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The Ontological Status of Sound Recording: An Artistic Blend between Documentation and Sonic Aesthetics

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This paper is an attempt to illustrate some of the complexity surrounding the ontological status of sound recording. Since Edison's invention of the phonograph in 1877, the technology has been used to capture and preserve sounds ranging from spoken messages to performances of great symphonies. However, the question concerning how such recording relates to the notion of an original sound or musical performance has been answered in different ways. The idea of recording as a documentation of a sonic or musical event has been a complex matter. Technical developments have enabled faithful reproductions, but the very same developments have made us question what at one point was understood as objective and truthful representations. With visual technology such as film and photography, their migration to digital formats was understood as breaking down such established beliefs. With sound recording, I will, however, argue that the ideal of objective representation was challenged even in the age of analog technology. In this text I will look at three different examples of sound recordings from the pre-digital era, all connected in some way to an idea of documentation, but all approaching it in very different ways.

There is, of course, a great difference between analog visual technology and the technology used for sound recording, but my argument is that the reason the objectivity of sound recording has been more difficult to define is because diverging musical aesthetics and ideologies have framed the concept of documentation differently. Sound recording's intimate relationship to music has, in my opinion, colored our experience of the medium, enabling different ontological definitions of sound recording to more or less coexist. The possibility to preserve sound meant that listeners could experience music of a greater diversity and magnitude than ever before in human history. This development in itself had a profound impact on musical expressions. The increasing accuracy and complexity of the technology not only facilitated a greater degree of fidelity towards the original live music, but also enabled artists to bypass earlier limitations of live musical performances when creating music. The first example I will discuss is the problem that surfaced with an anthropological approach to recording, exemplified by the Lomaxes' relationship to the artist Leadbelly. This is an example that illustrates how recording technology affects music when it is used as a means to capture and convey artistic expressions, centering on the question of *who* and *what* is being documented. The second example is producer John Culshaw and his way of creating a version of Strauss's opera *Electra* apt for a recording and not the stage, an example that emphasizes the question of *how* to document. In this example we see how musical aesthetics change when technology is used to improve on the sound and experience of traditional live music. The last example is Brian Eno and David Byrne's record *My Life in the Bush of Ghosts* that reappraised all the questions of *who*, *what* and *how*, tapping into both sound recording's capacity to distribute music as well as its creative potential to produce new types of musical

expressions. However, before I go into these different examples, I will start out by explaining some of the technical aspects concerning sound recording.

Recording Technology in the Realm of Music

In this text I will base myself on Johnathan Sterne's definition of sound recording. He defines it as the automatic recording and reproduction of sound (Sterne, 2003, p. 22). This is a technique in which the vibrations of sound in the air are captured and transferred automatically through technological means onto other material for storage and later reproduction. Such other material can be grooves in a record, digital bits on a hard drive or magnetic patterns on a tape. What makes this a useful definition is that it establishes a clear distinction between earlier means of preserving music, such as that of notation. Though notation could be called a record of music, it is a process that both in its stage of capturing and reproduction is based on the act of subjective interpretation. Notation is a symbolic mediator of music (Leman, 2008, p. 5). It does not represent the music in itself but is based on a shared language that describes it. Transforming notation into music requires knowledge, training, and subjective interpretation. Sound recording is not based on such a culturally established language, but on the automatic operation (Vanhanen, 2003, p. 48; Kahn, 1999, p. 5; Adorno, 2002, pp. 279–280). The first method for doing this was through acoustic recording as patented by Edison. By channeling the vibrations from the air into a horn, a stylus at its end vibrates, transferring the pressure waves into another material. By reversing the process, the patterns engraved by the stylus would make the stylus and the horn vibrate, recreating the sound.

Sterne's definition of sound recording points to an important characteristic that is also shared by analog photography and film. We can make the argument that we are faced with a technology that makes an "mechanical" imprint of our environment. Photography and film are based on chemical reactions to the light surrounding us; sound recording makes an imprint of those changes in the air pressure we perceive as sound. Such a definition established the technologies in a privileged relationship to objectivity. This was especially the case with Bazin's definition of the ontology of photography (Bazin, 1960). Edison himself had earlier made a similar observation about acoustic sound recording, arguing that the physical imprint of the soundwave made by this technology established a close connection between the "real" sound and the recording (Milner, 299, p. 48). But while analog photographic technology stayed much the same until it was challenged by digital tools, Edison's observation came at a time when his original invention was being contested by another analog technology, that of electrification.

In the 1920s, acoustic recording technology came under threat from new electronic processes. While still operating in the analog realm, treating the sound

waves as continuous signals, it was not as purely a mechanical process as the earlier acoustic recordings were. Electrification introduced the use of microphones, turning the vibrations into electric pulses which could be amplified and manipulated (Milner, 2009, pp. 52–53; Morton, 2000, p. 27). This introduced an improved quality of sound, enabling the reproduction of a broader range of frequency, and amplifying sound that acoustic technology could not capture. However, this also established a new creative approach to sound. The earlier mechanical technology was dependent on close proximity between the sound source and the acoustic horn of the recording device; the microphone, on the other hand, could pick up sounds from the entire room. This demanded more active choices in creating an aural image through deciding on acoustic locations, microphone placements, and level of amplification (Chanan, 1995, p. 58). An argument against this development was that technology could suddenly be used to improve on the sound, while the earlier acoustic technology was only developed to capture it (Milner, 2009, p. 55). Edison was among those who saw these new possibilities as the destruction of music (Millard, 1990, p. 304).

Electrification also introduced new means for storing sound that consequently led to entirely new creative practices. The electric impulses created by the microphone could, in addition to being imprinted onto disk, be stored both optically and magnetically. These latter two mediums were capable of both being spliced and mixed. With this development, different takes could be performed in a studio and pieced together to a unified recording. The result one heard was not necessarily a reproduction of any actual musical performance, but rather an assemblage created by the artist and the producer through the means of recording technology. Consequently, the relationship between the “real world” of musical performances and that of recorded sound grew more unstable as the technology evolved. Even if part of the complexity regarding the ontological status of analog sound recordings can be explained by its technology, what makes it even more complicated compared to much visual media is the unique nature of sound. While photography is always a representation, a recording of sound is still sound. As a consequence, sound recording as a medium cannot be so easily separated from the content it conveys.

Example One: The Lomaxes and Leadbelly

The first example is perhaps the one most directly linked to the concept of documentation. John Lomax was a pioneer when it came using recording technology to capture folk music. The most recognized part of his work, came from his collaboration with Huddie Ledbetter, better known as Leadbelly, one of the most renowned African American folk singers (Kip Lornell 2000, p. 23). Together with John Lomax and his son Alan, the three formed a partnership that lasted

several years. For Leadbelly, this both led to the recording of several songs and an opportunity to perform for a larger audience, culminating with a performance in New York in 1934 (Abrahams 2000, pp. 114–115).

What makes the Lomaxes' collaboration with Leadbelly an interesting example is that they had highly divergent conceptualizations about *what* and *who* was to be recorded. As the person in charge of the recording, John Lomax was making choices not only about whom to put in front of the microphone, but also what they should perform, choices that were influenced by an ethnographic pursuit to capture and preserve elements of culture for fear of its obliteration by modern progress (Makagon and Neumann 2012, p. 6). John Lomax decisions to put Leadbelly on disk and present him to a larger audience was motivated by the desire to capture and show a specific cultural expression he saw as raw and authentic. This was not necessarily how Leadbelly saw their partnership. Leadbelly saw himself as an artist, one that entertained people and was capable of evolving and developing his repertoire (Milner 2009, p 81). John Lomax, on the other hand, treated him as an anthropological specimen, an example of a distinct historic and culturally defined group. This diverging attitude became a source of conflict in their working relationship. Leadbelly wanted to be heard by a larger audience through both the recordings and the concerts organized by the Lomaxes, while at the same time also being able to take inspiration from newer musical impulses. John Lomax's attitude and notion of documentation led to him refusing to let Leadbelly include new material in his performances and recordings. The different attitude resulted in conflicts when Leadbelly was to record for commercial purposes. In one case Leadbelly wanted to record together with a newer vocal quartet, The Golden Gate Quartet, but John Lomax felt that their harmonies were too polished for the authentic original expression that he believed Leadbelly represented (Milner 2009, p 92).

In my opinion, the conflict between the Lomaxes and Leadbelly uncovers divergent attitudes to sound recording, revealing a deep disagreement about *who* and *what* they were actually to record. Lomax saw the technology as a means to capture and preserve the sound. Leadbelly, on the other hand, saw himself as an artist and the recordings were to present his contribution to an evolving musical culture. For him, the recordings were a means to reach an audience. To understand this conflict, we have to consider how sound recording works in the realm of music.

As stated, we are never listening to the recording of sound – we are always listening to sound. Music is an artform that is temporal, our experience of it is inseparable from the passing events of sound. Hennion argues that this has created a unique situation concerning music and sound recording. Visual art and literature have been riddled with discussion about internal and external explanations, between a search for an inner and objective aesthetics and the external social, economic and material conditions that shaped the work. In the case of music there

is an important notion that music has no *a priori* “content”. Hennion argues that “Music has nothing but mediations to show: instruments, musicians, scores, stages, records...” (Hennion 2002, p. 2). It is therefore not possible to approach sound recording as merely the carrier of the work.

Hennion emphasizes how the conceptualization of music is connected to its material realization to a much greater extent than other artforms. This may provide an explanation for why the conflict between Leadbelly and the Lomaxes emerged. The Lomaxes were working in line with anthropological documentation, while Leadbelly always saw himself as an artist. Leadbelly’s recordings and his performances in an academic anthropological setting were, despite Lomax’s attempts to isolate them in a specific socio-cultural historic context, always interconnected with Leadbelly as a performer and his role as a living and developing artist. In folk music, the music evolves and changes depending on who is performing it. The introduction of sound recording accelerated this process by spreading the different realizations of the music beyond the actual performer (Channan, 1995, p. 53). So, when the Lomaxes were documenting folk music, they were also changing it.

Example Two: Recording Classical Music

When attempting to understand the different ontological conceptualizations of recorded sound, it is clear that much of the variation we encounter is a consequence of different musical traditions. Compared to other musical genres, classical music had displayed a degree of suspicion towards sound recording early on. This was because it had historically been closely connected to another medium, that of notation. According to Lydia Goehr, in the 19th century classical music had managed to overcome some of the differences that Hennion described between music, and literature and visual art. Through establishing the concept of “musical works”, music was given a stabile *a priori* content existing beyond the singular event of the performance. This provided music with a definite object that could be subject to an aesthetic analysis similar to that of literature and visual art, a development that heightened the status of the artform (Goehr 2007, p. 250). In giving the work a tangible existence as a conceptual object, the medium of notation became important. In this sense classical music had from early on relied on mediation to establish the presence of a musical object beyond the singular performances, making it a means for both storing and disseminating. Other musical cultures, such as the African American folk music exemplified by Leadbelly, had previously only existed in the form of the performance. In comparison with classical music, the nature of folk music meant that recording technology very quickly assumed a central role in the dissemination of the music.

However, as it turned out the culture of classical music was in no way immune to recording technology. As in folk music, recording did of course become a means of spreading music to a larger audience, giving people unprecedented access to classical works. Through this development, technology created a musical audience that had an exceptional knowledge and experience of music, with the ability to compare a range of different interpretations of famous works. Glenn Gould has argued that this made the audience capable of enjoying music on a deeper level than ever before (Gould 2004, p. 116). What I find most interesting, however, is how recording technology came to spark new ways of approaching the established work concept by tapping into a great creative potential in creating new musical experiences. In comparison to how the Lomaxes and Leadbelly struggled to agree on repertoire and performers, the classical musical tradition had eradicated all such questions. The repertoire was already provided and the performers were well matched to it. What eventually surfaced as the central point of controversy was, therefore, how these artists and the repertoire were to be recorded.

The leap from acoustic to electronic recording had, as earlier explained, introduced a creative element into sound recording. At the time of John and Alan Lomax's documentary work, recording technology was scarce and the possibility to choose between a variety of techniques in order to achieve a different sound was beyond the practical scope of most recorders. All this changed during the 1960s; a good example of how this affected musical aesthetics is the producer John Culshaw's recordings for the label Decca. He embraced new technology in a unique way, using the traditional work concept as the starting point. Instead of documenting a performance, he aimed to creating something new. He used different microphone placements and different acoustic spaces to create a unique experience for the listeners at home. One of the most highly debated of such examples was his recording of Strauss's opera *Electra* in 1967. During the recording he moved the orchestra and performer out of the opera house and into a larger concert hall. In addition, he placed soloists and instrumentalists freely so as to achieve the sonic characteristic he felt suited the different scenes (Badal 1996, p. 7; Prendergast 2017). As such, he used the potential in recording technology to create a sound that could not have been experienced in a live concert setting where both the audience and the performers are confined to their set placement in one concert hall.

This recording of *Electra* did, however, spark a heated debate between Culshaw and the music critic Conrad L. Osborne. Osborne opposed Culshaw's approach to recording works which were originally intended for the stage. He thought it represented a deviation from the aesthetics of live music, which, in his opinion, was the right way to experience this work of Strauss (Osborne 1968, p. 78). What Osborne disliked was how the sonic characteristics of a unified stage room were broken when different characters and scenes were presented in different

acoustic spaces. The notion of attempting to create the impression that the opera unfolded in actual places was, for him, absurd (Osborne 1969, p. 20).

Culshaw, however, believed that the historical limitations of the opera house limited the musical experience of the work. Culshaw claimed he was aiming to get closer to what he believed was the essence of the musical work. He wanted to use the recording medium to realize what Strauss had intended when he wrote *Electra*. “[...W]e wanted it to hurt in the way Strauss meant it to hurt, and involve in the way Strauss meant it to involve. This is what really matters, because it is what the composer wrote” (Culshaw 1968, p. 69).

If we return to Hennion’s description of the unique connection between music and the form of mediation on which it depends, it is clear that these are the same considerations that fueled the debate between Culshaw and Osborne. Even if, as Goehr pointed out, the concept of musical work established an *a priori* object in relation to the musical performance, it is apparent that both of them are arguing for how important the choice of mediation is for the experience of such a work. Osborne upholds the historic context as vital, while Culshaw argues that recording technology can achieve a new and unique realization. Culshaw claims that such a realization can uncover some of the untapped potential intended by the composer, and he was not alone in pursuing this approach. Glenn Gould’s use of tape splicing in a 1965 recording one of Bach’s fugues is probably one of the more famous examples. He combined sections of different takes from his studio performance to piece together what he felt was the best interpretation of the work (Gould 2004, p 117), a choice that was controversial at the time, but is now more or less standard practice.

The conflict between Culshaw and Osborne was part of a broader discussion about the goal of technical developments within sound recording. The 1960s was a time when the idea of High Fidelity was central to the commercial music industry, a concept that was often connected to the idea of the objective and accurate recreation of musical performances. Jonathan Sterne has, however, argued that High Fidelity was indeed a social construct established in part by the commercial recording industries to help us make sense of the new sonic possibilities that recording technology established (Sterne 2003, p. 219). Examining the typical high-fidelity sound of that time reveals that its sonic ideal actually deviated significantly from that of a live context. Through mixing and microphone placement, the different instruments were isolated and given their own “space” within the frequency spectrum of the sound, making every element and instrument in the music appear more audible (Zagorski-Thomas 2012, p. 60). The technology could create new sonic and musical experience, but Sterne argues that for commercial purposes, it was advertised through a connection the established traditions of live music (Sterne 2003, p. 219). The writher Eisenberg has gone as

far as to claim that compared to earlier live experience, recorded sound was actually so different that it would be right to label this new realm as a totally new concept in music, that of phonography (Eisenberg 2005, p. 89).

Culshaw's recordings can be seen as a clear example of how the idea of High Fidelity develops into the Eilenberg's concept of phonography. The goal of his recordings is not to present something as it would sound in its given context of live music, but as something existing in its own right. Sound recording is no longer about documentation, but about the realization of an artistic expression through the use of novel technology. What I find interesting with the example of Culshaw's *Electra* is that the concept of the musical work functions as a safety net for his recording praxis. Following Sterne's argument, the link to traditional live music was crucial from a commercial point of view. In the case of Culshaw, however, the fact that his recording did not sound like a real opera was the actual sales pitch, since he could claim it sounded like the opera was intended to. In his case it was not about fidelity to live music, but a fidelity towards an ideal realization of the musical work. In my opinion, this enabled him to push the technology beyond reality without losing touch with the musical traditions with which his audience was familiar with.

Example Three: *My Life in the Bush of Ghosts*

The last example I wish to discuss in this paper is David Byrne and Brian Eno's album *My Life in the Bush of Ghosts*. Recorded in 1979 and released in 1981, it was in many ways a groundbreaking record. By mixing recordings of non-western folk singers with elements of funk and western pop, it was an album that predated the emergence of world music (Moorefield 2005, pp. 59–60). Sounds and melodies lifted from both ethnographical recordings and radio broadcasts were blended with the recordings Eno and Byrne made in the studio. Through this process, it became a predecessor for much of the sampling and intersexualization that flourished with the introduction of digital sampling technology in the decades after (Wolf 2008, p. 88). In the 1990s, sampling non-western folk music became a more or less commonplace part of dance music, exemplified by bands such as Deep Forest and Transglobal Underground (Feld 2000, pp. 271–272; Hesmondhalgh 2000, p. 283). By combining the previous approaches to sound recording, Eno and Byrne demonstrated that even before the advent of digital technology, recorded sound was an extremely multifaceted concept.

The technical appliances of sound recording in this example are interesting in their own right. On the album, Byrne and Eno demonstrated the whole range of creative possibilities of analog technology. The use of multitrack recording to layer different musical elements was of course an established practice, but they also used this to add elements from outside the studio. Sounds and melodies were taken from

existing recordings by cueing reel-to-reel tape players and synching them to other recordings. What additionally makes it especially interesting in the framework of this article is how this creative process was inspired by the concept of documentation. As Byrne explained, the idea for making the record came directly from his fascination with field recordings and ethnographical recordings (Byrne 2012, pp. 155–157). During the 1970s, several recordings of traditional music from beyond Europe were becoming commercially available through distributors such as the French Orca label (Van Peer, 1999, p. 374). For the first time, a western audience was encountering folk music from Africa and Asia, exposing them to a completely new world of sound and music. Fascinated by these recordings, Byrne and Eno thought of isolating themselves in a remote desert studio and creating what was to be presented as an ethnographic recording of a previously undiscovered civilization. The idea was to emerge with an album that was a cultural artifact that they had not themselves created. Both these ideas were eventually abandoned, but Eno suspects that the fantasy of creating a recording as an imaginary cultural artifact continued to guide them in a subconscious way (Eno 2006).

What came to be the conscious hallmark for Eno and Byrne's creative process was the concept of "found vocals". This was a work method inspired by the Dadaist collages, where found, often mundane objects were combined into a new artwork. Byrne and Eno collected interesting sounds, both from musical recordings and radio broadcasts, that they incorporated into their music (Byrne 2012, p. 158). A central element in this process was working with sounds with which they were unfamiliar, creating something unexpected through combining them with other elements into a new musical context. With the concept of "found vocals", music collected through recordings of non-western musical practice emerges as new material for new musical exploration. The creative process actively turned the results of documentation away from one of preservation towards one of transformation.

My Life in the Bush of Ghosts has been critiqued for cultural appropriation: Fell argues that ethnographic recordings are approached as raw tokens of authenticity in need of civilization (2012, p. 50). Others have argued that the recording should not be understood as an act of exoticism but rather as a process of decontextualization that underscores the sounds' strangeness (Wolfe 2008, p. 92). The recycling of these different recordings on *My Life in the Bush of Ghosts* is not done to create a reference to a specific authentic folk culture, but used because, as western listeners, we are unfamiliar with their original context. I believe that merging them with other sonic elements puts us as listeners in a strange and unfamiliar listening experience. A reference to this way of approaching the work is found in its title. *My Life in the Bush of Ghosts* is originally the title of a novel by the Nigerian writer Amos Tutuola from 1954, a surreal story of a young boy who flees into a wilderness, a parallel world inhabited by weird and frightening ghosts

(Toop 2006). As such, it becomes a recording that questions sound recordings' relationship to reality, history and the future.

The way Byrne and Eno approach sound recording shows clear similarities to my previous example. As mentioned earlier, it was clear that the Lomaxes were interested in preserving the music as though it were a token of an authentic and raw folk tradition, while Leadbelly was more interested in being an artist and taking inspiration from other music he heard. The difference, though, is that in Eno and Byrne's case the sound recordings were not only an inspiration for but constitutes the actual material building blocks of the music. Sound recording is not only treated as a part of the musical culture; it also becomes a privileged means for experiencing and creating music. Through this development, sound recording easily becomes decontextualized from the culture of performers, and questions about *who* and *what* has been recorded becomes less important.

To understand how Byrne and Eno ended up actually integrating the very recordings of other artists into their own work, we need to look at the creative potential of sound recording as it was emerging in the 1960s. Compared to Culshaw, Eno and Byrne took this one step further, doing away with the ideal of an established musical work. The music one hears on the record is not a realization of a finished composition or idea the artist already had in mind when they start the recording session. Rather, what one experiences is an artistic outcome of working with recording technology.

Since he also works as an academic, Brian Eno has explained much of his approach to sound recording in both writings and lecturing. He has argued that multitrack recordings have made the process of composing an additive one. In a recording studio one can add elements to the music, mix them together and actually construct the piece there and then (Albiez and Dockwray 2016, p. 149, Eno 2004, p. 129). This marks a difference between the Eno's understanding of recording technology and that of Culshaw. In Eno's hands, the technology is not a means to realize a musical work – it is a technology that creates, independent of both a natural acoustics realm and an *a priori* defined work. By doing away with the concept of classical musical work, his use of recording technology breaks more fundamentally with established musical traditions. In this process Eno also developed new ways of thinking about music. Instead of the traditional way of defining music, as a tightly organized field of sounds presented to the listener, Eno wanted to situate the listener within a larger field of loose-knit sounds. As such he wanted to recreate the way in which we would experience a place or sonic landscape. Eno described how he abandoned musical instruments more and more, both electronic and acoustic, working instead with “found sounds” that sometimes even meant incorporating whole existing works into his new songs (Eno 1986).

My Life in the Bush of Ghosts exemplifies an approach to sound recording that emphasizes its independence as a medium. Recording sounds is not merely an

objective process of capturing and preserving. It isolates, decontextualizes and enables both creation and recontextualizing. This might seem both controversial and culturally problematic since it has the potential to dissociate sound recording from established norms within musical traditions. But even so, it is clear that these ideas have long been a part of sound recording. In his article “The Prospect of Recording”, Glen Gould touched upon this problem as early as 1966. He criticized audiences and producers for paying too much attention to the actual situation of the recording, focusing on when it was recorded and who was performing instead of listening to the music. He ended the article by stating that “The role of the forger, of the unknown maker of unauthenticated goods, is emblematic of the electronic age” (Gould 2004, p. 121). This can in some ways be taken as a prophetic prediction of Eno and Byrne’s fantasy of fashioning their own anthropological musical documentation, presenting the record as an imaginary cultural artifact and erasing themselves as creators of the work, a fantasy that sparked the decontextualization and reuse of sound recordings that occurred on *My Life in the Bush of Ghosts*.

Conclusion

The three examples I have discussed in this paper are just a small sample among many where sound recording has approached the concept of documentation differently. What these particular examples illustrate is that the question of *who* and *what* is being documented can be answered in very different ways. In addition, they illustrate that analog technology facilitated a range of different approaches to how sound is to be recorded. All of this shows that the relationship between a recording and an original sound, or musical performance, was open to question even before the advent of digital technology. The first example with the Lomaxes and Leadbelly demonstrates the divergence of attitudes to sound recording between a scientific ideal of preserving a cultural expression and the musician’s goal of developing as a performer. The second example with Culshaw’s opera recordings, shows how recording technology in itself can constitute a new realm form musical expression beyond the limitations of live musical performance. In the third example Eno and Byrne take recording technology one step further: it is not just seen as a new way of realizing or disseminating music, recordings made in another place or another time, become a material for further musical exploration. The technology becomes not just a medium to realize or document music, but is also used in an additive creative process.

References

Abrahams, R. (2000). Mr. Lomax Meets Professor Kittredge. *Journal of Folklore Research*, 37(2/3), 99-118.

Adorno, TW (2002). The Form of the Phonograph. in *Essays on Music*. 277-282. Los Angeles, Berkeley and London: University of California Press.

Albiez, A. and Dockwray, R. (2016). Before and After Eno: Situating `The recording studio as a compositional tool. in S. Albiez and D. Pattie (ed.) *Brian Eno, Oblique Music*. 139-174. New York: Bloomsbury.

Badal, J (1996). *Recording the Classics: Maestros, Music, and Technology*. Kent and London: Kent State University Press.

Bazin, A and Hugh, G. (1960). The Ontology of the Photographic Image. in *Film Quarterly* Vol. 13 No. 4, 4-9.

Byrne, D (2012). *How Music Works*. Edinburgh and London: Canongate.

Feld, S. (2012). My life in the bush of ghosts:“World music” and the commodification of religious experience. In White (ed.) *Music and globalization: Critical encounters*, 40-51. Bloomington and Indianapolis: Indiana University Press.

Chanan, M. (1995). *Repeated takes: A short history of recording and its effects on music*. London and New York: Verso.

Culshaw, J. (1968). The record producer strikes back. *High Fidelity*, October, 68-71.

Eno, B. (1986). Liner notes to “Ambient 4: On Land (revised)” EG Editions.

Eno, B. (2004). The Studio as Compositional Tool. in C. Cox & D. Warner (ed), *Audio Culture: Readings in Modern Music*, 127–130. New York: Bloomsbury.

Eno, B. (2006). liner notes to *My life in the Bush of Ghosts*. Sire.

Goehr, L (2007) *The Imaginary Museum of Musical Works – An Essay in the Philosophy of Music*, Oxford and New York: Oxford University Press.

Gould, G (2004). The Prospects of Recording. in C. Cox & D. Warner (ed.), *Audio Culture: Readings in Modern Music*, 115–126. New York: Bloomsbury.

- Hennion, A (2002) Music and Mediation: Towards a new Sociology of Music. in M. Clayton, T. Herbert & R. Middleton (eds), *The Cultural Study of Music: A Critical Introduction*, 80-91. London and New York: Routledge.
- Kahn, D (1999) *Noise Water Meat – A History of Sound in the Arts*. Cambridge MA and London: MIT Press
- Lornell, K. (2000). Blind Lemon Meets Leadbelly. In *Black Music Research Journal*, Vol. 20, No. 1, 23-33.
- Leman, M. (2008). *Embodied music cognition and mediation technology*. Cambridge MA and London: MIT press.
- Makagon, D. and Neumann, M. (2012). *Recording Culture: Audio Documentay and the Ethnographic experience*. Thousand Oaks: SAGE.
- Millard, A.J. and Millard, A.J., (1990). *Edison and the Business of Innovation*. Baltimore: Johns Hopkins University Press.
- Milner, G (2009). *Perfecting Sound Forever – An Aural History of Recorded Music*. New York: Faber and Faber.
- Morton, D (2000). *Off the Record – The Technology and Culture of Sound Recording in America*. New Brunswick: Rutgers University Press.
- Osborne, Conrad L. (1968). Strauss's Elektra Poses Some Aesthetic Questions for the Record Producer. in *High Fidelity* February 1968. 77-78.
- Osborne, Conrad L. (1969) The Opera Reviewer Strikes Back. in *High Fidelity* April 1969. 20-25.
- Prendergast, RM (2017) “Operas, Ethics, and Elektra: A Return to the Recordings of John Culshaw”, *Forty-Five: A Journal for Outside Research*. vol. 3, Retrieved 11 April 2019 <<http://forty-five.com/papers/176>>
- Sterne, J. (2003). *The audible past: Cultural origins of sound reproduction*. Durnham: Duke University Press.
- Toop, D. (2006). linear notes to *My life in the Bush of Ghosts*. Sire

Van Peer, R. (1999). Taking the world for a spin in Europe: An insider's look at the world music recording business. in *Ethnomusicology*, Spring - Summer, 1999, Vol. 43, No. 2. 374-384.

Vanhanen, J (2003). Virtual sound: Examining glitch and production. *Contemporary Music Review*, 22(4), 45–52.

Wolfe, Cary (2008). Echographies from my life in the bush of ghost, in *Angelaki: Journal of Theoretical Humanities*, 13(1), 85–94.