involves listening acoustemologically. By critically navigating the assemblage of disparate-but-crucial acoustic stimuli in the arena during a performance (e.g., speakers, microphones, individual instruments, coms, audience members, venue acoustics), sound technicians engage a mode of listening that affords "a knowing-with and knowing-through the audible" (Feld 2015, 12), by which they can know, or can deduce, the state of their equipment, the performers, the audience, and each other. Mixing FOH on Corteo goes further, however, and is more akin to what J. Martin Daughtry calls "expert masculine auscultation" (2015, 130). This mode of listening positions military personnel, in Daughtry's case, as objective, rational, tough "expert auditors." He elaborates with an evocative passage:

> [Military service members] *transform sound into actionable intelligence; with great precision, they can determine what's happening by tuning into the sounds that surround them. They calmly assess the situation, as a doctor would, discerning, through listening and looking, the sonic and other pathologies in the neighborhood. They act bravely when*

> *they encounter sonic evidence of danger, and maybe even crack a little joke to*
> *demonstrate their sangfroid.* (2015, 131, original italics)

FOH sound technicians too listen incisively for *information* encoded in sound and respond to that information with cool, calm, decisive action.[17] Here again is the modern understanding of sound-as-signal reinforced. Through this mode of listening, FOH sound technicians focus on, filter, and discern different sound sources, vigilantly scanning for disruptions and irregularities (e.g., faulty equipment)—their version of sonic evidence of danger. At FOH, Corteo's sound technicians sonify a form of masculinity in the mix and then listen to that performance in a masculine mode. This is a feedback loop they cannot eliminate with corrective EQ.

In the section that follows, I build on the forms of masculinity at FOH I have outlined so far: the acquisition and performance of "good" sound and a masculine mode of listening. Expanding on Arlie Hochschild's (2003) notion of female-gendered, service-type emotional labour, I show how Corteo's FOH sound technicians engage in a *male*-gendered, *stoic*-type emotional labour during remote communications with backstage. Male-gendered stoicism has a long history in representations of masculinity in European and Euro-colonialist regions like North America and Australia (Jancz 2000), and is central to what Goffman called "the complete unblushing male" (quoted in Shamir and Travis 2002, 1). Male-gendered stoicism calls for men to have "total control of emotions" (Shamir and Travis 2002, 1) and to "display emotional strength, toughness and inexpressiveness in social situations" (Migliaccio 2009, 233), traits that align with those of expert masculine auscultation. The crucial point here is the emotional display. Stoic emotional labour is enacted when, for example, Davie masks his own emotions with inexpressiveness—what Jeroen Jancz (2000) calls "restrictive emotionality"—in the course of his job for the sake of his colleagues' well-being. Indeed, Davie described the stress he regularly

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[17] See Sterne's (2003) discussion of doctors, medicine, and a related mode of professionalized listening.

feels at FOH, particularly in relation to troubleshooting during a performance. He noted that

having unreliable sound technicians backstage is stressful because the show will not run

smoothly, and problems will not get solved. He remarked:

> It's still a little stressful for me because when I'm at front-of-house, thinking, "Okay, did the new guy do this? Did the new guy do that? Is this done? Is that done right? I know if that's not done right, this person is going to come complain about that." I'd say that the most stressful part of my job is worrying about every aspect right now until I *know* I can trust the people in those positions to do their thing. [. . .] Of course, I always feel just a little stressed like going to front-of-house, being there. But it's almost starting to be a little less stressful at front-of-house because I know that when there's a problem, I can only do so much out there. (Interview with the author, 17 Feb. 2019)

Davie's anxiety is characteristic of FOH sound technicians at CDS. They are required to stay at

FOH in the event of a technical problem but are also the de facto department head for the

duration of a performance and are thus answerable for anything that goes wrong. Mistakes are

obvious to colleagues and audiences alike, and when audible mistakes happen, the FOH sound

technician is the most exposed member of the team. In addition to the stares and glares from

audience members after a sound problem, there can be a great deal of corporate oversight for

FOH sound technicians.

Oversight (Overaudition?)

The FOH mix is governed by CDS through classical bureaucratic policies, such as divisions of

labour, hierarchical authority, and formalized rules and procedures (see Hatch 2013). Recent

changes in ownership at CDS have exacerbated the already "top-heavy structure, with greater

management control over the company's operations and the show creation process" (Leslie and

Rantisi 2019, 261).[18] The artistic director, the bandleader, stage managers, and any senior CDS

artistic staff, such as the sound designer, the composers, and the senior artistic director, all have

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[18] In 2015, CDS was split up and purchased by investment firms (see chapter 1).

licence to give notes, directions, and instructions to FOH sound technicians. These notes and instructions are polite and professional, and usually begin with a conversation rather than a stern, top-down decree. However, the FOH sound technician is subject to their instructions, no matter how polite, discursive, or compromising, and the corporate oversight of the mix is constant.

The layers of oversight, while not unique to CDS, are different from those on some other modes of touring. A FOH sound technician doing a concert tour with a band would be answerable to the band itself, whereas the band on a CDS tour is comprised of CDS employees, just like anyone else on tour. If a CDS band member has a complaint about a sound technician, for example, they would be required to follow hierarchical, corporate channels, and would not be able to fire the sound technician themselves. CDS sound technicians and musicians almost never have ownership of the sonic product they purvey. This tension between FOH sound technicians' agency and the corporate hierarchy regularly emerges in conversations and interviews. Christian and Davie, when discussing artistic decisions related to the FOH mix, often refer to a non-descript "they" to represent the person or people who make those decisions. Sometimes "they" will coalesce into the sound designer or the artistic director, but other times "they" will be unknown executives and administrators at CDS headquarters in Montreal. Several of Corteo's sound technicians and musicians expressed ambivalence or hostility towards the Montreal-based executives (and to the degree of oversight in general),[19] as well as a general lack of understanding of executive jobs and decision-making processes. Davie talks about the tension between the "vision" of the sound design and the day-to-day reality of mixing live:

> I keep key points of [the sound design] in mind, but in the end, you have to mix the show the way you think it sounds nice. I was here when he [Jean-Michel, sound designer]

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[19] Erving Goffman (1959) might attribute some of this ambivalence and hostility to a sudden, unwelcome introduction of the polite, "front region" behaviour of executives into Corteo's familiar—and typically quite vulgar—backstage region. Jack Santino sees "hostility toward authority [as] one of the most pervasive themes in occupational narrative" (1978, 201).

explained a lot of this stuff, and I understand a lot of his key points, but if I think the kick sounds too heavy, I'm going to turn it down or if it's too low, I'm going to turn it up. As long as it doesn't ruin the image that he had in mind. So I guess you've just got to use your judgement. Would he like it? Sometimes I think: if that dude was standing next to me, would he approve of what I'm doing? But he's not a dummy, he knows a person is going to mix. Usually they want to mix, and hopefully they take a lot of his opinion because he designed the show. Which I think we do. We respect his vision or whatever, his design. (Interview with the author, 9 Feb. 2019)

Here Davie indicates that there are guidelines and thresholds embedded in the sound design that allow for an individual operator's opinions or fluctuations in different performances. Jean-Michel too remarked that performances will change from night to night, sometimes for emotional reasons (e.g., friends or loved ones in the audience), other times for infrastructural ones (e.g., worn-out strings on the guitar), and that an FOH operator must be ready for that.

While some artistic decisions are edicts, handed down to FOH sound technicians, others can be more collaborative. Mark, the artistic director, considered the FOH sound technicians (and especially the head of sound) to be collaborators:

I will go back and forth with [the] sound [department] saying, you know, "We're not hearing this, we need to bring that up; that's happening at a different time now, so this is following that closer." So there's a lot of back-and-forth in that sense, and a lot of times, it's not always coming for me. It'll be sound [technicians] coming to me and saying, you know, "This is happening now. What do you think? What do you want us to do with that?" Because they're my ears more than me at times. (Interview with the author, 23 Jan. 2019)

Mark appreciated, and often relied on, the opinion of the FOH sound technicians to address certain details of Corteo's complex sonic product. He continued, noting that his experience has given him a valid perspective, but he must still depend on the advice of the sound department and the musicians to make informed decisions:

I've been doing this a while. I used to be involved in music as well and before that I was on stage for a long time. I know what I'm doing, but I'm not a sound technician and I'm not a musician. But I do have an informed opinion about all of those things through exposure and experience. So the ideal relationship [with FOH sound technicians] is very give-and-take. It's one of listening on both sides. It's one of asking questions, receiving

answers. It's one of speaking to each other as colleagues. (Interview with the author, 23 Jan. 2019)

He went on to say that he did not want to work with condescending technicians, nor did he want to adopt the "dictatorial approach" that he had seen in some other artistic directors. He preferred collaboration despite the corporate hierarchy, because everyone was working towards what's best for the show.

The musicians in turn have their own opinions about how the FOH mix should sound, particularly in relation to their own performances. Because the musicians on Corteo cannot hear the FOH mix as an audience member would, they have to trust the FOH sound technicians to represent their sound and their performance appropriately. Early in the tour, the musicians were given an opportunity to listen to the mix with a "virtual soundcheck," where the whole band sat in the house and listened to a multi-channel playback of the show through the PA.[20] It was not entirely successful and caused arguments amongst musicians. Camille, the guitarist and accordionist, felt that the show's finale was "disappointing" because the drums were so overpowering. She said the other instrumentalists agreed. She remembered thinking, "Do we really need to be playing here if all we're hearing is that [the drums]? [. . .] We didn't feel especially valued" (interview with the author, 1 Feb. 2019).[21] Stephane, the violinist, was also not happy with the FOH mix but seemed more resigned. "I just play," he said, "and the result is the result; there's nothing you can do about it" (interview with the author, 6 Feb. 2019). Roger remarked in an interview that he was "skeptical" of having the whole band listen to the FOH mix precisely because it can cause tension amongst the musicians, as well as between the musicians and sound technicians. Alan Williams, in his discussion of 'audioscapes', which are

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[20] See chapter 4 for a discussion of a virtual soundcheck at monitors.
[21] "Est-ce qu'on a vraiment besoin de jouer si on entend juste ça? [. . .] On se sent pas super valorisé."

"simultaneous, multiple aural experiences that result from the use of microphones, loudspeakers, and . . . headphones" (2012, 113), provides a possible reason for this tension. He writes:

> the experience of the control room audioscape during playback may conflict with the experience of the headphone audioscape during performance. What sounds good—prominent, clear, *important*—in the headphones may be buried, murky, irrelevant, through the control room speakers. A customized audioscape created to better enable the individual's performance can result in a myopic perception of the value of the individual's contributions relative to the whole. Control room playback reasserts the technician's dominance, in effect demonstrating the inconsequentiality of the musician's personal audioscape. This sense of insignificance can permeate every minute of the musician's studio experience, causing a pronounced un-ease and dread of recording sessions, where nothing ever feels "right." (2012, 117–18, original italics)

Here the control room audioscape can be equated to the FOH mix, while the headphone audioscape can be equated to the musicians' individual monitor mixes (see chapter 4). The differences between the FOH mix and the monitor mixes cause a disconnect in the musicians' understanding of their own performances and how they contribute to the show itself. Furthermore, they are powerless to consistently supervise their own sound at FOH, and would be powerless to change it even if they could monitor it. While the tension Williams describes was certainly present on Corteo, the sound technicians and musicians said repeatedly in interviews and in conversation that the relationship between the two groups was positive and strong. The sound technicians and musicians communicated regularly about the sound of the show and freely discussed any problems that arose. However, they also noted the effort it required to build, maintain, and in some cases rebuild those lines of communication and levels of trust.

The musicians also relied on the opinions of their friends and family who came to see the show. For example, Alex, the drummer, and Bobby, the bass player, were complimented on their sound by musicians they know and respect. Christian remarked that "because someone they trusted that wasn't in our world came and gave them a huge compliment on their sound, they in turn came up and thanked us [the sound technicians] for it" (interview with the author, 11 Feb.

2019). Christian noted further that while Alex has always been easy to work with, he (Alex) has since been even more cooperative and accommodating with any proposed changes to the sound or the system because he trusts Christian and the sound department in a new way.

Meanwhile, Phil, the saxophone player, received negative feedback from a friend who saw the show, which had an adverse effect on his level of trust in the sound department. Davie explained in an interview:

> I feel like the opposite happened with Phil a little. He had someone come who plays who said like, "Ah, I couldn't really hear you," and he said one of the saxes didn't really sound that good. And actually since then, I think he's been really honing in on his sound and worrying more about what's in the house. [. . .] I hope we can gain that [trust] back from him. (Interview with the author, 11 Feb. 2019)

Christian's solution was to combine technical and emotional labour. Phil had been asked by a different friend to provide recorded saxophone tracks for a personal project, and Christian offered to serve as engineer in an impromptu recording session at the tour hotel one evening. Using the show microphone, Christian hoped to expressly demonstrate that it can produce a sound that Phil would approve of, and that his (Christian's) work on that sound (e.g., compression, EQ) with that microphone and that saxophone is appropriate. Christian noted:

> I wanted to spend some time with him with the same mic and the same sax and show him what it sounds like. With the stuff that I was doing, he was like, "Man, it sounds great!" Then the guy wrote back to him yesterday and Phil was like, "Dude, the guy was so happy, he thinks it sounds amazing! Thank you so much!" [. . .] And I was like, "Cool! Okay, that's *good*." Because that's going to help with this [trust] in the bigger picture. It's definitely something I'm very conscious of, for sure. That perception. Because that's what it comes down to a lot [of the time]. (Interview with the author, 11 Feb. 2019)

Christian blended his technical abilities with supportive emotional labour to regain Phil's trust in the sound department's work at FOH. He successfully demonstrated that the show's equipment and his own musico-technical instincts were good, that is, they compared favourably to Phil's imagined ideal sax sound, and the results were respected by and viable for a third party—in this

case, Phil's friend who commissioned the recording. While workers often try to distance themselves from the emotional effects of their own emotional labour (Hesmondhalgh and Baker 2008), Christian invested himself further to find a solution to Phil's problem. The hotel recording session itself was more of an investment than was likely necessary, but the level of trust that was regained as a result was likely higher than if they had just talked backstage about the problem instead.

Performing Stoicism

Emotional labour takes different forms for Corteo's sound technicians. I now move to a further discussion of emotional labour at FOH that centres remote communication. Here I extend the definition of emotional labour to include remote communication, that is, conversations on coms or talkbacks between sound technicians and musicians that are not face-to-face. Coms (for all technicians) and talkbacks (for musicians and sound technicians) are the two-way verbal communication loops that connect the band, the sound technicians, and other technical departments (see figure 17).
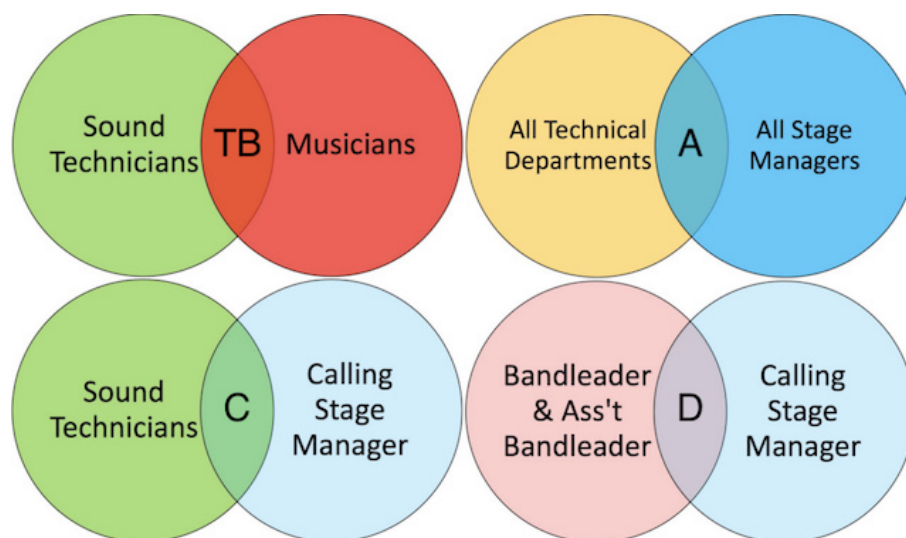
Figure 17: Remote communication channels for sound technicians and musicians

In addition to the musician talkbacks (TB in figure 17), there are four com channels: A ("party line") is for all departments and is used primarily for "show call" (i.e., mostly scripted and centralized verbal cues required to coordinate the actions of the show crew); B is lighting; C is sound; D is the bandleader's link to the calling stage manager at FOH. Each musician has their own talkback microphone that is used to talk to other band members and to the sound department. Remote communications with FOH are expected to be calm, clear, and concise. This conversational etiquette over coms is, I argue, grounded in another mode of emotional labour, one that could be gendered male and that is characterized by stoicism. This is an extension of Hochschild's notion of emotional labour in two ways. First, it is remote. While Hochschild's formulation calls for emotional labourers "to sustain the outward countenance that produces the proper state of mind in others" (2003, 7), these exchanges over coms are enacted at a distance by mediated voice only.[22] A person's outward countenance in this context is irrelevant. Second, it is gendered male.[23] Hochschild notes that men have "the private task of mastering fear and vulnerability" (2003, 163). However, for Corteo's sound technicians, these acts of stoicism are not private tasks, they are public and part of the job. To clarify the theoretical framework, the act of *becoming* stoic is private, while the act of *performing* stoicism (in this case, over coms) is public.

In a crisis, there is no room in a remote communication to express concern, worry, surprise, or elation about a situation, let alone panic. Priorities for this coms etiquette are a focus

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[22] People with "musical experience" (musicians and sound professionals) have been shown to have an "enhance[d] sensitivity to emotion in speech" (Strait et al. 2009, 661).

[23] Modes of remote communication and reasons for using it have been gendered since the early days of telephony, for which social calls were feminine: "frivolous, trivial, idle"; and business calls were masculine and "legitimate" (Sterne 2003, 197–98, 208; see also Martin [1991] 2012).

on technological facts and solutions to problems, and a recognition that time is short.[24] Corteo

musicians and sound technicians have noted in interviews that coms etiquette is not formalized

nor is it explicitly taught. Christian noted in an interview (interview with the author, 11 Feb.

2019) that coms and talkback protocols were never taught or formalized on Corteo, and

described the prevailing practices as "common sense." Roger noted in a separate interview that

verbal exchanges on coms and talkback should be "concise and clear," and concurred that the

etiquette is not taught (interview with the author, 18 Jan. 2019). It is instead imparted over time

to the group by the group's own communications (cf. Porcello 2004). In a group interview,

Christian, Davie, and Roger discussed talkback etiquette specifically, and addressed a time

during early rehearsals for Corteo arena when the etiquette was not in place:

> CHRISTIAN: It's never really occurred to me, correct me if I'm wrong, but we've never actually as a group gone, "Hey, this is the protocol for talking on the talkbacks during the show." But I don't see that as being a bad thing. I see that as being a thing of where a) we haven't needed to [use the talkbacks] all the time, but b) I think we as both departments [sound and musicians] working together actually do a pretty good job anyway, and that is an example of the common sense we all tend to agree on.

> DAVIE: I think there's an etiquette with the band talkbacks that everyone follows.

> CHRISTIAN: Which is really cool because we've never actually had to discuss that, which I see that as a total positive, because it means it's inherent

> DAVIE: But we can go back for a minute when Etienne[25] [original assistant head of sound and monitor technician for Corteo arena] was here and was getting really frustrated because—and it was an issue—someone [a musician] would ask him for something [for their monitor mix] and then other people [musicians] would just start having a conversation while he's trying to communicate a problem.

> ROGER: Oh yes, it was starting to be too much.

> DAVIE: That became a problem, and I completely understood his frustration. And that ended though. I think that's gone away.

> ROGER: Yeah, I think that was part of the creation process [i.e., Corteo's arena remount].

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[24] For similar ethics of terseness, calmness, and emotional control during remote communication see Sharon H. Mastracci and Ian Adams's (2019) discussion of emergency dispatch operators; Gene Krantz's (2001) of NASA space flight controllers; and Daughtry's (2015) of United States combat aviators.
[25] Etienne is a pseudonym.

CHRISTIAN: I could imagine it was. Sitting there, having nothing to do in a sense while waiting would only result in that. [The rehearsal period was sometimes very slow-moving, especially for musicians who had to be in place sometimes for hours at a time just in case the creation team wanted music.]

DAVIE: Yeah because that was mostly when we were in Quebec City I think, in that building for a month or two.

ROGER: So that was very much in the early situation. People were still sort of finding their way around.

DAVIE: But I think nowadays when someone asks for something, especially during soundcheck, everyone is pretty much quiet and allows us to communicate with that person who's in need of whatever. And that etiquette has gotten much better.

JACOB: So it's something that developed over time —

DAVIE: Yeah I think so. [agreement from Christian and Roger] I think, you know, just people realizing that trying to listen to a problem and then other people having a conversation, it was tough. When you're hanging out, and you don't have to deal with the problem, it's like, "Hey, let's bullshit." And I'm sure it wasn't intentional at all, but that was something that in the early stages was a problem.

ROGER: Yeah, that's true. And that's also part of us being in separate pits. [agreement from Christian and Davie—the eight musicians are divided into four pits and must use the talkbacks to communicate] It's easy to just come off the mic and have a chat with somebody [if you're seated together], but when you're all around the room, it's like, "Hey Roger, have you seen that film?" [*group laughter*] "No, Bobby!" [*group laughter—* this is a very good-natured jibe at the bass player (not present) who is especially friendly and loquacious] "Hey Roger, you wanna hear something funny?" "No!" [*group laughter*] (interview with the author, 11 Feb. 2019)

The coms and talkback etiquettes are, in a sense, what J. L. Austin (1975) called performative.

For example, Christian uses his terseness not just to adhere to the etiquette, but also to create—

and establish the primacy of—the etiquette. He shows musicians and other sound technicians

how to be terse and inscribes the etiquette onto remote communications and onto the role of

'sound technician.' The metacommunicative message (Bateson 1972) embedded in a sound

technician's terseness over coms during a performance is clear: "there is a show going on, I have

limited time and attention, please adhere to the established coms etiquette, and we'll discuss this

in more detail later." Remote communications between sound technicians who are all backstage

can be more discursive and less emotionally managed, but only if there is time. During a moment

of crisis or time-sensitive troubleshooting effort, the FOH-to-backstage rules apply. I now turn to a description of such a moment, drawing on my working interview *in absentia* with Christian and Davie.[26]

"Something's wrong with the SPD-S . . ."

In late December 2018, Christian and Davie are at FOH together in a rare follow-up training session. Christian had trained Davie to mix FOH months ago, and Davie had been mixing FOH on his own since then, but there was an opportunity for Davie to watch and ask questions while Christian mixed, and I was able to film it. Here I transcribe and explicate a seventy-five-second video excerpt that begins with a remote exchange over coms channel C. This exchange initiates a short discussion between Christian and Davie at FOH. The video concludes with a second coms exchange, which is essentially identical to the first. Though the discussion between Christian and Davie is audible, much louder is the show music, which is a combination of a theatre and a rock and roll aesthetic. It is dynamic and dramatic, with captivating vocal lines and whispered bits of dialogue, but is also bass-and-drums heavy, with clamorous solos and dense instrumentation.[27]

The orange call light flashes, strobing weirdly on their faces. Reflexively looking down, Christian grabs the old-style phone-shaped coms handset with his right hand, squeezes the talk button that is mounted on the inside of the handle with his middle finger, and utters a terse "Hello" in a practiced quiet-but-audible-over-coms voice. There is a pause as Christian listens to a sound technician backstage giving him some presumably equally terse instructions (see figure 18). While listening, Christian shifts the phone to his other hand and continues to make musical

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[26] See chapter 1 for a description of working interviews and the method of this particular working interview.
[27] The instruments are guitar, accordion, violin, keyboards and samplers, saxophones, male and female vocals, bass, drums, and multiple stereo sequencer tracks.

adjustments to the mix, though his attention is divided and his hearing is compromised. His eyes dart here and there in thought, focusing for an instant on the console, the next instant on some undetermined middle distance, then back to the console. Still holding the phone, he reaches over and, finding a specific channel on the console, mutes it.

"Done," he says, marking the end of the exchange. Waiting just long enough to hear a quick "thank you" from the other end, Christian replaces the handset, the exact reverse of the first pickup gesture.

Figure 18: 1. First remote exchange; 2. Conversation; 3. Second call; 4. Second remote exchange

The brusque register of remote communications between FOH and backstage is part of a largely unspoken understanding amongst sound technicians and musicians, an unwritten coms etiquette that everyone seems conditioned to follow. This isn't necessarily the kind of tacit knowledge based on common, assumed proficiencies in a technological craft that sound technicians generally share (Horning 2004), but is more in line with Aaron Fox's "material/technical" framework for the analysis of vocal practice (2004). For sound technicians, speaking on coms is what Fox would call "intuitively mastered patterns of expression" (2004,

36), that is, one they do not theorize or articulate in the abstract. Christian knows to keep his

verbal exchanges short, he knows *how* to keep them short, but unless pressed—in a formal

interview, for example—he would not be able to say why or how he does it.

Again, this coms etiquette is built on an extended mode of emotional labour, one that is

enacted remotely and that is gendered male. Christian's abruptness simultaneously masks his

own misgivings (which emerge below) and reassures (i.e., produces the proper state of mind in)

the sound technician backstage. Responding immediately to the call, Christian engaged in a no-

questions-asked, apparently unperturbed exchange, and concluded with an authoritative "Done."

The problem, whatever it is, needs to be concealed, and Christian's 'pattern of expression'

dispels the behind-the-scenes fear that the audience might be subjected to an unpleasant,

unscripted sound that would suddenly render the *sound technology* 'visible', rather than

maintaining the *sound* as an invisible, affective complement to the action on stage.

This brief exchange on coms is reassuring for another reason, both at FOH and backstage.

Remote conversations are "voice-off" sounds (Doane 1980), diegetic from a perspective of show

production that includes all technical activity, not just the activity on stage. This broad

production perspective is part of what Nick Hunt and Susan Melrose call the "human-real realm

[of the] production organism" (2005, 77). The FOH sound technician must maintain backstage

operations in mind as part of the show's narrative, just as the backstage sound technician must

keep FOH in mind, despite being entirely invisible to one another. Remote voices, speaking in

clipped and coded bursts of information, act as "a denial of the frame [the proscenium and

backstage curtain] as a limit and an affirmation of the unity and homogeneity of the depicted

space" (Doane 1980, 37–38). Essentially, exchanges on coms can remind the sound technicians

that the other contingent is there and that they will respond to a call, however brusquely. The

voice over coms *is* that other technician,[28] it *is* their knowledge, their authority, their understanding, their abilities, their experience, and their expertise. This informative, professional closeness through remote communication—what Daughtry calls "a simulacrum of presence" (2015, 50)—is crucial to the work and the emotional well-being of the sound department as a whole during a show.

Throughout this brief exchange on coms, Davie, standing in the background, remains mostly still, apart from a slight leaning-away to allow Christian to more easily access the coms handset. His eyes take in what is happening, but his face, like Christian's, conveys no emotion. Once the exchange is over, Davie, again, like Christian himself, refocuses on the sounds of the stage and the adjustments on the console, as if the exchange had never happened. During the exchange, both the FOH mix and the voice-over-coms flitted into the realm of noise, impeding on the other, as each signal vied for Christian's attention. Each signal, the mix and the voice, was at once pre-eminent and something to be temporarily ignored.[29] This is why conversations must be terse: conversation will always get in the way of careful attention to the mix, especially if that conversation were to go on too long, or if it had extraneous expressiveness.

Several seconds pass. Christian tweaks the mix, Davie watches his movements. Glancing up at the stage momentarily, Christian's brow furrows.

"Something's wrong with the SPD-S," he says rapidly, referring to the drummer's Roland SPD-S, an electronic percussion instrument used on Corteo to trigger certain sound effects (e.g., tympani). It had frozen and needed to be "power cycled"—turned off and on—which sometimes can cause unwanted sounds in the PA or in the monitor mixes.

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[28] Sterne (2003) and Miriama Young (2006) have made similar arguments about the recorded voices of singers.
[29] See Daughtry's (2015, 47–53) discussion of United States military personnel navigating multiple remote signals, voices, and inputs during combat and patrols.

"Oh, god," Davie replies, half sardonically. He considers. "We did get a new one, right?"

"Yeah."

Davie, happy with this confirmation, allows himself a single, short laugh. Davie's laugh is at once relieved and resigned (e.g., 'Yeah, of course. Now even the *new* one is fucking up.'). He and Christian have been overworked for the past few months. Because of a series of private matters involving other people, Christian and Davie were thrust into their respective head and assistant head positions, underprepared and understaffed. It was impossible for them to keep track of details like the most recent status of the SPD-S without conferring with each other, even during a show. When he was still at the rank of 'sound technician,' an entry-level touring gig in the four-person sound department, Davie would have been responsible for these sorts of details himself; he would have known the SPD-S's current status and indeed would have been the one to fix any problems like this during the show. Now, during his training at FOH, he is physically and mentally stuck there, unsure of what the problem is or if the people backstage can fix it.

With another squint and furrow, Christian continues: "Had an issue with it last night, but I didn't mention anything." He looks up, watching the stage, making sure the sound of the singer's voice effortlessly draws his eye to the singer himself. "But it was like one little glitch."

"What did we do with the old one?" Davie interrupts.

"It's a spare, I think."

"Huh?"

"It's a spare, I think."

Christian's misgivings about the SPD-S are made clear here. He is reminded of yesterday's "issue" and of the fact that he didn't say anything about it. Davie then reveals his own misgivings as well, essentially asking whether the current SPD-S is reliable and if the old

one is accessible. This brief conversation between Christian and Davie voices what is explicitly

missing from and suppressed by the two-word exchange on coms with the sound technician

backstage: anxieties and misgivings about the exchange itself, as well as any short- and long-

term ramifications.

This dialogue is especially revealing because under normal operational circumstances, it

would not have occurred at all, as Christian or Davie would have been mixing alone. Their

consternation, precisely what Hochschild points to as being suppressed in her definition of

emotional labour, is expressed in their conversation and countenances during this short verbal

exchange. This is a portrait of two colleagues, the senior members of the sound department,

discussing a problem together, expressing their anxieties to each other by word and by facial

expression, but suppressing those anxieties through remote communication.[30] After this dialogue,

both Christian and Davie turn their full attention back to the show, watching the performers,

pushing vocal lines in the mix. At the beginning of a crescendo, Christian positions himself for a

specific set of fader movements on the console. Davie positions himself to watch these

movements, leaning in and looking down. He begins to nod rhythmically as the music reaches its

peak. As if on cue, the call light flashes again. Christian, apparently ready for it, repositions

himself in front of the offending channel, the muted SPD-S.

"Hello."

There is no hand-switching with the coms handset this time. He moves deliberately, knowing

what's coming, knowing what the instruction from the other end will be. He unmutes the

channel, quicker than last time, keen to get back to the mix; the sax solo is just a few seconds

away.

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[30] Sara Ahmed, too, notes that an apparent lack of emotionality "*is not the absence of emotion, but a different emotional orientation towards others*" (2014, 4, original emphasis).

"Done."

Anxieties once again masked, he replaces the handset on its shelf, this time not waiting even long enough for a "thank you" that was likely not forthcoming in any case.

Terse speech, militaristic listening, veiled stress, shifting attention, invisibility, control, and performativity contribute to the male-gendering of stoic-type emotional labour over remote communication at FOH. Remote communication is, however, just one of many sites for the performance of masculinities at FOH. FOH as a space could be gendered male as well, since many male-dominated-labour stereotypes and techno-scientific tendencies coalesce there. FOH is a place of control and dispassionate stoicism; heavy, dirty, decidedly manual labour involving big, heavy stuff (e.g., console, cases, speakers, cable); immaculate, abstract, cerebral labour involving intangible stuff (e.g., signal processing and routing, data transfer protocols, invisible signals travelling at light speed, computers, programming, automation); and high-value, important work (the FOH mix is for *everybody*—audience, musicians, acrobats, technicians). The work of mixing FOH also has higher prestige than prescriptive manual labour (e.g., assembling stage panels) and female-gendered labour (e.g., ironing costumes, certain kinds of tour administration).[31]

Further, just as musical instruments can be gendered (Abeles and Porter 1978; Doubleday 2008; Koskoff 1995), a FOH console itself could conceivably be gendered female.[32] FOH, as a

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[31] Perhaps, despite its deep masculine gendering, FOH on a CDS show like Corteo is a site of emasculation for this reason, with FOH sound technicians in abject service to a better paid, more respected, more visible corporate creative hierarchy. Any sense of emasculation might then push a young man at FOH to exaggerate any performances of masculinity he might have available to him, becoming more pronounced in his emotional labour, for example. This is purely speculative; none of the sound technicians I interviewed indicated that they felt emasculated by their work at FOH, though Christian and Davie did express some bemusement and mild frustration with some top-down mix decisions (see chapter 2). I can easily imagine, however, other more belligerent FOH sound technicians feeling overtly subordinated by the CDS's hierarchical sound design model that denies them credit for their work.

[32] Paul Théberge (1997), in his discussion of the fraught relationship between gender and technology in electronic music trade magazines, shows that the artifacts of sound technology, such as amplifiers and synthesizers, are regularly associated with female sexuality in advertising and are deliberately made subjects of the male gaze.

site of masculine heteronormativity, aligns with Veronica Doubleday's (2008) framework for this kind of instrumental gendering: male exclusivity, gendered divisions of labour, gendered space, and male control over technology. She also notes that cross-gender instrumental relationships (e.g., B. B. King and his feminized guitar, *Lucille*) are most common when the instrument is female and the player is male (Doubleday 2008), as sound console operators most often are. Beyond that, I believe there is an erotic connection between FOH sound technicians and the people they work with, especially if those people are vocalists (e.g., singers, speaking characters).[33] This erotic connection contributes palpably to a female-gendering of a FOH console. Writing about erotics in ethnomusicology, Deborah Wong posits:

> An erotics is the place where the affective and the structural come together and where corporeal control is felt and made visible. Erotics are simultaneously material and immaterial. Corporeal control is experienced at the meeting point between a body and a social system, where it is "felt" tactilely through the fingertips and the skin and "felt" emotionally and spiritually. Erotics are where bodies meet bodies and where subjectivity comes home to roost in a body. Erotics are not only about women, sex, queer experience, or misogynist representation. Erotics are about all those things, as well as many other things we never seem to get to, especially heteronormative values. (2015, 179)

The gendered erotics of a FOH console—a tactile, sonic conduit to bodies—lies squarely within Wong's framework. With and through this feminized console over which they wield total control, FOH sound technicians reach into another's sound, probing its physicality and corporeality for transmissible affect. Their fingers move on the faders and knobs, feeling their way, following breath and movement, the contour of dynamics and phrasing, the push and pull of time (see figure 19). Even as a FOH sound technician is responding through touch to sounding bodies, listening bodies—including their own—respond in turn to that same touch. Indeed, the

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Speaking about consoles specifically, he argues that in a recording studio setting, the function of a console shifts "from an audio 'mixer' to that of a signal processor and communication device" (2004, 770).

[33] See Roland Barthes (1977) and Nina Sun Eidsheim (2011) for discussions of sensuality, corporeality, and voice.

fingers of especially expressive male sound mixers have been said to be "dancing" with the

faders (Kealy 1979).

Figure 19: Console erotics with Davie at FOH—Opera Roulette (left); Tissu (right)

In this chapter, I outlined how a FOH mix is created, maintained, performed, listened to,

and critiqued. While Corteo's FOH sound technicians have some creative control over the finer

details of the mix on a day-to-day level, CDS's constant hierarchical oversight always supersedes

a FOH sound technician's personal taste. Indeed, sound technicians, like some of the musicians,

acquiesce to Corteo's sound design on principle. That's the gig. I also discussed the performance

of masculinity in three ways: the acquisition and performance of "good" sound, a masculine

mode of listening, and stoic emotional labour. In the following chapter, I build on my discussion

of emotional labour, this time from backstage.

Chapter 4: Backstage

> The guitar is gently placed on its stand, the headphones jettisoned, cables navigated, and a path to the control room discovered for a round of unanticipated hometown embraces. The musician had imagined a more solitary morning, especially with an engineer whom it will take time to learn to read.
> David Grubbs, *The Voice in the Headphones*

In the last chapter, I theorized a masculine, stoic-type of emotional labour that is enacted by sound technicians over remote communication. This chapter expands the discussion to include two other kinds of emotional labour performed by sound technicians backstage. The first is a service-type emotional labour, which is centered around the monitor mix. This is the type that Arlie Hochschild (2003) most thoroughly theorizes in her study of flight attendants. The second type I will discuss is communal emotional labour, which is centered around daily life in cohabited backstage spaces. This is a type that closely resembles Hochschild's notion of private, use-value emotion work (as opposed to exchange-value emotional labour). I show that unique work communities—departmental, interdepartmental, corporate, intercorporate—emerge from standard backstage interactions that hinge on the sound technicians' emotional labour.

Backstage is a critically important space on Corteo; it would be impossible to run a performance without it. Backstage is used for technical work, acrobatic warmups and rehearsals, athletic workouts, food service, laundry, dressing rooms, and administration. But backstage is more than the physical workspace behind the proscenium, it is a way of working. "By invoking a backstage style," Erving Goffman writes, "individuals can transform any region into a

backstage" (1959, 128–29); this is true on Corteo. Backstage in this figurative sense is identifiable by dress, demeanor, and language—by the mistakes, laughter, taunting, boredom, and other unscripted or uninhibited behaviours that regularly occur in this setting. Corteo's trainings, soundchecks, rehearsals, and equipment maintenance periods allow backstage to extend onto the stage and into the house; it slowly recedes behind the curtain again as showtime approaches.

Because of the disparate, essential tasks that take place backstage, Corteo's backstage settings are alluring for the public and the press, as well as for aspiring cultural industry workers and, in Cirque du Soleil's (CDS) case, corporate partners. This allure is strengthened by the deliberate obfuscation of backstage activities. During a performance of Corteo, for example, an audience's suspension of disbelief combines with a masking of technology and technicians in a bilateral, tacit agreement between performers, technicians, and audiences to pretend backstage does not exist. In her general analysis of the backstage area of theatres, Alice Rayner writes:

> Whatever willing suspension of disbelief occurs in the face of a dramatic fiction on stage, there is a social and aesthetic—hence ideological—contract that prohibits an acknowledgment of the backstage life that includes stage manager, light and sound operators, dressers, property managers, curtain pullers or make-up crews: the technicians and stage hands of theatrical production. [. . .] An audience, largely for its own benefit, agrees to ignore the presence of technicians and to accept instead that only the visible or auditory results of their work will be counted as performance. That agreement discounts any naïve ignorance on the part of an audience for, if asked, surely anyone would acknowledge that what occurs on stage is contingent upon the work and the workers offstage. (2002, 537)

Audiences *know* that people are invisibly working backstage, and theatrical producers *know that audiences know*, but for the duration of a performance, all agree to ignore backstage. The separation of backstage from the audience is, according to Rayner (2002), a concrete, spatial division—backstage is a physical space with a definite boundary—as well as an ideological one. For those who imagine breaching those backstage boundaries, "There is a sense of gaining secret

knowledge about the truth behind the illusion of the stage space" (Rayner 2002, 538).[1] On

Corteo, that secret knowledge can be technically, artistically, or physically wonderous: the sheer

amount of *stuff*; the meticulous detail; the scale. The secrets can also be mundane: props and

costumes that were wielded and worn with such grace on stage, for example, often end up in an

indiscriminate heap once a performer is done with them. Mundane or wonderous, backstage

secrets—especially technical secrets—have a wide appeal.[2]

Corteo's sound department often leveraged the appeal of backstage technical secrets to

strengthen CDS's ties with corporate partners, such as Sennheiser, an audio equipment

manufacturer. Though Corteo's close relationship with Sennheiser representatives is not unique

amongst CDS shows (see, for example, Anonymous 2007), it is certainly the most robust.

Sennheiser hosted its partners and distributors at least four times across the USA at performances

of Corteo, providing as many as fifty free tickets to executives and sales representatives per

hosting event. Corteo's sound technicians provided backstage tours to these large groups after

each performance, engaging in a kind of hyper-service-type of emotional labour, in which the

sound technicians were especially 'on.' They made an effort to demonstrate their enthusiasm,

knowledge, politeness, clean humour, and professional experience, some of which was feigned—

what Hochschild would call "surface acting" (2003, 37). I call this hyper-service emotional

labour because the emotional labour was not simply being exchanged for a wage. The stakes for

the sound technicians were higher. These backstage tours lead directly to preferential treatment

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[1] See Butler's (1990) discussion of 'inner' and 'outer' worlds, their borders and boundaries.
[2] Touring technicians were at the centre of the television show *Roadies* (Crowe 2016). CDS touring technicians specifically (including me) were featured in an episode of a manual labour-centred, participant-observation-type television show, *Jobs de bras* (Ztélé 2013). CDS itself has produced a number of short, interview-style videos about specific technical roles, such as automation and rigging (Cirque du Soleil 2010; 2019; 2011; 2016; CirqueCast 2020; cirqueLIFE 2016). These are posted online on various sites (e.g., YouTube, Facebook), seemingly as recruitment tools. Other unaffiliated technical videos of CDS shows abound on YouTube, such as load-in time-lapses (e.g., ALWPhantom 2010; The Gazette 2019; WireCommando 2009).

from Sennheiser, both on a corporate level (e.g., discounts and priority technical support for Corteo as a touring show) and on a personal level (e.g., discounts for personal purchases for Corteo's sound technicians and musicians). Sennheiser also provided Corteo's sound technicians with a wireless microphone training workshop—what Sennheiser call their "RF Academy." For Christian, Corteo's head of sound, the complementary intercorporate relationship with Sennheiser led to a degree of renown and international exposure within the professional sound world.[3] Workshops, discounts, and professional recognition from Sennheiser were largely enacted within and bolstered by sustained, privileged access to Corteo's backstage.

Even experienced touring sound technicians can relish backstage secrets and their own level of backstage integration on a show. In separate interviews, Cliff, Corteo's former head of sound, and Charlie, a Corteo sound technician, described the sense of emotional payback they got from working backstage (28 May and 13 June 2019 respectively). This emotional payback was derived from their own appreciation of a show (i.e., if they thought it was a "good" show), their level of engagement in that show (i.e., how *essential* to the show they were), and how gratified the audience was (i.e., if they thought the audience enjoyed the show). Cliff now works as a sound technician for a famous pop band. He is "part of the machine" that brings tens of thousands of excited fans together for an affective, culturally significant performance. Cliff finds the simple fact that he is involved with these performances intensely energizing, which is often enough to help him through his exhausting twenty-hour days on tour. What Cliff experiences as a technician is an insider's version of what Tauel Harper calls "'jouissance,' a feeling of pleasure that is experienced through the incommensurable uniqueness of [a live music] event" (2015, 17).

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[3] Sennheiser produced a three-part, behind-the-scenes profile on Christian and the show for their 'Pro Talk' video series (Sennheiser 2019a; 2019b; 2019c).

For Cliff, the intensity of contributing to a live experience that gets "sixty-five thousand people screaming their heads off" makes all the hardships of being a touring stagehand worthwhile.

Emotional payback is often leveraged by cultural production companies, such as CDS, to exploit cultural workers.[4] It is used to counter-balance exploitative, for-profit practices like under-staffing, long hours, and precarious work contracts in high-pressure environments, which are framed as being 'part of the gig.' From this neoliberal perspective, exploitation is a small price to pay for being able to 'do what you love.' This discourse can be managerial and top-down (e.g., Born 1995), but workers can also self-exploit 'aspirationally' for cultural prestige (Duffy 2016; Hesmondhalgh and Baker 2011), or 'virtuously' as part of their professional identity and work ethic (Kuhn 2006). Charlie, a temporary Corteo sound technician, discussed the emotional labour and emotional payback he associates with working in show business. For several years, he actively sought emotional payback in his backstage work, but eventually realized it was not sustainable. He remarked:

> One of the reasons why I left [show business] is that there is an expectation of emotional payment. Everyone who's working in this industry is giving some sort of emotional labour. [. . .] And so you're giving this emotional labour to your work and you were often expected to get value back emotionally from doing the work. It's too bad that there's a consideration of your compensation that is your own emotional fulfillment for getting to do work that you like doing. (Interview with the author, 13 June 2019)

Charlie changed careers (he now primarily works as a programmer for a website development service) because he would have had "to start making some serious life sacrifices" to continue doing the work that he loved. For many of his show business colleagues who feel they are not able to change careers, "that emotional payment gets less valuable" over time (interview with the author, 13 June 2019). Nevertheless, cultural industry employers assume that any sacrifices made

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[4] Workers in creative industries—artists, writers, media, new media, and entertainment workers—are often subject to exploitation and precariousness (Gill 2013; Gill and Pratt 2008; Hesmondhalgh and Baker 2011; McRobbie 2004; Owen 2012; Ross and Shapiro 2017).

are worthwhile.[5] Charlie's former colleagues, feeling stuck backstage, follow Erving Goffman's 'believer-to-cynic' paradigm, in which "they can use [their] cynicism as a means of insulating their inner selves" (1959, 20). Workers may become surly, aloof, jaded, or flippant—traits common to many backstage technicians—to protect themselves from those sacrifices and diminishing returns. For these workers, the work becomes less emotionally fulfilling, but the associated risks and sacrifices remain the same or increase.

Part of the emotional payback Corteo's sound technicians receive is from being part of a skilled, companionable, hard-working team. Maintaining morale within such a team while on tour means successfully working in the close confines of communal space. I now move to a discussion of communal backstage spaces.

Communal Space

Entering the arena on the day after a load-in, the backstage spatial divisions are especially pronounced. Just the night before, the entire arena was the almost-exclusive domain of the technicians, and now the spaces are fully inhabited, allocated, claimed (see figure 20). This is premiere day. About half of the tour staff are seeing the new venue for the first time, and are getting acquainted with their workspaces for the week. Performers are working out, their own high-energy dance music blaring from a battery-powered speaker; musicians are setting up their instruments, an occasional snippet of a chromatic scale cuts through; technicians are helping with trainings on stage, carabiners click and clank as an apparatus is assembled; members of the press are conducting bubbly interviews in various languages, getting B-roll shots of costumes and rehearsals. Backstage even begins to smell lived in. Chalk and rosin from the acrobatic acts mix

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[5] Sacrifices include maintaining an uneven work-life balance, receiving low pay, and contractual precariousness (Carah 2011; Duffy 2016; Hesmondhalgh 1996; Hesmondhalgh and Baker 2011; Lee 2011).

with a local brew of dust and moisture, infused over decades in the arena's countless unreachable

corners. The concentrated, saccharine odour of laundry detergent drifts through as Corteo's half-

dozen washing machines rumble and whir, with rack upon rack of clean costumes trundling

through the backstage hallways being delivered to dressing rooms. Swathes of red carpet-bonded

foam, blue Taraflex stage flooring, and other gymnastics pads are deployed for stretching, warm-

ups, and rehearsals, and are surrounded by space heaters to take the chill off the ambient arena

temperature.
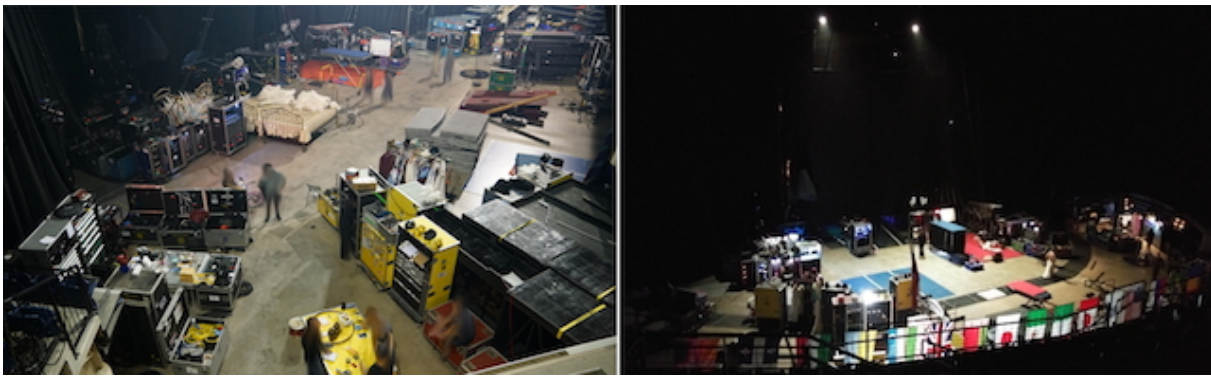
Figure 20: Two different-but-typical east-side backstage setups (people anonymized)

Blue, red, purple, green, black, yellow, and grey road cases and unwieldy steel set carts of all

shapes and sizes are shoved into interstices around the building. The colours of the cases on the

ground are mirrored by the string of flags—one for every nationality represented by touring

staff—that waft lazily in the HVAC's breeze. Racks of electrified, humming equipment, aglow

in the light of touchscreens and indicator LEDs, are in place—familiar, fixed boundaries that

mark where a performer's work ends and a technician's begins. Backstage is a worksite, a place

of exotic-seeming, highly specialized tasks and equipment. Ultimately, however, backstage is

standardized and routine—indeed, the more routine, the better, as variation is usually stressful

and sometimes dangerous.

Backstage is a semi-private refuge for touring staff. It is off-limits to most local arena

employees. It is invisible and usually inaudible to audiences during the show, with the

movements of Corteo's staff masked by the tall black curtains, their voices buried by the PA.

Occasionally loud sounds find their way through the curtain into the house. Backstage can be a

refuge, but it can also be a resource. Spaces within backstage are carefully delineated, reserved

for safety and exercise equipment, video playback and stage monitoring, rehearsals, props,

costumes, lockers, walkways, cables, workshops, and technical equipment. With such strict,

precise spatial divisions backstage, the exclusive areas for technicians, and the even more

exclusive areas for sound technicians specifically, become important spaces of solitude, focus,

and unique departmental camaraderie.

One such site was the sound department's work area (see figure 21). Two enormously

heavy, road case-mounted toolboxes—each one about six feet tall—acted as merlons that marked
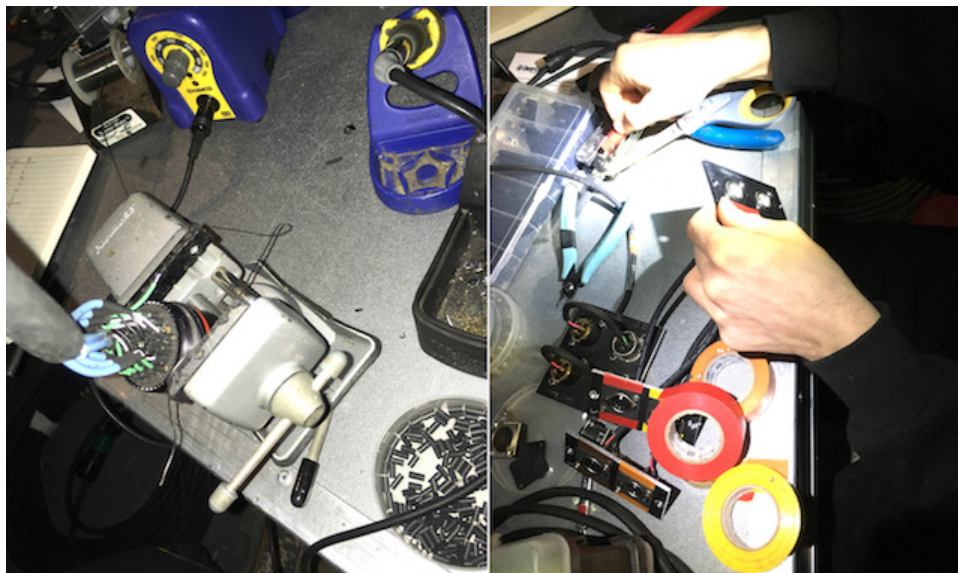
out and fortified the space.

Figure 21: Soldering a multipair cable (left); making chassis-mount MIDI connectors (right)

The lids of these toolboxes turned into worktables that needed to be defended from potential interlopers from other departments. Upon seeing a flat surface, another technician might try to use it to store something "just until load-out," or, even worse, as a surrogate garbage can for an unwanted coffee cup. The work area itself necessarily changed every week according to available arena space, and was often shared with a number of departmental worktables in a row.

As refuge or resource, backstage is a site of communal, inter-departmental emotional labour. This is emotional labour that a tour worker will enact to align their feelings, behaviour, and even appearance—what Yasemin Besen-Cassino (2014; 2018) would call aesthetic labour—with those of the group. Communal emotional labour is performed for the sake of group cohesion amongst technicians and other tour personnel. This kind of emotional labour can include elements of other modes of emotional labour (e.g., stoicism during the long, hard hours of load-in and load-out), but it more closely resembles what Hochschild (2003) calls "emotion work," that is, the management of feelings in private, everyday life (e.g., at home, with family). I distinguish between communal emotional labour backstage and Hochschild's notion of emotion work, however. While living closely on tour may be part of everyday life, it is also part of the job, and is therefore "sold for a wage [and] has *exchange value*" (Hochschild 2003, 7, original italics).

Communal emotional labour can include kindness, compromise, or displays of genuine interest in someone else's profession, such as a technician getting juggling tips from a performer, or tour administrators learning how to solder. However, communal emotional labour backstage more often involves hyper-masculine gestures, such as competition for competition's sake (see Matos, O' Neill, and Lei 2018), crassness, puerile humour, sarcasm, silliness, and pranks. For example, my fieldwork photos are full of people giving me and my camera the finger as a kind of

friendly greeting. Cartoonish images of scrota or penises or breasts were often sketched

anonymously in my notebook by people who were idly waiting for their next cue backstage.

Jokes and stories about sex and masturbation were shared widely throughout the day. Davie

discussed these trends and acknowledged that technicians in particular are known for their rough,

profanity-laced speech. He mused about a relationship between the professional skill of a

technician and their adherence to and re-inscription of this crass backstage culture. He remarked:

> Let's talk about the like the average tech here, you know, they're pretty good. If there's a problem, all bullshit and foul-mouth aside, they're going to get it done and fix the problem and have a show, something thousands of people are relying on. Thousands! Like, we're talking about audience and your co-workers. Everyone. If there's a problem, you *need* to fix it. And they're the only ones who can do that. I feel like that kind of gives way to this "Fuck off" society where we can kind of say whatever the hell we want. There's no filters in these hallways [backstage]. And we have fucking potty mouths all day long and if the corporate world didn't like that, and started pushing against that we'd be like, "Okay, go find someone else to fix that and they're going to be just like me!" I don't know where the whole culture really started but it's *definitely* a *thing*. (Interview with the author, 20 May 2019)

Davie defiantly suggested that stage technicians generally have a similar attitude, no matter what

company they're working for (this largely reflects my experience as well). Though Davie focuses

on technicians here, I should note that a vulgar verbal register was generally common backstage

amongst all groups on Corteo: performers, administrators, managers, caterers, truckers, and local

labourers. He continued to discuss this culture and described when he first encountered it:

> I've thought about this [the crassness of backstage culture] all the time because it was one thing that I very first noticed when I worked for Ringling Brothers as my first [technician] work. And I thought, "Man, people can fucking talk to each other however they want. It's *crazy*!" There [at Ringling Brothers] especially, people like yelling at each other. And I thought, "How come that guy's not fired?"
> The next day I was like, [whispered to a colleague, *sotto voce*] "Dude, wasn't he yelling at that guy? Is he gonna get fired?"

> [In the low, gravelly voice of his imagined colleague:] "Nah, that's just so-and-so, he's just a dick." [Gravelly voiced colleague shouts at the yeller:] "Hey! You're a fucking *dick*!"[6]
>
> [Back to his own voice] "Whoa, dude, what the hell is going on around here?" [*laughs*] *Dude*, it's *crazy*! It really is crazy and I love it. I do love that. I mean, I don't love yelling at people, and this show is great about that. No one fucking yells at each other. But on a lot of shows, you've got the yellers, you know who they are, and it's just *accepted*. Yeah, that was my first dose of it and I was confused—but then comfortable because I realized if I have something to say I can say it. Or I don't have to try to cover up who I am, you know, because I have always been like a fucking kid, with a bad mouth and a crazy sense of humour, so I was quickly comfortable in that type of environment. (Interview with the author, 20 May 2019)

Here Davie noted that the crass backstage culture makes him feel at ease because it allows him to 'be himself' and say what's on his mind. He could, for example, allow his frustrations to show in an occasional outburst of cathartic aggression, one that the corporate hierarchy would likely not observe and would, in his estimation, be powerless to prevent or curtail if they did. Davie also pointed to instances of communal, inter-departmental emotional labour, where he had to "accept" the yellers and manage his own confusion and affrontedness at the strange, verbally abusive work environment he had found himself in. Communal emotional labour backstage is dependent on these valences of acceptance and maintenance of a backstage status quo; self-assertion in the face of a separate, imagined, corporate status quo; and micro-adaptations to 'localize' one's vulgarities to a specific backstage community.

It is assumed in Davie's assessment of the backstage status quo that if he "has something to say," it will be aggressive, combative, or contentious—a verbal indication of deep-seated, normally unvoiced frustration, delivered in a hyper-masculine register. This kind of emotional out-pouring is accepted. There is room made backstage for these kinds of interactions between colleagues (especially male colleagues). A similar out-pouring of love, affection, care, joy, grief,

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[6] See Fox's discussion of this verbal narrative technique—known as full indirect discourse—that represents "the meaning or gist of another's utterance without claiming to represent the actual words s/he originally spoke" (2004, 38).

or other feminized emotions, for example, would not be as readily accepted or understood backstage. Affectionate interactions do occur amongst technicians, but aggressive interactions are much more common. For example, Corteo's sound technicians would greet each other with a hug at the beginning or end of a tour leg.[7] Occasionally, after an especially congenial group dinner, say, the sound technicians might also hug after leaving the restaurant, and before going their separate ways for the evening. Compare these two or three rounds of hugs in a three-month period to the daily barrage of light-hearted 'fuck yous' and middle fingers, and a person's experience backstage becomes severely weighted towards hyper-masculine, aggressive bonding practices rather than acts of care. Backstage behaviour, I argue, can work to prevent homosociality and intimate emotional connections between workers backstage. For example, it is easy for men backstage to 'talk shit' to each other in a teasing way, but more difficult to care for each other in more emotional and intimate ways. Lacking intimacy backstage, men can become "victims of their own masculinity" (Shamir and Travis 2002, 5) and feel alienated and discouraged from building those intimate emotional connections with other men. Importantly, in the context of Corteo, a dearth of homosocial intimacy and care serves CDS's exploitative labour structures (see chapter 5). Bonds of friendship amongst colleagues in cultural industries help workers navigate the inherent precariousness of the work (Hesmondhalgh and Baker 2011). While close, intimate bonds backstage may be strained on Corteo by a steady, hyper-masculine register, sites of compromise and generosity do exist. One such site is "monitor world," or "monitors," perhaps the most important backstage space for Corteo's sound technicians.

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[7] A tour leg is the ten- to twelve-week period of touring between two-week break periods.

Monitors

Monitors is tucked away in a darkened corner of the east backstage, in a chisel-tip-shaped wedge of space, with the backstage curtain ahead, a stage entrance to the right, and the house floor entrance on the left. The space is centred around the monitor console, which is about five feet wide, about three feet deep, and sits about three feet off the ground (see figure 22). The total spatial footprint of monitors is approximately ten feet by twenty feet; this includes the console itself as well as a number of other racks, devices, and cable paths.
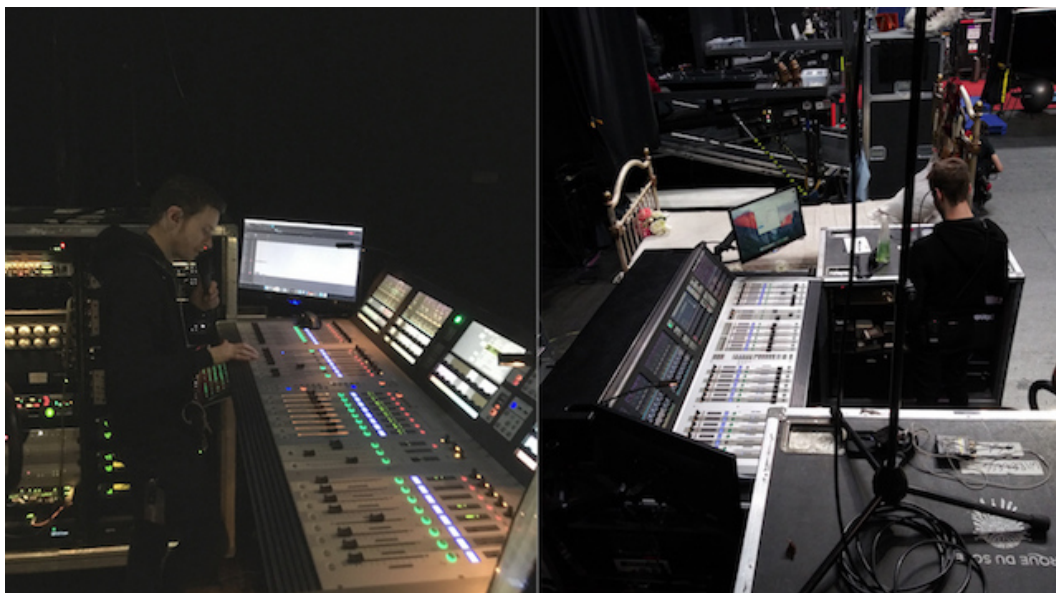
Figure 22: Davie speaking on the talkback mic during a show (left); and Dylan working during the day (right)

Monitors is a natural gathering place for performers and technicians during a performance. Some wireless microphones are placed at monitors for performers to pick up when they're ready for them (e.g., singer Aurelie, whistler Geert). If there was a problem with sound during the first half of the show, the sound department would convene at monitors during intermission to discuss a troubleshooting strategy. Monitors is also a hub for several show-critical systems. The transmitters for wireless in-ear monitors and the receivers for the wireless microphones are housed at monitors, even though the RF technician's station is on the west side

of the stage. Other systems at monitors include the audio power transformers and circuit boxes,

or 'distros', the mixer and amplifier for the backstage paging system, and the signal processors

for one side of the PA, all of which are housed in separate racks near the monitor console (see

figure 23).
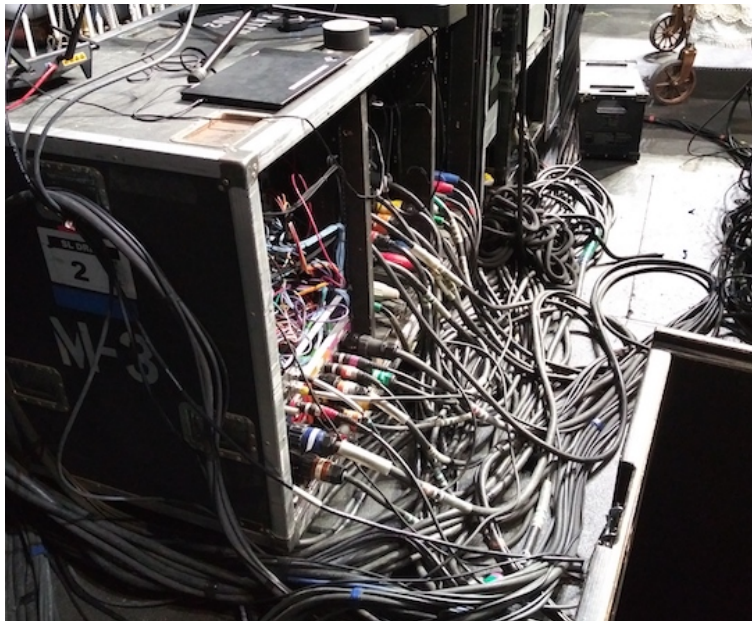
Figure 23: The PA distro rack at monitors

Also housed at monitors are the backstage security cameras; the digital audio and MIDI routing

matrices; the outboard effects units for compression and reverb; the clocking unit that

synchronizes various digital audio devices; the coms system for backstage communication

amongst technicians; multichannel digital-to-analogue and analogue-to-digital audio signal

converters; as well as the computers that run sequencer, audio synthesis, and MIDI trigger

management software for the band.

These systems operate like a sonic circulatory system, with signals being pumped in and

out over arterial connections, both wired and wireless. Aurelie's wireless microphone, for

example, transmits her vocal signal to the receiver at monitors. The received signal is then routed

to a number of different systems simultaneously. It goes to the monitor console, which sends her

voice—along with any other instruments she needs—to another transmitter that feeds her in-ear

monitors (IEMs). Her voice is also sent to front-of-house (FOH) via a cable (the FOH snake), so

the FOH sound technician can mix it for the audience (see figure 24).
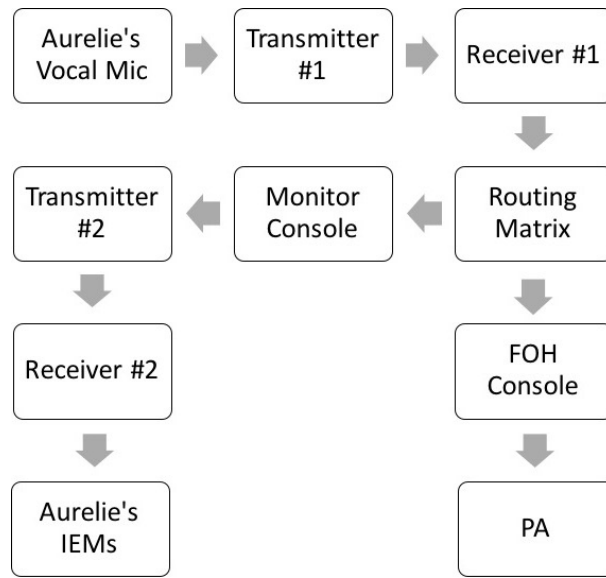
Figure 24: Basic signal flow for Aurelie's wireless microphone

All signals operate in this basic way: they are generated, captured, processed, distributed, and

reproduced. Varying degrees of complexity are introduced at each stage, and some stages, such

as processing and distribution, can be performed repeatedly. Examples of signal processing

include amplification, analogue-to-digital conversion, compression, and equalization.

      The breadth of systems housed at monitors and handled by the sound department speaks

to the degree to which the sound technicians are in service to different groups on tour. By

managing the paging, coms, video recordings, and radios, for example, the sound department's

work impacts everyone—the performers, administrators, managers, physiotherapists, technicians,

and subcontractors (e.g., truckers, caterers). Accordingly, the sound technicians find that they are

continuously fulfilling requests or troubleshooting for people throughout the day. Davie

remarked:

> Audio is everywhere. Everyone relies on us. And it's stressful when you walk into work,
> dude. I always tell people when I walk into work, it just *starts*. And it's just going to be
> something you *never* thought about *every single day* [i.e., you encounter new problems].
> You grab your radio, or someone comes straight up to you, or they call you on the radio
> asking you for something. Hopefully it's not because you didn't do something right and
> it's broken or whatever, but it's just crazy, man. Everybody relies on us for something.
> (Interview with the author, 17 Feb. 2019)

For Davie, the stress of having to be prepared to troubleshoot or repair such disparate systems for

such a wide variety of people at a moment's notice is tiring. Dylan put it more humorously:

> When you think about it, it just ends up being funny. You know, something just went
> wrong, something you didn't think would ever happen. And then it happened, and you're
> like, "Oh, all right, I guess I need to put *that* on the list! I guess I need to watch out for
> *that* now!" (Interview with the author, 5 Feb. 2019)

Taken with humour or frustration, the sound technicians on Corteo feel this sense of service to

different groups and the responsibility to diverse equipment very keenly.

Nowhere is this sense of service more acutely felt than at monitors. While many other

aspects of the sound department's work are in service to one group or another, monitors is the

most labour-intensive and requires a dedicated sound technician to "do monitors" every day (i.e.,

operate the monitor console during shows, rehearsals, and soundchecks). Sound technicians

repeatedly stated in interviews that the role of a monitor technician is one of service to the

musicians as though they were clients. Calling it a 'client/service-provider' relationship is not

strictly accurate, according to Corteo's hierarchical structure. Sound technicians are not

employed by the band as they would be in a traditional 'rock and roll'-style touring gig, where

the band *is* the show. The band members on Corteo are in service to the same corporate creative

hierarchy as the sound technicians, and both groups understand themselves to be CDS

employees. However, the sense of service for Corteo's sound technicians manifests largely in a

sound technician's attitude towards the job and the musicians. While Christian notes that in a certain context, he would say to a musician, "We are providing a service for you," that message is more often conveyed implicitly with openness and "constant communication." For example, the sound technicians try to check in with the musicians before and after soundchecks (especially at the beginning of a week) and ask how they're doing, if they need anything, and if they're happy with their monitor mixes. The sound technicians want to engender trust by making it clear that the band is welcome to ask for things at (almost) any time.[8]

Sound technicians enquire about the musicians' monitor mixes because the creation and development of the mixes is a long-term, multi-step process. A monitor mix is a musician's personalized blend of instruments and voices that can be customized for each song. During the early stages of the arena remount, each musician had a generic, all-around mix that included a bit of each instrument, vocalist, and sequencer channel, as well as click track and talkbacks. Each musician then slowly "tweaked" their own mix with the monitor technician to customize what they heard for each song. The individual songs were divided into "scenes" (i.e., console presets), in which the level changes specific to each musician's mix were saved. A new scene might have a number of changes for a number of musicians (e.g., more guitar and less bass for the singers and the drummer) or a scene might have a single change that affects everyone (e.g., muting the vocal microphone as the singer exits the stage).

Roger, the bandleader, in consultation with the rest of the band, would decide when to make a new scene, and the monitor technician would make note of the cue—that is, the specific point in the show when the new scene should be triggered on the console. In this way, the entire

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[8] Musicians know that certain times are better than others to make requests. For example, it would be inappropriate for a musician to ask for sweeping changes to their mix or to their setup right before a performance, in case the change didn't work and it compromised the show. Changes are also undesirable on especially busy days, such as premiere day or load-out day, because there is simply not enough time to attend to the change properly.

show was divided into discrete scenes that the musicians could then customize for themselves as they saw fit. For example, Camille might ask for less keyboard and more violin in a particular scene so she can harmonize with Stephane on her guitar. Phil might want more click track in a particular scene because he will play louder during his solo. These are individually enacted changes that allow musicians to personalize their mixes; these changes only affect the players who ask for them. The tweaked generic mixes changed drastically when the band moved from the small rehearsal studio to the large studio at CDS headquarters in Montreal in January 2018, and changed again when they moved to the rehearsal arena in Quebec City later that month. The saxophone, for example, would have been the loudest instrument in the small studio, and would have been acoustically audible to everyone, whether it was in their mix or not. In the large studio, and even more so in the arena, that saxophone was suddenly fifty feet away in another band pit, its acoustic sound dwarfed by the sound of the full PA ringing in a huge, cavernous space.

Fine-tuning individual monitor mixes is an acquired, entrained, professional skill for musicians and sound technicians. None of Corteo's musicians had been instructed on how to develop a mix or how to request changes from a monitor technician. Camille, the guitarist and accordionist, sometimes found the process of changing her mix difficult. She would not have time to ask for adjustments during performances and would forget what changes she wanted to make by the time she was free to ask. In a previous gig, she had been able to make her own adjustments to her mix with an iPad she kept on stage. On Corteo, she was tempted to simply ask for her own instruments to be louder all the time, but this is not sustainable. "Instead of asking for your own sound to be louder," she said, "you should lower the specific tracks [channels, instruments, sequences] you don't need. But it takes time, I find. [After one year,] I'm still trying

to get it right!"[9] Monitor technicians would help by suggesting which channels could be lowered and where.

Camille's focus on keeping the volume of her mix low is based on three things. First, she is concerned about long-term hearing health and is wary of loud sounds. Second, a lower mix volume allows her to focus more on the subtleties and the musicality of her sound. Finally, when her overall volume is lower, she can find places in the show where she is able to musically interact with the other musicians. Like all Corteo's instrumentalists, she improvises a lot during the show. Improvisation is an important musical element of Corteo and listening carefully to each other's playing is crucial to the musicians' relationships with each other. She remarked that "it wasn't the sound [of the show] that changed, it was the mode of listening. [. . .] I changed the way I use my IEMs, so I had to change the mix little by little" [10] (interview with the author, 1 Feb. 2019). One specific change she made was to wear both IEMs all the time. While on stage, she used to take one IEM out to hear the open, ambient sound, as well as the acoustic sound of her instrument, but because the sound in the house is so loud, it was tempting to make her own mix louder and louder. By wearing both IEMs, she was able to significantly lower the volume of her mix. Below, I discuss Geert and Alain, two other performers who don't wear both IEMs, and how they hear and listen to the show.

The IEMs themselves are cast from custom moulds, made from full inner- and outer-ear impressions done by an audiologist. Getting impressions is a special process that, I think, contributes to the unique bond that musicians and sound technicians feel on a show. Impressions on Corteo were organized for the group in fall 2017, when they were still getting to know each

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[9] "Plutôt que demander d'augmenter son propre son, c'est mieux de baisser précisément ses pistes là. Mais ça demande du temps, je trouve. Je suis toujours en train de le chercher!"

[10] "Ce n'était pas le son qui changeait, c'était la façon de l'écouter. [. . .] Je changeais ma façon d'utiliser les in-ears, donc, forcément je changeais le mix petit à petit."

other. They went together to a Montreal audiologist's office one afternoon, like going on a school field trip. Getting impressions is a safely invasive procedure during which blobs of pastel-coloured putty—usually green or pink—are injected deep into one's ears. The putty looks and behaves a lot like Play-Doh and is colder than body temperature. It feels and sounds like water going in, but it hardens after a few minutes and, with some tugging and coaxing from the audiologist, the impressions pop out as stiff, rubbery plugs. (It is strangely intimate when the impressions come out; they are shaped like a part of your body you'll never see in a mirror.[11]) Since the impressions and the resultant moulded IEMs are expensive and non-transferable, supplying bespoke IEMs is a signal of CDS's investment in the sound technicians and musicians as skilled, unique individuals who are important to the success of a show.

Once the moulded IEMs arrive on tour from a manufacturer, the collaborative tasks of care and management continue between the sound department and the musicians. The IEM cables are understood as 'consumables' and often have to be replaced. Sometimes the cables have to be customized or adjusted for a particular act or performer, so they don't impede acrobatic equipment or get tangled in costumes. Cable replacements and adjustments are done by the sound technicians, sometimes at the last minute. This can be stressful for performers, so sound technicians must execute their tasks calmly, efficiently, and confidently to help reassure and encourage a performer who could be late for a cue. These instances of backstage, service-type emotional labour are critical to the show running smoothly, which means the audience does not notice problems and performers feel comforted by and confident in the sound technician's work. While each musician and sound technician has only one pair of moulded IEMs, the moulds themselves are also considered consumables in a way. When the internal components wear out or

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[11] See Sterne and Rodgers (2011) for a discussion of the inner ear and its metaphorical associations with exploration.

the moulds break, the IEMs are sent back to the manufacturer for repair. IEM troubleshooting is often a collaborative effort, and it can get very personal and intimate. Sometimes sound technicians have to tactfully discuss earwax management and removal with musicians and teach them how to properly clean the IEM apertures with kindness and joviality, rather than disgust or scorn.

Discussing earwax management with musicians is more corporeal than other problems that monitor technicians typically face. On Corteo, however, this kind of relatively intimate physical touch between sound technicians and musicians can be required. For example, there were two instances of quick-change—a very short time between cues to change costume—during which a monitor technician needed to help a musician with in-costume cabling. For performers to feel comfortable with that help, they need to have a fundamental trust in the monitor technician, not only as a person with the technical skill to efficiently manipulate the equipment, but as a person who can manage stress, exude calm, be at ease with their bodies (e.g., sweat, skin, partial nudity), and maintain a professional demeanor when interacting with their bodies. Hands and eyes go only where they have to in order to complete the quick-change tasks, all of which have been discussed and possibly rehearsed in advance.

Quick-changes on Corteo are high-stress moments for the performers. In the two cases that involved a monitor technician, the performers exit the stage after physically and mentally demanding acts and are expected to change costumes and return to stage almost immediately, taking only about one minute to reset and test their wireless sound equipment. The quick-changes were only necessary during certain show versions, in which female singer Aurelie's back-up 'Tissu' act was replacing the 'Straps' act, or when Stephane, the violinist, was performing as the White Clown character. At a certain point in the show, the White Clown clips

into a harness and slowly traverses the stage by 'walking' upside-down on the beam of a high-

powered laser twenty feet in the air (see figure 25). When he performed as White Clown,

Stephane wore his IEMs so Roger, who was watching from his band pit, could verbally guide

him on how to maintain inverted verticality (e.g., "Good, Steph, just lean back a bit. Yup, that's

it. Just a bit more forward . . ."). Performing the White Clown's inverted traverse is stressful for

Stephane for at least four reasons. First, he has vertigo and is nervous about being in the air.

Second, the laser is extremely powerful and dangerous, and while there are strict safety protocols

in place, it could still do serious damage (e.g., cause blindness) if something went wrong. Third,

he rarely performs as White Clown, perhaps only once or twice a month, so it is difficult for him

to improve his balance and verticality. Fourth, he is nervous about the equipment and the people

responsible for his safety. He knew that the technicians who clip him into his harness, for

example, would be tired from working very long days for weeks on end, which, for Stephane,

might increase the likelihood of making mistakes (nothing ever happened). The monitor

technician would help Stephane with his IEMs as he removed his safety harness from underneath

his costume.

Figure 25: The White Clown's inverted laser walk with Aurelie dressed as an angel

The 'Tissu' act, meanwhile, has Aurelie singing and performing acrobatics on aerial silks simultaneously.[12] Musically, Aurelie is very exposed by the sparse instrumentation of the piece—it is for solo voice and piano-driven accompaniment. Indeed, her vocal exposure is emphasized in the FOH mix by the deliberate amplification of her heavy breathing after particularly taxing aerial manoeuvres. She is also exposed by the necessary change in her standard vocal performance practice on Corteo. She uses a different microphone with a different sound, one mounted on her forehead at her hairline, instead of her usual headset or hand-held microphones. Further, she does not wear IEMs during this act—the cable and wireless receiver would get in the way—so she does not have Roger's reassuring voice, the steady click track, or the sonic precision she wants (I discuss her particular IEM use in greater detail below). After her act, she must quickly put on a new headset microphone and her IEMs, with the cables and battery packs tucked away and hidden in her costume.

Even outside of a stressful quick-change, managing this equipment is challenging for Aurelie. "Singing was always something that I didn't need any extra things . . . to be able to do," she remarked. Discussing her singing equipment on Corteo, she continued:

> Here, coming to Cirque, of course you need to be heard, you need to use a microphone, and everything. I realized, "Oh, I need to *use* a lot of things in order for it to work!" The wireless mics, for example [are] something that now [are] becoming really a part of me, but it took me a *long* time to get used to having all those cables around me, realizing that, yeah, it's next to my leg right now [the wireless transmitter], and it's going to stay there for the whole show, and the cable is going to be there [running down the back of my costume]. (Interview with the author, 22 May 2019)

For her Tissu act, her microphone setup would change, but then would have to quickly change back. After her Tissu performance, Aurelie would arrive at monitors, visibly exhausted and

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[12] Aerial silks (*tissu* in French) are made of a single, sixty- to seventy-foot long swathe of strong, stretchy, synthetic fabric that is knotted in the middle and hoisted in the air by a single anchor point, leaving two separate legs of flowing material. Aerialists climb the silks, insinuate themselves into them with various knots and wraps, and perform "drops" (i.e., controlled falls). The moves can be similar to those used in Spanish web or *cordes* aerial acts.

totally out of breath. She would station herself next to the road case where her equipment had been pre-set and quietly sip water and patiently wait while the monitor technician worked to "wire her up." She needed to be back on stage and singing almost immediately for the lively, loud, and vocally demanding finale: the high-bar act, 'Tournik' (see chapter 2).

On Corteo, monitors serves not just as an essential part of the sonic infrastructure, but also as a communal space for sound technicians and musicians. It is a place where they can go to regroup, for example, after an equipment failure, or after a strenuous on-stage performance. Monitors is also where the musicians most thoroughly engage with the sound system (beyond their own band pits) to address problems they might have with their sound. I move to a discussion of two such instances, first with the Whistler character and next with Alain.

IEMs and Sonic Control

As I discussed in chapter 3, sonic control is crucial to Corteo's sound design and IEMs can be an excellent tool for maintaining control over the sound a musician hears. This is based on a modern understanding of sound-as-signal. Any extraneous sound that impedes the transmission of the sonic signal, including uncontrolled architectural reverberation, is understood by modern listeners as noise (E. Thompson 2002; see chapter 3). Unlike some kinds of musical performances which make the architectural acoustic of the venue part of the performance (e.g., Baumann 2011; see also Blesser and Salter 2007), Corteo's sound designers and touring sound technicians work to erase the local sonic signature from an arena in order to foreground the music and sound effects—the signal. This aural ethic of erasure is predicated on a corporate understanding of the show as an experience that should be standardized and thus available for audiences no matter where they see the show. IEMs are one way to control the impact of a

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constantly changing local acoustic of different arenas on tour. IEMs are what Mack Hagood calls

an "orphic medium": they help wearers "remain unaffected in changeable, stressful, and

distracting environments, sonically fabricating microspaces of freedom" (2019, 3). When used as

designed, IEMs attenuate external, ambient sound, such as arena reverberation, by approximately

twenty-five decibels. This helps musicians focus on the stable sound of their customized monitor

mixes coming from the console backstage, as opposed to the venue acoustic, and, theoretically,

deliver the same performance night after night.

Corteo's suppression of a local acoustic through the use of IEMs can break down.

Emotional tension can emerge from sonic disjuncture between a curated personal soundscape,

such as an individual monitor mix on tour, and a public soundscape, such as the FOH mix.[13]

While the use of IEMs and other technologies is in place to facilitate clean transmission of pure

sound-as-signal, this is not always the result. I saw examples of long-lasting tension, conflict,

and hostility on Corteo when IEMs were not deployed as designed.

Geert, the Whistler character, came to Corteo from a fifteen-year career as a virtuoso

whistling soloist. He performed, competed, and adjudicated competitions around the world, and

never once wore IEMs. He was told unequivocally that he must wear IEMs to perform on

Corteo, which he found shocking at the time, having always before been able to dictate his own

performance terms as a concert soloist. After three months of performing as Corteo's Whistler,

he was still not used to his IEMs. During my interview with him, he talked about why he finds

them frustrating, and how they can have a direct impact on his performance:

> For me a big thing was, and is, to be honest, that I have to wear in-ears. The fifteen years
> before I always told everybody who asked me this, I said, "No, it's impossible with
> whistling." And they accepted it because I was the soloist, and they paid me money, and I
> came there, and that was like a star, you know? [They said,] "Okay, if he says it's not

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[13] Scholars have observed such tensions in recording studios amongst musicians (Grubbs 2020; A. Williams 2012) and with iPod and Walkman users in their everyday life (Bull 2007; Gilman 2016; Hosokawa 1984).

possible, then it will not be possible." At the audition in October [2018], I said to Mark [Corteo's artistic director], "Well, I don't work with in-ears," when he started talking about that. And he said, "Well, I guess you *will* work with in-ears." I said, "Um, *why*?!" Well, because of the click track, et cetera. I get it now. So, working here in Cirque, I'm still struggling with the in-ears. I use one [he inserts his left IEM fully and does not use the right IEM at all]. And the delay in time makes it very difficult [i.e., acoustic reflections—discussed below]. But most of all, the sounds, the direct sound of the whistling coming out of my mouth directly to my ear is not there anymore. So I'm very insecure about my tuning. Am I whistling in tune? Am I whistling in time? I always have the feeling I'm late or early. I don't know why. That's strange. I think I hear it [his whistling] in my [in-]ear earlier than in the arena. Probably it [would] be less difficult if I wore both in-ears but I just can't. [. . .] We're working in huge arenas that are closed and not covered with acoustic material, so it's not really made to make loud music. And that's really weird too every time. [Before Corteo,] I worked mostly in concert halls, which are made perfectly for this [whistling]. (Interview with the author, 31 Jan. 2019)

Throughout his career, Geert always rejected IEM technology but Corteo's sound design gave him little choice but to conform, at least somewhat. The problems that he faces in his adjustment to IEMs are exacerbated by the long reverberations and delayed acoustic reflections of the arenas in which Corteo performs. By blocking that noise with the IEMs, Geert also blocks out the sound of his own whistling.

Knowing that Geert was unaccustomed to IEMs and was unenthusiastic about having to use them, Christian, Corteo's head of sound, approached him upon his arrival on tour by performing emotional labour. Christian wanted to meet Geert socially, believing that a friendly interpersonal foundation between musicians and sound technicians makes technical discussions and decisions easier. Christian remarked:

The first thing I knew about Geert was that he was going to be coming to the show, he was a champion whistler, he's phenomenal, he's a really nice guy, but that he didn't want to use in-ears, he hated using in-ears, and that we [the sound department] would have to work out something with him. So, of course, the first day he was there, I took him out for coffee! [*laughs*] Because I wanted to meet him and get to know him, of course, but also because that's part of this role [head of sound]—it's building a positive relationship for when I'm going to have to deal with stuff like that, truthfully. So we caught up a couple of times, and apart from being a really great guy, we did start talking about in-ears. But I think because that groundwork of talking with someone and getting to know someone personally, that they're much more open to suggestions of, "Hey look, I know you're not inclined to go

> down this road, but if we try it and you don't like it, we've got some options, but it will help you." It's not in your job description to go down that way, but it's going to help in the long run, for sure. [. . .] Positive relationships make this job a lot easier. (Interview with the author, 11 Jan. 2019)

Christian sees value in a personal approach to technical problems, a practice he understands as essential to being the head of Corteo's sound department. Christian's emotional labour did not solve Geert's problems with reverberant arenas, to be sure, but it made both sides more comfortable and constructive when looking for solutions to those problems.

Corteo's sound design failed Geert in a sense. He will likely never be comfortable with IEMs: if he doesn't wear them, he will miss cues from the bandleader and not hear the click track; if he wears only one, he hears a significant and distracting sonic delay in the house; if he wears both, he loses the direct sound of his whistle, a musical relationship with his own body he has been developing his entire adult life. Despite how personalized the monitor mixes themselves can be, the IEMs are designed for a homogenous mode of listening. Emotional labour cannot fix this, but it can soften the blow and help performers understand the aural disconnect between what they want to hear, what they think they are hearing, and what they are actually hearing. Though dissatisfied with his IEM experience, Geert was ready to listen to explanations and look for solutions.

Alain, the male vocalist, also had problems with his IEMs, but for the first year of the arena tour, he did not seem interested in finding solutions. It became clear early on that Alain was not happy with the sound of his monitor mix. He would often complain to the other musicians in the dressing room or over talkback, which was audible to the band and the sound technicians. Simply knowing that a musician is not content with their mix is not enough for a sound technician to fix the problem. It requires communication and collaboration between the sound technicians and the musician. In Alain's case, the sound technicians needed more

information about what the singer was hearing (or not hearing), and what, specifically, was so disagreeable, but Alain would not provide that information, he would just make private criticisms.

Alain performed for years with the big top iteration of Corteo, which was very different from the arena version. It had a more intimate band pit layout, a lower ceiling, and a smaller audience capacity. It had a different PA design with far fewer speakers. Furthermore, the big top show stayed in one city for at least two months at a time, and even when the show moved to a new city, the performance venue (i.e., the tent), would be the same—the same acoustic, dimensions, and architectural reverberation. Alain's problems stemmed from the fact that he had not reconsidered his understanding of the Corteo that he knew in big top, with its many layers of sonic control and sonic stability, to accord with Corteo's new reality of near-constant acoustical change. In the face of such change, the IEM's "orphic" quality of attenuating ambient sound becomes crucial. A musician on Corteo's arena tour must understand that without that attenuation, which is part of the sound design, they will struggle with other elements within that sound design, as Geert discussed. Alain did not understand this. He insisted on wearing both IEMs perched outside his ears, with each one just slightly inserted, not fully inserted as they are designed to be used. He relied largely on the sound of the PA in the house when he performed in big top, so he could not understand why it would not be the same in an arena. (It's still the same show, right?!) Instead, Alain would shrug off the sound department's offers of help. He avoided making time to come to monitors and work on his mix one-on-one with a monitor technician and would loudly blame the sound department for his dissatisfaction with his mix and the FOH mix when talking with the other musicians.

The sound technicians and musicians knew Alain was dissatisfied. This caused

significant tension between Alain and the sound department, and between the Alain and the other

musicians. Stephane, the violinist, remarked that Alain would often be "sweaty, red [in the face],

and just freaking out" about the monitor and FOH mix. Indeed, several of the musicians asked to

have Alain's talkback microphone muted in their mixes because they were tired of listening to

his negative commentary. Davie also expressed his frustrations with Alain. He was annoyed that

the problems seemed to continue no matter what steps the sound department took:

> He's just getting on my nerves, man. Because again, I want everyone to be happy, and I
> know it's not possible to make everyone happy all the time, but every time I think we get
> somewhere with him, it's just like one step forward, two steps back, you know? I'm
> about to completely give up and not give a fuck. (Interview with the author, 23 Jan. 2019)

Davie's capacity to care about Alain's happiness had been almost totally exhausted by Alain's

un-constructive approach to his problems. The emotional labour the sound technicians were

performing was not rewarded with a solved problem, a more open line of communication, a new

understanding of the problem, or a sense of collaboration or compromise, but was instead met

with further complaints and inaction.

After approximately one year of this building tension, Alain finally set up a time to work

directly with Davie and Christian. One afternoon before the daily soundcheck, the three of them

gathered at monitors to listen to the 'virtual soundcheck' Davie had set up. This is a technique

that allows a full, multitrack recording of the show to be played back through a console. At

monitors—it can be done at FOH as well—this meant that Alain could listen to his own mix

without singing and without hearing the PA. Davie and Alain, both with their IEMs fully

inserted, began by listening to 'Straps,' a dark, emotional piece with a broad dynamic range and

a duet section with the male and female singers. Backstage, and without the PA, Alain was

hearing his actual mix for the first time. At first, he did not believe that he was listening to his

actual mix because he was so used to hearing the rest of the music in the house:

> ALAIN: No, I can hear just my vocal.
>
> DAVIE: Huh?
>
> ALAIN: I can hear just my vocal, no instruments, nothing.
>
> DAVIE: This . . . [verifies the settings on the console] this is your mix.
>
> [Alain shakes his head 'no']
>
> DAVIE: No? It's because you don't hear anything from the house.
>
> ALAIN: Yeah, but the rest [of the music] is so low . . .
>
> DAVIE: This is how your mix sounds—
>
> ALAIN: You sure?
>
> DAVIE: —in everything [in every song throughout the show].
>
> CHRISTIAN: Maybe go to another scene [a different preset on the console].
>
> DAVIE: Okay, I will, we're going to go to this scene now [a different section of the same song]. This is the breathy part [in the 'Straps' act]
>
> ALAIN: Ah, okay, my volume is too low . . . [on his IEM wireless receiver; he turns his receiver up.]
>
> [Ten seconds of listening]
>
> ALAIN: It doesn't sound like my mix. My voice is *super* loud!
>
> [Five seconds of listening]
>
> DAVIE: Ahh . . . [verifies settings on the console again] this is . . . this is the mix.
>
> ALAIN: Wow. Without the house it makes a *huge* difference!
>
> CHRISTIAN: Yeahyeahyeahyeahyeahyeah . . . right right . . . [excited]
>
> ALAIN: Huh, that's *crazy*!
>
> DAVIE: That's usually the volume of your voice when I listen to your mix in any other song, and we can listen to any song you want.
>
> ALAIN: That's interesting . . . without the house . . .
>
> CHRISTIAN: Right . . .
>
> DAVIE: But it just shows how much you're relying on the house and not so much on your mix.
>
> ALAIN: Totally!
>
> DAVIE: Which is why we try to change things a lot, and it seems like those changes aren't taking effect for you, you know what I mean?

ALAIN: You know what? I begin to understand more now . . .

CHRISTIAN: But it's not a bad thing if you're comfortable using the house, because at the end of the day, it comes down to how comfortable you are on stage.

ALAIN: Yeah, yeah . . .

CHRISTIAN: But the issue is what he [Davie] said: the changes you make in the mix, on your in-ears, might not take effect as you say, and might sound different the next week—

ALAIN: In the house, yeah . . .

CHRISTIAN: —because the reverberation of the house is different.

ALAIN: And who's mixing . . .

[This comment is met with silence at first. Christian and Davie obviously do not agree with this. After a pause, Christian mumbles, "Yeah," apparently in an effort to remain positive.]

ALAIN: You know, I don't feel like touching anything now.

DAVIE: The only thing I can say, and I know your answer, is to stick both your ears [IEMs] in the whole show.

ALAIN: Hmm . . . [Alain makes a rueful face—he is not interested in trying this; Christian laughs gently at his response]

DAVIE: Because then we gain back some control as far as our side goes.

CHRISTIAN: But the comfortability [sic] is what we want to make sure . . .

ALAIN: It's not the comfortability, it's that it creates such a cool [aural] universe [to listen to the house]

CHRISTIAN: Yeahyeahyeah, okay . . .

ALAIN: It creates a . . . creates a . . . you know what? Without the house . . . it's hard to judge . . . you're right . . . you're right . . . you're right . . .

DAVIE: Yeah, it is [hard to judge], for sure. (14 Feb. 2019)

Alain was incredulous that his mix sounded like it did. He had not realized that he was relying on the PA for his musical references. When the arena acoustic changed, it sounded to him like his mix had changed even though it actually had not. Alain believes that the way different FOH sound technicians mix the show, even in the same venue, will have a significant impact on the venue acoustic during a performance. For example, if Christian mixes on Wednesday, and Davie mixes on Thursday, Alain thinks this is an important factor. Christian and Davie do not believe this. Like other FOH sound technicians I spoke to, Christian and Davie strive to be consistent

with the sound design. Any individual alterations or adjustments that they make would be insignificant once buried in the reverberant sonic reflections Alain hears. Moreover, Alain did not give any specific evidence of what sounds different between Corteo's two FOH sound technicians. He was not likely in the position to reflect on those differences in any case, having only just discovered in the moment transcribed above that he had been relying almost entirely on the house for his 'monitor mix.'

Two themes emerge from this exchange. First, there are verbal indications of emotional labour. Christian, Davie, and Alain were making an effort to be polite, calm, and generous with each other's opinions. They allowed for different ways of listening and different interpretations of what they heard. Such verbal indicators include: an abundance of affirmative language, which helped validate other people's opinions (e.g., "totally", "yeahyeahyeahyeahyeah", "right", "for sure"); an absence of profanity, even though swearing is all but expected backstage; leaving room for further discussion, giving benefit-of-the-doubt to each side (e.g., "usually", "seems like", "might", "that's what we're thinking", "I'm starting to understand"); and a concern for the singer's comfort, both during the listening session itself (e.g., "we can listen to any song you want"), and for future performances (e.g., "how comfortable you are on stage"). After the tension of a year's worth of complaints and frustration on both sides, emotional labour was crucial for effective collaborative problem-solving. To rectify Alain's complaints about his monitor mix, each person needed information that only another person could provide. Alain needed to hear his mix in a new way in order to understand the root of his troubles. The sound technicians in turn needed Alain's feedback on what he was hearing, and what he thought about their ideas. They also needed demonstrable proof that Alain understood what it meant for him to rely on the house for most of his musical references.

At monitors, service-type emotional labour is integral to successful collaborative troubleshooting sessions. It helps build trust between disparate groups who hold differing opinions. Service-type emotional labour is especially useful when enacted in conjunction with other aspects of successful collaborative troubleshooting, such as: clear short- and long-term plans; isolating and changing as few variables as possible; being as specific and precise with language as possible; maintaining a transparent discussion of pros and cons of possible solutions; demonstrations or visual aids with the actual equipment when possible (e.g., fader or EQ settings); striving for consensus; making changes as a group, but allowing the person who will be most affected to have the final say; verifying the plan as often as necessary; and deciding on a designated time for everyone to check in with each other (e.g., after the show, before soundcheck). I saw these practices repeatedly enacted by Corteo's sound technicians in countless different scenarios.

A second theme that emerges from this exchange is sonic control. Controlling the sound a person hears, be they musician, audience member, or other Corteo staff, is central to the work of Corteo's sound technicians and is central to a modern understanding of listening (Bull 2007; Sterne 2003; 2012a; E. Thompson 2002). Davie made note of this explicitly at the end of his exchange with Alain above, and Geert understood that controlling the delay in the house depends on blocking it out with his unused IEM. Alain's complaints about and rejection of the idea of inserting both IEMs were not as articulate or precise as Geert's, but they were still real complaints. IEMs are a homogenizing technology that demand a certain usage (i.e., both ears fully inserted). As such, they can efface personal preferences and drastically change how a person hears. By having both IEMs fully inserted, a performer's corporeal orientation towards sound shifts internally: the sonic influence of internal resonance, such as sinus cavities and bone

conduction, becomes more pronounced, and directionality of sound is reduced. To be sure, some IEM users on Corteo adapt the technology according to their wishes, as users of any technology tend to do (Bijker 1997; Oudshoorn and Pinch 2003; Pinch and Bijker 1987), but those users, like Alain and Geert, must weigh the affordances and limitations, and strike a balance between their own preferences and the abstract sonic ideal of controlled sound-as-signal that is enshrined in the sound design.

Aurelie, the female singer, also uses only one IEM at a time. She has a clear understanding of what this IEM technique offers her as a performer. Unlike Geert and Camille, who would remove one IEM to more precisely hear the acoustic sound they were making with their instruments (e.g., whistling and guitar/accordion respectively), Aurelie draws on the IEM mix for the clarity it affords:

> I greatly appreciate having one in-ear because you get two different levels of sound. You have the one where you hear everything, the raw, primary foundation of it in the in-ears, and also the instruments in a not confusing way. Every instrument is very precise. And then you get in the house in the [other] ear. You hear all the effects that go around everything, my voice, and the mixture of all the instruments together. So I like to have both, personally, because it gives me the precision I need on one hand, and the actual result [that comes] out of that precision. I like that. I think it's really cool. (Interview with the author, 22 May 2019)

Aurelie spent the first three or four months on Corteo wearing both IEMs all the time, because, as she said, "That's what I was told to do." Having never used IEMs before, she was keen to listen to the advice of the sound technicians and her vocal coach. Over time, she spoke to and observed other musicians who did not always use both IEMs and decided to experiment. Now she enjoys hearing the reverberant sonic space when wearing only one IEM, probably in a similar way that Alain enjoys the sonic "universe" that he hears when listening to the house. She notes that "your sense of hearing is very different when you're hearing directly in your ear, or when you're hearing it in a space. It's *very* different. And I feel like having both is a great thing."

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Interestingly, it is precisely this loud, reverberant universe that Geert objects to, and that Camille is now trying to avoid.

The way a musician decides to wear their IEMs is usually only discussed amongst the sound technicians if it causes or is indicative of a problem. Sound technicians always recommend that musicians wear their IEMs as designed (i.e., both IEMs fully inserted), but they do not insist. If a musician is comfortable with their IEM practice, the sound technicians will not give it much (if any) thought. However, because wearing both IEMs yields the greatest possible sonic control over what the musician hears, it is a common initial suggestion to solve a number of problems, such as a lack of clarity or volume in the mix, or being unduly influenced by the venue acoustic. Corteo's sound technicians and musicians know that a musician's IEM practice can have a significant, sometimes detrimental effect on their performance and their professional relationships (cf. A. Williams 2012). In Alain's case, it caused him to misunderstand his own monitor mix, which led him to misinterpret and aggressively mischaracterize the work of the sound technicians. Geert's commitment to wearing a single IEM indicated a problem with how unnatural his headset microphone sounds to him in his mix. For Camille, it indicated a need for lower volume, more instrumental isolation, and greater precision in the mix itself (e.g., reducing the volume of all the channels she didn't need). In Aurelie's case, there was no discussion because there was no problem. She was happy to experiment and found a solution that works for her. When problems arise at monitors, however, it is crucial that the sound technicians adopt a service-type emotional labour to find a solution in what will inevitably be a collaborative problem-solving effort.

Stoic-type emotional labour is also enacted for simple monitor-related requests between musicians and sound technicians during a performance. Similar to the coms ethic I discuss in

chapter 3, the verbal ethic that governs the musician's talkback loop likewise insists on calm, clear, concise communication when musicians make requests of the monitor technician. A musician can make a short, simple request at an appropriate moment in a song (e.g., "Could I have a bit less violin in that scene?"), and the monitor technician must convey a clear, affirmative response (e.g., "Copy" or "Yes"), also at an appropriate moment, usually immediately after the request. The musicians must not give too much detail, make too many requests at once, or explain their request, as Camille pointed out in an interview. "I try to be pretty clear," she said, "just more or less of such-and-such a thing."[14]

This talkback etiquette developed on Corteo over time. In a group interview with Christian, Davie, and Roger, they noted that it was not taught or discussed, and was not part of any professional training or instruction. All three agreed that the talkback ethic was something that developed and stabilized as the musicians got more comfortable with the physical layout in their separate pits, and with their own monitor mixes. Christian, Davie, and Roger also discussed how and why a sound technician's capacity for this kind of emotional labour might break down at monitors. The monitor technician's frustration at not being able to effectively converse with someone who needed help because of idle chit-chat became a problem. Sound technicians occasionally let their frustrations show at monitors when multiple people repeatedly ask for changes at the same time. One feature that recurs in studies of emotional labour is that workers often "find themselves performing emotional labour while simultaneously struggling to distance themselves from its emotional effects, to make it just another aspect of the job" (Grindstaff, quoted in Hesmondhalgh and Baker 2008, 110). Camille expressed this very thing when she observed that she sometimes hears a musician's impatience in their voice when they ask the

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[14] "J'essaie d'être assez claire, juste plus ou moins de telle chose."

monitor technician to make a change. For her, expressing these frustrations "is part of the gig. It's just like that, it's not the people themselves."[15]

In a separate interview, Roger discussed his own approach to the talkback loop. He notes that humour, levity, and confidence are important for him, even though he knows that clarity and conciseness are most important overall. This is partly for the sake of the musicians, who need to concentrate on their playing, but also, he noted, because other departments (e.g., stage management) hear his voice as well. I got the sense during this moment of the interview that Roger is careful with his language in part for political reasons, precisely because of those extra-musical sets of ears listening in. He remarked:

> I think from a personal perspective, it [speaking on talkback] has taught me a lot about being more confident in the way my voice comes across. I try to keep it sort of interesting and with a little bit of a smile if I possibly can, and keep a little bit of humour and attitude up. And it's just basically an aspect of keeping things very short and concise, giving a lot of information in a minimal amount of time. I'm always aware as well that other people are listening in—sound [technicians] or stage management—so I don't want to say too much. If there's ever a problem in the show and I know there's a lot of action going on backstage, I keep it down to a minimum. Yeah, just concise and clear, as much as possible. (Interview with the author, 18 Jan. 2019)

Roger tries to make room for humour on talkbacks whenever possible, but he makes it clear that calm, concise conversation becomes the priority when things are going wrong. The talkback loop, moreover, is always recorded during the show as a standard practice. Roger is aware of this too, which I'm sure informs his own personal talkback practice and how much he chooses to say.

Monitor mixes, IEMs, and talkbacks are all used in full view of the audience during a performance, but the development and maintenance of those systems are fundamentally backstage tasks. The sound technicians engage in service-type emotional labour when working with the musicians on these systems. In this chapter, I discussed service, hyper-service, and

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[15] "C'est le métier. C'est comme ça, c'est pas les personnes."

communal emotional labour that is enacted backstage. Backstage spaces are at once private and public, professional and personal; for Corteo's touring staff to maintain the largely masculine backstage culture that allows them to 'be themselves,' they must constantly and consistently engage in these various modes of emotional labour. Sometimes communication strategies break down and must be re-established with a different tactic, as was the case with Alain and the virtual soundcheck at monitors. Sometimes 'sound-as-signal' design strategies of sonic control break down and people backstage work towards solutions through oblique instances of emotional labour, as was the case with Geert. Emotional labour is a management strategy to mitigate the resultant anxiety, stress, and uncertainty that Corteo's musicians sometimes grapple with. At the heart of these breakdowns with Alain and Geert are the issues of corporate standardization and homogenizing sound design.

Chapter 5: En Route

> Now, in the gray light of the early morning, everything was changed. The horses were tired and muddy, and wore old and dirty harness; the gilded chariots were covered with mud bespattered canvas, which caused them to look like the most ordinary of market wagons; the elephants and camels looked dingy, dirty, almost repulsive; and the drivers were only a sleepy looking set of men, who, in their shirt sleeves, were getting ready for the change which would dazzle the eyes of the inhabitants of the town.
> James Otis, *Toby Tyler; or, Ten Weeks with a Circus*

Since its inception in 1984, Cirque du Soleil (CDS) has prioritized touring. The company started by touring within Quebec, but quickly expanded to other parts of Canada and the USA. As the company's celebrity waxed, CDS moved beyond North America, travelling to Europe in 1990 and again in 1995. Since then, CDS has mounted international tours continuously until the pandemic shutdown in early 2020. In 2007, CDS remounted Saltimbanco, a big top show that premiered in 1992, for arena touring. Saltimbanco's arena remount was a first for CDS. It was a success, and the arena remount became a process that CDS would repeat with other shows, most recently with Corteo. CDS's arena shows are meant to open new markets—that is, to perform in smaller cities that could not sustain a long big top show run.[1] Arena shows have a smaller, simpler, and less expensive infrastructural and logistical footprint than big top shows. An arena show can load-in in a day and load-out in a few hours, and will stay in a city from four days to

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[1] CDS categorizes cities on a tour plan according to market size. For example, 'A' markets are large cities that have large arenas and correspondingly large audiences. For example, Montreal and Toronto are 'A' markets; 'B' and 'C' markets get progressively smaller (e.g., Victoria and Kamloops). Based only on my experience on tour, not on any official CDS marketing documentation, I estimate that 'A' markets can seat over four thousand people for a performance of Corteo (Montreal's Bell Centre seats over five thousand); 'B' markets over two thousand; and 'C' markets at least one thousand. See Susan Bennett's (2016) brief discussion of CDS arena shows; see Ola Johansson and Thomas L. Bell's (2014) discussion of North American market tiers for arena rock and pop concerts.

two weeks. The setup and tear-down of a big top show, by contrast, takes two weeks and three

days respectively; a big top show will stay in a city for up to four months.

Circus as a genre is characterized in part by exoticism and sensationalism (Stoddart

2000), and touring has a direct, fundamental link to an aestheticization of the Other. Paul

Bouissac writes:

> Nowadays a literary tradition and a strong promotional narrative construe circus life as an existential choice that embodies a dream-like freedom for city dwellers caught in the shackles of their daily routines. This romancing of the circus is largely a modern fallacy. Running away with the circus sounds both heroic and liberating. The actual nomadic condition is more ambiguous and challenging than the poetic themes it has spawned as it is rooted in ethnic discrimination. The circus originally was a strategy of ephemeral acceptance and precarious survival devised by ethnic minorities that were not allowed to settle for business in villages and towns. (2010, 12)

In this chapter, I take up some of the themes Bouissac alludes to here—the romanticization of

mobility, the rejection of domesticity, racial and ethnic discrimination—in my discussion of the

material, social, and cultural conditions of being on tour with Corteo. I begin with a short

autobiographical section that describes my background as a musician and technician. The goal of

this section is to outline the foundations of my own understandings of mobility, which were

demonstrably influenced by my middle-class experience as a young, white, Anglophone man. I

grew up playing music; I finished high school and went to university; I had many early

opportunities to work with and learn from mentors; and I aspired to work for CDS before getting

the job. My background, education, and formative desire to travel are roughly similar to those of

the sound technicians and musicians on Corteo, though details differ from person to person.

Some sound technicians on Corteo went to a trade school or college. One started working right

out of high school, learning the trade on the job and through the occasional workshop. One of the

musicians started her arts training in ballet, not music. Everyone wanted to tour with CDS

though, and most of the sound technicians and musicians had, like me, toured with CDS before

working on Corteo's arena remount.

After the autobiographical section, I move to a critique of mobility, particularly the

romanticized notions of mobility that characterized my own approach to travel. I build on the

work of a number of mobility scholars, with a particular focus on Beverley Skeggs (2004), who

argues that a person's capacity for mobility is a resource, is capital. I also build on Rebecca

Draisey-Collishaw's (2018) notion of travel narratives. Travel narratives come in two varieties:

road narratives and transit narratives. Draisey-Collishaw writes:

> Road narratives [. . .] feature prominent quest motifs and solitary wandering figures, akin
> to modern-day troubadours. They function as *claims* to artistic authenticity [. . . and
> focus] on acts of mobility: stories about being lonely on the road, driving all night to
> reach a gig in a far-off locale and finding inspiration through encounters with the
> unexpected. (2018, 8, original italics)

Road narratives allow their narrators to establish their own value by virtue of the places they

have visited, the sacrifices they made to get there, and the things they learned from being away.

The value of a road narrative is internal. Transit narratives, meanwhile, focus on a person's

geographical background. Draisey-Collishaw writes:

> Transit narratives [. . . emphasize] origins, travel and migration, often elaborated
> alongside alliances to major Canadian cultural institutions (e.g. awards, grants, labels and
> performance venues). These narratives *attribute* legitimacy to musicians and their music
> through discursive alliances that construct and layer affiliations to locales, institutions
> and people. (2018, 8, original italics)

The value of a transit narrative is assessed externally. That value is ascribed to the narrator if

they are sufficiently connected to or aligned with (e.g., commercially, politically, culturally)

another locale, institution, or group of people. Though conceived to discuss the perceived

'Canadianness' of Canadian musicians, I adopt Draisey-Collishaw's travel narratives to frame

CDS's—and my own—romanticized notions of mobility and cosmopolitanism. I then draw on

my fieldwork on Corteo for a discussion of why Corteo's sound technicians and musicians tour and what effect touring has on them personally. I conclude with a brief discussion of CDS's bankruptcy and sale due to the COVID-19 pandemic in 2020.

Travel

I had wanted to travel for work for as long as I can remember. Mine is a family of musicians and I was always hearing stories about a tour or a recording session or a concert series in another place. Indeed, every summer of my childhood, we travelled as a family so my father could play in the pit orchestra for a summer theatre festival. He had, moreover, immigrated to Canada from the United States to work as a percussionist in a newly minted local symphony orchestra. For me, travelling for work was a normal, desirable part of life and part of growing up.[2] In the years between high school and university, I sometimes travelled for work—selling door-to-door in Australia, teaching English in Italy, or teaching sailing in the USA—and sometimes worked to travel—in gas stations, restaurant dish pits, hostels, farms, cafes—doing anything that would give me enough money to keep moving.

After I started my undergraduate degree in classical guitar performance, music and technician jobs started to materialize. Through a connection with one of my dad's students, I got my first job as a part-time sound technician, working at various venues around the university campus. With a bit of technical experience under my Maglite-and-jack-knife-carrying belt, I started working at bigger venues around town: a proscenium theatre; a local arena; a summer festival mainstage; the city park that hosted concerts by The Rolling Stones and Paul McCartney. During this time, I also had my first proto-tour experiences, both as a musician and as a sound

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[2] A person's wanderlust is thought to have its foundations in their early life (Shields 2011).

technician. I went to summer festivals in the USA as a recording engineer and guitarist; I helped

get rural theatres up and running; I drove a theatre company's tour truck across the prairies.

I was travelling for work and it was great. I was mobile—geographically, socially, and

professionally. I was getting more gigs and making better money, travelling further and for

longer periods, and cultivating my network of what David Lee (2011) calls "weak professional

ties"—colleagues and acquaintances who might hire me or recommend me. I coveted the

distances I travelled, my dual Canada/USA citizenship, my passport stamps and work visas, my

multiple, far-flung contracts, my extraordinary and irregular work hours, my paycheques, and my

time off (these last two I mostly used for more travel as a tourist). Travelling was exciting. There

was always something new to learn, but it was more than that. There were lessons in logistics

and language, of course, but I also relished the relentless and necessary tension between

arrogance and humility, between self-confidence and self-effacement I felt as a young worker,

musician, and backpacker who was constantly on someone else's turf. I was, by my own

estimation, clever and brave enough to get to a new place (wherever it may have been), but I

would then have to learn to live by different—sometimes wholly new—rules, risking reprimand

and mortification for each misstep. I simply could not learn these idealistic, worldly life lessons

at home. I had become a collector and purveyor of my own road narratives.

Many of the technicians I worked with in my hometown had been on tour. Their speech

was lightly peppered with references to this show or that band, this musical or that festival—

work they had done in what seemed to be a past life. There was an ease about their work at the

theatre, as if in their minds these local gigs were a kind of working holiday. I got the sense that,

though everyone was working hard, any difficulty they would face on a given day at the local

theatre would be nowhere near as challenging as what they would have experienced on tour. It

seemed like they had learned their craft and their confidence on the road. Touring experience

was, for me, a mark of a 'real' technician, and these technicians had *earned* this local gig through

the hardship of touring. Some colleagues would talk about touring with light-hearted contempt,

exclaiming to me: "Why would I want to go back on the road? You wake up on the bus and

everyone stinks, the food is terrible, and you're always exhausted!" Despite this, I still felt it

would be an irreplaceable, formative experience to have as a technician.

The job that I desired most was touring with CDS, entrenched as the company was in the

psyche of Canadian show business. CDS was famous for the calibre of their performances, the

breadth of their international tour plans, and their use of cutting-edge technology. Even as an

entry-level technician, I would be a part of that. I got my first up-close look at a CDS show when

I worked as a 'local' (a locally based, hourly waged worker on large-scale touring productions,

usually hired in each city to help with load-ins and load-outs) when Saltimbanco, CDS's first

arena show, came to my hometown in 2007. As a local, I was involved in building the stage,

which comprised dozens of large, brightly coloured, interlocking aluminum panels and a

wheeled under-grid of steel and aluminum scaffolding. I was also able to observe other parts of

the setup as well. The touring technicians were experts and load-in was efficient, precise, and

meticulous, but also beautiful and at times chaotic.[3] It was clear that the technicians from the

different departments (e.g., sound, carpentry, rigging) had specific, independent tasks and were

competing for floor space, but they were also cognisant of the inter-relatedness of the

departments and of the overall end goal. They shared, conversed, laughed, and compromised,

and I saw how several separate departments could be a single team.

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[3] Years later, around 2015, I would again work with some of the people who had been touring CDS technicians that day, this time as a touring CDS technician myself. They remember that load-in differently than me. They emphasized the chaos and did not consider themselves experts. That load-in was early in the tour plan, so they had not had very many opportunities to assemble the equipment.

There were three moments in particular that made the experience stand out. First, the stage assembly process was carefully choreographed and was spread out in modules across the arena floor and beyond. Dancing around lights, speakers, and rigging points, the different sections of the stage that had been assembled in different areas were able to roll on their wheeled scaffolding and interlock to form the full stage. Its final shape roughly mimicked a traditional circus ring and filled about a third of the arena floor. It took dozens of people to move the separate pieces but once moving, the pieces rolled easily. With everyone working together, the whole stage could be adjusted on the floor within half an inch, despite its unwieldy bulk. Second, the leading edge of the stage had tiny speakers mounted underneath that were pointing towards the audience and covered with a black mesh. These "front fill" speakers are a common sound design strategy for audience members who are sitting too close to a stage to be able to hear the main PA speakers properly. I had seen countless examples of front fills at concerts where they were placed on the front of the stage, in full view of the performers and audience. Saltimbanco's front fills, however, were treated 'theatrically'—subtly placed and hidden from view—which was something I had never seen in an arena. I had thought of arenas as loud, echoey, dirty sports venues, not places for that kind of sensitivity and care. I would learn that CDS tends to treat all technology and technicians theatrically, concealing as thoroughly as possible any equipment and personnel that are not part of the scripted stage show. Third, lunch! As a local I was used to pizza, pop/soda, and doughnuts, but the catering on this show was the best I had ever had, with a variety of healthy, delicious, fresh food. There was plenty as well, and it was easy to get a full meal in the thirty-minute break we had been given. Even the catering was efficient! My experience as a CDS local showed me that there was at least as much impressive spectacle going on behind-the-scenes as on stage.

After years of applying for jobs at CDS, I finally got an offer as a "fly-in" sound technician, an entry-level, part-time, per-contract position.[4] Starting in fall 2011, I worked throughout Montreal in CDS's creation studios, workshops, and warehouses.[5] I was mobile within the city: I bussed, carpooled, bicycled, or walked everywhere for my new job. The level of mobility afforded by travelling locally for work was a precursor; it was symbolic of the very real promise of international travel in the future. Interestingly, I found that many of the technicians I worked with in Montreal had the same air of quiet confidence and competence that I had seen in my mentors back home. My new colleagues, too, shared stories of their time on tour with CDS, their credentials written plainly on their lined faces, faded CDS t-shirts, scarred hands, and well-worn tool pouches. Their wanderlust, however—like that of my mentors—had abated. In addition to their tour stories from the past, they also spoke of the present—of having to pick up their kids from school, of having to install a new water heater in their newly purchased home, of having to take care of the cats. Having never wanted kids, house, or pets, I instead worked towards a large-scale touring experience of my own.

Touring was not just about the travel itself. It was a chance to learn my craft in an in-depth way that was apparently not possible in a local theatre, bar, rehearsal studio, arena, or stadium. As difficult as some of the local Montreal CDS production schedules were, they seemed never to approach the pressure, pace, and relentlessness of being on tour. I wanted to be actually

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[4] I applied for an interview slot at a kind of job fair/hiring drive CDS hosted at its big top site in downtown Montreal in 2011. I was one of probably dozens of interviewees. The interviews were structured but somewhat casual; there were three or four interviews happening concurrently in the same backstage area.

[5] I was almost always the only Anglophone worker during these initial contracts; French was always the working language. Beyond the technical work, administrative paperwork and email correspondence was also in French. Language debates can be deeply politically charged in Quebec and elsewhere in Canada, but I never felt any animosity. On the contrary, my colleagues were very generous and patient when I made mistakes or didn't understand, going so far as to explain (in English) the punchline (*le punch*) to the funniest French joke I've ever heard. Some colleagues preferred speaking English with me, wanting to practice. Most were used to switching between languages in any case, since on tour, the working language is English.

responsible for the success or failure of a show, to solve complex technical problems, and deal with last-minute changes, all while floating on a distant island made of pure show business, constructed with skill and planned ephemerality. For me, being trusted to work on tour would be a validation of my value and status as a worker, and a meaningful signal of respect (cf. Rees 2002). I saw touring as "an index of sophistication" (Meintjes 2003, 82): it was a testament to a technician's abilities, a producer's logistical acumen, and a show's popularity. It would be a whole new way of working and travelling.

I started to tour part-time with CDS in 2012, taking almost any contract that was offered. This included working in lighting and carpentry departments as often as in sound. Since my primary aspiration was to travel for work, staying on tour was worth more than working in my own field (cf. Carah 2011; and Duffy 2016). In separate interviews, Davie, Corteo's assistant head of sound, Cliff, a former Corteo head of sound, and Ana, a CDS big top sound technician, also discussed working in other departments in a positive light. They considered extra-departmental work as a means to stay on tour during a lack of sound jobs and as a way to be in place on tour for any sound work that might come up. Learning new skills on-the-job was also important for them and for me. Ana remarked that sometimes she specifically chose carpentry contracts over sound contracts to "diversify [her] skill set" (interview with author, 9 Apr. 2019).

Being on tour gave me a sense of being immersed in the workplace. Tour staff often stayed at the same hotels together, usually took the same route to work (e.g., walking, shuttle, or public transit), and sometimes hung out in small groups after a performance. I travelled to multiple shows every year, broadening that sense of immersion to the entire CDS 'global' landscape.[6] I met dozens of people—technicians, administrators, performers, and contractors—

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[6] See Timothy Kuhn's (2006) discussion of the workplace as a site for identity construction.

with whom I would work off and on over several years on different shows around the world. I would sometimes even pass a fellow CDS employee in an airport as we travelled to separate gigs. As a fly-in, I would receive a contract and a flight confirmation and would just be expected to show up, ready to work on an appointed day in another country (Western Europe, USA, and South-East Asia were my most frequent destinations). I would be in the Montreal studio one week, Paris the next, Barcelona and Brooklyn, Santa Monica and Singapore.

The tacit technical knowledge I was expected to have for my job (e.g., proper microphone placement; see Horning 2004) was no longer enough. With airports, taxis, and unknown cities now part of my workplace, my tacit knowledge expanded to include touristic competency. Being able to negotiate public transit in an unfamiliar language, for example, was crucial. Indeed, local transportation became a site of 'job crafting' for tour staff: workers would 'customize their workplace' by deciding how to get from the hotel to the venue; this became part of the culture on tour.[7]

Mobility

I was generally uncritical of my mobility, never thinking that I would not be able to continue to travel. I knew that my family ties to the arts were a boon and that my second passport was helpful at the US border, but at that time, I didn't recognize my socio-economic status, gender, race, ethnicity, sexuality, capacity, and Anglophone upbringing as, in effect, a collective third passport. Furthermore, as a musician, and especially as a young, male guitar player, I had been aligning with a well-established mythos of romantic nomadism, one that insists that musicians

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[7] Job crafting (Kuijpers, Kooij, and van Woerkom 2019; Wrzesniewski and Dutton 2001) took many forms on tour. For example, local transportation (e.g., from the hotel to the venue) was an important part of being on tour, especially as alternative modes, such as rideshare apps, municipal bicycles, and electric scooters, gained in popularity and prevalence. An entire folding-bicycle subculture, for example, emerged on some touring shows.

are naturally peripatetic bohemians (H. S. Bennett [1980] 2017; Novoa 2012). The idea of the

wayfaring troubadour, bolstered by countless artistic representations over the centuries, further

aligns with Romanticism in general, which emphasizes authenticity, originality, expressivity, and

emotion (Holbrook and Olney 1995; McKinna 2014). In my case, I believed that my own

originality, as compared to my friends and family, manifested in the job itself—touring the world

with CDS distinguished me from most people. Authenticity manifested similarly: if someone

was willing to *pay* me to travel, I reasoned, I must be the real deal. I valued my mobility for its

own sake; I felt free, important, unique, and worldly because of it, and increasingly rejected

anything that would curtail that mobility.

  That music and sound technology were fundamental to my own romanticized mobility

was appropriate, as they often align with notions of cosmopolitanism and emancipation from

domesticity. Sound technology has long been used to escape the doldrums of domestic life, even

within the home,[8] while some contemporary touring bands think of mobility "as a form of

resistance to several pre-established cultural norms" (Novoa 2012, 363), such as rootedness and

stability. Citing music and literature like The Doors, Bob Dylan, and Kerouac's *On the Road*,

André Novoa (2012) argues that the mythos of the rebellious, itinerant musician has its

foundations in the countercultural 1960s. In an ethnography of the underground beach-rave

scene, Anthony D'Andrea notes that "Mobility is . . . second nature to global nomads, as

traveling actualizes both the economic and cultural features of their charismatic, exotically self-

fashioned lifestyles" (2006, 106). Narratives of the unfettered nomad are dominated by young,

white, middle-class, presumably fantastically virile men, who, through transgressing cultural

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[8] Commercial sound equipment, such as radio, telephones, and phonographs, has long been leveraged to create private (gendered) listening spaces (Keightley 1996; Martin [1991] 2012; Sterne 2003; 2012a). Tom Porcello notes the "pissed-off wife or girlfriend" as a trope of masculine discourse in recording studios (1996, 268).

norms of sedentarism, also reinforce the racialized, gendered, and classed privilege in this kind of mobility.[9] Touring CDS staff could be seen as transgressive with their unconventional skills, jobs, and lifestyles, similar to D'Andrea's "self-marginalized" global nomads (2006, 97).[10] However, touring with CDS should not be seen simply as an outright and romantic rejection of the status quo. With its profit-driven corporatization and imbalanced labour practices, CDS's version of mobility reinscribes pre-existing power dynamics and inequalities. I discuss some specific inequities of mobility below.

Embedded in notions of mobility are notions of immobility, power, and control. The relationship between these elements is more complex and nuanced than a simple valorization of mobility for its own sake. Caren Kaplan asserts that the "tendency in contemporary social theory to romanticise mobility as a free-floating alternative to the rooted traditions of place" can potentially mask power dynamics and unequal social relations (2006, 395).[11] The kind of mobility that many migrant labourers experience, for example, is fraught with legal, financial, and physical risks, precariousness, and severe governmental power imbalances.[12] Skeggs notes:

> The ultimate issue is not who moves or is fixed, but who has *control*—not only over their
> mobility and connectivity, but also over their capacity to withdraw and disconnect. The

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[9] See Draisey-Collishaw's (2018) discussion of race, ethnicity, gender, and authenticity in Canadian musicians; see Stephen Davenport's discussion of emotionality and masculinity in American stories (e.g., Kerouac's) of "male flight . . . as expressions, not evasions, of woundedness and grief" (2002, 168).

[10] Scholars have long discussed themes of marginality in circus (R. Adams 2016; Fricker 2016; Little 1995; Stoddart 2000; Tait 2005; Toepfer 1999; Ward 2016). Interestingly, James R. Carr's (2014) discussion of sailors in the 1800s yields significant parallels with touring circuses, traditional and contemporary: cosmopolitanism, masculinity, marginality, mobility, and music.

[11] Many scholars have made similar assertions, arguing that mobility and immobility are inextricable, and both are concepts of power, status, and control (Adey 2006; Cresswell 2012; Gilbert 1998; Massey 1993; Sheller and Urry 2006).

[12] Some recurring, interrelated themes in migrant labour journalism and scholarly research include: global demand for migrant workers (Anderson and Ruhs 2012; Harris 2020; Semple 2020); human and legal rights of migrant workers (Di Lieto 2015); gender and race (Momsen 1999); physical abuse and killing of migrant workers (Yee and Negeri 2020); health risks to migrant workers (McKenna 2020; Verini 2020); the agricultural industry's dependence on migrant labour (Holmes 2013); the social lives of migrant workers (Horgan and Liinamaa 2017; Johnson 2017); and corporate misuse and abuse of federal permit programs (Roseman, Gardiner Barber, and Neis 2015).

> point is that the poor have to put up with that from which others can move. (2004, 50, original italics)

Expanding on the capacity for mobility—what Vincent Kaufmann et al. call "motility" (2004)—Skeggs continues, arguing that mobility can be understood as a resource:

> The 'white flight' from US inner cities is a classic case in point. [. . .] [I]n the USA, a person's social status is increasingly marked by the degree of their insulation in residential, travel, working and safe environments. Voluntary mobility is therefore a social good, a resource, not equally available to all. [. . .] [I]mmobility increasingly acquires the connotation of defeat, of failure and of being left behind, of being fixed in place. (2004, 50)

For the American white middle-class people who fled to the suburbs in the mid-twentieth-century 'white flight,' mobility was indeed a resource that aligned with other social 'goods' that were already in place. White Americans had the financial means, as well as the institutional and political protections not afforded many black Americans who moved north during the Great Migration, and from whom many 'white flight' migrants were fleeing. These racially intertwined, approximately concurrent instances of mobility are often characterized by privilege, safety, and continued segregation for white communities, and by loss, violence, and continued precariousness and power imbalances for black communities.[13] Whitney Slaten, "whose family was among that first great wave of southern black migration" (2018, 74), draws a line directly from the Great Migration to his own work as a live sound technician, which causes him to feel a deep ambivalence. He writes:

> I have also pondered [. . .] the absence of my own peace just before beginning my labor as a live sound engineer—a lack of peace informed by a particular kind of internalized capitalism, and overdetermined by the intersections of my black masculinity and my status as a laborer in a cultural service economy—a laborer responsible for amplifying sounds while avoiding coloring these sounds with proof of my own agency, and even for hiding any trace, as I duck behind the sight lines of audiences and musicians, of my own existence. (2018, 75)

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[13] Many scholars have presented nuanced analyses of this period of sub/urban, racialized mobility and its lasting effects (e.g., Griffin 1996; Kruse 2013; K.-Y. Taylor 2019). See Charles Blow's (2021) call for black Americans to return to the south for what he calls a Second Great Migration.

For Slaten, a notion of mobility includes invisibility, self-effacement, and service, which are at once tenets of professional sound work and symptoms of "the many historical violations of . . . dignity" (2018, 75) that families like his suffered both before and after migrating. A romantic understanding of mobility, from rebellious ravers to white flight suburbanites, is thus racialized, gendered, ableist, and classed.

The kind of mobility CDS offers on tour should be understood predominantly as a resource, as capital. Touring CDS staff are generally very well protected against the precariousness suffered by many other workers (e.g., migrant labourers) on the "employment-related geographical mobility spectrum" (Roseman, Gardiner Barber, and Neis 2015). Entire departments at CDS are dedicated to mobility (e.g., immigration and work visas, international taxation), and through these institutional allegiances and protections, touring CDS staff wield a great deal of control over their own mobility and can withdraw from unsafe environments. For example, CDS permits individual conscientious objection and temporary withdrawal from a tour in cases where touring to certain countries would expose workers to discriminatory laws and invasive visa requirements. Russia, for example, has strict anti-LGBTQ legislation and now requires foreign nationals to submit the results of an HIV test in their application for a work visa. In such cases, CDS employees who want to withdraw are essentially granted a short sabbatical.

CDS tour plans—where shows travel—generally favour white communities in North America and Western Europe, and exclude vast regions of the world, as profits are higher in the global north. Indeed, according to Susan Bennett (2016), CDS's mobility increases the profitability of its own markets by contributing to the long-term gentrification of the neighbourhoods it visits (cf. Wynn 2015). CDS does tour to countries in the global south, but

less often and less thoroughly. CDS has only toured South Africa in sub-Saharan Africa, for example, and has only recently toured to India for the first time.[14]

The appearance of actual global engagement is a priority for CDS (Cirque du Soleil 2020b). The company established two international charities: One Drop, a clean water charity, and Cirque du Monde, a charitable social program that trains "underprivileged" youth in circus arts. CDS's approach and level of engagement is questionable in both cases, however. CDS co-founder Guy Laliberté tried to use One Drop to claim the cost of his twelve-day trip to the International Space Station in 2009 as a business expense and evade millions of dollars in Canadian taxes (La Presse canadienne 2020). The tenuous link between One Drop and Laliberté's space tourism was satirized by Quebec comedians at the time (Prenez garde aux chiens 2009). Laliberté meanwhile maintains a stance of 'White Saviour' in his discussion of Cirque du Monde training, stating that the training is "the foundation that will give them [the youth participants] the ability to dream" (Babinski 2004, 183). While Laliberté may believe Cirque du Monde training will magically bestow some kind of emotional mobility upon the youth with dreams-via-handstands, he makes no pretense that this training will have any impact on their prospects for employment-related geographical mobility as actual CDS acrobats.

CDS emphasizes Cirque du Monde's international mobility and top-down benevolence as a program, while the program participants are exoticized, objectified, and immobilized. In CDS's *Authorized History* (Babinski 2004), for example, juggling, back-flipping, and unicycling black and brown youth are identified only by their city and country (e.g., Dakar, Senegal; Abidjan, Côte d'Ivoire), not by their own names (Babinski 2004, 178–85), unlike the hundreds of mostly white CDS performers who are meticulously identified by name in the same book. Laliberté talks

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[14] Several arena shows have toured to South Africa; the big top show Bazzar began a tour of India in 2018.

about what he saw as a positive outcome of Cirque du Monde during one of his many trips to

Brazil:

> There are certain street corners where, for years, you would see young people who had
> been sniffing glue, their eyes glazed over, begging. Some of the first Cirque du Monde
> programs were in Rio. About two or three years ago [six or seven years after Cirque du
> Monde was established], on the same street corner, you could see that something had
> happened. The same young people were asking for money—but they were juggling while
> they did it. So instead of begging, they're performing, they're doing something to earn it.
> (Babinski 2004, 183)

After noting his own prodigious geographical mobility—his road narratives—Laliberté states

that the Cirque du Monde training program, whose very name (Circus of the World) highlights

its cosmopolitanism,[15] has, in his estimation, been successful. However, it hasn't managed to

move these youth beyond their own street corners. Cirque du Monde's representative value here

seems to be in race and place, and in keeping nameless, racialized, objectified people immobile

where they are. Cirque du Monde extracts tax-deductible financial value from the apparent

poverty of participants and White-Saviour emotional value from the apparent inability of

participants to dream for themselves without intervention.[16] Charity is not a creative, artistic

exchange. Instead, it maintains power imbalances (K. M. Bell 2013), and CDS's orientalist

tendencies remain.

On Corteo, the international group of performers who are on stage becomes part of the

show's exotic display of mobility and global citizenship.[17] During a performance, audiences can

hear multilingual character dialogue, as well as song lyrics in an invented language (see chapter

2). Globality is further emphasized in Corteo's souvenir program, in which the nationality of

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[15] Cirque du Monde is a partner of Jeunesse du Monde (Youth of the World), a human rights non-profit. Cirque du
Monde's name reflects this partnership as well.
[16] See Rivard (2007) and Morency and Needles (1998) for further discussions about CDS and Cirque du Monde.
[17] This is a common dramatic strategy for CDS and is probably most pronounced in the dubious representations of
Indigeneity in the show, Totem (Batson 2012; Fricker 2016).

each performer is listed below their individual, wistfully-gazing-into-the-distance headshot (technicians and administrators are listed without photograph or nationality). Similar (but out-of-date) information is emphasized on the Corteo website (Cirque du Soleil 2015), with countries visited, languages spoken, and nationalities of performers (again, technicians and administrators are not mentioned). The transit narratives of the performers ascribe value to the performers' cultural and geographical origins—their obvious elsewhere-ness and Other-ness—by their intimate association with CDS. CDS quite literally capitalizes on the value that they ascribe to these transit narratives to sell tickets, programs, and merchandise. More subtly, CDS uses these transit narratives to reinforce its own organizational identity—its public-facing image of what the company stands for and provides—as an eminently mobile, cosmopolitan, and exotic corporation through which a spectator may glean some of that mobility and exoticism simply by watching the show.

During my fieldwork period, Corteo had personnel from twenty-three countries, which suggests that the show is a generally broad global gateway for people trying to access touring jobs. However, some countries and regions are much more represented than others. Of Corteo's 129 touring staff,[18] the vast majority were white and sixty-four (49 percent) were from Canada or the USA (see table 1). That proportion increases if staff are separated into their respective roles. For example, Canadians and Americans made up only 22 percent of the sixty-one performers, but 68 percent of the forty technicians. This distribution suggests an inequality of citizenship and race in employment-related geographical mobility on Corteo. Staff and audiences alike are drawn largely from the white global north, while the rest of the world is essentially rejected as unproductive and unprofitable. For people of colour in general, but especially those from the

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[18] This total, 129, includes people who were there temporarily, who went on temporary leave, and those peoples' replacements. Approximately 110 people are on tour at a time.

global south, race, ethnicity, and nationality will most likely prevent rather than provide access

to the 'globality' CDS offers. CDS's global citizenship is exaggerated and disingenuous, strictly

speaking, but is entirely aligned with white, Western, colonial, and elitist foundations of

cosmopolitanism (Eze 2017; Kent and Tomsky 2017).

Table 1: Nationality distribution of Corteo by number of workers
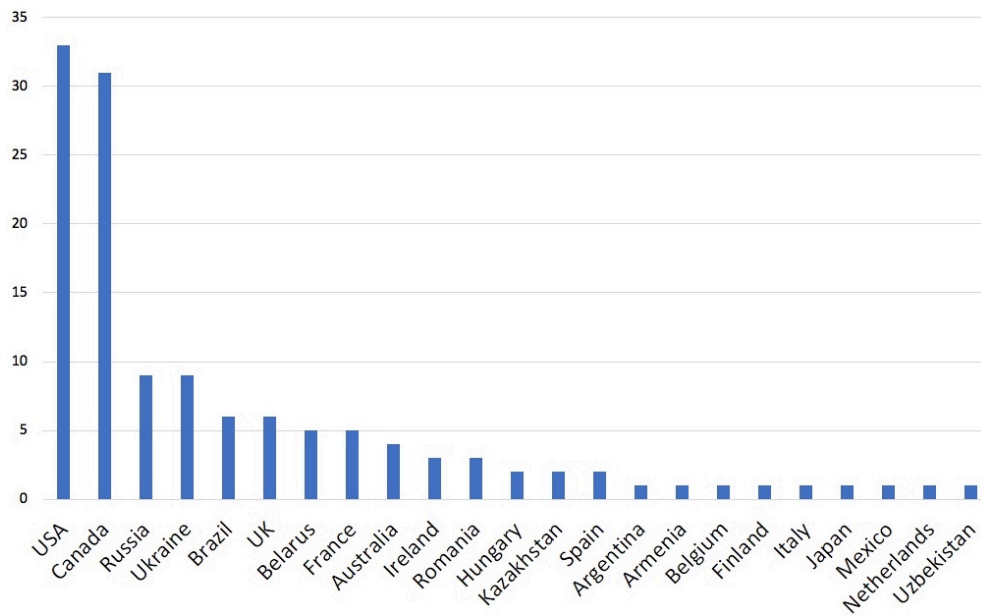
Employment, and thus employee mobility, is further constrained by gender (see table 2).

During my fieldwork, the 129 employees on Corteo were mostly men (67 percent). The sixty-one

performers, the largest sub-group (see table 3), had a slightly less equal gender divide (70

percent male). This is largely by design. CDS's audition process is similar to film and theatre

casting, where the gender of a role is generally predetermined (e.g., female juggler, male

clown).[19] Except for the male and female vocalists, the musicians' gender roles on Corteo are not

explicitly predetermined by casting. Nevertheless, of the eight musicians, six (75 percent) were

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[19] Emphasizing, reinscribing, critiquing, and challenging traditional gender roles have always been and continue to be common dramatic devices in circus acts (K. H. Adams and Keene 2012; Bouissac 2012; Jensen-Moulton 2016; Offen 2010; Tait 2005; Tait and Lavers 2016).

men. Because most musical instruments are themselves gendered (Abeles and Porter 1978; Doubleday 2008; Koskoff 1995), a gendered casting for Corteo's musicians would have been at least somewhat predetermined by choices of instrumentation and orchestration.

Table 2: Gender distribution of Corteo by number of workers
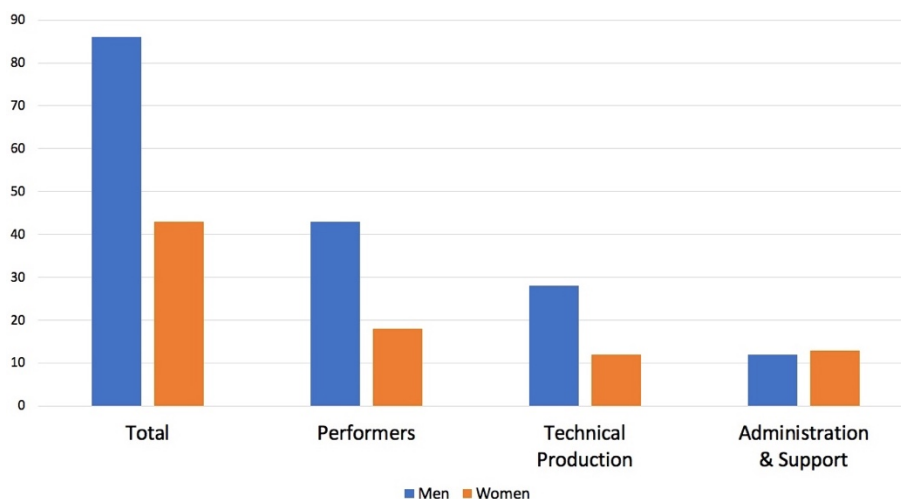
Twenty-eight of Corteo's forty technicians were men (70 percent).[20] All four sound technicians were men on Corteo, as they have been on most of the shows I have worked on at CDS and beyond.[21] Of the twenty-five people whose primary roles involved administration, service, and care—the kinds of roles that are typically gendered female, such as stage management and catering—a small majority were women (52 percent).[22]

Further, while CDS is generally a queer-friendly employer,[23] mobility of sexuality on tour is necessarily enmeshed with and constrained by, among other things, legislated rights and

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[20] The technical departments that had the most women were wardrobe (four of five—a department that is already gendered female), carpentry/props (four of six), and rigging (two of ten).

[21] Of the probably hundreds of audio professionals I have worked with during my career in stage production, only five were women, and four of those women were at CDS.

[22] Perhaps in response to its own male-dominance, CDS produced Amaluna, a touring show that premiered in 2012. The marketing for this show emphasizes Amaluna's female-led narrative. The show tells an unsubtle, essentialist story of womanhood, in which audiences visit "a mysterious island governed by Goddesses and guided by cycles of the moon" (Cirque du Soleil 2020a). The Amaluna website makes it clear that most of the cast, all of the musicians, and the show's director are women.

[23] In 2004, CDS fired a gay acrobat because he had tested positive for HIV. According to CDS, he would have posed a high risk to staff if he had been involved in an accident on stage (e.g., if he fell and started bleeding). The

cultural protections of LGBTQ communities in the countries CDS typically hires from. Even though Russian acrobats are at the core of many CDS shows and CDS maintains an administrative office in Moscow, I am more likely to work with an openly gay Canadian person on tour, for example, than an openly gay Russian person.

Table 3: Sub-group distribution of Corteo by percentage
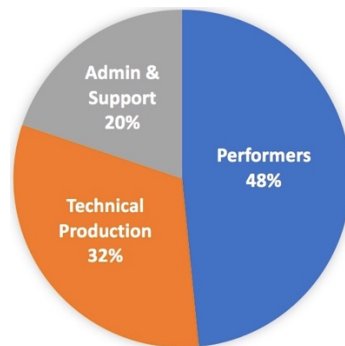
Inequality and difference are at the heart of CDS's projected image of mobility. CDS performs its own curated versions of global citizenship, cosmopolitanism, and the fetishization of travel, adventure, and (other)worldly experiences. These notions are easy to market because they mask inequality by making difference safe and desirable, a hallmark of traditional circus shows (Leroux 2014). Indeed, in traditional circus, exotic difference is a goal in itself (Davis 2002; Stoddart 2000). Beyond circus, romanticized, cosmopolitan understandings of mobility have direct, long-standing ties to colonialist and elitist attitudes and behaviours, and have been commonly circulated as selling points and justifications for such attitudes and behaviours (Feld 2012; Lilley, Barker, and Harris 2017). Corteo is not explicitly colonialist in the same way as, say, a traditional circus's use of black and Indigenous people "as savages, cannibals, and missing links" (R. Adams 2016, 240). However, exoticism, difference, and unequal mobility are central

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dismissal was deemed discriminatory, and the acrobat was awarded US$600,000 as a settlement (Anonymous 2004; Cernetig 2004; Letellier 2004).

to CDS's artistic product, charity work, marketing, and labour practices. In the next section, I focus further on inequality in CDS's labour practices, discussing the local labourers Corteo hires in each city it visits. As I noted above, Skeggs (2004) avers that the capacity for mobility is capital, is a resource. This assertion, while it pertains to each of my observations thus far, can be especially pernicious in its application to local technical labour, or "locals."

Locals

Locals are the backbone of load-in and load-out. It would be impossible to mount a show like Corteo without them. Most locals are hired simply to push, pull, and lift equipment, but some do more specialized tasks, such as rigging. Locals are supplied by the venue and usually hired through a subcontract with a local labour company or the labour union IATSE.[24] Some locals are unionized (or work for the union as non-members, as I did) and have considerable agency over their labour, as I outline below.[25] Unions develop labour agreements with performance venues and other work sites—theatres, arenas, film and television productions—and are then responsible for fulfilling labour contracts for touring shows like Corteo. Unionized workers, who enjoy stability, pension, and health benefits, for example, are, however, the minority. Venues with a strong union presence are usually associated with larger cities in Canada and the USA; local labour unions like IATSE are, as far as I know, non-existent outside of North America. That some locals are unionized becomes less impactful when balanced against the larger scope of CDS's mode of 'global' arena touring. Even within North America, the number of unionized people Corteo hires is small compared to the huge numbers of non-unionized workers. In

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[24] The International Alliance of Theatrical Stage Employees (IATSE) is a union that governs the labourers in thousands of theatres and arenas throughout Canada and the USA. They also govern most large-scale film shoots (their logo appears at the end of the credits of any Hollywood movie) and some movie theatres (e.g., projectionists).
[25] CDS employees are not unionized.

discussing locals here, my aim is to describe and analyze the power structures that are in place

that influence local labour practices, which I show to be enmeshed with issues of race, class, and

(im)mobility.

On Corteo, approximately sixty to one hundred locals are hired in each city to aid with

load-ins and load-outs, and they are allocated to each technical department.[26] Corteo's sound

department did not require any dedicated sound locals for load-in, for example, but required four

for load-out. The locals are given colour-coded t-shirts per department for load-out (sound locals

wear brown). This is a common strategy for large-scale arena tours of any genre (e.g., pop

concerts) as a way for touring staff to quickly identify locals working for each department on a

crowded and chaotic arena floor. There are three things about this practice that exacerbate labour

inequities between touring crews and locals. First, the departmental colour code is only for

locals, for subordinates, for the hired help. Touring sound technicians can identify sound locals

in a crowd, for example, but sound locals cannot identify touring sound technicians. Second, it is

a means of surveillance and discipline. Any Corteo technician can easily see when a "pusher"

(orange shirts) isn't pushing or a "loader" (black shirts) isn't loading, and can then police their

behaviour, ensuring they—or rather their bodies—remain docile and productive (Foucault [1977]

1995). Third, it was often the case that the locals' names did not matter, only their shirt colour.

Instead of actually learning names during a load-out, sound technicians (including me) would

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[26] Locals are paid per hour, sometimes with a minimum call time of three to five hours (e.g., locals who work for one hour will get paid as if they worked for the full minimum call). Minimum calls are usually associated with unionized labour but not always. A typical minimum call time is four hours. Locals who work more than the minimum will earn their hourly wage for any time worked and, according to the pre-negotiated labour contract, will sometimes be entitled to meal breaks, catering access, and overtime pay. Most locals who work on a Corteo load-in will have a catered, thirty-minute lunch break, like the one I had when I worked for CDS as a local in 2007. CDS big top shows also hire large groups of locals, but the rules and requirements are much different for two main reasons: first, big top setup takes almost two weeks while an arena load-in takes a day; second, arena venues are sometimes unionized, while big tops never are.

often simply call out to "Sound!" or "Brown shirts!" or "My guys!" when we wanted something done.

The tasks that locals most often perform are ostensibly non-specialized; locals mostly lift, push, pack, and stack. Even so-called unskilled, non-specialized tasks are specialized to some degree, however, and require training and experience to perform them safely and efficiently. Most tasks (e.g., cable-coiling, gaff-taping, case-stacking) will have a best practice and the touring crew will likely have a preference for how each task is performed (cf. Marshall 2020). Cliff, Corteo's former head of sound, noted in an interview that one of the first things he learned how to do in his first professional sound technician job out of high school was "how to tape cables on fancy floors" (interview with the author, 28 May 2020); my own early experience was similar. Touring equipment is largely standardized (e.g., cases, latches, cables, connectors, trusses, ramps, straps) so a local who has worked on any large-scale arena show will have handled gear similar to Corteo's and it is expected that non-specialized locals have at least this level of experience. With some negotiation with labour unions or contractors, touring technicians determine which tasks the locals perform. Locals are told how and when to perform each task and how equipment should be handled.

Working as they do only before and after the shows, locals are not equipped or emplaced to engage with the artistic product in the same way as touring staff. A deep engagement with a show is one aspect of touring that technicians cite as a reason to tour in the first place. Their instrumental control over tasks and their level of involvement with the show allow touring technicians to conflate their own mobility with notions of efficiency, knowledge, creativity, and skill, while "local" can become a derogatory byword for faceless inefficiency, inexperience, and

lack of skill.[27] However, touring technicians depend on locals and local (i.e., immobile) systems (e.g., hotels, food suppliers) to facilitate their own mobility.[28] Tour staff may see locals as people who would not or could not cut it on the road, should not be equally mobile, and should instead be left behind. Moreover, the locals CDS hires are often from what Jasbir K. Puar (2017) calls "debilitated communities"—racialized, subjugated, marginalized, or poor—and often lack many of the institutional protections touring staff enjoy.[29]

Imbalanced notions of mobility on tour contribute to the already significant masking of the precarious working conditions many locals face and of the neoliberal priorities and power dynamics that create those conditions. For example, load-out on Corteo was often framed by production management as an internal competition, stoking a masculine "contest culture" with toxic leadership (see Matos, O' Neill, and Lei 2018). Adulation was the reward for the mostly male crew when they managed to shave minutes off the projected load-out time, with frequent retellings of the legendary three-hour-and-three-minute load-out in Quebec City for inspiration. Competition was the impetus for the crew, but for management, it was to help CDS increase profits by paying the locals and touring staff—both of whom are waged—less. While CDS follows a theatre design paradigm that hides technology and technicians from the audience, it also follows a neoliberal labour practice that correlates an apparent lack of specialization with worker anonymity and replaceability. CDS administrators and technicians may be *somewhat* effaced in CDS's marketing, as compared to performers and show creators, but CDS locals are *entirely* effaced. CDS transforms locals—and to a lesser degree, administrators and

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[27] Nick Hunt and Susan Melrose (2005) discuss the word "technician" as a derogatory term.

[28] As Mimi Sheller and John Urry point out, "There is no linear increase in fluidity without extensive systems of immobility" (2006, 210).

[29] While large-scale touring acts of any genre will hire local workers as cheaply as possible to assist with load-ins and load-outs, circuses in particular have always depended on large groups of anonymous, inexpensive, supposedly unskilled, often racialized labourers (Childress 2018; Davis 2002).

technicians—into what Susan Leigh Star and Anselm Strauss call "non-persons," whose "act of working [and] product of work [are] visible to both employer and employee, but the employee is invisible" (1999, 15). The fact that up to one hundred locals are hired for every transfer, in every city, for every CDS touring show (big top and arena), is not mentioned anywhere in Corteo's souvenir program or on the CDS website. Locals have no value for CDS in the currency of mobility: they have no transit narratives, like the performers who come from fascinating, faraway places; they have no road narratives, like the touring CDS shows themselves, which have visited *x* cities in *y* countries on *z* continents. They are *local*: unremarkable and unnamed, untravelled and unexotic; as common and numerous and forgettable as the throngs on a morning commute. Race, class, ethnicity, gender, literacy, mobility, control, and value are woven into the fabric of CDS's colour-coded t-shirts, with CDS touring crews and locals on visibly different teams.

My discussion of locals in the context of Corteo (and in the broader context of CDS touring shows) has been deliberately pessimistic, highlighting inequities and little else. I wanted to emphasize the notion of mobility-as-power and the capacity for mobility as a resource, as many scholars have (e.g., Skeggs 2004), and to demonstrate that mobility-based power imbalances between locals and touring crews are systemic and can therefore emerge on tour at any time. This is not the whole story. Locals are still people, of course, and can become friends, colleagues, or mentors, even spouses. (I myself became a friend and colleague to touring CDS technicians after having worked for them as a local.) Locals know the venue. They have connections. They share information about the city (e.g., where to find nice parks, good restaurants, illicit drugs). They might remember you from the last time you were in town with another show. They can assert agency over their own work that countermands the instructions of

the touring crew. Sometimes they are unusually mobile and work with a tour several times as

locals in regional venues (e.g., central/eastern Texas: Dallas, Houston, Austin, San Antonio,

Corpus Christi). In cases like these, regional locals are sometimes able to take on greater

responsibility during load-ins and load-outs and act as lieutenants for touring technicians because

they're more experienced with the show. I did not interview any locals during my fieldwork; I

instead move to three short anecdotes from my own time on tour about locals who transcended

the uneven frameworks I outlined above.

During a load-in one afternoon, I was chatting casually with Edward,[30] a calm, friendly,

middle-aged man who was working as a local for the sound department. We were talking about

the musician's setup, and he mentioned that he had designed and built the headphone amplifiers

CDS uses.[31] These particular headphone amplifiers were very popular at CDS; almost every

musician on every touring show I had ever worked on had one. I had a relatively comprehensive

familiarity with these amps, having worked with dozens of them over the years, but Edward was

able to repair and update the older amps with an unparalleled intimate knowledge. This

experience was exciting for both of us: for me, I got to work with and learn from an unsung hero,

who, while the show was at that venue, became something of a celebrity for the touring sound

department; Edward, meanwhile, got to see (and recount) with pride the quality and longevity of

his creations. Based on the serial numbers, some of the amps on that show had been touring for

almost twenty years. Edward's expertise as an equipment designer and builder, which far

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[30] Edward is a pseudonym.
[31] A musician can listen to their monitor mix through a headphone amplifier and can adjust the overall volume and left-right stereo balance themselves. These amplifiers were placed at each musician's station (e.g., on a road case next to a keyboard; attached to a vocal microphone stand) and gave the musicians a "hard-wired" signal. These amps did not rely on batteries or radio transmission, so they were simple and reliable. They were also analogue and built for touring, so they were heavy-duty and easy to repair.

surpasses that of any CDS touring sound technician I know, contravenes the trope of the derisible, unskilled local that sometimes emerges in the discourse of touring technicians.

Sometimes equipment needs more than just a tune-up. During a load-in on a different show—the last load-in before that show closed for good—the monitor console stopped working. It was irrevocably broken and we needed a new one. It was late, around 9 p.m., and most people had left the venue. We needed to rent one locally and have it delivered first thing in the morning, but we didn't know where to turn. Any local audio company (*Are* there any local audio companies here? What city is this again??) would have long since closed for the day. Desperate and slightly panicked, I approached Brett,[32] who had been quietly setting up chairs for the next night's audience. He was the last person left in the house. Though I didn't know what Brett's exact role was, I already knew him to be more involved than a typical local labourer. He had been there all day; that he was still at the venue at 9 p.m. spoke to his relatively high stake in the production, despite the non-specialized task he had been undertaking. "Sure," he said, after hearing the situation, "I'll call a friend of mine. He's probably not in bed yet." This friend—he ran the local audio company—happened to have the very console we needed and was able to arrange delivery and a week-long rental over the phone that very night. Brett's apparent connectedness and rootedness to the community—his immobility—was the very thing that saved the show that week.

Unionized locals can have considerable power when determining how they work. The most common requirements for union houses are minimum call times (e.g., four hours; see footnote 26 in this chapter), meal breaks, and overtime pay after a certain number of consecutive hours. Sometimes the rules extend to specific tasks certain groups of locals will consent to. One

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[32] Brett is a pseudonym.

of the most common rules of this kind is the dichotomy between "loaders," who load and unload trucks and whose domain is the loading dock itself, and "pushers," who ferry the equipment from the dock to and from the arena floor. Loaders aren't allowed on the arena floor and pushers aren't allowed in the trucks. In the stricter venues, pushers are not allowed to set foot past a certain boundary—maybe a doorway, a ramp, or an actual painted line—and the rule is rigorously, sometimes viciously policed by union stewards and the locals themselves. Only once have I seen such a severe division of labour for sound locals. Again, during a load-in on another show, I learned that sound locals could not touch the musical instruments. Instruments were considered props by the union, and thus the domain of the carpentry locals (carps). However, once the carps removed the instruments (e.g., keyboards) from their road cases and placed them on the stands (I don't remember who set the stands up), it was the job of a sound local to plug the instruments in. My job was to verbally direct this unusually inflated crew, suddenly twice its regular size; had I touched anything myself I would have been taking work away from the locals. Here the unionized locals defied CDS's standard neoliberal labour framework by insisting on more waged labourers, not fewer. It was irrelevant that the union's boundaries for sound locals, which prevented them from touching musical instruments, seemed arbitrary and nonsensical to me as a touring technician. Their regulations prevailed and more locals had work.[33]

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[33] It is in the interest of the union that more locals have work as well. Like any labour contractor, the union will charge the producer (e.g., CDS) a certain amount of money per local, per hour. The union then pays the worker a portion of what they charged the producer, sometimes as little as 50 percent (e.g., the union might charge CDS $30 per hour for a pusher, but then pay the pusher $15 per hour). Union dues are then subtracted directly from the worker's paycheque. I don't know how dues are calculated, but it is likely a small percentage of the gross paycheque. Hourly rates change according to the job and the worker's seniority (e.g., a veteran sound local will make more per hour than a new pusher). While I was on tour, I got the sense that the degree to which rules like these were enforced was directly proportional to the degree to which a union branch (i.e., the local) that controlled a venue was annoyed with a tour (e.g., Corteo) or a tour company (e.g., CDS). For example, IATSE local 514, which governs the locals at the Bell Centre in Montreal, is notoriously strict—read, *expensive*—for CDS. Some CDS colleagues suspected that because CDS is headquartered in Montreal and CDS technicians are non-unionized, the Montreal IATSE local equated this with a huge loss in union dues revenue.

In many American and Canadian unionized venues like Montreal's Bell Centre, the locals—and especially the locals who are union members—would almost certainly have better working conditions and better support than non-union locals in many other parts of the world. When I worked as a local in my hometown, it was often under the auspices of IATSE as an external 'per service' non-member. Those were well-paid, formative years and the experience I gained as a local was vital to my career as a touring technician. There always seemed to be work available. However, I was a young student, consciously treating local stagehand work as a steppingstone, a springboard, a sometimes-brutal-but-necessary lower rung on a circuitous ladder that I was eager, able, and encouraged to climb. If I had had to rely on public busses to get home at 2 a.m. after a shift, or had to feed a family, make mortgage payments, or work a second (or third) part-time job, I'm sure the lens through which I now see that experience would not be quite so rosy. For one thing, the unions apply their own hierarchical seniority structure, which is a system that gives preferential treatment to people who have an existing capacity for mobility. Those who benefit most from this structure are often middle-aged, white men who have themselves retired from full-time touring, or people like me who are deliberately un-invested in the structure and who, with the advantage of other socially constructed assets (e.g., race, class, gender), are in pursuit of something greater. I was working towards a profession with clarity, hope, and support; a retired-from-touring technician may be looking to settle into an institutionalized position like a unionized sound local at a venue. In both cases, the advantage goes to those who are voluntarily mobile, like I was, or have "the capacity to withdraw" (Skeggs 2004, 50), like many senior union members.

Locals are essential to the success of a show like Corteo. Despite the institutional protections some have through IATSE, most have a precarious socio-economic and professional

status. Issues of power and (im)mobility are tied to the work, and inequities are compounded by

the mode of touring. I move now to a discussion of the arena touring mode from the perspective

of Corteo's sound technicians and musicians.

Tour

Travel is a central motivation for touring for many of Corteo's sound technicians and musicians.

They often balanced their discussions of their own mobility with discussions of stability,

however, and often talked about home or family. Davie, Corteo's assistant head of sound, is an

enthusiastic homeowner, for example, but in interviews, he extolled the kind of travel arena tours

provide. Speaking about his previous job with Disney on Ice, he remarked:

> I think the biggest appeal with Feld [the production company for Disney on Ice] is the
> places you go and the tours you do. It's crazy, man. I don't think I'll ever do as cool tours
> as I did with them because we didn't just go to Japan under a big top and go to this city
> and that city for a couple months [like CDS does]. Dude, we went to Japan for like three
> months at a time doing a different city every week. Same with South America. That was
> definitely what kept me there for so long was travelling. (Interview with the author, 4 Jan.
> 2019)

Davie valued the breadth of the travel experience and the near-constant movement afforded by

fast-paced arena touring.[34] Some of the musicians, while less effusive than Davie, were certainly

enthusiastic about the travel as well. Positive remarks about travel were often paired with

comments about salary and work stability. For guitarist/accordionist Camille, who "comes from

a family where one must have a steady occupation," the ability to travel *for* work was important.

She remarked:

> Everyone my age who has always lived in the same place wants to travel. That's one of
> the positive points, that we work *and* we travel. And with our two or three days off per

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[34] Many CDS big top staff instead appreciate the longer two- or three-month sojourns in a city—long enough to take
day trips, find a favourite restaurant, and have a love affair, as one colleague put it. Big top staff can begin to feel at
home in a city, while arena staff typically cannot.

week, we have time to travel around a bit. That's a very cool aspect [of the job]!"
(Interview with the author, 1 Feb. 2019)[35]

Camille associates her desire to travel with her age and implies that her family is more

supportive of her touring with Corteo because it is a steady job. Stephane, Corteo's violinist, also

mentioned salary, but focused primarily on the possibility of returning to Europe (he is

Canadian):

> It's a decision of money, although money is not everything. [. . .] I want to go to Europe again. I love Europe. That's the part of the tour that I love the most. I felt at home in Europe, it was very nice. (Interview with the author, 6 Feb. 2019)

Both Camille and Stephane were able to transcend the hectic arena schedule and find time to

travel around each city and feel at home in the destinations. Bobby, the bass player, had never

been to Europe. He had toured the USA extensively but was looking forward to travelling

abroad:

> But man, I have great health insurance. I have a great salary. I have a great band to work that I work with every day. I'm going to get to travel the whole entire world, which I always wanted to do. (Interview with the author, 17 Jan. 2019)

Salary, stability, and mobility are entwined for these musicians in a way that was not apparent

for Davie. Davie was speaking of a former contract, however, while the musicians were speaking

of their current contracts. This likely changed the degree to which they romanticized their

mobility. The musicians still seemed to romanticize the travel aspect of touring, but other more

practical considerations, such as salary, always came first.

For many of the musicians, being on tour with Corteo changed their relationship with

music. Phil, the assistant bandleader, discussed how difficult it is to stay in shape as a musician.

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[35] "J'ai une famille où il faut avoir un métier sûr. [. . .] Comme tout personne de mon âge croit quand on a vécu toujours dans le même endroit on a envie de voyager. Ça, c'est une des points positives: c'est que on travaille *et* on voyage. Et avec nos deux, trois journées de congé par semaine, on a le temps de faire des visites. C'est un côté très cool!"

He had left university for a job with CDS, but returned to finish his bachelor of music after touring for six years. Speaking about his return to full-time study, he remarked:

> It was hard! It was a big challenge for me to see the kids that are *flawless*. They're nineteen years old and they're just at the top of their game. Of course, they're missing experience but it was a nice kick back to reality. Sometimes here in the professional world you can sit on what you've accomplished and you can get lazy. *Especially* on the road. I think one of the most common subjects I see when I go to masterclasses with my idols—the best saxophonists in the world—is how hard it is to stay in shape, especially on the road. You just don't have time to practice. It needs to be in your mind. *La volonté* [the will] to keep studying, you kind of lose it sometimes. You travel so much, it's hard. (Interview with the author, 17 Jan. 2019)

Other musicians also discussed the challenge of studying and practicing on tour and addressed it in different ways. Camille was taking online improvisation courses and Aurelie was taking occasional voice lessons with her coach. Bobby had the sound technicians make him a special cable so he could listen to his "play-along" tracks on his phone and his in-ear monitors at the same time. Alex set aside practice time every day before soundcheck. Each said staying motivated was the most difficult part. For Phil, sometimes just listening to music required motivation:

> My days off for the last ten years have been Monday and Tuesday. Usually there's nothing playing. Every time I want to see a band or something, I cannot go. And I'm performing, let's say, five nights a week. For a long time it was six nights a week [with Corteo big top]. You have one day off. Do you really want to go out and see a show? Sometimes no, unfortunately. It's normal, I guess. For long periods of time I don't listen to music. It's unfortunate. But I have phases. Right now I'm in a good phase. I get home and put the radio on, or a nice album—a *new* one especially is good. I always listen to different music. (Interview with the author, 17 Jan. 2019)

Evenings, weekends, and holidays are workdays for Corteo. As Phil noted, this leaves little time or motivation to listen to music or see live shows. There is a direct relationship, then, between music and mobility for the musicians. Corteo is a well-paying, steady gig; being on tour is a mark of status and success. However, there are significant constraints on a musician's ability— and will—to study, practice, improve, and grow beyond the context of Corteo.

Phil consistently found ways to encourage musical growth and band cohesion on tour. When Corteo was in Memphis, Tennessee, he booked an evening at Sun Studio—where Elvis Presley and a number of other 1950s-era American musicians got their start—and the band recorded a few songs for fun (see figure 26).[36] Phil also facilitated a semi-weekly jam session with the Corteo musicians. He would choose a pop song that he thought would be a good fit for the band (e.g., *Rosanna*, by Toto; *Love on the Brain*, by Rihanna), transcribe it, and distribute parts to each musician. The band would then play it for a Sunday morning soundcheck. The jam session was good for the band, but it also encouraged agility for the sound technicians as well, since, both at front-of-house (FOH) and at monitors, the sound technicians had to quickly mix an unrehearsed, possibly unknown song 'on the fly.' It also provided an emotional boost for the Corteo staff in general. Sunday is load-out day and is one of the most difficult days of the week. The effort required to push through the inertia of having been stationary for nearly a week is considerable. Here the link between mobility and music extended beyond the musicians to include the whole tour.

While activities like a weekly jam might promote musical and technical agility, there are also ways to maintain versatility on tour. Corteo's sound technicians necessarily approach versatility differently than the musicians. For example, sound technicians—and technicians generally—are *expected* to demonstrate and cultivate their versatility on a show like Corteo. They are required to move to different positions within the sound department (e.g., they take turns mixing monitors), and might even rotate positions with other technical departments (e.g., working with lighting, rigging). Stephane, meanwhile, could not simply swap instruments with Camille. The musicians' work is specialized in a different way, with fewer positions available—

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[36] They recorded several Elvis songs as well as an improvised rendition of *Sweet Georgia Brown*, with Geert whistling the melody.

there are four sound technicians on tour, but only one violinist. Versatility can translate directly

into work—and indeed, employment-related geographical mobility—for a technician, as Ana,

Cliff, Davie, and I experienced. This versatility is good for technicians, but also for management.

There is a much higher turn-over rate amongst technicians than performers, so rotating tasks

ensures that the show can continue if a technician leaves.

Figure 26: Roger (left) and Phil outside Sun Studio

This is not to say the musicians are not versatile. Camille, as guitarist and accordionist, is

herself working and mobile thanks to her instrumental versatility. Before the arena remount,

Corteo big top had two different musicians—an accordionist and a guitarist—playing her parts.

Stephane occasionally plays the White Clown character on Corteo (see chapter 4), which, while

not a musical role, requires different skills (e.g., silent acting) and expands his responsibility on

the show. Phil, the assistant bandleader, is deeply implicated in the programming and

maintenance of Corteo's audio sequencing and MIDI management systems (Ableton Live and

Max). Aurelie, the female vocalist, is an aerialist and has performed her 'Tissu' act regularly as

one of Corteo's backup acrobatic acts (see chapter 4). Bobby and Alex, the drummer, have developed emotive, clown-like personae of their own, and interact with audiences in a way that goes beyond their contractual obligations. Roger, the bandleader, composed the music for one of Corteo's backup acts. Alain, the male singer, performed as a backup Whistler character in the weeks before Geert arrived to perform the role full-time. However, these instances of versatility are unique to Corteo, while technicians maintain this level of versatility across different CDS shows. The path to inter-departmental work for CDS sound technicians is much more clearly signposted and well trodden than it is for CDS musicians, which bears directly on the degree of precariousness each group faces. I always had work as a CDS technician, but musicians often wait years between CDS gigs, if they get another gig at all.

Alex was one such. He left another CDS arena show in late 2014 to have a more stable life at home in Brazil. He found it difficult to re-integrate, however, and relations with friends, family, and colleagues deteriorated; he came to understand that leaving tour was a mistake. When offered the job for the arena remount of Corteo, a show he had seen and loved in its big top iteration, he readily accepted. Having already toured with a CDS arena show, Alex knew what to expect and, after three years at home, was excited to get back on the road. "This is my place," he said in an interview, speaking of CDS arena touring specifically. "This is my home, my professional home. I felt great [to be back on tour], I felt good, I felt [at] peace! I thought that this was a blessing!" (interview with the author, 5 Feb. 2019). Alex felt a deep emotional and spiritual connection to the job and what it affords, to the travel, to his band mates, to his performances, to the music, and to his other colleagues on tour. Touring with CDS pushed him to perform in a way that being at home did not. He connected his performances on Corteo to his earnest contemplations of mortality:

> I never know when is going to be my last show. I always think about that. I have to prove to myself that I'm doing the best I can [on] that day because I don't know if it's the last. We close our eyes to sleep, man, we don't know if we're going to wake up the next morning. Nothing is forever. (Interview with the author, 5 Feb. 2019)

Though Alex's thoughts about death and dying are founded in his own spiritual practice, it is poignant that Corteo's main theme is death—it is the story of a man who dreams of his own funeral—and dying is symbolized by riding a bicycle, by mobility. This thematic overlap is an important emotional connection to the work for Alex.

While Alex found life at home in Brazil challenging, some other workers on Corteo find that being away can cause their home lives to suffer (cf. Arlinghaus et al. 2019). Workers miss the birthdays, weddings, funerals, and other life events of friends and family, and when they can attend such events—periods that Barbara Neis et al. call "fragile synchronicities" (2018)—their time, attention, and energy is constrained.

Touring also causes the line between work and time off to blur. Industrial capitalist society makes supposedly clear distinctions between work and leisure (Clegg, Courpasson, and Phillips 2006; Hatch 2013), but work for CDS employees is leisure for audiences and art for the show's creators. These competing priorities impose pressure on workers. They feel an almost moral imperative to go beyond their contractual obligations because of what's at stake for audiences and creators, which is to say the CDS corporation (cf. Besen-Cassino 2018). Christian and Davie, Corteo's head and assistant head of sound, in particular felt the pressure to produce a successful show even when they had the night off. They remained on-call, checking in by text, sometimes even coming to the arena anyway, "just in case." The blurred line between work and leisure on tour is compounded by the fact that leisure time is often spent with or around colleagues.

The tensions between work and leisure, work and education, or work and home are, for Corteo's sound technicians and musicians, vivid daily reminders that the mobility touring affords is not always romantic. In early 2020, the romance of touring dissipated entirely, as the COVID-19 pandemic forced CDS to shutter its forty-four productions, furlough 95 percent of its staff, and file for bankruptcy protection (MacFarlane 2020; Montpetit 2020; A. Willis 2020). Corteo was in Belgium at the time of the shutdown, having completed just a few months of a European tour that should have lasted years. After the performers and administrators were sent home, Corteo's technicians worked to store the equipment in a local warehouse before heading home themselves.

CDS has once again been sold and restructured (The Canadian Press 2020a; 2020b), but the thousands of employees have little hope of returning to work any time soon as the future of the company remains uncertain (Bilefsky 2020; 2021). The spread of the SARS-CoV-2 virus is an example of what Tim Cresswell calls "critical mobilities—mobilities which interrupt the taken-for-granted world of flows and force us to question how things move and the meanings given to those movements" (2014, 712). The extreme "critical mobility" of the virus interrupted the presumed mobility of Corteo's arena tour and disrupted the value Corteo's workers ascribed to the tour—the global mobility of the pandemic superseded CDS's cosmopolitan fantasy of globality. When the mobility that is enjoyed by CDS employees is interrupted, it is disturbing, frustrating, and bewildering because that kind of mobility is presumed to be unrestrained and autonomous (cf. Pooley 2013).

To return to Skeggs's critique of mobility, CDS had the "capacity to withdraw and disconnect" (2004, 50) during the pandemic, despite its collapse as a profitable corporation. While CDS did tour extensively, and its sudden inability to tour—its sudden immobility—

spelled its demise, CDS's trajectory has not "acquire[d] the connotation of defeat" that immobility sometimes can (Skeggs 2004, 50). Instead, having staked claim to a corporate and cultural home and remaining deeply emplaced in Quebec.[37] CDS was able to both control its own mobility and garner local support when their typical degree of mobility was no longer feasible. This fixedness allowed CDS to create a culture with which it could establish local partnerships and upon which it could fall back and regroup when things changed. At certain points in the past, CDS moved to efface its Québécois roots in its marketing, instead emphasizing its international mobility. However, ensconced in Quebec, CDS has weathered shifts in ownership, business model, and artistic practice (Leslie and Rantisi 2019; Peterson-Withorn 2015). In each of CDS's restructurings, CDS executives demanded that the company remain headquartered in Montreal, to which new owners and investors readily agreed. Even as a shell, CDS remains a cosmopolitan cultural icon, preserving and reinscribing the inequities of mobility through its own transit narratives—being vigorously Québécois—and road narratives—having gone away and come back home.

Romanticized mobility and cosmopolitanism are central to CDS's image, but this image can be problematic. On a practical, day-to-day level on tour, the romanticization of mobility for Corteo's musicians and sound technicians is tempered by a desire for employment stability and a need to maintain their musical and technical skills. More broadly, however, it enables a class-, race-, and gender-based devaluation and erasure of countless labourers and their work by masking the uneven power relations that profit from this kind of mobility.

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[37] Scholars have examined how important Quebec is to CDS's creative practice, community development initiatives, and business model (Courchesne and Ravanas 2015; Harvie and Hurley 1999; Jensen-Moulton 2016; Leroux 2014; Leslie and Rantisi 2011; Spiegel and Parent 2017).

Load-Out

It is about 7 p.m. on a Sunday evening. As the second of today's performances comes to a close, the sound technicians are spread out around the arena. Christian is mixing front-of-house (FOH); Davie is mixing monitors. Dylan is also at monitors, ready to collect the wireless microphones and in-ear monitors (IEMs) from the characters and musicians as they come off stage. Charlie, having brought four dedicated, brown-shirted sound locals from the loading dock to backstage, is describing to them what their first tasks will be. The locals already had a 'Safety First' speech from Corteo's assistant production manager when they were with the larger group, so Charlie can skip most of that. He reiterates, though, how important it is to always push road cases in teams of two for greater control. Charlie knows how busy load-out can get. Once load-out starts in fifteen minutes, the locals will ferry a dozen or so cases onto the arena floor.

Load-out hasn't technically started yet but there is no question that technicians backstage are thinking of little else. Everyone has been preparing for load-out all day. Indeed, for some, load-out has started already. For Corteo's sound department, however, load-out has three beginnings, three starting points. The most obvious starting point—the one by which a load-out's duration is measured (e.g., three hours, forty-two minutes)—is the 'click' after Sunday's second show. A 'click' happens after every performance: it is the moment when the calling stage manager, seated at FOH, allows the post-show state—curtains down, lights dim, 'walk-out' music playing quietly—to switch to a working state: curtain up, lights bright, music off. Usually about five minutes after the performers' final curtain call, the stage manager determines that

enough audience members have left the arena with the 'magic' of the show intact and calls a click over radio.

When the call comes, backstage personnel immediately emerge from hiding. After most shows, technicians and performers flood the stage for 'offset' and 'change-over': they clean up after the last performance and get ready for the next one. The stage is mopped, batteries are changed, props and acrobatic equipment are reset. A load-out click—the starting pistol after Sunday's second show—triggers a wholly different set of events, which I describe below.

The second starting point for load-out is sometime the day before, on Saturday evening, when road cases are hunted down and work areas are tidied (see figure 27).
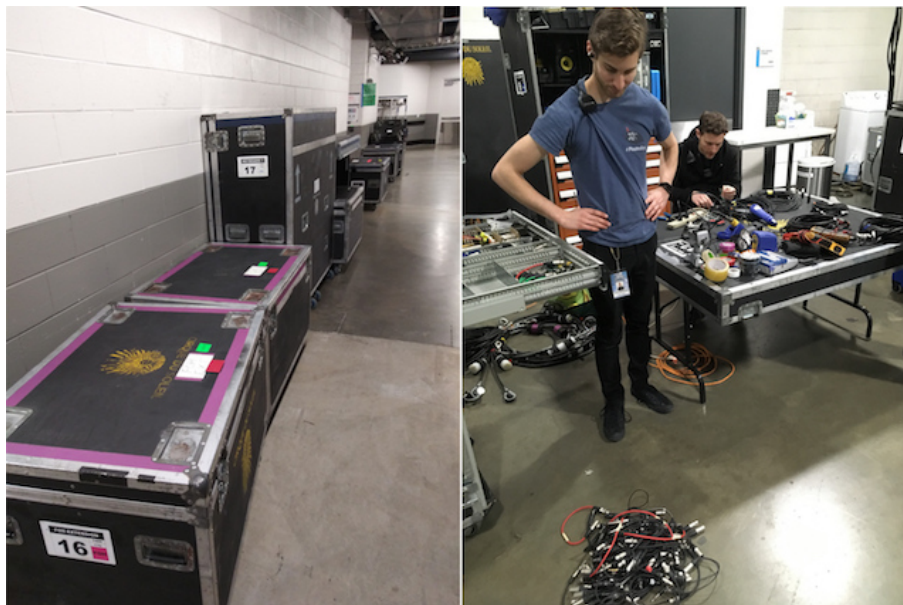

Figure 27: Sound department road cases in a hallway (left); Dylan and Davie cleaning up a work area (right)

Cases can end up almost anywhere in an arena's backstage and work areas can become very messy. To reduce Sunday's workload, the sound department addresses these two seemingly small but crucial tasks on Saturday.

The sound department prepares as far as possible in advance, which leads to the third starting point for load-out. In a sense, load-out begins at load-in. Touring equipment is installed

in stages; in some situations, it is literally stratified. For example, in a cable path that has
multiple cables for multiple systems, the cable that has to be removed first during load-out is the
last one to be put in place. This is planned at load-in expressly for load-out. Laying the cable is
for load-in; laying the cable *in that way* is for load-out. The cable path for the departmental FOH
snakes—the three-hundred-foot power-and-signal umbilicals that connect FOH to backstage for
sound, lighting, and automation—is one such example. The sound technicians, knowing that they
will be first to finish their FOH load-out, will be the last to install their FOH snake.

At 7:10 p.m., the show ends. Having taken their final bows, the performers stream off
stage, the rumble of a hundred pounding feet resonating in the empty space below the exit ramp.
Those with wireless sound equipment quickly make their way to monitors, knowing Dylan will
be there waiting. Dylan is keeping track of the gear as each person comes and goes; once he has
all the microphones and IEMs, he walks quickly downstage to finish packing up his workstation.
Davie, with two of the sound department's four locals, has started to pack up monitors. Christian
has started packing FOH. The tension for Charlie is high: he has nothing to do for now but wait
for the click so he can throw open the backstage curtain and start rolling cases through. Minutes
pass.

"*Okay, channel one, that is the click. Click, click*!"

Finally. Switching his radio to channel seven—the sound channel—as he moves (the other sound
technicians have already switched), he opens the curtain and sends the locals through with the
cases. There is a wash of new sounds. The sudden absence of placid walk-out music emphasizes
the shouts, clanks, and clunks as technicians and locals jockey for position with their cases and
carts. The whir of electric motors as hanging equipment begins its controlled descent; the rattle
of wheels as they roll over textured steel ramps; the crash of folding chairs getting pushed out of

the way. People are everywhere. Popcorn and discarded paper cups are strewn across the floor; they crunch under foot. Heavy foam mats and 'Tournik' high-bars are being disassembled on-stage; plumes of chalk dust waft into the house.

The first thirty minutes of load-out are critical. This is when the most people and their cases crowd into the least amount of space. This is also when the sound department's most fragile equipment—the consoles, instruments, and microphones—are at their most exposed. Packing those things is the priority. Bobby, Phil, Camille, and Stephane will be along shortly to pack their own instruments in the road cases Charlie is setting out. They will have changed out of their costumes, removed their makeup, and donned their hardhats. In the meantime, Charlie and the locals finish shuffling cases and start packing the keyboards. On the other side of the arena, Dylan has started packing the cables and microphones from the violin/guitar pit. He will wait for Davie and the other two locals to tackle the drums.

About forty-five minutes after the click, the instruments and consoles are secured in their cases and on their way to the loading dock. Two teams of sound technicians—Christian, Charlie, and two locals on the south side, Davie, Dylan, and the other two locals on the north—bring in the PA. Each team works on one hang of speakers at a time, with each hang coming down in just a few minutes. As the sound technicians lower and divide the speakers into discrete stacks, locals are tasked with covering the stacks and packing the associated cables. The smaller hangs of delay speakers are next. These speakers do not have to be divided into stacks, but lowering them requires some coordination with other departments, so this small job sometimes takes longer than it should.

One hour and thirty minutes in, the main speakers are down and the pace begins to slow. There are still more speakers to bring in (the subs, surrounds, and crossfires), but there is time for

a quick drink of water and a full-team meeting on the floor. It is often easier to bring the rest of

the PA down as a group of four technicians and four locals. It is not difficult work, but it is

unwieldy and could be unsafe for too few people. It's better—and more fun—to have too many

(see figure 28).

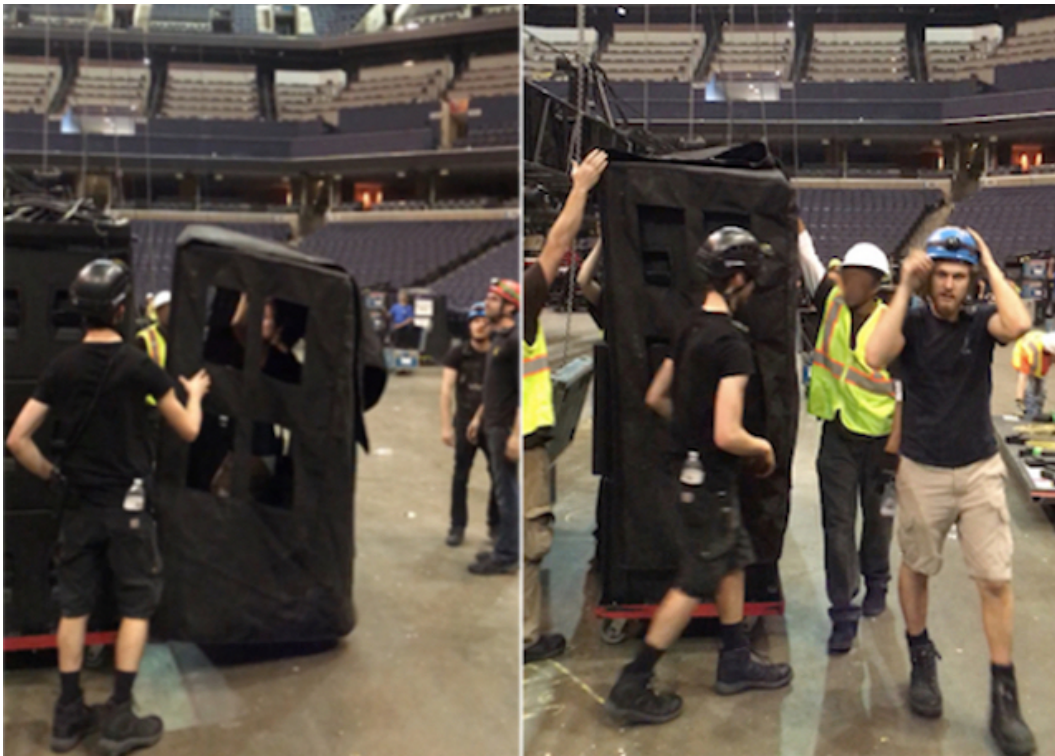*Figure 28: Christian experimenting with a sub cover, while Dylan, Davie, Charlie, and locals (anonymized) look on*

Two-and-a-half hours have passed. Most of the gear is gone and there is much more room on the

arena floor (see figure 29). By this point, the sound technicians have left the disassembly of the

remaining equipment to other technical departments and have gone to the loading dock to pack

trucks (see figure 30).

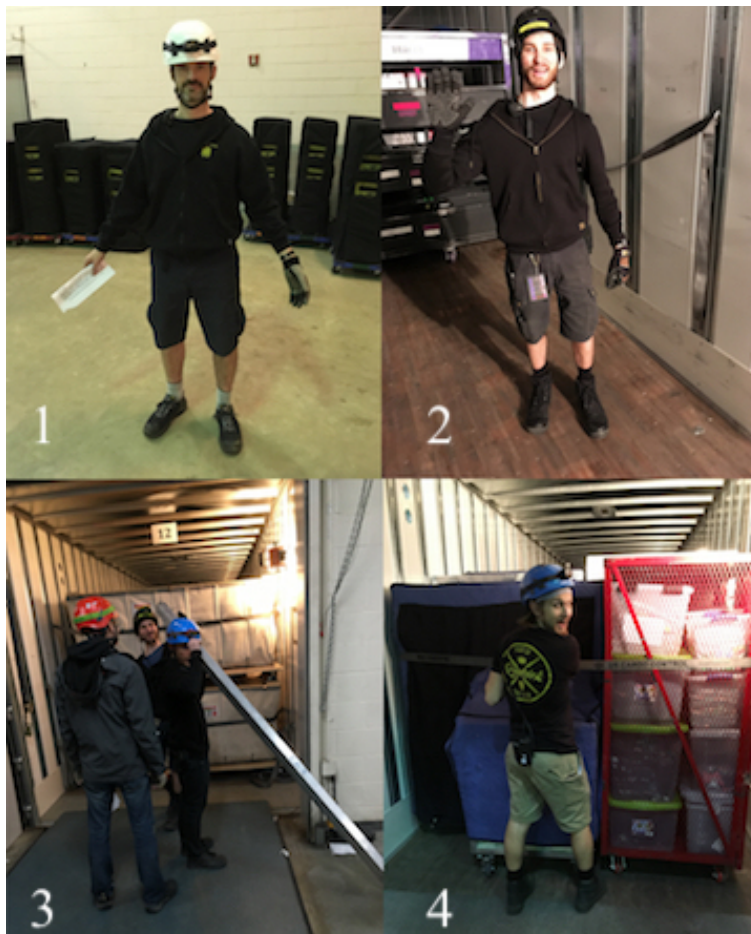*Figure 29: Locals (anonymized) pushing gear to the dock (note their coloured t-shirts)*

Figure 30: 1. The author on a loading dock (note the stacks of speakers in the background); 2. Dylan in a truck; 3. Charlie and Dylan, with Davie holding a load-bar; 4. Christian strapping cases

Load-Out

The dock is loud. The sounds of trucks and forklifts are often masked by the jangling clatter of metal on metal, echoing off what seems like endless cement walls, as racks of gear are shoved into place (see figure 31).

Figure 31: Christian (right) supervises as a rack of lights gets loaded on a truck by locals (anonymized)

Before the last truck is loaded, Corteo's production manager dismisses the sound department. They're told to "locker up," which means to get changed into travelling clothes and send the locker road case to the dock right away. The locker will be the first case off the truck in the next city. By that point, two days from now, Christian will be standing on the floor of the next venue, just finishing his measurements for the PA and he'll be ready for his helmet and boots.

About three-and-a-half hours after the click, the sound department's locker slams shut for the last time that week, the sound reverberating around the now-empty arena. If he were paying attention, Christian might have recognized the sound of the reverberation from when he first heard it during load-in, but he and the others are winding down, starting to forget about the past week already. Clusters of technicians, no longer divided by department, chat about load-out— how it went for everybody; highlights and crises; funny stories. The locals, still wearing their coloured t-shirts, start to filter out into the night. Some shake hands with the technicians they

worked with and say goodbye, but the two groups, locals and technicians, remain mostly

segregated. People are off the clock now, eager for clean hands, food, and sleep. Happily for

Corteo's technicians, the post-load-out pizza has already been delivered and the drinks have been

in the refrigerator all day. There's time to grab a bite before heading to the plane (see figure 32).

Figure 32: Dylan on one of Corteo's chartered flights (other people anonymized)

Chapter 6: Conclusion

> And so every year the day comes when the workmen remove the marble pediments, lower the stone walls, the cement pylons, take down the Ministry, the monument, the docks, the petroleum refinery, the hospital, load them on trailers, to follow from stand to stand their annual itinerary. Here remains the half-Sophronia of the shooting-galleries and the carousels, the shout suspended from the cart of the headlong roller coaster, and it begins to count the months, the days it must wait before the caravan returns and a complete life can begin again.
>
> Italo Calvino, *Invisible Cities*

Corteo is no longer touring because of the COVID-19 pandemic, and the future of the show is uncertain. Cirque du Soleil (CDS) president and CEO Daniel Lamarre hopes to begin opening shows in fall 2021 but does not expect to be operating at a high capacity until 2022. Even then, the priority for CDS will be on resident (i.e., non-touring) shows in Las Vegas, NV, because of the lower operational costs and greater stability (Bilefsky 2021; Kelly 2020b). In the meantime, employees are diversifying. Davie, for example, has steady work as a fly-fishing guide in the USA. He is unsure if he would return to tour even temporarily, just to get the show up and running. Other former CDS employees are equally skeptical about their own return, believing the company's current financial woes pre-date the pandemic by years (Kelly 2020a). Labour scholars agree and have pointed to a long-term shift in CDS's creative practice that seems to prioritize standardization and devalue innovation (Leslie and Rantisi 2019).

My own experience as a technician with the company reveals cost-cutting trends. When I started in 2011, for example, the big top shows toured with a school for young performers and the children of performers, with accredited teachers who followed a Quebec curriculum. This

amenity was eliminated in stages starting in 2013. After CDS's initial sale to investment firms in

2015 (Deb 2017), discussions of money-saving strategies were part of every major production

meeting of each show I worked on. Just before I finished fieldwork on Corteo in 2019, CDS

devised a new set of touring standards for new arena shows, which included a two-year term

limit on technician contracts in place of full-time, permanent contracts and shared (i.e., double)

occupancy for hotel rooms.[1] In their announcement of these policies, Corteo's managers were

careful to stress that the new conditions were for new arena shows *only*, and would not apply to

Corteo. I have little doubt that when (if) arena touring resumes for Corteo, however, the new

conditions will be applied for new and temporary staff at least, if not everyone.

Despite the decline in employee tour conditions and the purported decline in internal

standards of creative practice, CDS has maintained an outwardly high benchmark of technical

production. Corteo's arena remount shows evidence of that: it has many technologically

advanced systems; it is logistically complex; and it repurposes old equipment and makes it look

new (e.g., the PA). Each of these aspects of the show demands high-calibre, experienced

technicians to make them function. Cutting-edge technology requires training and practice;

logistical complexity requires strong inter-corporate partnerships (e.g., with trucking companies,

suppliers) and solid touring experience; maintaining repurposed gear requires technical agility

for quick repairs, quick decisions, and contingencies, and to maintain weakening supply chains

for discontinued parts.

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[1] Under the new scheme, touring employees could opt out of double occupancy. They would be given a percentage of the cost of the shared hotel room and would pay out-of-pocket for their own accommodation. A similar (and very popular) opt-out scheme was in place already, but since the money employees received was based on a percentage of a *single*-occupancy room, the amount was much higher. For many touring employees, opting-out was profitable. Small groups of friends would rent a large, inexpensive, multi-bedroom house through Airbnb, for example, and pocket the difference.

Chapter 6: Conclusion

By cheapening tour conditions for technicians while maintaining high production standards, CDS risks losing or alienating the experienced technicians who keep complicated shows like Corteo on the road. For Corteo's sound technicians (and for myself and most CDS technicians I know), a job with CDS was something to aspire to. Because of the decent tour conditions and the apparently high technical standards, CDS existed for them on the upper end of a continuum of large-scale touring companies. The companies with which Corteo's sound technicians started touring—Feld (Disney on Ice) for Davie and VStar (Paw Patrol Live) for Dylan, for example—could reasonably be considered 'feeder' companies for CDS.[2] Technicians who come from jobs with companies like Feld often regard a CDS gig as a sort of promotion and a significant step up.[3] They receive better pay and better conditions, but more is asked of them technically and creatively. However, the less experienced technicians who will be attracted to the new tour conditions—or rather, who will take the place of experienced technicians who are dissuaded by the new conditions—may not be able to deliver what CDS will ask of them. The current state of show business favours CDS as an employer, however: the shutdown and long hiatus will likely make workers eager to get back to tour under almost any conditions. Might the new conditions cause some workers to abandon CDS as an employer? Might those who do take CDS contracts have a higher risk of becoming alienated, dissatisfied, and overworked?

With this context and these questions in place, I ask: How could my research inform how CDS values technicians and guide the company's future labour practices? How can my research help prevent workers from becoming dissatisfied? I conclude this dissertation by arguing that

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[2] VStar is a CDS-owned company, but operates decidedly non-CDS shows, like Paw Patrol Live, and does not directly recruit workers through CDS channels.

[3] I also viewed CDS work as a step up, but I came from independent theatre, not another corporate touring company.

CDS should provide training and support to sound technicians in new ways and develop a new valuation paradigm that includes labour of all kinds at all levels of the hierarchy.

My research shows that Corteo's designers and directors understand how important sound is for a CDS show. This reinforces similar findings by other scholars (e.g., Jensen-Moulton 2016; Paul 2012). Mark, Corteo's artistic director, and Jean-Michel, Corteo's sound designer, both described how Corteo's sonic product can help connect audiences to the show emotionally. Mark and Jean-Michel are not prescriptive about what emotions they think audiences *should* feel at a given moment, as I discussed in chapter 2. They can be prescriptive with the affective, sonic strategies they use, however, as I showed using the example of verbal intelligibility. Despite some top-down rigidity with certain elements of the sound design, such as intelligibility, Mark expressed a sincere openness to the front-of-house (FOH) sound technicians' (i.e., Christian's and Davie's) opinions about Corteo's sound. He readily acknowledged that the people mixing FOH are in greater contact with the show sound than he is, just through sheer exposure. Mark cannot watch (or listen to) the show as often as the FOH sound technicians. Though Mark has the final say, he wants to work in partnership with the sound department to make Corteo sound its best.

My research also demonstrates that Corteo's sound design is predicated on strict sonic control. This finding supports Emily Thompson's (2002) theorization of modern sound and Jonathan Sterne's (2003) modern audile technique. Sonic control is fundamental to every stage of the sound design, from measuring the venue and modelling the PA's sonic response during load-in, to managing a musician's in-ear monitor (IEM) mix. Corteo's designers and directors assume the touring sound technicians are capable of controlling a venue's acoustic and maintaining the sonic standard established by Corteo's sound design. For their part, Corteo's

sound technicians seemed at ease with the idea of having to constantly maintain sonic control; they saw it as fundamental to their work.

These two assumptions—sonic affect and sonic control—are part of the worldview of Corteo's designers, directors, and sound technicians. My research nuances these assumptions by demonstrating that sonic affect is not unilateral—from musician or PA speaker to audience member, for example. As I show in chapter 2, it is instead based on a complex network of feedback loops—a feedback web—between sound technicians, musicians, audience members, and on-stage performers. Each group, sensitive as they are to 'the energy in the room,' feeds *and feeds off* the others, as well as themselves, through sound (e.g., audience feeds musicians; audience feeds audience). This sound is often music from the PA, but not always; it also includes applause, for example. The sound of Corteo—the sound that helps generate important emotional connections—is much more than the sound design. It includes sounds that cannot be controlled by careful PA calibration. In some cases, like laughter, the more effusive and unrestrained these sounds are, the better. By explicitly making space for 'room energy' in a sound design, sound designers could address a FOH sound technician's sensitivity to it during training, rather than leaving FOH sound technicians to learn how to intuit room energy over time. This might encourage a FOH sound technician to move more quickly beyond the 'mix-by-numbers' stage Jean-Michel described in chapter 3 and instead tap into the sound-based emotional connections that are (rightly) so important to CDS. As I demonstrated in chapter 3, mixing with an awareness of the audience is assumed to be a supplementary technique, a skill that is acquired over time by talented, sensitive FOH sound technicians. It could instead be framed as integral to the mix and be part of the sound design.

Chapter 6: Conclusion

Emotional connections for Corteo's sound technicians extend beyond those established through music during a performance. Throughout this dissertation, I show that interpersonal relationships on tour are important and delicate. Sound technicians navigate these relationships through shifting modes of emotional labour. In chapter 3, I discuss the stoicism of remote communication. I expand my discussion of emotional labour in chapter 4, examining service, hyper-service, and communal modes. Corteo's sound technicians depend on these modes of emotional labour to establish and maintain working relationships with the musicians, the directors and designers, suppliers, other technicians, and each other. As I note in chapters 3 and 4, the sound technicians and musicians repeatedly commented on the emergent nature of their emotional labour, both in their remote communication etiquette and in their communal, backstage etiquette. Just as a FOH sound technician's sensitivity to room energy is learned over time, so too are these modes of emotional labour. Emotional labour, as I have shown, is crucial to working on tour, from building work areas and troubleshooting (remote or in-person), to providing backstage tours and doing post-load-out travel.

Sensitivity to room energy and emotional labour are essential to the success of a performance and are expected of Corteo's sound technicians but are not explicitly discussed at any level—departmental or company-wide. I view this lack of discussion as an opportunity for CDS to better engage with, and thus understand, what they ask of their touring employees generally, regardless of department or role. This dissertation presents data that CDS could use to devise better training and support for employees. By taking assumed elements of Corteo's inward-facing organizational culture, such as backstage communal emotional labour, and adopting them as part of its public-facing organizational identity, CDS could create a more open, thoughtful workplace that overtly values workers at all levels. A simple example would be to

somehow include technicians and backstage life in company marketing. This could also begin to counter-balance the ambivalence and hostility some CDS employees harbour for some Montreal-based CDS executives, whom they view as disconnected and out-of-touch with touring life.

My research may reveal an increasing prevalence in formal training for young sound technicians. Christian, Davie, and Dylan, the youngest sound technicians on Corteo's crew, completed college training programs in professional sound engineering. According to live sound technician Boden Sandstrom (2000), her male colleagues in the 1970s, 1980s, and 1990s tended to be trained on-the-job through apprenticeships, while her female colleagues tended to be formally trained in technology and physics. She remarks:

> Women who wanted to mix thus found themselves in a position where it was necessary to seek out classes on the science of sound as well as "how-to" classes. This actually worked in their favor since they ended up knowing more, scientifically and technically, than many men and could handle the electronic and acoustic problems better. This acoustic knowledge can result in better control of the sound during a performance or recording. Women discovered that to be employed and noticed, they needed to work more intelligently and from a broader base of knowledge. (2000, 297)

Women were implicitly or explicitly rejected from informal apprenticeships that were standard amongst men and instead sought out formal training. Whitney Slaten (2018) also remarks on the prevalence of apprenticeship for male sound technicians. Cliff, Corteo's former head of sound, who is several years older than Corteo's other sound technicians, learned the trade through apprenticeship. I am older than Cliff by a few years, and I too learned on the job.

Though the professional audio industry is still dominated by men, as countless observers have remarked, there seems to be an acceptance of formal training amongst younger technicians. Hands-on apprenticeships and 'knowing a guy who can get you in' are no longer understood as the only gateways to the profession for young men. Sound technicians on Corteo embraced their scientific training. Beyond using the measurement and calibration tools that any CDS sound

technician would use when setting up a PA in an arena, for example, Christian often used physics and psychoacoustics terminology to discuss sound in general. Instead of simply reacting programmatically to the read-out on a screen, Christian understands the underlying physical principles the on-screen read-out represents. This is a far cry from the references to audience members as "blood bags" or "human absorption units" that prevailed when I was learning from mentors about how the frequency response of a room changes when an audience is present (see also Dahlie 2018). These deliberately crude or pseudo-scientific terms were denials of physics terminology and were rejections of sound technicians who relied on physics and science to describe their work.[4] Working with these terms was a crass, masculine signal by sound technicians of my generation (and older) that they understood the end result of audio physics—in this case, that certain frequencies are absorbed and dispersed by the bodies of audiences—but that they were not letting theory 'get in the way' of the intuitive practice of 'doing' live sound. While still reinforcing traditional standards of male dominance in the industry, Corteo's sound technicians represent a new paradigm that makes the apparently feminine way of doing live sound—an embracing of physics and psychoacoustics—the new status quo. Whether the industry becomes more accessible to women because of this remains to be seen.

CDS can use this information to provide continued training for technicians through professional development workshops. Corteo's sound technicians, through their educational background and through their daily discussions of sound and sonic control, showed that formal training is important to them as professionals. To keep them engaged and to demonstrate a new level of investment in them as workers, continued, relevant training modules could be prioritized. Some standard training workshops do exist for some departments at CDS (e.g., fall-arrest and

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[4] Another example of pseudo-scientific terminology is "high-impedance air gap," which refers to a problem caused by an unplugged cable.

work-at-height training for riggers; forklift training for big top technicians), but these workshops are rarely enacted just for the sake of learning. Touring technicians are usually required by law to take these training modules.

CDS has started to demonstrate an apparent outward value of technicians through online recruitment videos that highlight technical roles that had previously been largely effaced, as I indicate in chapter 4, but the company could go much further. By discarding the value system that puts designers at the top and technicians below, CDS could establish a new organizational identity that deliberately emphasizes the lower echelons of the current creative hierarchy. In chapter 3, I show that Corteo's FOH mix, for example, is a fluid set of thresholds and parameters, rather than a strict set of immutable cues. The FOH sound technicians' moment-to-moment interpretation of the music and their sensitivity to the energy in the room play a crucial role in how Corteo *sounds*. This contribution could be highlighted by CDS. In this dissertation, I use sound and sound technicians as a case study, but many of my findings could be applied to other technical departments, such as lighting. Beyond CDS touring staff, I describe in chapter 5 how and why locals are entirely effaced; this could easily change as well. CDS could help shift how locals are viewed institutionally—that is, by large-scale touring productions of all kinds— and raise awareness of their existence to consumers. CDS could use my work to find ways to embrace, rather than efface, the technicians and locals they employ. Further ethnographies of other technical departments and ethnographies of locals would compound this effort, and would be important contributions to the scholarly literature of large-scale touring productions.

Sound studies scholars have called for a re-valuation of music labour (Vagnerova 2017), and a re-definition of music itself to include material resources and associated labour (Devine 2019). The suggestions I put forward in this conclusion—training, visibility, comprehensive

understanding of technicians' labour—are not likely to be embraced by CDS without such a re-valuation and re-definition of music. From within a neoliberal, profit-driven framework, and especially after a bankruptcy and hiatus, CDS has every incentive to further marginalize workers and continue to whittle away at wages and tour conditions. Further, if CDS were patronizing or disingenuous about worker validation, or if the company were to institute top-down directives and policies regarding emotional labour, for example, it would likely cause resentment amongst staff, especially if it compromised the beloved vulgarity of backstage work. As Davie once put it, "No, the company does not tell you how to deal with anger, and actually, at this point, [it] would just piss everyone off for them to try, ironically" (interview with the author, 17 Feb. 2019).

While CDS's reform is unlikely, it is still possible to use the findings of this dissertation to pose challenging questions about show business and the live sound industry. I have shown that a sound technician's emotional labour and sensitivity to 'room energy' are integral components of a CDS sound design, but what would it mean to produce a show that *recognized* this from the outset? Instead of sidelining a FOH sound technician's contribution to the mix, how might a sound designer expressly and overtly leverage it? How might FOH sound technicians be trained differently to allow for a more comprehensive understanding of their role in production? How might diverse listening experiences and understandings of sound be incorporated into such a design? What if locals had a greater stake in the production? What if they were visible and valued on their own terms? CDS could make locals visible in a very basic way by simply acknowledging them on the CDS website. It would be easy (and inexpensive) for CDS to provide statistics for local employment, as they do for, say, countries visited or tickets sold (e.g., "CDS employs ten thousand local workers per year to assist with touring shows around the world.").[5]

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[5] I do not know how many locals CDS employs per year, though I am sure those figures are readily available to company management. Ten thousand is a quasi-random figure; I expect it would be at least this many.

Chapter 6: Conclusion

What is the relationship between visibility of technical labour and labourers and the affective intensity of a performance? How might unions, partnerships, cooperatives, and workshops change how live sound technicians think about their work? How can the live sound industry in general move beyond its dependence on hegemonic white masculinity? Would that mean for relinquishing sonic control? Is it possible to embrace diversity—of personnel, listening experiences, mixing methods, venue acoustics, labour practices—and produce a show that purports to sound the same night after night, city after city, year after year? While the findings of my dissertation do not answer these questions—and unfortunately, at least one of the questions has been waiting decades for an answer—I think it is important and fruitful to ask them nonetheless. Questions like these will spur future scholarly, artistic, technical, and administrative work in show business and beyond.

When I started this research, I didn't know CDS would shut down. I (and others) saw a decline on the horizon, but certainly not a precipitous fall. With CDS's closure, bankruptcy, sale, and uncertain future, writing this dissertation has, at times, felt somewhat elegiac, which was never my intent. I wanted to examine and expose aspects of a live sound technician's work that were little known or obscured, deliberately or otherwise. If there are real prospects of a resurrection of touring, CDS could use my work to embrace and support the technicians' emotional labour, while finding ways to address the limitations of its increasingly profit-driven, neoliberal labour practices. My approach to this project has been largely practical from the first, but these issues of redress for CDS have gained a new urgency and higher stakes.

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Appendix A: Ethics Documentation

Initial Approval Letter[1]

MEMORIAL UNIVERSITY

Interdisciplinary Committee on Ethics in Human Research (ICEHR)

St. John's, NL Canada A1C 5S7
Tel: 709 864-2561 icehr@mun.ca
www.mun.ca/research/ethics/humans/icehr

ICEHR Number:	**20190675-MU**
Approval Period:	October 31, 2018 – October 31, 2019
Funding Source:	Not Funded
Responsible Faculty:	Dr. Ellen Waterman School of Music
Title of Project:	*Understanding the Roles of Touring Sound Technicians at Cirque du Soleil*

October 31, 2018

Mr. Jacob Danson Faraday
School of Music
Memorial University of Newfoundland

Dear Mr. Danson Faraday:

Thank you for your correspondence of October 26, 2018 addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) concerning the above-named research project. ICEHR has re-examined the proposal with the clarification and revisions submitted, and is satisfied that the concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* to October 31, 2019. ICEHR approval applies to the ethical acceptability of the research, as per Article 6.3 of the *TCPS2*. Researchers are responsible for adherence to any other relevant University policies and/or funded or non-funded agreements that may be associated with the project.

The *TCPS2* **requires** that you submit an Annual Update to ICEHR before October 31, 2019. If you plan to continue the project, you need to request renewal of your ethics clearance and include a brief summary on the progress of your research. When the project no longer involves contact with human participants, is completed and/or terminated, you are required to provide an annual update with a brief final summary and your file will be closed. If you need to make changes during the project which may raise ethical concerns, you must submit an Amendment Request with a description of these changes for the Committee's consideration prior to implementation. If funding is obtained subsequent to approval, you must submit a Funding and/or Partner Change Request to ICEHR before this clearance can be linked to your award.

All post-approval event forms noted above can be submitted from your Researcher Portal account by clicking the *Applications: Post-Review* link on your Portal homepage. We wish you success with your research.

Yours sincerely,

Kelly Blidook, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

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[1] Ethics approval is renewed every year, but formal letters are not issued for renewals. My most recent renewal is valid until 31 October 2021. Dr. Blidook's signature has been redacted to comply with university privacy policies.

Appendix A

Business Card

This is the obverse and reverse of the business card I distributed to all research participants, including anonymous public intercept participants. Personal contact information has been redacted in this scan. The text on the reverse side is standard ICEHR language and also appears on all informed consent forms.

Memorial University of Newfoundland

St. John's, NL, A1C 5S7, Canada
www.mun.ca/music

Jacob Danson Faraday
PhD Student, Ethnomusicology

██████@mun.ca
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The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at +1-709-864-2861.

Appendix B: Glossary

Coms is short for communications; some technicians will abbreviate it as comms. On Corteo, coms refers to the communication system of discrete departmental channels. Coms can be wireless or hard-wired (the wireless coms are not included in what is understood as RF equipment). There are four com channels: A ("party line") is for all departments and is used primarily for show call; B is lighting; C is sound; D is the bandleader's link to the calling stage manager at FOH. Each musician has their own talkback microphone that is used to talk to other band members and to the sound department (see chapter 3 and figure 17).

EQ is an abbreviation of equalization, which is a form of signal processing. On Corteo, to adjust the EQ, to apply EQ, or to EQ something, is to modify the frequencies of an audio signal. EQ is used constantly on Corteo. It is applied to every microphone channel, to most instruments, and to the PA. EQ'ing an instrument, voice, or speaker will change the tonality of the sound. EQ can be applied to align with personal taste, to correct a measured sonic deficiency, or to prevent feedback.

Faders are vertically oriented sliders on a mixing console that adjust the loudness or volume of a particular channel of audio (e.g., a vocal microphone). Faders are the primary console interface a sound technician uses to mix a show, either at FOH or at monitors (see figure 19). Corteo's consoles are digital, so the faders encode digital data. The faders on analogue consoles, by contrast, are potentiometers, or variable resistors, which alter the output voltage of an audio channel. Digital console fader layout is usually based on analogue console design

Line Arrays are standard speaker configurations in amplified touring shows of all kinds. They are characterized by a tall, roughly J-shaped column of identical speaker elements (Barber and Berryman 2005). On Corteo, each stack of main PA speakers is a line array (see Load-In, figure 7, and figure 8). Line arrays are customizable and predictable, and can be adjusted according to the parameters, measurements, and analyses of a specific venue. Vertically adjacent line array elements (i.e., individual speakers) are designed to acoustically couple—the sound waves combine, naturally increasing the amplitude of certain bandwidths—creating a single coherent and powerful sound source.

MIDI stands for Musical Instrument Digital Interface. MIDI has been a standard data protocol in music production since the 1980s. Music and sound production hardware and software of all kinds, such as electronic keyboards, sequencer and recording programs, and sound consoles, have MIDI capabilities built in. MIDI messages can be used in music in innumerable ways, such as to control volume, play notes (e.g., MIDI note 60 is middle C), or change settings on a digital synthesizer. On Corteo, MIDI is used in a number of ways, including to change scenes at FOH (see chapter 3, footnote 2); to change between primary and backup computers for the band; and to trigger samples in the sequencer (i.e., Ableton Live). In figure 21, Davie is soldering and assembling MIDI connectors for the keyboard band pit. Corteo uses many MIDI management tools, including Max (formerly Max/MSP), a multimedia data processing software. See the MIDI Association website (2021) for more information.

Appendix B

RF stands for radio frequency. On Corteo (and on many other CDS shows), RF is a catch-all term for wireless microphones and in-ears, the management of the transmitter and receiver frequencies, and the wireless infrastructure in general. RF also refers to the show track that handles the RF equipment during a performance (see chapter 1). The sound technician whose primary job is to manage the RF gear is called the RF tech; on Corteo, the RF tech is Dylan.

Sequencers are a kind of computer software that manage the playback of audio files. Corteo uses Ableton Live, which is the industry standard for music-focused performance (theatre and dance shows might use QLab, for example). Corteo's sequencer manages hundreds of audio files, including click tracks for most acts, synthesizer tracks, and backup instrumental tracks in case a musician misses a performance.

Signal Processing, for Corteo's sound department, refers to an adjustment of a digital or analogue audio signal. Signal processing for audio can refer to many processes, including equalization, delay, and compression. Signal processing can be 'onboard', through the EQ settings of a channel on the console, for example, or 'outboard', with an external piece of equipment, such as the Galileo signal processors for the PA. Electrical engineering and computer science use the term 'signal processing' as well; the term is not reserved for audio signals.

Technical Departments:
- **Automation** (three technicians) is responsible for the motorized, moving elements. Motorized aerial elements, which move with winches and steel-wire rope, include Mauro's flying bicycle (see chapter 2), the tissu (see chapter 4), and suspended pole (see chapter 2); non-aerial elements include the rotating sections of the stage, known as the turntable (inner circle) and annulus (outer ring; see chapter 3).
- **Carpentry**/**Props** (six technicians) is responsible for the stage, curtains, props, and some non-aerial acrobatic equipment, such as the trampoline beds (see chapter 2).
- **Lighting** (four technicians) is responsible for the stage lights, light tracking system (this is acts as a kind of automated spotlight), and laser (see chapter 4). The head of lighting is typically responsible for managing the venue's electricity service for all departments, and will liaise with the house electrician at each venue to manage the connection and disconnection to the touring equipment.
- **Rigging** (seven technicians) is responsible for anything that pertains to equipment that hangs overhead. This includes structural elements such as truss; the chain hoists (i.e., motors) that lift those structural elements; any associated clips, chains, rope, and steel cable; and safety harnesses (for performers and technicians who work at height) and safety nets.
- **Sound** (four technicians) is responsible for all audio equipment, including tour radios. They are also responsible for the security video system, which includes a high-definition camera that gets mounted in the house for a full stage view; four backstage cameras; and one FOH camera. (Automation maintains their own network of cameras that allow them to see their winches and other equipment during a performance).
- **Wardrobe** (four technicians) is responsible for costumes, shoes, hair, wigs, hats, and makeup for performers. They tailor, maintain, and launder costumes and costume elements. They are also responsible for setting up the dressing rooms during load-in.
- Some CDS shows also have a **video** department, but Corteo does not.