

Listening to Sound Patterns: Tony Schwartz's Documentary Recordings

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Introduction

On September 07, 1964, the highly controversial political campaign advertisement for U.S. president Lyndon B. Johnson, commonly referred to as “Daisy,” aired. The 60-second video footage begins with a girl counting the petals on a flower. When she reaches ten, a countdown begins in a man’s voice, and the video zooms in on the girl’s eye. When the voiceover reaches zero, an explosion occurs and Johnson’s voice is heard: “These are the stakes. To make a world in which all of God’s children can live, or to go into the dark. We must either love each other, or we must die.” Finally, the announcer asks viewers to vote for Johnson in the election.

“Daisy” appeared just once, but it drew a harsh response from Johnson’s Republican opponent and is thought to have played a part in the president’s historic landslide victory.[1] It was effective because it reminded the viewers of the Republican candidate’s support for the use of nuclear weapons. Advertisement creator Tony Schwartz (1923–2008) was in charge of the use of sound in the ad. In his book *The Responsive Chord* (1973), Schwartz writes that the most important thing in advertising through electronic media is to make the listener remember something: “Indeed, the best political commercials are similar to Rorschach patterns.”[2]

Kathleen Hall Jamieson draws attention to how the girl in the commercial makes mistakes in her counting[3]. According to Jamieson, this realistic performance shows that the creator was well acquainted with the world of sounds. In fact, prior to working on commercials, Schwartz had made recordings of street music, people’s voices, and the environmental sounds of Manhattan, where he lived, capturing everyday sounds with a tape recorder. In the preface to Schwartz’s second book, *Media: The Second God* (1981) John Carey writes, “This early work with communication in the everyday, non-media world is one cornerstone in his approach to electronic media.”[4]

In this study, to better understand Schwartz’s practice of listening to and documenting sounds, I will explore the background and nature of his documentary recordings.[5] Based on Steven Feld’s concept of “acoustemology,” Thomas Porcello proposes the term “techoustemology.”[6] Feld’s term refers to research on how individuals hear a specific acoustic environment, whereas the latter refers to the ways in which individuals hear their acoustic environments through technology. The tape recorders that entered the American market in the mid-1940s changed many people’s practices regarding sound and affected listeners’ awareness, as has often been pointed out.[7] The environmental sound recordings that Schwartz collected could be seen as his exploration of the ways in which individuals become aware of the actual acoustic environment around them.[8] Environmental sound recordings have so far been

examined mainly in two contexts: “music concrete” and “soundscape recording.” However, Schwartz’s documentary recording activity does not fit into either of these contexts. In addition, his work was deeply connected with electronic media advertisements, contemporary popular music, and urban spaces. Thus, it has great significance for techoustemology as it relates to tape recording.

Separate from his work in political advertising, there have been preceding studies on Schwartz. Richard Kostelanetz interviewed Schwartz about radio advertising, while Barry Truax referred to him as one of the early users of tape recorders.[9] Jennifer Stoeber-Ackerman uses W. E. B. DuBois’s concept of the “color-line” to examine how Schwartz’s record *Nueva York* (1955) deals with the contemporary issues of race through sound culture.[10] Building on this preceding research, I will examine the generally recognized characteristics of Schwartz’s documentary recordings, aiming to better understand how he listened to sounds through his tape recorder. His theory of electronic media advertising serves as a tool in assisting this study. From there, I will look at his awareness of sound, exploring how it is connected to his work in documentary recording.

This study is divided into three sections. First, I offer an overview of Schwartz’s career and his documentary recording work, as these are not well known in Japan.[11] In the second section, I examine his contemporary cultural background, for example, the relationship between the spread of tape recorders and the practice of environmental sound recording. The third section relies on Schwartz’s electronic media advertisement theory to analyze the characteristics of his documentary recording activity. The conclusion will tie the preceding three sections together to determine the way in which Schwartz’s mode of listening was structured.

1. From documentary recording to advertising: The first half of Schwartz’s life

Born in New York in 1923, Schwartz was raised in the suburb of Crompond and spent much of his childhood with a radio by his side.[12] Among the varied music that he heard on the radio, folk music in particular drew his interest. However, during his college years, his talent for visual art shone most brightly. Schwartz studied art at the Pratt Institute, and after being discharged from the Navy, he moved to Manhattan in 1944 to begin work as an advertisement designer. Having heard about magnetic recording during his service in the Navy, he purchased a wire recorder, manufactured by the Webster-Chicago Corporation, from a second-hand goods shop.[13] It was originally used for airchecks in radio broadcasting.

In New York City at the time, street musicians often gathered to sing folk songs. Wanting to record their music, Schwartz developed his own equipment that would allow him to carry a recorder around outdoors. The musicians welcomed his efforts to record them, and he developed relationships with representative singers of the folk revival and the likes of Harry Belafonte and Moondog. During this time, he heard of a musician’s friend in California who was interested in recording folk music, and they began to exchange recordings via mail. Schwartz became completely absorbed in these types of exchanges and is said to have interacted with more than 800 amateurs and fans in 52 countries via readers’ columns in

magazines and other means. Because he could only speak English, he relied on translations by friends when communicating with people in non-English speaking countries to create “tape letters.”

Having assembled a large archive of recordings over a short time, Schwartz was put in charge of a program on the public radio station WNYC called “Around New York.” Beginning with *1, 2, 3, and a Zing Zing Zing* (1953), a recording of children singing and playing, he released documentary recordings one after another through Folkways Records, a label managed by Moses Asch. Schwartz created *New York 19* (1954) based on a tape letter he had created to introduce his local environment to people in other countries. The number 19 was actually the zip code of the area he lived in at the time. It was followed by *Millions of Musicians* (1954), a derivation of *New York 19* and *Nueva York*, composed of the words and music of New York’s Puerto Rican community.

Schwartz referred to the content of his recordings, in a broad sense, as “folklore.”[14] This expression, which indicates that his practice was an extension of his love for folk music, encompasses environmental sounds such as children playing, people selling their wares on the street, mothers calling out to their families, laborers at work, and the sounds of natural phenomena and trains. He engaged in documentary recording as a hobby alongside his main work. Always carrying his recorder with him, he captured the everyday sounds around him and then edited them on the weekends. Schwartz said that because this was a hobby, he was not restricted to a particular genre of music or academia and was thus free to record the vibrant sounds of life as he wished.[15]

Schwartz began working on commercials in the mid-1950s. His work for Johnson and Johnson became popular with its performances by real children. Until then, adult women had always performed the voices of children in commercials. Schwartz had recorded children playing in the streets, and at those times, he had observed how children repeated words among themselves while teaching each other how to play. He used the same technique when producing the Johnson and Johnson commercial, recording the natural voices of children. Schwartz went on to create many ads for AT&T, Coca-Cola, and other major companies as well as political advertisements for Lyndon B. Johnson and Jimmy Carter. He was also involved in public awareness advertising on topics such as anti-smoking, AIDS, and nuclear weapons disarmament.

In 1967, Schwartz was appointed to a teaching position at Fordham University, where Marshall McLuhan was teaching at the time, and the two became friends. Schwartz’s two books, *The Responsive Chord* and *Media: The Second God*, could be considered the applications of McLuhan’s media theory to advertising theory. When he passed away in 2008, Schwartz’s produced recording archives and commercials were brought together as the Tony Schwartz Collection at the Library of Congress.

Two difficulties during Schwartz’s teenage years had a profound impact on his career.[16] At age 13, he developed agoraphobia, which would continue throughout his life. Due to this affliction, he was unable to leave the area around his home alone, and he never left New York City. This is likely one of the reasons why he immersed himself so completely in exchanging of recordings by mail. Also, at age 16, he became temporarily blind for six months. Schwartz

explained the cause of the ailment to be emotional and said that it deepened his interest in the world of sounds and sound technology. The present study does not fully explore the relationship between these experiences and his documentary recordings, but they should be considered important influences on his practice and will be examined further in the next section.

2. Schwartz's background of documentary recording: Environmental sound recording, record label, and urban space

There is as yet little academic research on the recording of environmental sound as a hobby, but Schwartz was not alone in this practice. In this section, I will discuss the early spread of the tape recorder, environmental sound recording, and the record label that released Schwartz's work. Finally, I will take a look at the contemporary social conditions in New York City.

The first half of Schwartz's life saw many important developments in sound media. The radio station WNYC was launched the year after he was born, in 1924. Schwartz thus grew up with the radio, experiencing its golden age as a youth. In 1944, the Allies discovered the German army's highly efficient wire recorders at the Radio Luxembourger broadcasting station, of which Schwartz may have heard during his service. Scotch magnetic tape entered the market in 1947, and Bing Crosby began using it to broadcast on the radio.[17] During the same period, Schwartz became involved with a radio station.

In the 1940s, tape recorders were only used by specialists, but in the 1950s, they spread to homes. However, the private uses of the recorder varied considerably. According to David Morton, the tape recorders often seen in American homes in the 1950s were used in several ways.[18] First, they were used to create sound albums, using the recorder like a camera, and exchange tape letters. Tape correspondence clubs were created in America around 1950, and the number of users increased during the Korean and Vietnam Wars. Recorders were also used to practice speeches, language, and music. Airchecks for the radio was just one of these many uses, but in the late 1950s, they became a primary focus.

Airchecks and environmental sound recording both became more common over the course of the 1950s. Karin Bijsterveld discusses the activity known as "sound hunting" in the Netherlands.[19] The first international competition of sound hunters was held in the Netherlands in 1952, and in 1956, the Dutch Society of Sound Hunters was established as an offshoot of a tape correspondence association. According to Bijsterveld, participants treated this activity as a sport (just as the name "hunting" implies), in terms of trying to record uncommon difficult-to-record sounds or document sounds from one's own culture.

Schwartz's practice should be understood in light of the background described above. Taped letters and environmental sound recordings were the general hobbies of the 1950s. However, for Schwartz, recording was not a sport but rather a part of everyday life; he was not drawn solely by an interest in capturing the traditional sounds of an ever-changing New York City. Along with Schwartz, Allan Nevins also recorded New York's culture as sound in the late 1940s.[20] Similarly, Ludwig Koch, immigrated from Germany to England, created BBC radio

programs and records of environmental sounds prior to Schwartz during this time.[21]

Folkways Records, which released Schwartz's work, was founded in 1948 and is now affiliated with the Smithsonian Institution. The label is known for Harry Smith's *Anthology of American Folk Music* (1952) and is recognized as having contributed to the formation of postwar America's musical identity.[22] Folkways Records also sold a great number of environmental sound records. Many of its titles began with "Sounds of," and the label highlighted a "Science Series"[23] that included recordings of insects, sea animals, the sounds of offices and junkyards, railroads, and cable cars. Schwartz's documentary recordings were often introduced together with them. Asch created the Science Series as a result of his experience with an exhibit at the American Museum of Natural History where tropical rainforests were recreated.[24]

In addition to the Science Series, environmental sound records were made to demonstrate high-fidelity sound recording techniques. Cook Records, a subsidiary of Folkways Records that sold many of these types of records, was managed by Emory Cook, who invented the consumer stereo phonograph. LP records, with their high-fidelity recording quality, attracted great enthusiasm when they appeared in 1948, and many environmental sound records were released as technical demonstrations.[25]

Finally in this section, I will turn to conditions in New York in the 1940s and 50s.[26] In the mid-1940s, when Schwartz moved to the city, Puerto Ricans and Africans were also moving there in great numbers. In this period, while Puerto Ricans and Africans began moving to the center of the city, European citizens began moving to the suburbs of New York. The movement was called "white flight," developing immigrant slums full of people who could not speak English. As a result, New York City construction coordinator Robert Moses hastened to construct public housing projects. The sounds of construction and people speaking Spanish can often be heard in Schwartz's works.

It is hard to imagine that living in such a large city was good for Schwartz's agoraphobia. According to Anthony Vidler, who examined the cultural history of agoraphobia, the disorder is related to the formation of metropolises in the late 19th century, when it was first recognized, and many thinkers and artists of the 20th century were interested in agoraphobia and spatial relationships.[27] Stoeber-Ackerman suggests that sound recording may have had a soothing effect on Schwartz's agoraphobia.[28] If this is true, one can imagine that sound recording affected his sensitivity to urban spaces in many ways. Schwartz believed that people who record sound should have their recording equipment play as little a role in the situations as possible. At the same time, he frequently observed that recording sound was for him a means of getting closer to life. Again, we cannot fully explore the relationship between his agoraphobia and his sound recordings here, but the possible connections are certainly intriguing.

3. Listening to sound patterns: The mode of listening in Schwartz's documentary recordings

I will now turn to Schwartz's mode of listening in his documentary recording, using his theory of electronic media advertising from *The Responsive Chord*. Focusing on his methods of

recording and editing and on the subjects of his recording, I would like to examine the way in which Schwartz listened to the sounds of New York through his tape recorder.

As I mentioned at the beginning of this study, Schwartz believed that it was important in electronic advertising to make the listener remember things. He called this the “resonance principle” and described it as follows.[29] Communication via print media occurs along a straight line from the transmitter of information to the receiver, comparable with transportation. In print media, it is thus a problem if the information does not reach the receiver, or if some outside noise is added. On the other hand, communication via electronic media involves information, such as sound, spreading across space, and rather than a failure to transmit, faces the bigger problem of transmitting too much information. Thus, the latter case does not involve simply transmitting information to the user; rather, electronic media should cause the receiver to spontaneously respond to the information. Schwartz described this spontaneous response as “resonance.”

The above argument is likely based on the media theory of McLuhan, with whom Schwartz had a close friendship. The first half of it could be viewed as a reflection on McLuhan’s comparison of print and electronic media in the 1950s, whereas the second half focuses on participation in electronic media.[30] McLuhan also speaks of resonance when referring to these two arguments together:

The subliminal depths of radio are charged with the resonating echoes of tribal horns and antique drums. This is inherently in the very nature of the medium, with its power to turn the psyche and society into a single echo chamber. ... The famous Orson Welles broadcast about the invasion from Mars was a simple demonstration of the all-inclusive, completely involving scope of the auditory image of radio.[31]

The concept of resonance gradually became more important in McLuhan’s writing, and Werner Heisenberg’s idea of the “resonating interval” was considered as an option for the title of *The Global Village: Transformations in World Life and Media in the 21st Century* (1988).[32]

McLuhan is well known for arguing that low definition, “cool” forms of media receive higher participation from consumers. At the same time, as a creator of commercials, Schwartz searched for a way of making advertisements that could elicit a response from people. He explained his own attitude when taking in sounds as follows: “I have no interest in *sound effects*. I am solely interested in *the effect of sound* on people.”[33] Sound effects serve to complement information sent through direct transmission, whereas the effects of sound involve the receiver being spontaneously moved to action. “Daisy” is certainly a good example of the effect of sound. The child’s mistakes in counting not only make the scene feel more realistic but also bring out the psychological urge to get involved in the scene and correct her. Moreover, her Boston accent recalls the previous president, John F. Kennedy.[34]

Looking at Schwartz’s career, one can imagine that his learning about the effect of sound through his documentary recording work in the 1950s provided an impetus for him to develop his advertising theory built on McLuhan’s ideas. At the same time, as McLuhan was beginning to examine the nature of electronic media, Schwartz was likely coming to understand the types

of sounds that would bring about a spontaneous response in the listener. I will discuss indications that Schwartz became aware of the effect of sound through his documentary recordings; however, before doing so, I would like to discuss Shuhei Hosokawa's "sound = effect" idea to better explain the concept of the effect of sound.

Hosokawa defines "effect" as "the generation of the sensible that the subject senses" and points out its relation to the term "sound" as frequently used with reference to popular music.[35] He contrasts the effect of a song with its structure and meaning. Hosokawa looks at how attention has been given to "sound = effect" in popular music, bound as it is to sound recording technology. As an example of music that emphasizes sound, Hosokawa points to songs with lyrics that cannot be heard clearly, and artists such as Bing Crosby and Elvis Presley, whose singing style was dependent on the microphone.[36] In the present context, I wish to highlight that in a number of cases, one can see that Schwartz paid attention to the effect of sound in his sound recordings. Furthermore, this emphasis is closely tied to his environment and the methods that he used to record sound. By directing the microphone to his environment, Schwartz came particularly close to what Hosokawa referred to as "sound = effect," later applying what he had learned to advertising. I will look in turn at each of the three parts of his practice: recording and editing techniques and the subjects of his recordings.

Schwartz's outdoor recordings began with street music. Because recording equipment was very expensive at the time, musicians responded warmly to Schwartz, using the recordings as a chance to hear their own voices and performances played back. Many of these musicians said, "I've never heard myself recorded like this before." [37] As each song progressed, Schwartz would move the microphone closer to or further from the singer's mouth. This recording method can be thought of as similar to the singing styles that relied on the microphone, as Hosokawa described. Schwartz said that the most essential thing in environmental sound recording is not the quality of the sound, but rather holding the microphone as close as possible to the subject's mouth.

As for selecting his subjects for sound recording, Schwartz said that he never decided what he was going to record before leaving the house. His words show that his documentary recordings were not meant simply to add sound effects to a previously written outline. This improvisational, "guerilla" approach to recording is founded on his commitment to recording the sounds of everyday life. To do this, he carried a recorder at all times and invented equipment that would allow him to record sound during breaks at work. The cable extending from the recorder in his left hand went up his sleeve and wound around his neck, going through his right sleeve to finally arrive at a microphone attached to his right wrist by a band. Thanks to this setup, he was able to get closer to his subjects at any time. Schwartz once said, "The philosophy behind recording is what determines the design of equipment." [38]

Like his approach to recording, Schwartz's editing techniques did not follow a pre-written script either. Schwartz made a habit of editing tapes on the weekend; he didn't release his recordings as finished products right away. According to Schwartz, the real thrill of editing was in finding relationships between the materials, which emerged naturally from what he had collected. *Millions of Musicians*, for which he first conceived the idea while working on *New York 19*, involved focusing on the musicality of the voices and sounds he heard in everyday life.

The record's "Rhythm of Words" contains wordplay in various languages, scats, street sermons, and announcers' voices. "Calls and Whistles" contains sounds that draw people's attention, whereas "Rhythm and Motion" involves the sounds of people playing with balls, jumping ropes, hitting punching bags, and yelling out during exercise. They are edited so that the musicality of each sound comes to the foreground. On the other hand, "History of a Voice" in *You're Stepping on My Shadow* (1962) and "Nancy Grows Up" in *Tony Schwartz on How to Record the Sounds of Children* (1967) express relationships of human growth and family through the comparisons of the grain of voices. Through his editing, Schwartz draws the listener's attention more to the effects of sounds rather than to their meaning.

One sound that Schwartz often included on his records was that of foreign languages that he could not understand. He seems to have developed an interest in the words of the immigrants, who increased in number each year, and in foreign songs to which he listened through short-wave radio. He often recorded the voices of children studying languages, settings where people were learning a foreign language, interpretations, and people's accents. For example, "Translation" on *New York 19* contained foreign songs together with simultaneous translations. In the first section of this study, I described how, while recording children at play, Schwartz learned that they use word repetition to teach one another, and he applied this insight to his work in commercials. This method also applies to foreign language acquisition, and it could be thought of as a learning method that utilizes the effect of sound. Schwartz later focused on communication between humans and animals in *A Dog's Life* (1958).

In the liner notes for *Sounds of My City* (1956), a record that began as a radio program, Schwartz wrote, "All recordings in the program were considered as sound patterns, including speech and music."^[39] He also examined "vocal patterns" in *The Responsive Chord*, and he wrote in *Media: The Second God*, "I was able to construct a sound pattern that people really felt was San Francisco."^[40] This "sound pattern" does not refer to directly transmitting information to the listener; rather, it involves the implications of sounds that cause the listener to respond or remember something. We have already seen how Schwartz listened to the effects of sound through his tape recorder. Accordingly, his documentary recordings tend to emphasize environmental sound patterns. Schwartz's theory of electronic media advertising is surely based on the awareness he gained through these practices.

Conclusion

To deepen our understanding of Schwartz's mode of listening via sound technology, this study has examined characteristics of his documentary recording. Schwartz recorded many of the environmental sounds of everyday life and combined them to emphasize their effect. All this was made possible by his tape recorder. However, as we saw in Section Two, not everyone who recorded environmental sounds paid attention to sound patterns as he did.

Another point should be emphasized; in the process of becoming more aware of sound patterns through environmental sound recording, Schwartz was affected not only by sound technology but also by the cultural elements surrounding him. According to Hosokawa, the idea of "sound = effect" is "at once esthetic and social."^[41]

In Section Three, I pointed out the relationship between the increase of immigrants in Manhattan and the content of Schwartz's recordings. Many other cultural factors also impacted the formation of his documentary recordings. Schwartz came into contact with folk music through the radio and was influenced by the folk revival. His broad concept of "folklore" gave direction to his practice in many ways. For example, his technique of holding the microphone close to his subject enabled him to document life just as it is and was connected to his desire to get closer to life.[42] His practice of recording sounds in daily life as a hobby unrelated to his professional work on commercials provided him with an opportunity to listen to and compare environmental sounds beyond any one limited genre, thus becoming aware of the effects of sound. To properly understand the meaning of his expression "folklore," it is necessary to understand the ideology that supported the folk revival of the 1940s and 50s.[43]

Several other aspects of Schwartz's cultural and personal experiences deserve attention as well. His recordings reached the world through the radio program that was hosted by him and a record label that produced scientific recordings of world folk music and environmental sounds along with early demonstrations of high-fidelity recording techniques. In addition, the relationship between Schwartz's agoraphobia, the urban space where he lived, and his sound recording were undoubtedly important. His documentary recordings were constructed in relation to these elements, and his discoveries would later be applied with great effectiveness to electronic media advertisements. To understand how these elements undergirded the development of his advertisements, we would have to examine the actual commercials that he created. That is a task for which I do not have space in this essay, but I hope to explore it in the future.

Notes

- [1] Cf. Kathleen Hall Jamieson, *Packaging the Presidency: A History and Criticism of Presidential Campaign Advertising* (Third Edition), New York: Oxford University Press, 1996, pp. 198-200. Montague Kern, *30-Second Politics: Political Advertising in the Eighties*, New York: Praeger Publishers, pp. 32-34.
- [2] Tony Schwartz, *The Responsive Chord*, New York: Anchor Books/Double Day, 1973, p. 93.
- [3] Kathleen Hall Jamieson, "Prof. Kathleen Hall Jamieson on Tony Schwartz." <http://www.tonyschwartz.org/JamiesonInterview.html> (retrieved October 2015).
- [4] John Carey, "Introduction," in Tony Schwartz, *Media: the Second God*, New York: Random House Inc., 1981, p. xiv.
- [5] The phrase "documentary recording" comes from Tony Schwartz's record *Sounds of My City*, liner notes, 1956. His records are also referred to as "tape documentaries," sound portraits, and sound documentaries. At the time, his work was compared with the documentary films of Robert Flaherty and John Grierson. Cf. Herbert Mitgang, "Children at play: Folkways Disks offer street songs of youngsters here and in Canada," in *New York Times*, Jun.10, 1956.
- [6] Thomas Porcello, "Afterword," in *Wired for Sound: Engineering and Technologies in Sonic Cultures*, Paul D. Greene and Thomas Porcello eds., Middletown: Wesleyan University Press, 2005, p. 270.
- [7] One example of this is Shuhei Hosokawa's *The Aesthetics of Recorded Sound*, Keiso Shobo, 1990,

- pp. 92-107.
- [8] Cf. Angus Carlyle, "Steve Feld interviewed by Angus Carlyle," in Cathy Lane and Angus Carlyle, *In the Field: The Art of Field Recording*, Devon: Uniformbooks, 2013, pp. 211-212.
- [9] Tony Schwartz, Richard Kostelanetz, "Interview with Tony Schwartz, American hörspielmacher," in *Perspectives of New Music*, vol. 34, no. 1, Winter 1996, pp. 56-64. Barry Truax, *Acoustic Communication* (Second Edition), Westport: Ablex Publishing, 2001, pp. 218-219.
- [10] Jennifer Stoever-Ackerman, "Splicing the sonic color-line: Tony Schwartz remixes postwar Nueva York," in *Social Text 102*, vol. 28, no. 1, Spring 2010, pp. 59-85. "This is the first full-length scholarly article to be published on Schwartz's life and work." (p. 65)
- [11] However, there is a Japanese translation of *Media: The Second God*. It is called Tony Schwartz's *Electronic Media Strategy*, translated by Ko Kajiyama, SANNO Institute of Management Publication Department, 1983.
- [12] About Schwartz's career, Joanne Lowe "Tony Schwartz: master tape recordist" in Schwartz, *Sounds of My City* (record), liner notes, 1956. For further reading see also Schwartz, 1973, pp. xi-xv; Richard Carlin, *Worlds of Sound: The Story of Smithsonian Folkways*, New York: Smithsonian Books, 2008, pp. 238-241.
- [13] The year when Schwartz first bought a recorder varies depending on the source; it was either 1945 or 1946. He purchased a tape recorder in 1947. He used recorders from Amplifier Corporation (Amplicorp Magnemite) and The Kudelski Company (Nagra), among others. Cf. Robert Angus, "Tape, talent and imagination," in *Better Listening: Through High Fidelity*, vol. 3, no.7, July, 1957, p. 7.
- [14] Tony Schwartz, *New York 19* (record), liner notes, 1954.
- [15] Lowe, op. cit.
- [16] Cf. Patrick Rogers, Nancy Matsumoto, "Ears wide open," in *People*, Oct.4, 1999. Margalit Fox, "Tony Schwartz, father of 'Daisy Ad' for the Johnson Campaign, dies at 84," in *New York Times*, Jun.17, 2008. Sam Roberts, "On the streets, discovering the voice of the city," in *City Boom: Blogging from the Five Boroughs*, Nov. 8, 2011. <http://cityroom.blogs.nytimes.com/2011/11/08/on-the-streets-discovering-the-voice-of-the-city/> (retrieved October 2015).
- [17] David Morton, *Off the Record: The Technology and Culture of Sound Recording in America*, New Brunswick: Rutgers University Press, 2000, p. 67.
- [18] *Ibid.*, p. 140-143.
- [19] Karin Bijsterveld, "'What do I do with my tape recorder...?' Sound hunting and the sounds of everyday Dutch life in the 1950's and 1960's," in *Historical Journal of Film, Radio and Television*, vol. 24, no. 4, 2004, pp. 613-634.
- [20] Morton, op.cit., p. 148.
- [21] Richard Ranft, "Capturing and preserving the sounds of nature," in *Aural History: Essays on Record Sound*, London: The British Library, 2001, pp. 68-70.
- [22] Cf. Peter D. Goldsmith, *Making People's Music: Moe Asch and Folkways Records*, Washington: Smithsonian Institution Press, 1998. Tony Olmsted, *Folkways Records: Moses Asch and His Encyclopedia of Sound*, New York: Routledge, 2003. Carlin, op. cit.
- [23] These "Sounds of" records include *Sounds of New Music* (1958), which contains music by John Cage and Vladimir Ussachevsky.
- [24] For more on scholarly recordings of environmental sound, see Ranft, op. cit., p. 71; Joeri Bruyninckx, "Sound sterile: Making scientific field recordings in ornithology" in *The Oxford Handbook of Sound Studies*, eds. Trevor Pinch and Karin Bijsterveld, New York: Oxford University Press, 2012, pp. 127-150.
- [25] Roland Gelatt, *The Fabulous Phonograph 1877-1977*, New York: Macmillan, 1977, pp. 297-298.
- [26] Cf. C. Wright Mills, Clarence Senior, and Rose Kohn Goldsen, *The Puerto Rican Journey: New*

- York's Newest Migrants*, New York: Russell & Russell, 1967. Anthony Flint, *Wrestling with Moses: How Jane Jacobs Took on New York's Master Builder and Transformed the American City*, New York: Random House Inc., 2011.
- [27] Anthony Vidler, *Warped Space: Art, Architecture, and Anxiety in Modern Culture*, Cambridge: The MIT Press, 2002, pp.25-36.
- [28] Stoeber-Ackerman, op. cit., p. 59.
- [29] Schwartz, 1973, chap. 1.
- [30] Schwartz frequently references the "involvement in depth" of electronic media as described by McLuhan in *Understanding Media*. Cf. Schwartz, 1973, p. 104; 1981, p. 14.
- [31] Marshall McLuhan, *Understanding Media: The Extensions of Man*, Cambridge: MIT Press, 1994, pp. 299-300.
- [32] Asami, Katsuhiko. "Media as forms, hybrid of thought (Japanese title: Keitai toshite no media, shiko no hybrid)," Marshall McLuhan and Bruce R. Powers, *The Global Village: Transformations in World Life and Media in the 21st Century*, trans. by Katsuhiko Asami, Seikyusha, 2003, pp. 320-340.
- [33] Schwartz, 1973, p. xiv; Schwartz, Kostelanetz, op. cit., p. 60. McLuhan also writes that one fundamental change brought about by the era of electronics is a shift in interest from meaning to effect. McLuhan, op. cit., p. 26.
- [34] Greg Goodale, *Sonic Persuasion: Reading Sound in the Recorded Age*, Urbana: University of Illinois Press, 2011, p. 120.
- [35] Hosokawa, p. 221.
- [36] Hosokawa, pp. 84, 230-235.
- [37] Lowe, op. cit. Many parts of my arguments here are also based on this text.
- [38] Ibid.
- [39] Tony Schwartz, "Sounds of My City," in *Sounds of My City* (record), liner notes, 1956. The term may have some relationship to *Sound Patterns* (1953), sold by Folkway Records. Cf. Carlin, op. cit., pp. 242-243.
- [40] Schwartz, 1983, p. 48.
- [41] Hosokawa, p. 236.
- [42] Lowe, op. cit.
- [43] Another person deeply involved in both the folk revival and environmental sound recording was Bernie Krause, former member of the Weavers and author of *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*. Cf. Ronald D. Cohen, *Rainbow Quest: The Folk Music Revival & American Society, 1940-1970*, Amherst: University of Massachusetts Press, 2002, pp. 149-150.

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