Recording as Representation/Recording as Musical Creation: Distinct Ontologies in Four Musical Fields

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In this paper I comment on *ontologies* (ideologies or philosophies about the existential nature of something) of recorded music in relation to 'live music' which I define as 'real-time performance among people present in face-to-face situations'. As has been suggested before, the very concept of 'live music' as a distinct type is totally dependent on the advent and ascendancy of recorded music. Before recordings, all music was live and so did not need to be marked. Linguistic theory tells us that marked terms suggest a less common, primary, or dominant status (man/*wo*man; American/Asian American), with unmarked terms representing the doxic, the unnoticed, the commonsensical, the powerful. Thus, restaurants and clubs advertising 'live music' is but one clear indicator of the preeminent position recorded music has attained in many cosmopolitan societies - the ubiquitous presence of recorded music in all sorts of establishments 'goes without saying'. It also goes without saying that recorded music, the most easily commodified type, *would* gain ascendancy in capitalist-cosmopolitan societies.[1]

The different cultural meanings and uses attached to recordings seem like obvious points of departure for the ethnography of recording studios, and so I will consider recording in fairly broad ways. The discussion is underpinned by the framework of *four fields of music making* that I began to theorize in the early 1990s, introduced in 2000, and published in its most complete form in 2008. For live music the two fields suggested were *participatory performance* and *presentational performance*, and for making recordings the two fields were *high fidelity and studio audio art*. People who have responded to this work have found the live music fields most useful, and the recording fields have largely been ignored. In this article I want to flesh out the recording fields further to think about ontologies of recordings in various societies, for various types of recording, and for various musical genres.

1 I use the term 'cosmopolitan' to denote a particular type of cultural formation of which there are various specific exemplars (e.g., capitalist-cosmopolitan, socialist-cosmopolitan, Islamic-cosmopolitan) akin to the way the term 'diaspora' functions (Jewish diaspora, African diaspora) as I elaborate in Turino (2000; 2008).

When considering the ethnography of recording studios as a general topic, the number of variables and the variety of goals for undertaking such ethnographic work appear staggering. A few of the prominent variables and issues that surface in ethnomusicological studies of studios, and which I will at least touch on, are:

1. conceptions about music and recording in the society or social cohort involved.
2. the goals for making particular recordings both by performers and recordists—more specifically, why do people want to record in the first place, and how do they feel about the process?
3. the structures and scope of the *network* in which recording takes place. I borrow the term network from Jon Sterne who writes 'Any medium of sound reproduction is an apparatus, a network—a whole set of relations, practices, people, and technologies' (Sterne 2003: 225). The network involves all the different connected roles: musician, producer, engineer, listener, consumer, manufacturer of the technology, etc. If the same producer and artist target specifically different markets, say a native market and a tourist market, these, then, represent partially different networks.
4. A major concern for ethnomusicologists has been the social and artistic positioning, economics, and power relations in play in the studio, in the network, and in the society where the studio operates, as have
5. the ideologies that frame judgments about quality and/or authenticity for given musical genres vis-a-vis recording and
6. ideologies that frame and practices involved in different genres and processes of recording, e.g., studio recording, field recording, live-concert recording, self-cellphone recording, and others (each involving a range of approaches and practices) and finally,
7. what Jon Sterne and Chris Scales, following Barthes, have termed '*the grain*' of the recording. The grain of the recording is the sound of the recording apparatus. It has been suggested that along with, and often linked to, musical genres there are traditions of specific sonic qualities of recordings that define what we *want* particular types of recordings to sound like due to past experience. Moreover, individual studios often produce and are known for a particular grain of recording due to their specific practices and physical spaces.

Ontologies of Music, Ontologies of Recordings

When I did field research in the rural district of Conima in southern Peru in the mid-1980s, daily life was strikingly quiet. Trucks carrying goods and people between Peru and Bolivia on the dirt road that threaded around Lake Titicaca would pass through a few times a week. The indigenous Aymara people in Conima still used a pre-columbian-styled digging stick or animals to tend their fields rather than machines. There was no electricity or mail service, and no locally owned cars. The family I lived with had a transistor radio that they would play briefly after dinner at a low volume, they said, to save batteries. Some people owned battery-powered cassette boom boxes, but these were rarely heard, again for economic reasons, to save batteries. Most days, wind, birds, cattle, dogs, and low-key human conversation were the main sounds heard.

This oppressive quiet was countered on the average of once a month by community and district-wide festivals, some of which like carnival, lasted for more than a week. Music, dance, eating and drinking, along with certain spiritual rituals, comprised the focal festival activities. The people of Conima performed indigenous wind instruments local to the area in large consorts accompanied by drums; these instruments included panpipes, several types of duct flutes, and transverse cane flutes. As has been the case since the time of the Incas, the type of instrument performed differed according to the festival and time of year; for example, panpipes in dry-season festivals, vertical flutes in the rainy season.

Link » Audio Example 1

Qhantati Ururi, panpipe ensemble, Easter celebration. Field recording by the author.

In these festivals, all community members were welcome, and in fact encouraged, to take part as musicians and dancers regardless of skill, although along gender lines - only men played instruments while both men and women could elect to dance in the circles that laced around their community's musicians. Without the intervention of anyone or anything else, these folks made their own parties - this was *participatory performance* to the max - and these parties were at the center of what made life worthwhile. As the title of my book about Conima expressed it, these festivals were a way of *Moving Away from Silence* (Turino 1993).

During festivals people would sometimes record their community ensemble on their cassette boom boxes. What is of importance for our purposes today, these recordings were not made for archival, or critical-analytical, and certainly not for commercial purposes. Rather, as I witnessed it, these cassette recordings functioned to extend the most recent festival. In the days after a fiesta, friends would gather around and listen to the recordings which often spurred remembrances of and conversations about particular people and festival moments. That is, Conimeños used these recordings like one might use photos or videos of a vacation or wedding: to remember special happenings. However, an important difference is that these recordings, and this use function, were particularly impermanent. Often people with boom boxes would only own one or two cassettes and they would record over them a month later during the next festival, and again and again to the same purpose until the cassette wore out.

For Conimeños, and in *participatory performance* situations generally, the very conception of what music is, and is for, differs from other musical fields. More akin to a game than to a work of art, participatory performance and the resulting sounds and motions are about the doing and the relationships involved more than about some abstractable sonic product. Thus, for rural Conimeños, as recently as the mid-1980s, early 1990s, a recording was not conceptualized as *music* per se. Rather a recording bore the same relationship to music and festival - as a partial representation - in the same way that a photo or video is a representation of the people and places photographed.[2] Few people conflate a photograph or video with the actual presence of the person or subject filmed. Most know that the former is a representation of the latter, although it is assumed that the two are actually connected indexically by a camera.

Not so with recordings and music in contemporary cosmopolitan societies. When most people go out to buy or download recordings they understand that they are acquiring *music*--the actual thing not a representation of something else. I suggest that both these diametrically opposed positions—recording as representation of an original live musical event versus recording as *the* music itself can be equally true depending on the field one is operating in.

2 I have used this photo analogy for many years, but recently have noticed that it is used frequently. For instance, Chris Scales writes: 'James Badal (1996) has published interviews with a number of world-famous conductors regarding their experiences making recordings. He noted that many of those interviewed likened a recording to a photograph: 'Any recording, even a heavily edited studio product, represents an artist's interpretation of that work at that moment in time. In essence it is an audio snapshot" (Scales 2012:237). Malsky writes: 'For the hobbyist, the tape recorder was the audio equivalent of the photo album' (2003: 248).

The Four-Fields

Inspired by Charles Keil's attention to participatory music making (1987) and a fieldwork experience I will describe later, in the early 1990s I began to conceptualize four fields of music making each of which is distinguished by distinct ethics, goals, musical roles, social relations, musical practices, sonic characteristics, and, especially important, distinct conceptions of what music is and is for. My idea was that the noun 'music' actually stood for different phenomena in each field; each field was artistically and ontologically distinct. Alessandro Arbo clearly addresses this same problem that:

> with the passage to technical reproducibility, music has not undergone a change of name. [...] This detail is highly significant: when discussing photography or cinema, we implicitly recognize that these are new arts, distinct from what preceded them (painting and theater, respectively) whereas we continue to use the same term for music that has been constructed and edited in the studio: what should strictly perhaps be called 'phonograpy' [...] (2015:65).

Like Arbo, my initial point was that the activities and artistic outcomes of one field should not be conflated or confused with those of another field, and certainly not evaluated from the position of another field—and hence the need for new terms to distinguish them. My position has always been that each field has something special to offer and will suit different types of personalities, and indeed social groups, just as each has its own constraints. My music utopia would be a place where all fields were equally valued for what they are.

Participatory performance is a special type of musical practice in which there are no artist-audience distinctions, only participants and potential participants performing different sound and movement-making roles within face-to-face occasions. The primary goal in participatory traditions is to involve the maximum number of people in some performance role; sound style as well as ethics of performance are shaped to reach this goal in predictable ways in different societies throughout the world. Participatory traditions have evolved in different societies so that there are roles for people of all levels of musical and dance ability - from neophyte to expert - so that no one is excluded; for example, if there were only simple roles, experts would be excluded by becoming bored. *But what is key is that all participation is valued regardless of expertise or the particular type of contribution*.[3] Village festivals in Conima and ceremonies in Zimbabwe are textbook cases as is the dense, repetitive sound evident in the panpipe recording (Audio Example 1) and in Zimbabwean ceremonial music (Audio Example 2).

Presentational performance, in contrast, refers to real-time face-to-face situations where one group of people, the artists, have the responsibility to prepare and provide music for another group, the audience who do not participate in producing sounds or motions considered essential parts of the performance. Presentational performance is typically framed so that audiences expect something well-prepared, or special in some way. Typically, the members of ensembles specializing in presentational performance will be relatively similar in their level of musical competence; the responsibility of providing an attractive performance for an audience inspires presentational performers to seek out the best possible ensemble mates and to prepare through goal-oriented rehearsals.

I think of the four fields as distinct mindsets or mental frameworks for approaching music making in specific circumstance rather than as abstract categories. For example, presentational rock bands typically plan their sets in advance and rehearse the pieces as set forms or musical items to be performed as scripted. If dancers move onto the floor, bands with a presentational mindset will not alter their program and pieces even if they include dramatic tempo or metric shifts that will make dancing difficult. Conversely, a band with a participatory

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3 As a common objection to this framework, many, many people have argued that simply listening to music is a form of participation. Of course, in a sense this is true, but this objection (1) ignores the specific way I am defining the symbol 'participatory performance,' and moreover, (2) it is made by people operating from the position of the presentational and recording fields. Such an objection would probably not occur to people who are socialized in places where participatory performance (as I am defining it) is the mainstay; for them simply listening would probably be thought of as resting!

mindset will shift what they had planned to make dancing comfortable (good dance grooves, extending the song if dancers have just hit the floor) and hence inspire more dancing, or simply specialize in playing good dance music. That is, they place the value on group participation over the value of preserving the scripted artistic item.

If the long repetitive grooves, dense textures, lack of planned dramatic contrasts, wide intonation, and steady dynamics typical of participatory performances are not meant to entertain non-participating audiences, they are certainly not meant for recording. They can be recorded but in Conima, the boom-box recordings were not considered *the music* but sonic snapshots that, because of Conimeños' thoroughly participatory mindsets were the basis for more participation in gatherings and conversation. Moreover, field recordings of participatory performances often do not make for good listening unless you had been there, know about, or are learning about that tradition. This is because we have come to expect different things from recordings which are more closely tied to the tighter, clearer, more carefully scripted presentational mode in the form of high fidelity recordings.

Following industry discourse,[4] my use of the term **high fidelity** refers to the making of recordings that are intended to index or represent live performance in some way. Regardless of whether they are initially made at a ceremony or festival as field recordings, in a concert, or in a studio, high fidelity requires special recording techniques, selection, mixing, mastering, and editing practices necessary to represent liveness in the sound, and to meet the expectations of reception framed by the medium of recording itself. Additional artistic roles for making recorded music - including the recordist, producer, and engineers -also help delineate high fidelity as a separate field of artistic practice. This is still the most common field of recording and we will return to it later.

The fourth field, **studio audio art**, involves the creation and manipulation of sounds in a studio or on a computer to create a recorded art object (a 'sound sculpture') that is, and this is the key, *explicitly not intended to represent or be related to real-time performance*. Academic electro-acoustic music and *musique concrète* are prime examples of this field when involving practitioners that consciously eschew any connection to live performance. This field has largely been misunderstood as involving any music created on computers or in a studio, which nowadays, is most recorded music. I return to the issue of a specific mindset as an essential definitional issue; to be what I am calling studio audio art, the artist consciously (and sometimes gleefully) divorces *herself* and her work from any connection to live performance and performers. It is this mindset and artistic practice that most clearly requires a new name to differentiate it from the word 'music' (as suggested by Arbo), but I would argue that new terms were equally necessary for the other fields as well.

For studio audio art, attention is on artistic process and product. Although sharing the medium of sound with the other three fields, I suggest that studio audio art has more in common with studio visual arts such as painting and sculpture than it does with participatory music making in terms of goals, conceptions of art, types of activities in shaping the sound material, attention to form for itself, and spatial-temporal distance between producers and perceivers of the forms. Playing an electro-acoustic piece on playback equipment in a concert hall is more akin to a visual art exhibition than it is to an Aymara panpipe performance. As contrasted with participatory music, studio audio art, often involving one or two composers, offers the least potential for direct, intimate social relations and the most potential for individual creative freedom and imagination. Each field has its own benefits and constraints.[5]

Studio recording, both high fidelity and studio audio art, involve practices and technolo-

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4 While the ideology of high fidelity had been part of the recording industry's advertising since the early twentieth century, it is in the 1950s when the term becomes widely diffused, e.g., signaled by the magazine *High Fidelity* (founded 1951) as well as by appearing on record jackets and labels.

5 Beyond academic composers, electronic studio audio art is produced for a variety of purposes, such as dance scenes. This case represents a mixing with the participatory field, and the sounds, e.g., long steady grooves will be shaped accordingly although because of the electronic machines used may not index real-time performance for many people. Of course, as synthesizers and computers have become more common in stage and club performance, the sound of presentational performances, and thus the sound of high fidelity recordings have expanded.

gies that, to quote Tom Porcello, 'disrupt the linear flows of musical time' in the actual music making process (2003: 266). The recording of a sequence of individual tracks, to be assembled and shaped at a later time, also fundamentally changes the spacial and temporal relations among the musicians and obviously between musicians and listeners.

Initially, people introduced to the four-fields framework, my dear colleague and well-known ethnomusicologist Bruno Nettl among them, sometimes had difficulty accepting high fidelity as a separate field on par with live performance; the notion here was that high fidelity was basically a representation of, and even parasitic in relation to, live performance. People also had trouble accepting the roles of recordist, editor, producer, engineer, and masterer as being on par with instrumentalists and singers in shaping the creative outcome. I argued, however, that orchestra conductors typically make no sound during performances yet their musical role is celebrated; record producers and engineers have a similar, perhaps even more pronounced, creative impact in studio high fidelity recording; composers as sound-machine engineers and producers are the whole show in studio audio art. The basic manner of performing instruments or singing is often distinct for high fidelity recordings made in a studio, and new concerns about reception, for example how the recording will sound on different types of playback equipment, and how it will work for repeated hearings, shape high fidelity music-making processes in fundamentally distinct ways. Albin Zak's *The Poetics of Rock: Cutting Tracks, Making Records* (2001) is one of the best studies I know that makes this case for the creative input of engineers and producers in the artistic shaping of records. Exactly paralleling my point in suggesting the four fields in the first place, Zak's work makes a persuasive case that creating records is simply a distinct form of music making very different from, but equally valid as live performance.

It was a particular experience of making a studio recording with a band I was playing with in Zimbabwe that was pivotal for creating the four-fields framework. During a year of fieldwork in 1992-93, I undertook many types of activities. I studied Shona *mbira* and drumming and was even allowed to perform with some of my teachers in spirit possession ceremonies. In rural villages these all-night ceremonies are intended to bring a particular ancestor into his or her spirit medium. The ceremonies take place inside a relatively small round house on the host family's compound. *Mbira* players or drummers accompanied by loud gourd rattles create the sonic ground for intense participatory singing, dancing, and hand clapping among all present; spirited and dedicated music-dance participation is key for inspiring the ancestor to come into her medium. The relatively small ceremonial space is packed with neighbors, friends and family members; body heat, sweat, dancers rubbing shoulders, and loud sounds - singing, clapping, shouting - envelop participants. Unlike the Conima case, no recording by anyone was allowed during ceremonies because the ancestors would not come if any machine or cultural item was present that they didn't know when they were living.

Link » Audio Example 2

Dandanda ceremonial music, made the morning after a ceremony. Field recording made in Murewa, Zimbabwe by the author.

During that same year, I performed button accordion with the electric-guitar band Shangara Jive. This band played on nightclub stages, but like most musical occasions in Zimbabwe these performances were largely participatory, a band's popularity rising or falling with their ability to inspire dancing. My friend Joshua Dube Hlomayi, a guitarist who had initially worked with Thomas Mapfumo, led the band comprised of bass, drums, keyboards, three female backup singers, and during that year, my button accordion. We went into Shed, one of the few sophisticated sound studios in Zimbabwe, to record with Steve Roskilly, an expat British engineer and producer who had been working in the country since 1975.

Although Josh had recorded many times with Mapfumo's famous band, this was his first time in the studio as band leader and lead singer to record his own songs. For each song, as has been described many times and is often standard procedure for high fidelity recording, Roskilly first recorded the drums separately to a scratch track. The lead-guitar and bass parts

were then performed together but plugged directly into the console with the drum tracks in the headphones. Keyboards, plugged into the console were then added. Next, my acoustic accordion part was added. With one mic and headphones, I was placed in a small glass-fronted room that looked onto the main sound studio with everyone silently watching me through the glass.

Performing or participating in spirit possession ceremonies on the weekends and then going into the glass sound booth during some of the same weeks, a more dramatically contrasting musical experience couldn't be imagined. In the one I felt like a goldfish in a clinical bowl, in the other I experienced an intense human merging through dense heat, sound and motion. The realization that recording was a radically different art form than participatory performance (although I didn't have the terminology at that time) hit me viscerally in a particular recording session in which I was feeling particularly isolated in the booth -one of those light-bulb moments in fieldwork which generates new theory, in this case the idea of ontologically distinct musical fields.

Power Relations in the Studio

After all the Shangara Jive instrumental tracks were recorded, the lead and then backup vocals were done. It was during this phase, as well as the mixing stage, where the issues of power relations between Steve, as engineer/producer, and musicians emerged most clearly. Josh and his band mates were extremely proficient on their instruments and so easily recorded these parts with few retakes. Not so with the vocals. Josh was new to lead singing and Steve intervened, at times a bit harshly, to get the quality of timbre and intonation that he felt recordings demanded. Finally, he decided that the thinness of Josh's voice required double tracking and a fair amount of reverb to get the presence he was after. He never consulted Josh about what vocal sound *he* was after. The session recording the female backup singers was even more troublesome. The women sang with the wide intonational spectrum that is common, and in fact appreciated, in participatory group singing, as in the *dandanda* (Audio Example 2). Steve became particularly impatient in his struggle to get these women to sing in what he regarded as 'in tune'. That he felt freer to voice his impatience with the women even more than with Josh speaks to common gender dynamics in Zimbabwe. As a white outsider, these interactions made me uncomfortable. But not wishing to cause problems, I never asked my bandmates how they felt about these sessions. They clearly were frustrated when they couldn't perform up to Steve's standards, and I think that they were eager to get the best recording they could and trusted Steve's expert opinions. More than this I will never know.

By the mixing stage, most of the band sat silently in the room, with Steve occasionally asking Josh for an opinion about balance or sound quality, but for the most part this was Steve's show. Nobody else in the room had the knowledge to suggest how to fix certain problems such as the sound of an indigenous drum bleeding into the bass part. While accordions were used in South African pop music - which influenced the parts I created - they were non-existent in Zimbabwe. Josh had invited me to play accordion in the band out of friendship perhaps, but also because he was looking for ways to distinguish the band's sound from the many other similar groups that were performing then. My parts were clearly not what Steve had in mind for the finished recording and were mixed low in the final recording in spite of Josh's goal for including accordion.

Link » Audio example 3

From *Sharanga Jive*, by Joshua Dube, Vibrant Record, 1993.

In the Shangara Jive sessions, the music was created track by track to accumulate the lump of clay that is then shaped in the mixing and mastering phases. Within this process, it is clear that the recording *is* the music and that, like orchestra conductors, engineers/producers have

a major impact on the final work. The sounds of one of Josh's songs on the recording and as played on stage are similar - the high fidelity connection is strong - but ontologically and processurally they are different things with different purposes.

Attention to broader patterns of social power relations has been one of the most common themes in ethnographies of recording studios by ethnomusicologists. How power dynamics play out varies according to the social positioning of the actors in terms of professional prominence, knowledge, race, class, and gender in particular societies. Given Zimbabwe's history, and Josh's modest demeanor, the interactions described for the Shangara Jive sessions could have been predicted. But it must also be said that when Thomas Mapfumo recorded in Zimbabwean studios he was largely in control of the process because of his fame, money, experience, and strong personality.

Stereotypical assumptions about how power relations might play out often vary in surprising ways. For instance, in his excellent ethnography of Native American *powwow* recording (2012), Chris Scales discusses the dynamics of recording Native musicians by the white producer of Arbor Records, a company that specialized in releasing *powwow* music. Here, the history of white-Native American conflict operated in the opposite way of what I have described for Shangara Jive at Shed. Brandon, Arbor's owner and producer-engineer, usually let the *powwow* singers make the aesthetic decisions about how the music should sound if the recordings were to be marketed to native consumers on the *powwow* trail. First of all, he bowed to their greater knowledge of the tradition, but he was also sensitive to how it would appear if he tried to exert excessive control given Native Americans' mistrust of whites. Wanting to attract more *powwow* groups to his studio, he worked to develop a reputation for a culturally sensitive, collaborative studio dynamic. Interestingly, when he produced Native musicians for a tourist or non-native market, that is, within a different *network*, he often exerted more creative control over the recording.

Ethnomusicologist Karl Neuenfeldt writes about engineer-producer Nigel Pegrum who began recording Aboriginal didjeridu artists in Australia starting with David Hudson. Pegrum stated:

> We produced that first album [*Didgeralia*] [but] as a Pommie [British migrant] in Australia (and also working with somebody of the status of David), I really was very careful about putting forward any opinions. But it soon became clear to me that David liked to be produced [...] I found myself almost talking David through some of the tracks using a combination of visual and musical cues, [...] he seemed to be wanting that direction so I leapt in and gave it and he wasn't offended. And the end result, of course, was a very successful album (quoted in Neuenfeldt 2005: 89).

Here the personalities, parallel goals of the actors, and Pegrum's long experience and skill recording a variety of non-mainstream instruments led to a successful collaboration in spite of a history of racial tensions in Australia.

In Louise Meintjes book *Sound of Africa: Making Music Zulu in a South African Studio* (2003), she describes a dynamic between white engineers, black producers, and black musicians with language being a prominent marker of cultural position and power. Often the white engineers didn't speak Zulu or the languages of the musicians; often the musicians didn't speak the technical language of the studio; and the black, albeit middle-class, multilingual producer acted as intermediary and translator, maintaining the greatest amount of artistic control. Meintjes describes a variety of cases where the lining up of insider and outsider positions shifted in the processes of making records for a black South African market. While the power dynamics in recording studios are influenced by, and may reflect broader patterns within a given society, and more specifically a particular network, these few examples illustrate the number of potential variables that might be in play. These examples also illustrate why in-depth, on-the-ground ethnography is important for understanding how records are made and the meanings they carry in particular societies.

Equally Authentic: Live and Recorded

If power relations are a prime topic in ethnomusicological work in recording studios, issues of musical authenticity vis-a-vis the relations between live and recorded music are equally prominent. Again, close attention within ethnographic methodologies has yielded some surprising insights.

Critiquing the ideology of faithful reproduction, Jon Sterne has persuasively argued there is no pristine original that lies outside the recording process to be authentically captured. Sterne puts it this way:

> the sound event is created for the explicit purpose of its reproduction. Therefore, we can no longer argue that copies are debased versions of a more authentic original that exists either outside or prior to the process of reproduction. Both copy and original are products of the process of reproducibility. The original requires as much artifice as the copy (2003: 241).

This is less true for ethnographic field recordings, especially ones like the Conimeño panpipe recordings I made; those people would have played as they did whether I was there recording or not. It is also perhaps *somewhat* less true for the recording of concert albums. Here the genre or type of recording becomes a variable in the live-recorded authenticity nexus along a continuum.

Reluctance to accept high fidelity studio recording as a distinct field of music making on par with the live fields is an effect of the discourse of fidelity itself. Two aspects of this discourse are the attempted erasure of the recorded media and processes, as well as the assertion of an equivalence between live performance and recordings. Sterne outlines in detail, that in the early days of recording, people had to be convinced and taught to hear recordings as 'faithful' renderings of 'real' performances. He writes that from 1915 to 1925, the Edison Company conducted over four thousand tone tests in front of millions of listeners throughout the United States (Sterne 2003: 262). These tone tests were staged demonstrations for the purpose of advertising record machines. A singer or instrumentalist would perform next to a phonograph playing his recording of the piece: 'He begins playing solo; then the phonograph starts to play with him; he stops playing, and the phonograph continues', at which point the curtain is raised to show the phonograph. Sterne asserts that 'the Edison Company [...] was working to convince audiences that [...] a good reproduction is the same thing as a live performance' (2003: 263). If we think of the sound quality of early cylinder and 78 disc recordings this equivalence is hard to swallow, and yet Sterne shows that this advertising technique was successful in convincing many listeners; Sterne's point was that people had to learn to *believe* in the equivalence, that is, *learn to hear* in new ways to believe in the machine. Matthew Malsky makes the same point when he writes:

> the magnetic tape recorder might be said to reproduce recordings with higher definition than its predecessor, the phonograph. In contrast, fidelity is based on an idelogical assumption that there should, or even could, be a direct correspondence between a live and a reproduced sound. [...] Second, [sonic] definition is dependent upon the listening audience's familiarity with those norms (2003: 239).

As recording technologies improved, it became easier to accept the equivalence of an original and a copy, i.e recordings as faithful of a live performance, but this was because the ability to technologically manipulate sound became more sophisticated. As studio technologies, techniques, and social roles evolved to make recording an ever more separate form of music making, the equivalence of live and recorded, and the ideology of high fidelity itself were strengthened.

Especially from the 1950s on, as the technological manipulation of sound grew more and more central, a new field of music making arose, studio audio art, in which the construction of a recording as a work of art, rather than as a representation of a live performance, split off from the live-performance and high fidelity fields. By the mid-twentieth century in the elite art music realm, composer-engineer-producers of *musique concrète*, electronic and computer music rejoiced in their lack of dependence on performers, their expanded sound pallets, freedom from the score, and their greater artistic control.

While recognizing the groundbreaking and concurrent activities of elite academic composers, Albin Zak traces the rise of studio audio art in popular music to Les Paul and Mary Ford's 'How High the Moon'. This number 1 hit of 1951 was constructed of twelve overdubs by Paul and Ford with her singing the least important vocal parts first and the lead last.[6] As producer-engineer Bruce Swedien put it, this record was the one that 'changed pop music forever, [...] There wasn't a shred of *reality* in it - and it was wonderful' (quoted in Zak 2001: 11, my emphasis). Swedien's use of the term reality is interesting in that it still suggests the idea of a live or 'real' performance as what recordings, before this one, captured. Zak concludes that from this time on, 'the [recording] process and its end result became very different from what they had been. The process became one of deliberate composition, and its product, an original musical work' (2001: 11-12). Zak pinpoints rock music as the first mass genre where 'recording moved almost inevitably from a process of collecting, preserving, and disseminating to one of [music] making' (2001: 13). Certainly, by the time of the Beatles' *Revolver* (1966) and *Sgt. Pepper's* (1967), the idea of the recording studio as the site for a distinctive form of music making and musical art work entered mainstream cosmopolitan understanding. Central to this turning point, these works celebrated studio manipulation explicitly at a time when the Beatles were rejecting performing live-studio audio art.

Ironically, corporations were still arguing for the fidelity of their products for reproducing real-time events. As cassette tape ads of the 1980s went: 'Is it live or is it Memorex?'.[7] Set in a recording studio, Ella Fitzgerald was asked to differentiate between a 'live' performance and a recording of Chuck Mangione in a revival of the old Edison tone tests. Note the shift in setting of the tone tests from the early 20th century concert stage to the mid-20th century studio as the primary, privileged, site of music making. By the late 1960s, 1970s, much studio recording had *become* studio audio art in terms of process. This should render my two fields redundant, yet the ideology of liveness as key to musical authenticity soldiers on - especially in particular musical genres such as blues, jazz, classical, gospel, country, soul, singer-songwriter, so-called 'folk' and 'world' musics, and, surprisingly, many types of rock. As recording/sound generating technologies and techniques have improved for creating works in the studio, so too have they improved to mask their own presence and to create the sense of 'liveness', which people clearly still value.

Genres of Recording/Genres of Music

There are myriad ways of making high fidelity recordings, and myriad reasons for attempting to create a sense of liveness in those recordings. A friend of mine, Ralph White went into a silo in upstate New York to record a CD with his cellphone, using the huge cavernous space to create a unique sound.

Link » Audio Example 4

Ralph White on accordion, selfie-cellphone recording.

After recording in Pogo Studios in Champaign, IL with Mark Rubel for a number of projects, my son, Matt, JB Faires, and I recorded our most recent CD in my living room with our friend James Hathaway and his computer.

6 In both cases it was the post-World War II availability of tape recorders that drove these musical experiments.
7 See John Mowitt's close analysis of this example (Mowitt 1987).

Link » Audio Example 5

Real time rambling', from *Real Time,* by Turinos and JB Faires, CD Baby, 2015.

Such self-recording projects with cellphones and computers for CDs and the internet have become ever more convenient, cost-effective, and common, and suggest a different direction for the ethnographic study of recording. Attention to new DIY recording processes and projects - rather than a focus on stars and famous studios/producers - fits with ethnomusicologists' traditional orientation of studying grassroots music making.

All of my field recordings from the mid-1980s through the 1990s were made on a Sony Professional Walkman cassette recorder and a single stereo microphone. Recordings in Peru were largely made for my own research purposes - to have examples of the music I was to analyze and write about. The only control I had for making these recordings was mic placement. Later I was invited to contribute to a Smithsonian-Folkways CD, *Mountain Music of Peru, Vol. 2*, with John Cohen. For this project I selected a variety of my favorite recordings and put them in an order to create contrasts and illustrate the variety of instruments and genres in the Aymara region around Conima. This was not a case of documentary realism, to use Steven Feld's term, because in Conima different instruments were rarely juxtaposed in the same festival, and the performances of each piece went on much much longer than the cuts I put on the record. My editorial choices were based on my ideas about what would make for more interesting listening when the music was presented on a record. I have already argued that these recordings do not fit Jon Sterne's assertion that for recorded music there is no original source outside the recording process. As I have said, these folks would have played as they did whether I was there recording or not; but I did make choices about mic placement for the purpose of balance, and editorial choices regarding what I thought would make the recording more interesting, so as recordist I did have some minimal input.

Raising another key issue, the reason that my incredibly low-tech recordings were acceptable for publication in 1994 may be found in the 'traditional' sound of previous field recordings. Those of us who grew up listening to Folkways published field recordings in the 1960s, 70s, and 80s, were used to low-tech sound, and in fact this sound, this 'grain of the recording' was part of what made these recordings seem authentic. The grain of recordings shape listening habits - what we expect to hear and thus what we want recordings to sound like. Matthew Malsky notes that when electrical recording was introduced in the 1930s with a much improved frequency range and the ability to record more detail: 'Ironically, and not at all dissimilar to the reaction that accompanied the introduction of compact discs, the initial public perception of the quality of electrical recordings was that they sounded harsh and artificial' (2003: 244). The grain of recordings become part of the style associated with particular musical genres. The scratchy sound of old 78s, even when remastered, is part of the authenticity of early hillbilly music. Likewise, Peter Manuel argues that some Indian audiences have become accustomed to the sound of cheaply reproduced cassettes and, therefore, have come to prefer that sound in their recorded music (1993, see Sterne 2003: 401). The low-tech sounds of punk and old-time string band records are clearly part of the style indexing both liveness and do-it-yourself, anti-industry ideology in contrast to, say, the overproduced sound which how we want to hear disco.[8] Thus, the grain of recordings becomes part of genre style even in the high fidelity field where the technology is supposed to be hidden.

In discussing the commercial recording of Native American *powwow* music, Chris Scales (2012) outlines a range of processes from holding a single mic over drum groups performing on the *powwow* grounds, much like any field recording, to studio recording that uses a single or multiple mics for the singers. Many *powwow* groups insist on on-site recording on the *powwow* grounds because they believe that their performances will lack energy if they are not playing for dancers, even when record company producers would prefer the studio to enhance their

8 For example, on the notes accompanying the CD reissue in 1995 of the *Fuzzy Mountain* String band's original 1971 and 1972 Rounder recordings, (Rounder CD 11571) they make a special point of stressing the low-tech process of making these recordings.

control. As more groups began recording in studios, however, the grain of *powwow* records shifted and more people began to want to record in studios.

Scales describes some *powwow* groups who were willing to experiment with electronic manipulation of vocal timbre. What I found interesting, however, was that, according to Scales:

> The sacred and traditional nature of drums prohibits the kind of sonic experimentation that singers will sometimes indulge in when making a studio recording. [...] This is not to say that drum sounds are not digitally manipulated, only that these timbral adjustments are all in the service of creating a documentary sound: recording technology in the service of making the drum "sound as much like the sound of the drum" as possible (2012: 225).

The same kind of decisions are made for commercial Aboriginal didjeridu recordings by producer Nigel Pegrum who, according to Karl Neuenfeldt, has developed secret techniques for recording the didj but whose goal 'was to produce recordings where the mediating role of technology was minimized. Instruments and voices were recorded and mixed (using various electronic effects, compression, and equalization) to make the audio experience seem 'real' and not at all 'unauthentic" (2005: 91). The very identity of the didj as Aboriginal, like many so-called 'folk' and 'world music' genres tend to require a 'documentary' or a high fidelity approach for recordings in general. But as the *powwow* drum example shows, there may be more specific values at stake and decisions at work that are best understood through detailed ethnographic work in studios.

In relation to more mainstream genres, Scales notes that:

> the stylistic conventions and norms of styles and genres are established in part through decisions about which parts of recordings are considered "documentary" and which parts may be digitally altered and sonically manipulated. For instance, in rock recording the voice is an instrument most likely to be treated as "documentary." Because rock singers are expected to actually "feel" the emotions they are singing about [...]. digital manipulation of the vocal line represents a disruption of the authenticity of the emotional state of the singer (2012: 224).

Tell that to John Lennon! One of the great values of ethnography is the specifics learned in particular situations that then are used to avoid over generalization.

Conclusion

For some people it is still true that a recording is like a photo, a representation of something else, a real-time musical event. But it is also clear that since at least the 1960s, and Jon Sterne would argue much before, studio recording is an art in itself and the works that result *are* the music. Both positions are true and simply pertain to the different ontologies of distinct musical fields. The building of any recording -track by track, and then shaping the sonic material electronically - could be likened to a sculptor of clay or a painter. The commonality of this process in the studio seems to make my category studio audio art redundant in relation to what I have called high fidelity. Yet, there are many personally and culturally specific reasons why 'liveness' is still desired and still indexes authenticity, which is to say individual subjectivity, group membership, and ultimately humanness. Even though many cosmopolitans' most common experiences with music are through recordings, recorded music is still iconic of a direct human connection for many people, although certainly more distant than the live music fields that high fidelity indexes. It is also clear that to produce a sense of liveness on recordings there are a vast array of culturally and technically specific ways of, and reasons for, doing so. As the work I have cited and the very topic of the seminar for which this paper was written suggest, doing ethnographic research in recording studios is the best way to begin to untangle all the variables at work.

Postscript

Of the questions and issues listed at the beginning of this paper, most received attention during the 'Ethnography of Recording Studios' seminar. One, to my mind, glaring exception was my second question, 'why do people record?' to which we might add 'how do they feel about the recording process?' When I asked the why question, Jeremy Wallach was the only one to respond with one probable answer, 'money', but this hardly covers the ground for the myriad local musicians who record fully understanding that they might not even break even. For someone like me who actually hates recording, I have still had the urge to do so for a variety of reasons including making a document of certain musical relationships and compositions. Beneath this is a deeper, perhaps broader, human urge 'to make' things that have some permanence and to share those things with others. I could go on, but the point is that these are questions that can only be answered through in-depth ethnography and my guess is that the list of answers would be long, varied, and significant for understanding people's relation to different kinds of music making. The fact that these central questions are often not considered in studies of recording points to the unmarked, doxic, character of recording and recordings in the twenty-first century.

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