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Voice—E-Voice-Design—E-Voice-Community: Early Public Debates about the Emotional Quality of Radio and TV Announcers' Voices in Germany, the Soviet Union and the USA (1920–1940)

Abstract

This article focuses on public debates about the emotional quality of electronically recorded voices of early radio and TV announcers. The following questions will be addressed in connection with this main research focus: Which technical problems did the sound designers of the early 1930s encounter in transforming a natural human voice into an electro-acoustic voice design? What psycho-acoustic and ethno-cultural aspects of voice performance have been rated most important in the context of such transformations? By which means were the boundaries of social communities and gender displayed in early e-voice-designs? The analysis of discussions and surveys carried out by early radio magazines in Germany, Russia and the United States with regard to the quality of female and male announcer voices should provide an answer to the posed questions. Based on the analysis of early sound films, the study deals with the interrelationship between the voice stereotypes of radio and TV announcers on the one hand and the voice stereotypes of classical horror films (monster, scream queen) on the other hand. The purpose of this analysis is to determine the contribution of electronically reproduced voices to the emergence of mass media publicity.

Structural Change and Technological Change

From the moment of its inception, secondary voice media, produced by means of electronic recording, were distinct from so-called primary voice media produced by people in the context of interactive face-to-face communication (Pross 1972: 128, 124). In the late 1920s and early 1930s, the Euro-American world almost synchronically began to develop and implement methods of so-called optical sound recording and reproduction. Such methods allowed filmmakers: a) to break down the human voice into acoustic oscillations, b) to transform these oscillations into electronic waves, c) to convert these waves into light waves and d) to convert light waves again into acoustic oscillations (Vogt 1930: 468–470, Vogt 1964: 1–101, Cameron 1980: 78–83, Jossé 1982: 45 f). The process of optical sound recording enabled filmmakers to simultaneously capture image and sound

on the film strip; it made visible the volume and frequency response of sounds, thereby bringing them closer to scientific awareness. Since the time when optical sound recording and electronic sound synthesis became publically established, an abstractly understood ‘vocality’ has gradually replaced concrete human voices. The voice of the speaker has become separated from the person of the speaker, just as the voice of the singer has become detached from the singer’s person.

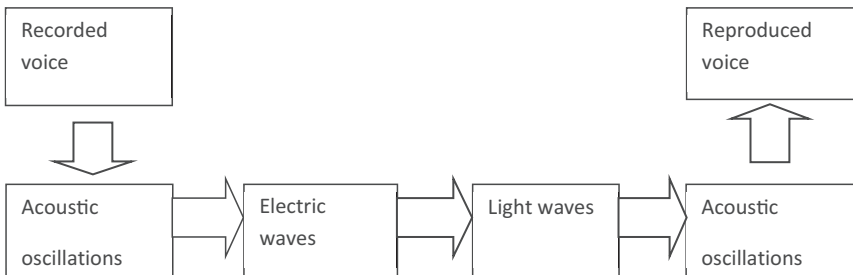


Figure 1: The method of optical sound recording

This technological change was accompanied by a shift in modes of social representation. These modes were oriented for centuries to generally acknowledged standards of “good society” (Kieserling 2001: 178 ff). Elaborated speaking and singing voices were part of these standards. The King of France, the German Kaiser and even the Czar of Russia (not to speak of the average aristocracy) used to go to the opera and to promote opera singers. The members of liberal *Bildungsbürgertum* used to attend lessons in the art of rhetoric. By the end of the nineteenth and the beginning of the twentieth century the vertically integrated three-class society was gradually transforming itself into a horizontally integrated and functionally differentiated society, in which the division into subsystems, professional groups, and informal organizations was ever more prevalent. Both tendencies were strengthened by the fall of court regimes in Europe at the beginning of the twentieth century. The emergence of disembodied radio voices at the beginning of the twentieth century launched a common reflection on the fact that society had become complex and opaque. An opaque society could not be faithfully depicted by portraying a group of nobles or by reproducing their discourses. Trying to depict this increasingly opaque society, constructivist artists (such as Paul Klee) experimented with not-figurative painting and incorporated elements such as abstract lines and seemingly meaningless spots of color. A similar search for basic meaning can be observed in the area of sound. A clear shift of interest from verbal and musical aspects of voice towards problematizing nonverbal and non-musical voice inputs can be observed in the early sound film of the 1930s. The problem of unanticipated

acoustic impacts produced by both human and non-human vocal signals replaced the logocentric concept of a praying and preaching voice.

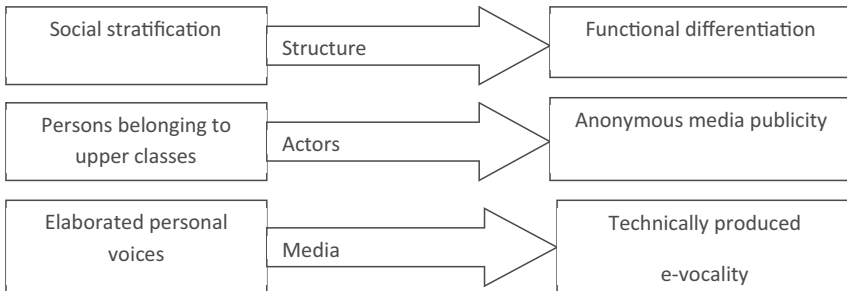


Figure 2: Structural change at the beginning of electronic voice reproduction

I intend to show that a number of similar solutions in the field of electronic voice design were used in the early 1930s both in fictional and non-fictional films. These solutions were tailored to the concrete communicative needs of a society that tried to resist the dissolution of social ties brought about by the rise of new media and the emergence of anonymous media publicity in which there was no face-to-face contact any more. The development of optical sound recording advanced public interest in screaming, shouting, and yodeling, i. e., in aspects of voice that are not filtered through the grid of language. And the reverse is true as well: the development of optical sound recording techniques was prepared and prefigured by Western critiques of language and civilization that focused on the auditory manifestations of national spirit. The concept of the sound-film voice as a hodge-podge of acoustic oscillations has multiple parallels in the concept of the “primordial voice” (or “Urstimme”) as defined by European sociologists in the early twentieth century. The German sociologist Georg Simmel referred to screaming as the purest and most primal manifestation of the human voice. Screaming was seen as displaying aggression and sexual drive. “The lonelier the mountain dweller,” Simmel wrote, “the less affected is his yodeling and the less it resembles song” (Simmel 1882: 261 ff). Trying to resist the ever-changing surrounding world, which was becoming more and more impersonal, featureless, vacuous, and bland, acoustic communities grasped at essential features of voice such as pitch, overtone spectra, and intonation. Quite different from the verbal components of voice, screaming stimulated a significant reorientation toward the primordial units of clan and tribe.

The American anthropologist Daniel Blumstein believes human reactions to screaming to be innate and unconditional reflexes. Screaming alleviates the difficulty of overcoming dangerous situations. The human cognitive apparatus immediately registers even a relatively quiet scream. According to Blumstein,

these noises, uttered or roared when an animal is enraged, play a crucial role in communication: they frantically call for attention (Blumstein 1992: 26–28, Blumstein 2011: e14549). According to Strauch and Schick (1979: 175 ff), even the very low sound of vomiting is able to rouse us from sleep more quickly than the eight times greater noise of the airplane engine, whose volume is close to the pain threshold. Animal distress calls and other animal vocalizations were being included, or copied by instruments, in film soundtracks to influence human emotions on a primal level. As a result, snakes, lions, hippos, birds, whales, dolphins and even fish were being recorded for film soundtracks, or were being emulated by musicians. In the future, as Jennifer Viegas (2010) remarks, more of such sounds will likely be included in movie scores, which is expected to improve filmmakers' potential for influencing audience emotions, since the science behind the process is increasingly coming to light. Screams with higher base frequencies, which are produced primarily by female voices, are perceived as particularly penetrating. The main reason why higher frequencies have a more penetrating effect is shown by the following chart, which demonstrates that the human ear is most sensitive to the range between 1,000 to 5,000 Hz.

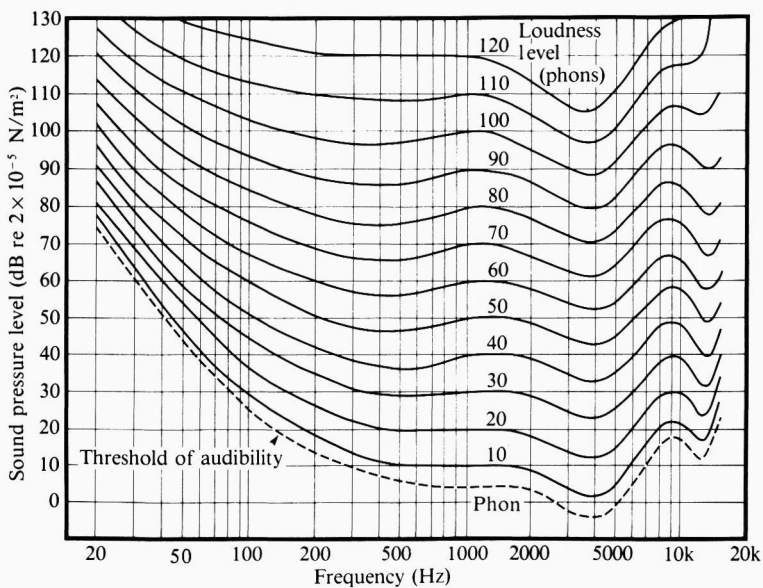


Figure 3: Equal – loudness contour

Analogously to such enervating reactions to women's screaming, most people get goose bumps from hearing the piercing buzz of the dentist's drill or the shrieking sound of train brakes. A picture similar to the presented chart of so-

called isophonic curves was published by the American sound research institute *Bell Laboratories* in 1933. The American scholars Harvey Fletcher and Wilden Munson (1933) discovered that the perception and interpretation of high and low vocal ranges was conditioned by the variable auditory sensitivity of the human ear. On the one hand, the ear reacts to sound frequency, here depicted on the horizontal axis; on the other hand, it reacts to the acoustic pressure or intensity of the sound, here depicted in decibels on the vertical axis. Researchers asked their subjects to compare the relative volume of two tones to a standard 1 kHz tone at a set level. Comparing results collected from the group, Fletcher and Munson determined human auditory sensitivity at various frequencies. They found that hearing was most sensitive to pure tones in the 3,000 to 4,000 Hz range and less so above and below that (Fletcher & Munson 1933: 82–108). To perceive that a 100Hz signal is of equal loudness to a 3,000 Hz tone requires an appropriate sound pressure level which is much higher than that of the 3,000 Hz tone. Roughly speaking, the content of the chart must be understood as follows: screaming in the bass register requires more energy (physical power and bodily strength) than producing similar acoustic effects in the soprano register.

A voice whose base frequency falls into the soprano region is clearly audible even when it is produced at a moderately low volume. By contrast, someone screaming with a deep voice must apply more force in order to be heard. In human beings, scalp topography displays the overlap of tactile and auditory stimulation in the auditory cortex region. The bass tones in particular are the range in the frequency spectrum where auditory and tactile stimuli affect the body as a whole (Wilson, Reed & Braida 2009: 1960–1974.). This is the effect experienced when the deep voices of hard rock singers are felt vibrating in chest and stomach. The automotive industry also uses this effect by designing bass-heavy motors that express potency. In the process of visualizing acoustic and psychoacoustic effects of voice, early film producers attempted, at first empirically, to create an analogy between base frequency and both tactile and optical experiences of the viewer (Flückiger 2007: 210ff).

E-Voices in Narrative Film

If we take a look at the repertoire of early mainstream fictional films, we can confirm that lower voices, which are more intensive than higher voices by nature, were associated with mass, gravity, physical strength, sexual energy, and with dense opaque materials that intercept weak light waves and are perceived as black or dark brown by the human eye.

Table 1: Main associations with low and high frequencies

	Low frequencies	High frequencies
Visual perception	Darkness	Paleness
Tactile perception	Gravity	Lightness
Gender	Males	Females
Typical animals	Wolves, lions, bears, buffalo	Birds, mice, mosquitoes
Typical artifacts	Motors, bombs	Breaks, doors
Typical social roles	Perpetrators of violence	Victims

With regard to higher voices, the sound aesthetics of the 1930s developed the enervating and disturbing effects of the shrill dissonances revealed in women's screams, creaking doors, and chirping birds. In the context of these experiments with sound, Hollywood cinema of the 1930s developed two vocally and gesturally organized repertoires, whose tradition extends into the present. They are the animal monster and the female victim represented by a scream queen, or queen of screams.

Due to the ear's particular sensitivity to screams, the repertoire character of the scream queen still remains one of the most important elements of horror films today. The character which is portrayed by shrill screaming has usually been a sexy and seductive woman who is afraid of falling victim to rape and male violence. In terms of classical theatre, the corresponding repertoire role was also called "young damsel in distress." It is no wonder that the first screaming "damsels" began their career on the stage. This first group of film actresses who started in the theatre includes Olga Baclanova (also known as the "Russian Tigress") who played the role of the cruel circus dancer Cleopatra in Tod Browning's horror film *Freaks* (1932) (Mank 1999: 118.), Madge Bellamy, who played a young woman being transformed into a zombie at the hands of an evil voodoo master in Victor Halperin's horror film *White Zombie* (1932)¹, Carroll Borland, who performed the role of pseudo-vampire Luna in Tod Browning's *Mark of the Vampire* (1935)², Elizabeth Allan, the young telephone switchboard operator named Daisy in Hitchcock's *The Phantom Fiend (or Lodger)* (1932) (Svehla & Svehla 2000: 12–18.), Virginia Bruce, who played Jane Eyre in a Christy Cabanne's sound film adaptation of Bronte's novel, etc.³ The second

1 Cf. Madge Bellamy as Madeleine Short Parker, the fiancée of Neil is turned into a zombie by Murder Legendre. Cf. Rhodes (1997: 108): "Bellamy has devoted two years to the spoken stage with a view to obtaining vocal training for the talkies".

2 Cf. R. Guiley (2005: 37): "In 1935 he [Tod Browning] remade the silent film, *Mark of the Vampires*, starring Lugosi and Carroll Borland".

3 Cf. O'Brien (2008: xii): "During Bruce's MGM tenure (1932 to 1939) she made scores of

group of scream queens comprises actresses who are known almost exclusively as sound film performers. Following Fay Wray, who became famous for her screams in *King Kong* (1933), Janet Leigh in Hitchcock's *Psycho* (1960), Jamie Lee Curtis in John Carpenter's *Halloween* (1978) and finally Drew Barrymore in Wes Craven's *Scream* (1996) all were "queens of screams" who helped the horror thrillers in which they acted to unprecedented box-office success (Svehla & Svehla 2000: 214ff)⁴.

Like the high voices of scream queens, the acoustic portraits of male animal monsters such as the cloned dinosaurs in Spielberg's *Jurassic Park* (1993) also originate in experiments with sound frequencies in the early 1930s. In order to depict the voice of the lonesome king of Skull Island, the giant gorilla King Kong (1933), sound designer Marvin Spivak recorded actual lions and tigers roaring in the Selig Zoo, which was established for film recording in California (Franklin 2001: 88 – 102, Maestriperi 2005: 89). He played back the roar one octave lower and at the same time he decreased speed and mixed it under the original. The suggestive effect of the lower frequency range is acoustically amplified in *King Kong* and raised to the viewer's consciousness with the help of original visual effects. Such effects include the bass-heavy humming of the shaman who sacrifices the white woman to the beast, the thundering of enormous drums, the incomprehensible speech of the island dwellers, and the thunderous falling of rocks and old trees in the forest. The roar of the heavy black Kong stands in a clearly polarized relationship to the voice of an aetherial white woman who embodies the enervating effect of shrill dissonances.

We can only agree with Mark McGurl, who grasped optical and acoustic images of *King Kong* in terms of picturing the Radio Age. The roaring monster represents an electronic bridge between the Sky and the Earth and provides a crude image of an audible radio environment. The Hollywood studio Radio Keith Orpheum (RKO), where the film had been shot, appeared in *King Kong* as an unrealistically large radio tower, which emitted a cascade of visible radio waves, "a pulsing jagged ejaculation"⁵. The Planet Earth associated with the female element swelled from the bottom of the screen. Frank Arnold, who was hired in 1926 to head development at the new radio broadcast network, NBC,

pictures and proved her ability of being a highly attractive cinema workhorse most noted for her porcelain-like beauty and her vibrant voice".

4 The acceptance given by the British public to the screams of American horror movies was not always positive. The book *Censored screams* pictures a depressing sobriety with which the British Board of Film Censors (BBFC) demanded extensive cuts, enforcing age restrictions. The Board banned outright many of Hollywood's horror movies (Johnson, Gordon & Weaver 2006: 58ff).

5 Cf. McGurl (1996: 418): "In *King Kong* the passionate sacrificial embodiment of the Radio Age becomes a towering libidinal gorilla who, as publicity still makes clear, approaches New York City with electricity as her sponsor".

founded and owned by RCA, viewed the radio wave as an invisible capitalist predator, able as never before to penetrate domestic, “feminine” space. Arnold’s book *Broadcast Advertising: The Fourth Dimension* (1931) served as a unique source of imagery for the two directors of *King Kong* (Schoedsack and Cooper), in which the pre-technogical and the technological were consequently brought together. This example demonstrates that even in the early films of the 1930s the voice was not simply copied, but produced according to the laws of psycho-acoustics and socio-acoustics. The most significant of these experiments aimed to develop a symbolism of bass-heavy voices. Such voices were conceived as a combination of celestial and terrestrial energy sources. On the one hand, they were viewed as coming from the sky. On the other hand, they symbolized mass, groundedness, and local ties—a telluric power emanating from the ground.

E-Voces in Documentary Film

What was the situation in radio news broadcast and in documentary film at the time? I will now shift from fictional sound film projects to the semantics of voice in documentary or, more precisely, documentaristic radio and film projects. The fields of radio news broadcast and documentary film in the 1930s reveal a striking interest in low vocal frequencies. This interest concerns almost all the vocal repertoires found in documentary-like media of the 1930s. It relates in particular to voices transmitting information about current events that are perceived as real (happened in reality) by listeners. It is customary to divide the types of radio and television speakers into three categories: the voices of news broadcasters (announcers), the voices of radio hosts (moderators), and those of VIPs such as executive authorities, political leaders, prominent actors, and others. Each of these vocal repertoires is characterized by a particular semiotic structure. The genre of the news broadcast demands a certain iconic similarity between the tonality of the voice and the type of event to which the voice refers. The voices of hosts, in turn, have an indexical function of reference: they refer the speakers to the listeners and vice versa. The voices of political or other authorities function as symbolic signs of the charisma ascribed to a particular person from without.

Table 2: Types of radio speakers

Types of radio speakers	The speaker's role in communication	The meaning of e-voice acoustics
Announcers	Pronouncing names of events from the observer's point of view	Iconic: Similarity between the acoustic characteristics of voice and the pre-programmed perception of events.
Moderators	Pronouncing names of other speakers, who pronounce names of events	Indexical: Indicating turn-taking. Anticipating the perception of other speakers' voices.
Authorities	Pronouncing names of events from the participant's point of view	Symbolic: Self-fashioning. Emanation of Charisma.

At the beginning of the radio age, listeners' resistance to high female voices was extremely strong, particularly in the field of news broadcasting, which demands a certain iconic similarity between the tonality of the voice and the type of event. Public discussions about this topic can be divided into the following three types of arguments about the incompatibility between the purpose of news broadcasting and the acoustic characteristics of female voices:

According to the first type of arguments, female announcer voices were viewed as inappropriate for natural, primordial reasons. Special emphasis was put on innate differences between female and male voices. It was claimed that female voices were "flat" or "shrill" and were "far too high-pitched to be modulated correctly" (Mix 1924: 391).

According to the second type of arguments, women were not used to speaking in public. Differences between female and male voices were explained in this case in terms of different social roles. "As a class, women have not had opportunities to adapt their voices to varying audiences and auditoriums." The result is that "few women have voices with distinct personality". Social roles largely restricted to the private sphere prevented women's representation in public, so "women on the radio somehow don't seem able to become familiar with their audiences" (Mix 1924: 392).

According to the third type of arguments (influenced by a scientific discourse) the low quality of female announcer voices followed from the state of radio equipment of the 1920s. Voices with a higher pitch suffered from distortion in the process of converting sound waves to electrical signals. This technical limitation was quickly translated into the maxim that women's voices were unsuitable for broadcasting (Lacey 1996: 198). A study conducted at *Bell Lab-*

oratories (1927) demonstrated that mellowness and sweetness of tuning were dependent on the relationship between the basic note and the associated harmonics: the closer the fundamental note to the high limits of its voice limits, the fewer the harmonics and, conversely the lower the fundamental within her voice range, the greater the number of harmonics. If the original note is high (such as high “C” sung by a soprano) the overtones and harmonics of this note would be the second, third, fourth, and even higher multiples of the 1,024 vibrations per second. If all these harmonics are removed or attenuated (and the equipment at the time was not capable of retaining them) the final sound will be a “shrill shriek or whine, entirely unmusical” (Rider 1928: 335). The loss of overtones and harmonics was the reason for the defeat of the soprano as a radio broadcast artist. “If listened to personally in a concert hall [the soprano singer] would doubtless be a delight to the ear. Over the radio however she is poor” (Rider 1928: 336). The majority of loudspeakers respond poorly to the harmonics and overtones of high notes sung by sopranos. The speaker was therefore “the greatest contributing factor to the poor reproduction of the soprano’s voice” (Rider 1928: 337). Assuming perfect transmission and perfect receiving equipment, the greatest source of trouble was the loudspeaker, because it lacked response to higher audio registers and its response was far from uniform over the audio frequency band, particularly on the vibrations represented by the overtones and vibrations of a female voice.

We can state that the rejectionist stance of listeners towards female voices was the result of an interweaving of technological and social factors. The social tendency to find male voices more authoritative and credible blocked the critical sociological interpretation of imperfect technical solutions, such as distorted tuning of high-pitched voices. And vice versa, the imperfect technical solutions strengthened the existing prejudices against women announcers as well as against the concept of women dealing with “serious” topics such as political news (Lacey 1996: 199). Broadcasters in European and non-European countries with different social and political systems shared a general agreement that women should not be heard as often as men announcing current affairs on the radio.

The United States

The first comments on the quality of announcers’ voices on the radio appeared on the pages of *Radio Broadcast* magazine in the early twenties. As a well-known correspondent to a number of American newspapers, Jennie Irene Mix conducted column debates called “The listeners’ point of view” from April 1924 until April 1925 (McKay 2000: 23). Listeners and radio authorities used the column to

formulate critical remarks, which promoted public discussion on the quality of radio speech.

Numerous representatives of important radio stations judged women to be unfit for announcing. The representative of the publicity department of the Westinghouse Electric and Manufacturing Company at East Pittsburg W. W. Rogers (associated with the radio station KDKA since the day it transmitted the first program ever broadcast) stressed in his statement that women were “rarely a success” as announcers:

“[...] The reason is that their voices do not carry the appeal, and so, whatever the effect desired, it is lost on the radio audience. One of the chief reasons for this is that few women have voices with distinct personality. [...] Their voices are flat or they are shrill, and they are usually pitched far too high to be modulated correctly.” [...] “Another reason is that women on the radio somehow don’t seem able to become familiar with their audiences, to have that ‘clubby’ feeling toward the listeners which is immediately felt and enjoyed. Still another thing that is lacking in most women before the microphone is summed up in that trite old phrase ‘sense of humor’. [...] We need quite a bit of light and airy stuff, or humorous quirks by radio. To sum the matter up, women who are heard by radio seem unable to let themselves go. They are too self-contained to carry a real friendly feeling out past the transmitting station, through the ether, and into the homes of the radio audiences” (Radio Broadcast 1924c: 391, see also: Mix 1924: 391).

KDKA was primarily broadcasting radio talk formats and the spoken word programming was a central feature of the station from its very beginning. KDKA’s roots began with the efforts of Westinghouse employee Frank Conrad, who had operated KDKA’s predecessor in the Pittsburgh suburb since 1916. On November 2nd, 1920, KDKA broadcast the US presidential elections from a shack on the roof of a Westinghouse building in East Pittsburgh. Not surprisingly, the management of Westinghouse Company had collected a great amount of experience with different speakers prior to 1924, when the discussion about the quality of announcer voices broke out.

The view expressed by the management of the publicity department of the Westinghouse Company was shared by the director of the WWJ radio station at Detroit, Corley W. Kirby. The station (also called *The Detroit News*) first went on air on August 20th, 1920. It is believed to be the first station to broadcast news reports regularly as well as the first regularly scheduled religious broadcast and play-by-play sports broadcast. Corley W. Kirby claimed in his interview that women were “not fitted for radio announcers” and gave the following reasons for it:

“When women announcers try to be congenial in their announcements, they become affected; and when they attempt to be business-like they are stiff. There also seems to be an offensive nasal quality in their announcements. Their voices are pitched too high. As

for women readers, they are as a rule simply terrible. This applies both to those we have had at our station and those I have heard from scores of others” (Mix 1924: 392).

Another pioneer station that participated in the discussion was WOR, which began broadcasting on February 22nd, 1922 from Bamberger’s Department Store in Newark, New Jersey. The station found it necessary to put emphasis on news reports and talk programs, but music was transmitted as well. Formulating his view from out of the fog of political correctness, the director of the station (J. M. Barnett) noted that

“a woman’s voice on the radio is not generally considered uninterested [...] but for announcing a well modulated voice is the most pleasing to listen to [...] As a general thing, a woman’s voice is considerably higher pitched than a man’s voice and sometimes becomes distorted” (Mix 1924: 392).

An experienced manager of the WABC radio station in New York (the station used the call sign WJZ from 1921 to 1953), Charles B. Popenoe explained the lacking quality of female announcing in terms of distorted electrical transmission:

“We use, of course, just as every other station, a great many women speakers on various subjects, but in no case does the female voice transmit as well as that of the man. As a general thing it does not carry the volume of the average male voice. As far as women announcers are concerned, we have never used them with the exception of Miss Bertha Brainard, who occasionally broadcasts theatrical material or announces a play being broadcast directly from the stage. In this case she is used because she knows a great deal about the theater” (Mix 1924: 392).

Program logs from May 15th to December 31st, 1923 reveal that WJZ aired 3,426 programs, including 723 talks, 67 church services, 205 bedtime stories, and 21 sports events (still a bigger part of the broadcasts were musical).

Finally, we have the view of the radio station WGR from Buffalo, New York, which had commenced its broadcast operations on May 22nd, 1922. The station was represented by its manager, M. A. Rigg, who sent the following statement concerning the suitability of female announcers: “Although we have a woman announcer at this station, it is not my intention to feature a woman in this capacity. There are many reasons why, to my mind, it seems advisable to use a man as announcer, especially during the heavier part of the work” (Mix 1924: 392). Published reports say that the first programs on WGR were: a clergyman’s lecture, a concert from Victor’s Furniture Store showroom, and a presentation on the advantages of a college education by Dr. Julian Park, from the University at Buffalo.

It is not a surprise that the views of these radio experts were supported by male listeners, who preferred an even baritone voice like that of John Stewart Daggett from the radio station KHJ in Los Angeles. Daggett, who used to introduce himself as Uncle John to his fans, served as chief announcer from April 13th, 1922 until November of 1927. He was at home interviewing movie stars on

KHJ and also hosted the nightly Children's Hour program at 6:30 p.m. each night, showcasing talented children on the radio. Being "even" and "clean-cut" from the point of view of an average listener, Daggett's voice provoked comparisons of male and female radio speakers: "With few exceptions our stations out here employ men announcers," one of the listeners wrote, "and they are always far superior to the women. I have heard some very fine talks rendered by women, but will say I prefer men all the time" (Radio Broadcast 1924d: 51).

When the American radio station WJZ conducted a survey of 5,000 listeners in 1926, it became apparent that 100 of 101 participants preferred the voices of male news announcers. The management circulated 10,000 impersonal questionnaires (covering all of the important phases of broadcasting) to all who wrote to the station reporting on the reception of the 50 kilowatt transmitter. More than 4,000 questionnaires were completely answered and returned to the station. The editorial staff summarized the results of the survey as follows: "The questionnaire clearly shows that men announcers are more popular than women announcers," (Radio Broadcast 1926a: 135, see also: Wallace 1926: 135) and:

"A canvas of 5000 listeners resulted in a vote of 100 to 1 in favor of men as announcers [...] Perhaps the best reason suggested for the unpopularity of the woman's voice over the radio is that it usually has too much personality. A voice that is highly individual and full of character is aggravating to the audience that cannot see the face and expression which go with the voice. We resent a voice that is too intimate on short acquaintance, and the woman announcer has difficulty in repressing her enthusiasm and in maintaining the necessary reserve and objectivity. The bane of the radio voice is a certain patronizing quality which gives the effect of a teacher talking to children or of Columbus instructing the Indians. It is difficult for women to avoid the patronizing note in their effort to speak effectively over the radio" (Radio Broadcast 1926b: 45).

These citations reveal that gender-specific role expectations and non-gender specific "sound expectations" overlapped in the definition of authentic voices.

Great Britain

Attitudes similar to those in the United States were prevalent in Great Britain. For most listeners, voices in the bass and baritone regions appeared most trustworthy and reliable. The information processing within the British e-voice community of the 1930s was based on a rather strict distinction between hard news and soft news. Hard news, which contained political and economy-related information, were broadcast by low-pitched male voices. Soft news, which included practical advice on household matters were usually broadcast by high-pitched female voices. Sheila Borrett appeared in 1933 as the first woman national radio announcer to read news on the BBC. But soon a female voice reading

news on radio caused an uproar. Borrett was taken off after only three months, as the BBC had received a number of letters from retired colonels in Cheltenham, accompanied by complaints from outraged woman listeners. Later Sheila Borrett appeared briefly as a commentator for British Movietone News No. 312 A of May 1935, and on the program 'Fashions'.

Rather late—only in 1936—did BBC television employ the first female news broadcasters: the two Englishwomen Elisabeth Cowell and Jasmine Bligh. They were recruited from 1,122 applicants for the position of “hostess-announcers” in the TV Studio leading up to the start of programming. Biographies of the first TV announcers suggest that acoustic and visual stereotypes of the British aristocracy reproduced themselves in electronic formats. The two women were of aristocratic origin: Jasmine Bligh was a descendant of Captain William Bligh (the commander famously usurped in the mutiny on the *Bounty* in 1792) and a niece of the Earl of Darnley. Elisabeth Cowell was the daughter of a squire in Cambridgeshire. Both women alternated announcing with looking after guests in the setting of Alexandra Palace, where the studio was located. Their first broadcast appearance lasted only 15 seconds. During the first appearance, Elisabeth Cowell announced the song “Here’s Looking at You” by Miss McKay, while the larger part of the program, which was devoted to demonstrations at “RadiOlympia” was announced by the low baritone voice of Leslie Mitchell. Leslie Mitchell, Jasmine Bligh, and Elisabeth Cowell became the first three BBC Television service presenters. The two ladies predominantly announced news that fell into the category of “soft news.” The voices of Elisabeth Cowell and Jasmine Bligh were low and dark in comparison to the average female voices. Elisabeth Cowell was the voice of “the Woman” on the soundtrack of Paul Rotha’s documentary *Land of Promise* (1946).

Olive Shapley, who produced pioneering radio features and documentaries for the BBC in the late 1930s (such as *The Classic Soil* (1939)), called the media enterprise of Manchester where she worked, “a very gentlemanly place.” There was only one other senior woman on the staff at Manchester. On the first day, Shapley asked her for help, as she had little experience broadcasting. “The first thing you have to know, dear, is how the gentlemen like their tea,” the lady answered. The first documentary program, which included Shapley’s narrative commentary introducing and linking the recorded material, was called *A Study in Shopping*. Shapley also created the program *Miners’ Wives* for the BBC and she became the presenter of *Woman’s Hour* in 1949. Her later activities were confined mainly to recording people of lower classes. Many of them needed social protection. Apparently only this type of voice could be smoothly combined with a narrative commentary performed by a female voice. For *Canal Journey* she “recorded men and women working on the Leeds-Liverpool canal” with the help of a teenager (Shapley 2000: 32–33).

Germany

Following Kate Lacey's statement, the excuse of technological limitation was still being used in Germany at least as late as 1941 "to account for the dearth of women's voices on the air" (Lacey 1996: 198 ff). When *Funk* magazine (1933) conducted a survey to determine the share of female announcers working for German radio stations, it found only four persons. The first woman who became employed as an announcer with a part-time contract (1926) was Margarete Wolf from the radio station *Süddeutscher Rundfunk* in Frankfurt⁶. Toni Nebuschka from the Bavarian radio station *Deutsche Stunde* (renamed *Bayerische Rundfunk GmbH* in 1930) and the two announcers Maria Einödshofer and Edith Scholz from the station *Der Norddeutsche Rundfunk AG* followed in Wolf's footsteps in 1930 (Mendzee 1930b: 91).

Discussing the low suitability of female voices for the purpose of news broadcasting, *Funk* magazine (1933) claimed that the two main reasons for this were the acoustic perception of high-pitched voices and the inertia of tradition: listeners were generally "not accustomed to accept female voices". *Funk* explained the latter phenomenon in terms of collective imagination. The magazine was of the firm opinion that acoustic prejudices could not be "outsmarted" by means of "feminine cunning"⁷. With regard to the well-known problem of "a female announcer" (Ger. "Das Problem der Ansagerin") the magazine offered a subtle solution for finding, educating, and modulating an ideal female voice which could be adopted into the system of news broadcasting. It was thought that the problem could be resolved by intensifying acoustic properties generally typical of male voices. Proceeding from the set of contrasting characteristics of voice (such as high/low, bright/dark, clear/rough) one can observe that female voices are higher, brighter, and clearer than male voices. While bright voices are achieved by enhancing overtones in the region of higher frequencies, dark voices presuppose enhancing bass frequencies. The effect of "darkening" can be achieved by lowering the larynx and narrowing the mouth-opening. The roughness of voice might be explained in terms of irregular (not periodical) vibration of vocal folds. According to *Funk* magazine, an ideal female voice suitable for news broadcasting had to be dark, but at the same time devoid of roughness: "A dark

6 Cf. Mendzee (1930a: 46): "Die älteste – ich meine natürlich berufsälteste – Ansagerin an deutschen Sendern ist unbestritten Frau Margarete Wolf vom Süddeutschen Rundfunk. Ihr und vor allem dem damaligen Direktor dieser Station, Dr. Hans Flesch, ist das Verdienst zuzuschreiben, für diesen neuen Frauenberuf Bahn gebrochen zu haben".

7 Cf. Kw (1933: 125): "Der Hörer stellt die Kritik dagegen und lehnt eine Frauenstimme ab. Er will seinen Ansager hören, auf den ist er "eingestellt": hier liegt ein konservativer Moment vor, das besser nicht im Ansturm überwunden werden sollte, sondern – fraulich heimlich überlistet werden kann".

voice has the advantage that it does not differ much from a male voice (it should be noted that we mean a dark and not a low, not a masculine rough voice)⁸.

Table 3: Characteristics of an ideal female announcer voice

	Typical male voice		Typical female voice		Ideal female announcer voice	
Low-High	<i>Low fundamental frequency</i>		<i>High fundamental frequency</i>		<i>High fundamental frequency</i>	
Dark-Bright	<i>dark</i>	<i>bright</i>	<i>dark</i>	<i>bright</i>	<i>dark</i>	<i>bright</i>
Rough-Clear	<i>rough</i>	<i>clear</i>	<i>rough</i>	<i>clear</i>	<i>clear</i>	

Funk believed that a dark female voice “would attract the conservative section of listeners”. Such a voice would sound “less shrill” and “more pliable, warm, feminine, less demanding and more appealing”. The main error of radio stations in Berlin allegedly consisted in transmitting only bright voices. Such voices “sounded thin” on the radio⁹. By contrast, a famous Italian announcer (most likely Maria Luisa Boncampagni, one of the first radio hosts in the Italian Radio Union) was thought to sound melliflously seductive due to the “slightly dark soothing tone” in her voice¹⁰.

Apart from the purely acoustic criteria which addressed the unconscious competence of radio listeners, *Funk* listed criteria of gender identity which imposed further restrictions with regard to the use of female announcer voices on the radio. Generally speaking, women were considered to be eligible for announcer jobs. But this did not mean that women were suitable for broadcasting all types of news. Daily political news and stock market reports were not considered appro-

8 Cf. Kw: (1933: 125): “Eine dunkle Stimme hätte nämlich den Vorzug, dass sie sich nicht zu sehr von den männlichen Stimmen unterschiede. (Wohl gemerkt: eine dunkle, nicht eine tiefe, männlich – rauhe Stimme!) Bei aller Neuheit wäre ihr Eintritt in das Programm nicht sensationell, er vollzöge sich behutsam, nicht eindringend, sondern – und das entspräche auch ihrem Klangcharakter – einschmeichelnd. Und dadurch kann sie den “konservativen” Hörer gewinnen! Eine dunkle Stimme wird nicht so leicht spitz klingen. Sie ist schmiegsamer, wärmer, fraulicher, weniger aufrufend als ansprechend”.

9 Cf. Kw (1933: 125): “Vielleicht beruht die scheinbare Rückständigkeit Berlins darauf, dass man bisher den Hörern fast nur helle Stimmen oder wenigstens solche mit vorwiegend heller Tönung zuführte, Stimmen, die wohl auch ein wenig dünn klangen. Es könnte durchaus der Fall sein, dass man mit dunkleren volleren weichen Frauenstimmen zu einem besserem Ergebnis käme”.

10 Cf. Kw (1933: 125): “Einen leicht dunklen Einschlag hat auch die bekannteste Sprecherin Europas, die Ansagerin des Senders Rom, die sich weit über die Grenzen ihres Heimatlandes hinaus nicht allein durch den Wohlklang der italienischen Sprache, sondern gerade durch die wundervolle, einschmeichelnde Klangfarbe der Stimme einer großen Beliebtheit erfreut”.

prate for female voices¹¹. That is why the first female announcer Margarete Wolf became the object of compassion and adoration at the same time because she had to deal with “dry stuff,” such as “stock market reports, prices of cereals, and those of cattle, weather forecasts and similar news”¹².

Being part of gender identity, voices evoked an image of femininity. And femininity was associated with established social roles and specific female occupations such as housewife, nurse, educator, and actress. It is remarkable that limitations of the use of female voices had been imposed and propagated by female journalists. Disgruntled female listeners wrote to the press office of *Funk* that those who wanted to sacrifice ten minutes to housewives should broadcast more cooking recipes, practical advice for household work and recommendations concerning linen for children¹³. Female journalists emphasized that a country woman could not be prepared “to listen to a scientific report about Strindberg” or “about international women affairs”¹⁴.

A supplement of *Funk* magazine called *Frauen- und Jugendfunk* (“*Funk* for young people and women”) served as a forum for the exchange of ideas and best practice among female listeners. The supplement published recommendations and listed programs aimed particularly at the indoctrination of girls and women. The table below (table 4) shows schematically the contents of such programs.

Table 4: German radio programs aimed at female listeners

Title of the program	Indoctrination purpose
“Economic broadcast”	One can learn “much about egg, meat and vegetable prices”. The program will help housewives “while shopping”.
“Woman’s hour”	The program “is a source of new ideas” for women.

11 Cf. Kw (1933: 125): “Gewiss, noch andere Voraussetzungen müssen beachtet werden. Eine weibliche Stimme eignet sich nicht zum Ansagen aller Arten von Sendungen. Tagesnachrichten und Börsenberichten sind weniger ihr Gebiet als die Kinderstunde und der Frauenfunk”.

12 Cf. Mendzee (1930a: 46): “Sie [...] muss ‘trockenes Zeug’, d. h. Börsenberichte, Getreide- und Viehpreise, Wettermeldungen, Nachrichten und ähnliches weitergeben”.

13 Cf. Boehmer (1925, 76): “Wenn man schon der Hausfrau 10 Minuten ‘opfern’ will, so soll man sie auch wirklich erfreuen und erbauen mit Sachen, die teils in ihr Fach schlagen, teils, die sie darüber hinausheben. Unter erstes könnte man z. B. ausgeprobte Koch- und Backrezepte rechnen, praktische Ratschläge für Haus- und Kinderwäsche, für Garten und Balkon, praktische Handgriffe im Haushalt, Haushaltseinteilungen und was noch mehr. Und um sie zu erheben über die Sorgen des Alltags, da gibt’s vielleicht manch’ nettes Gedichtchen, manche Rezitation, die Empfehlung irgendeines guten neuen Buches [...]”.

14 Brix (1930b: 45 – 46): “Denn man kann schließlich von der Frau auf dem Lande, die vielleicht selbst auf dem Felde und in den Ställen tätig ist, nicht verlangen, dass sie sich die Zeit nimmt und einen Vortrag über Strindberg oder Weltverbesserung oder internationale Frauenfragen anhört”.

Table 4 (Continued)

Title of the program	Indoctrination purpose
"Parents' hour"	The program "provides information on education, school questions, cooperation between the school and parents' home," it "promotes an understanding of children".
"Children's hour"	While listening one can learn "what captivates children" and "how mothers play with children".
"Poet's hour"	"A new and beautiful world opens up in verses."
"Music"	"Serious and cheerful music" comforts and consoles the spirit ¹⁵ .

The functions of a female announcer were intended to be confined to activities within the programs whose target audience consisted mainly of women. When Gertrud van Eyseren was invited to work for *Berliner Funk-Stunde* (1930), the editorial team had to suppress rumors of a female announcer succeeding a male predecessor. Such a demanding task could hardly "correspond to the narrow limits of activities of a female announcer". It was emphasized that "there could be no question of using a female announcer for all programs"¹⁶. The following table (table 5) provides an overview of the main functions of female voices on German radio of the 1930s.

15 Cf. Honekamp (1930: 97): "Für die Hausfrau ist der Wirtschaftsfunk von gewisser Bedeutung. Sie erfährt die Eier-, Fleisch- und Gemüsepreise und kann sich bei ihren Einkäufen danach richten. Die Frauenstunde gibt ihr Anregung und Ideenbereicherung auf ihren vielfachen Interessengebieten. Die Elternstunde bietet ihr Aufklärung über alle möglichen Fragen der Erziehung, über Schulfragen, Zusammenarbeit von Schule und Elternhaus, fördert auch in ihr das Verständnis für die Kinder – das ja zur guten Erziehung unerlässlich ist – indem psychische und physische Zusammenhänge bloßlegt, wertvolle Winke und Ratschläge, Erfahrungstatsachen und psychologische Beobachtungen mitgeteilt werden. Gern wird die Hausfrau und Mutter sich hin und wieder die Kinderstunde anhören. Hier, im losen Zusammenspiel kindlicher Kräfte, erfährt sie, was die Kinder wirklich fesselt, was sie anregt, wie die Mutter mit den Kindern spielen, wie sie sich mit ihnen ergötzen kann. Und will die Hausfrau eine Stunde der Erhebung, der seelischen Entspannung, ein Vergessen des Alltags, so lauscht sie der Dichterstunde, und aus Versen blüht ihr nicht selten eine neue und schöne Welt entgegen. Und dann Musik, ernste und heitere! Wie oft kommt doch gerade sie der Sehnsucht der Seele nach Befreiung und leiser Loslösung vom vielen mechanischen Tun klingend entgegen und verstärkt einsame Stunden mit einem leisen und frohen Glanz".

16 Cf. Brix (1930a: 216): "Es kann natürlich keine Rede davon sein, dass eine Ansagerin für sämtliche Veranstaltungen geeignet ist. Bei der jetzt erfolgten Berufung von Gertrud van Eyseren wurde sogar durch falsche Pressemeldungen verbreitet, dass sie die Nachfolge eines in seiner Art charakteristischen verstorbenen Ansagers antreten sollte, eine Aufgabe, die den engen Grenzen weiblicher Ansagertätigkeit gar nicht entsprechen würde".

Table 5: Programs of german radio stations moderated by female announcers

Female speakers	Program	The expected effect
Announcers	“Program for young people” “Woman’s hour”	The effect of shared gender identity: female announcers have priority in the programs for youth and women but “male announcers should not disappear” either ¹⁷ .
	“Programs with chamber music”	The effect of representing artistic truth: “Female voices are soft and they radiate a certain contemplative power” ¹⁸ .
Moderators	Moderating in general	The effect of mediation (stepping aside and leaving the limelight to others): “A female speaker should recognize her position as a sole inconspicuous intermediary, [...] she should be aware of appearing not in front of the audience but in front of the program, [...] her voice should appear like a welcome friend in the domestic circle” ¹⁹ .
	Programs for girls and women	The effect of anonymity: female listeners write to female announcers and moderators “whom they don’t know” ²⁰ . The effect of interactivity: listening to the voices of other women on the radio a young girl experiences “the feeling of being personally addressed” ²¹ . The effect of education: elder women can transfer their skills to girls “in the ages of 16 – 24 years” ²² .

17 Cf. Brix (1930a: 216): “Welche Sendungen soll die Frau ansagen? Man denkt da zuerst an den Jugendfunk, die Frauenstunden. Gewiss, aber es müssen nicht nur diese Sendungen sein – und es müssen diese Sendungen durchaus nicht ganz den männlichen Ansager verlieren”.

18 Cf. Brix (1930a: 216): “Für viele Sendungen, die stillen und besinnlichen – für Kammermusik wäre das wohl die richtige Einstellung – und sollte dann für die Ansage nicht gerade die Frau am rechten Platz sein”.

19 Cf. Kw (1933: 125): “Die Sprecherin ist stets nur unauffällige Mittlerin, ihr ‚Ich‘ tritt ganz zurück im ständigen Dienste am Hörer. Sie muss sich stets bewusst sein, dass sie nicht vor ein Publikum tritt, sondern vor eine Sendung; ihre Stimme muss wie der Besuch eines gern gesehenen Freundes im häuslichen Kreise sein”.

20 Cf. Hersel (1930: 101): “Man spricht und erzählt zu einer unbekanntnen und schwer zu leitenden Hörergemeinde. [...] Die Sprecherin, der sie schreiben, ist ihnen fremd”.

21 Cf. Hersel (1930: 101): “Die Jungmädchenstunde ist da, die Hauptsache ist nun, dass das junge Mädchen darauf hört, aufmerkt und fühlt, dass es hier persönlich angesprochen wird [...]”.

22 Cf. Brix (1930c: 134): “Nun, wenn Sie junge Mädchen im Hause haben, Töchter im Alter von 16 bis 24 Jahren, so achten Sie doch bitte mal darauf, was der Rundfunk diesen zu sagen hat”.

Table 5 (Continued)

Female speakers	Program	The expected effect
	“Book hour”	The effect of shared gender identity: books written by women should be read out loud and discussed by women. The effect of representing artistic truth: works of delicate genres, like romantic fairytales by Oscar Wilde, Clemens Brentano, as well as rococo novels should be read by female performers ²³ .
	“Reporting” from nurseries, hospitals, old people homes, institutions for the blind, houses of fashion, fashion shows	The effect of a shared gender identity: female voices reporting from places where large numbers of women are employed will find resonance with the female audience ²⁴ .
Authorities	“Woman’s hour”	The effect of transferring skills, e.g., acquiring more information about children’s care ²⁵ . The effect of transferring symbolic capital: “Other women who have visited exhibitions or conferences in other cities can speak about their impressions” ²⁶ .

23 Cf. Mendzee (1930c: 30): “Derartige Regieentgleisungen [“wenn man z. B. Hermann Kessers “Schwester Henriette” von einem Manne gelesen hört] wirken nicht nur komisch, sondern vernichten geradezu die Stimmung beim Hörer und bringen den Dichter um den von ihm angestrebten Effekt. [...] Das gleiche gilt für alle zarteren Kunstgattungen, wie z. B. Rokoerzählungen oder die Märchen von Oscar Wilde, Clemens Brentano und für vieles mehr. Ferner für einen großen Teil der Lyrik. Vor allem aber müssten Frauenbiographien dem weiblichen Interpreten vorbehalten sein. [...] Von Frauen geschriebene Bücher sollten ihres inneren Klages wegen immer von Frauen gelesen, ebenso in der Bücherstunde von ihnen besprochen werden. Grundsätzlich, sei die Ankündigung von Frauenvorträgen ureigenstes Gebiet des weiblichen Ansagers”.

24 Cf. Mendzee (1930c: 30): “Man muss sich darüber klar sein, dass zum Pflichtenkreis des Ansagers heute nicht mehr, wie anfangs, nur die Ankündigung der einzelnen Darbietungen gehört. [...] So seien Berichterstattungen aus Säuglingsheimen, Krankenhäusern, Altersheimen, Blindenanstalten usw. als ihr Betätigungsfeld empfohlen. [...] Auch Reportagen aus Modehäusern und über Modevorführungen dürften viel Anhängerinnen unter den weiblichen Hörern finden”.

25 Cf. Brix (1930c: 134): “Haben wir wirklich immer genau gewusst, wie es am Krankenbett des Kindes zugehen soll?”

26 Cf. Brix (1930c: 134): “Auch Frauen, die Ausstellungen und Konferenzen in fremden Städten und Ländern besuchten, berichten von ihren Eindrücken, lassen miterleben”.

Soviet Russia

Soviet experiments with transmitting and receiving human speech were not begun until 1921. Two engineers from Kazan, Ugllov and Dikarev, were awarded a contract by the Soviet government for constructing a sound amplifier and a loudspeaker as part of the effort to realize Lenin's concept of "Radiogazeta," which was to become a "newspaper without paper and distance". The first scientific result the two scholars were able to report consisted in a microphone, a sound amplifier, and a loudspeaker located on the balcony of the Radio Laboratory in Kazan. During the experiment, a speaker's voice could be understood without difficulty within half a kilometer from the laboratory²⁷. Loudspeakers created by the two engineers were used for the first time during the annual May Day celebration in 1921 in Kazan. On June 8th, 1921, loudspeakers of this type were installed in six squares throughout Moscow. This date can be considered as the starting point for the collective awareness of a distant vocal source. On November 23rd, 1924, the Moscow radio station of the Comintern began broadcasting daily news reports in the form of the so-called "Oral newspaper ROSTA". The audience of this medium consisted mainly of Moscow citizens who gathered in the squares. Ruzhnikov points to the exact meaning of the Russian term "громкоговоритель" (Eng. "loudspeaker") in this context. From the very beginning it was associated with the specific articulation of a speaker's voice, which was reading aloud news reports in front of a large crowd of people²⁸. In the beginning, the ordinary workers of the Central Telegraph Office took on the function of news broadcasters because there was no appropriate voice education for announcers at the time. The actors of Moscow theatres followed in the steps of unprofessional readers.

The optical sound recording method was actively used in the Soviet Union for producing media carriers that incorporated both visual images and soundtrack on the same band. Since the number of cinemas equipped to reproduce sound was very limited, however, the Soviet departments of culture, agitation, and propaganda preferred to broadcast pre-recorded sound and voice on the radio. The so

27 Cf. Dikarev (1923: 101): "Телефон с рупором выставили на балконе радиолaborатории и стали читать газету [...] Звуками громкой речи наполнилась вся площадь, собралась толпа прохожих, привлеченная неслышанным громкоговорением. Чтобы испытать дальность действия громкоговорителя, его подняли на мачту радиостанции на высоту около 23 метров и направили в сторону вокзала через лес. Когда стемнело, стали читать газету, и оказалось, что свободно понимать речь можно в полукилометре от рупора, а голос был слышен на вокзале" (cit. Ruzhnikov 1987: 101).

28 Cf. Ruzhnikov (1987: 107): "Появление термина "громкоговоритель" было связано с таким именно характером вещания, с особым стилем чтения материалов по радио, обращенного к множеству людей, собравшихся в одной месте ("рупор усиливающий телефон и говорящий толпе")".

called “radiofilm,” which consisted of nothing more than an optically recorded sound source, aspired to meet the challenge of providing Soviet citizens with a most advanced propaganda medium. It had to show “life as it really was”. The main accent was put on the improvement of the quality of auditory perception. Part of this program included voice-training, which comprised exercises on articulation and on flexibility of breathing. The Association of Workers of the Revolutionary Cinematograph (1923 – 1934) organized a series of lectures by experienced specialists in recitative declamation. Most of these specialists combined methods used in ortho-rhino-laryngology, clinical speech therapy, and language psychology with structuralist approaches to speech analysis. The focus of voice training was a vowel-emphasized declamation of prose texts and verses. A. Prianishnikov, who delivered a lecture entitled “About the background noise design and speech design in sound film” on December 29th, 1929, counts among the pioneers who tried to adapt the principles of declamation to the technical requirements of speech transmission. The direct speech performance on the one hand and the radio declamation on the other hand had to cooperate to implement universal criteria such as “sonorous power” (the art of increasing the energy of sound expression in order to “let the voice fill the space”), “purity/clarity” (the art “of avoiding roughness, hissing, wheezing, etc.”), “motion” (the art of changing from one register to another), “expressionism” (the art “of homogenizing the sonorous power and the articulation of syllables”)²⁹.

A matter of central concern in Prianishnikov’s paper is the motion described by sound passing from a chest voice to a high head voice and vice versa. As the sound is mainly formed in three different resonance chambers, the lower (chest), the middle (larynx), and the higher (oral cavity, nose), a high level of radio declamation is clearly committed to the conscious change between registers. Voices formed below the lower voice register are characterized by wheezing and are similar to the signals of animals. In the context of face-to-face communication, speakers generally use a lower register when addressing persons who are located near them. The voice formed in a lower register signals a higher degree of warmth, erotic radiance, credibility, and commitment. As soon as one speaks into the microphone one is not able either to see the addressees nor to measure the distance between different material objects referred to in the speech. Announcers sitting in front of the microphone therefore encounter problems

29 Cf. Prianishnikov (1929) (December 29th, 1929): “Нормальные требования, предъявляемые к голосу актера, это 1) чтобы голос заполнял все помещение, а не потухал в первых рядах; 2) чтобы голос был выразителен, т.е. подвижен, гибок, а не звучал однотонно; 3) чтобы голос был чист по звуку, без примесей силпости, сдавленности, тусклости, гнусавости и т.п. и 4) чтобы звук голоса не перекрывало звуков членораздельной речи. Итак, – сила (полнозвучность), чистота (благозвучность), подвижность (многозвучность) и согласованность силы звучания с артикуляцией (словозвучность)”.

adopting the register of their voice to what they cannot see. The art of radio declamation, which is based on a deliberate interplay between chest and head voice, requires speakers to follow specific rules of voice coaching. They have to learn how to express emotions such as sorrow, disbelief, shock, or joy. Prianishnikov emphasized that YES being pronounced with a voice formed in a higher resonance chamber would be marked by a lower degree of credibility. It “would contain a shadow of doubt and ambiguity,” “acoustically YES would sound almost like NO, or at least like YES, BUT”. And, vice versa, an answer produced by means of a low register voice conveys a message “of positive feedback and trust”. “The main conclusion we can draw from this,” Prianishnikov writes, “is that a deep and true feeling expresses itself by means of chest tones formed in a low register, one speaks about a small and far-away object using the high register and one uses a low register to speak of the big and near-by”. Fantasy tends to be expressed by a voice formed within the high, and reality by a voice formed within the lower register chambers³⁰.

Even outside the Euro-American context, where the concepts of the bourgeois nuclear family, with the woman at the center of the private sphere, were never able to gain ground, female voices were underrepresented in news broadcasting. A series of committed female speakers did work in Soviet radio in the late 1920s, but nothing suggests that these speakers were ever entrusted with reading the speeches of power symbols such as Stalin or Molotov. Although the Russian documentary film archive of the 1930s contains enough records of successful Soviet women, such presentations are never accorded a representative function, but almost always a moderating or referential one. In all newsreels that feature a speaking woman, changing camera angles indicate the presence of a male speaker in the background. Natalia Barabash, who worked in many Russian radio stations in the 1990s, provided the following comment on the situation in the earliest Soviet radio news service *Radiogazeta*:

“In the beginning, the group of announcers consisted only of men [probably until 1925]. There was the view that a female voice was not suitable for radio broadcasting.

30 Cf. Prianishnikov (1929) (December 29th, 1929): “Игра регистров, как показатель того или иного состояния, отношения, принадлежит к одному из необходимейших способов выразительности. На вопрос “Можно ли положиться на этого кандидата?” – ответ “Да, конечно”, на верхних тонах явно будет носить характер сомнения, уклончивости, текущее “да” тонально осмыслится как “нет”, или по меньшей мере – “да”, но...”. Ответ же на низком регистре звучит положительной оценкой, доверием. Сергей Волконский, этот “следопыт тона”, предлагал полшутливо своим слушателям не верить признаниям в любви на высоких нотах. Серьезный вывод отсюда – глубокое, искреннее чувство и говорит на глубоких, грудных тонах. О предмете малом, далеком говорят на верхах, о большом, близком – на низах, фантазия и реальность также ищут выражения в регистровых контрастах: “Что ты мне сулишь миллионы, да миллионы... – (на верхах) ты дай мне сотню, да чтобы я видел ее в руках” – (на низах)”.

The direction of *Radiogazeta* rejected all the attempts to use a female voice for the program. One of the editors wrote to the head of the department that female voices did not fit the press material because they did not harmonize well either with the voices of male speakers or with the content of radio news. The appearance of female announcers on air was allowed only by exception if the speaker in question had a pleasant low-pitched timbre. Nevertheless, the first female announcer did appear in “Radiogazeta ROSTA” (Zinaida Remizova). She had read the “Song of the Stormy Petrel [a romantic heroic poem by Maxim Gorky] and it sounded very beautiful. That is why she received an offer to read newspaper reports immediately after her verse presentation, and she was no worse than male announcers”³¹.

Evgeniia Goldina joined the announcer team of the All-Union State Radio in 1927. Four other women, Valentina Solovieva, Anastasia Golovina, Natalia Tolstova, and Olga Vysotskaia, were appointed as announcers in 1929. Tolstova read out news reports occasionally, but her main activities were concentrated on moderating musical programs, programs for children, as well as announcing live transmissions of concert classics. Olga Vysotskaia started announcing the program of morning gymnastics in 1929, but she worked her way up and was in charge of announcing political news since 1932. The share of female announcers on the Soviet radio was higher than in the radio cultures of Western Europe and in the United States. Many women became prominent Soviet announcers despite the fact that the capacity of transmitters and the state of technical equipment in the Soviet Union did not meet the higher Western standards. The only explanation for this phenomenon might be the underdevelopment of a private sphere associated with women not engaging in gainful employment. After all, in Stalin’s concept of the Soviet state, women were to work in factories, on farms, as well as in the public sphere. As a result, Soviet radio did not transmit any special programs for housewives, as was customary in Germany and Great Britain. While a female voice was generally perceived as part of a woman’s identity and not as part of housewife’s identity, there was positive recognition of collaborations between male and female announcers who took turns reading daily news at the microphone. The line dividing typical male from typical female applications of voice was never clearly defined in the Soviet Union. In the beginning

31 Cf. Varabash (2011: 22ff): “Первое время группа чтецов состояла только из мужчин. Существовала даже версия, что женский голос не подходит для радиопередачи. Попытки использовать к передаче женский голос отклонялись руководством радиогазеты. Один из редакторов писал руководителю дикторской группы, что женские голоса не подходят для газетного материала, так как не гармонируют ни с голосами чтецов, ни с содержанием газеты. В качестве исключения допускалось лишь появление в эфире женщин-чтиц, обладающих приятным низким тембром. Тем не менее, первая женщина-диктор появилась именно в “Радиогазете РОСТА” – ею стала Зинаида Ремизова. Она читала “Песню о Буревестнике”, и это звучало очень красиво, поэтому сразу после выступления ей предложили почитать газетный материал, и у нее это получилось ничуть не хуже, чем у дикторов-мужчин”.

(until 1937), female operators of the Central Telephone Station usually worked for a service where people could call and ask an operator for the current time. They answered what time it was after having caught a glimpse of their private watches. When an automatic service for announcing the exact time was established in 1937, the male voices of Emmanuel Tobiash and Iurii Levitan were the first to be recorded. Millions of Moscovites “called Tobiash” before winding up their watches. However, this demanding task was taken over by experienced female announcers two years later. It was mainly Olga Vysotskaia who announced the exact time for Moscovites until 1970.

Male announcer voices were given clear priority for broadcasting the most important decrees and directives of the Soviet government. In contrast to Great Britain, the USA, and Germany, where authorities considered speaking into a microphone as an obligatory part of political self-presentation, Soviet power elites had a very complicated relationship to public speaking. Traditional Russian prejudices toward the use of declamation in political contexts can be traced back to different fundamental values of social, religious, and political nature. According to the rules of Byzantine ceremonial, which was imported by the end of the fifteenth century, the Russian Court was considered a sacred place in which loud speaking was prohibited. Sacred silence, which accompanied the sessions of the Old Russian Parliament, was recognized as the primary means of emanating charisma, rather than elaborated forms of declamation (Zakharine 2005: 386). Tsars did not appear speaking in public until the decay of monarchic rule in February 1917. Public orators associated with the Russian Bolshevik party, such as Lenin, Trotsky, and Zinoviev, were the first to succeed in conquering and retaining political power outside the tradition of dynastic succession. The scepticism of the Russian Orthodox Church regarding the effectiveness of sermons for laity prevented the translation of Sacred Scripture (originally written in Church Slavonic) into vernacular Russian (Uspenski 1988: 208–224.). Protected by their status, religious and secular authorities preferred being represented by messengers who were entrusted with the right to speak in public. The language purism that went hand in hand with the consolidation of Tsarist power throughout the various phases of Russian history nevertheless did not go so far as to hinder the recruitment of non-Russians for different state services. The bureaucracy of the Russian Empire could not afford to impose the principle of an accent-free pronunciation on multi-ethnic state elites.

At the very beginning, radio and sound film were considered the most appropriate media to use for organizing an open political forum. Scholars and journalists who wrote about the optical method of voice recording had no doubts that Soviet party functionaries would use the radio to communicate freely with the masses, much like American politicians (Anoschenko 1930). But the plan to broadcast meetings with the leaders of the Soviet state in the real-time format

was implemented only partially. It was not until May 14th, 1935 that the first recording of Stalin's voice was prepared. According to eye-witness reports recorded by Boris Shumiatsky, Stalin was frightened and embarrassed when he discovered that his voice had been recorded during his speech at a party plenum. Stalin felt uncomfortable because of his heavy Georgian accent and he was angered after realizing that his ruler's voice was temporally and spatially separated from his person (Kozlov 1996: 77).

Before and during World War II, the voice of the Soviet radio speaker Iurii Levitan of the Soviet Information Bureau became associated with the voice of central power, the voice of Stalin himself³². And it should not surprise that such an association was personally pre-programmed and maintained by Stalin. A twenty-year old radio speaker of Jewish origin, Levitan began his ascent in late January of 1934. According to his own report, at one point he was dragged into the radio recording studio "pale with fear" after a phone call "from above." At the studio, he was handed a sealed document to be read aloud. It was Stalin's speech to the 17. Party Congress of the Communist Party of the Soviet Union (CPSU). A few hours before, Stalin, who tended to work at night, had turned on his table top radio. He had taken great pleasure in the expressiveness of Levitan's voice and per telephone he ordered him to be entrusted with a special task.

From a psychoacoustic perspective, the secret behind the effect of Levitan's voice lies in a bright range of overtones. While the highest overtones of this voice lie in the soprano region, the lower frequencies are dominated by deep bass tones. As a result, the frequency spectrum of Levitan's voice reveals a stunning similarity to the frequency spectrum of deep metallic sounds, such as the ringing of bells. Levitan's voice was the voice of metal, of cast iron, of steel, that is, of those materials which symbolized the victorious era of Soviet industrialization. German propaganda minister Joseph Goebbels announced a reward of 250,000 Reichsmark for anyone able to capture Levitan and bring him to Berlin alive. According to Goebbels' plan, the eloquent Jew was to read aloud the report of the German ultimate victory in Berlin on Christmas of 1941. When such a "victory" seemed impossible, SS special commandos fanned out to liquidate the radio speaker. The Soviet radio agency was bombed specifically at the time when Levitan was scheduled to read news broadcasts. But Levitan stayed alive. This reaction shows that insiders and outsiders alike associated the fighting power of the Soviet "community" with the power of the news announcer voice.

In the meantime, the analogy between Levitan's voice and a cannon salvo had become established in the Soviet ritual of victory fireworks. Since the introduction of the victory fireworks in 1943, Iurii Levitan's voice was used to issue the government's order to begin the ceremony. After Levitan read the last war report of

32 Cf. The latest biography of Iurii Levitan: Taranova (2010).

the Soviet Information Bureau about Germany's capitulation in 1945, 1,000 cannons were used to shoot thirty salutes in every large city in the Soviet Union.

“Cannon Voice” Announcers and the Bass Fetishism of the 1930s

After the birth of radio and sound film, the significance of the most important political events was always expressed through a symbolic translation into the lowest vocal frequencies. It is symptomatic that the voices of bass and baritone speakers such as Harry Giese of the German Nazi-era newsreel and Leslie Mitchell of the British BBC all became acoustic symbols of their respective states during the 1930s. The best documentary propaganda films of the Nazi era, such as Fritz Hippler's *The Eternal Jew* (“Der ewige Jude” (1940)), implemented sound effects that had been developed for fictional animal-monster films such as *King Kong* shortly before. The moaning and snorting of a dying cow was an allusion to a German society viewed as threatened by the Jewish knife. In the post-production phase, the film, initially accompanied only by music and sounds, was dubbed with the spoken commentary of Harry Giese, the main speaker of German newsreels, which increased the reality effect of the film. Siegfried Kracauer made the observation that newsreels were intended “to impress people rather than to instruct them” and that the transition from musical accompaniment to recorded sound occurred later in documentary than in fictional film. Nazi propaganda “aimed at psychological retrogression to manipulate people at will. Hence the comparative abundance of tricks and devices. [...]” “The Nazis, while suppressing death in their films, once allowed a radio broadcast from the front to include the cries of a dying soldier. [...] The Nazis knew that allusions may reach deeper than assertions and that the contrapuntal relation of image to verbal statement is likely to increase the weight of the image. [...] The whole commentary of a propaganda film is a succession of such explicit verbal statements, each separated from the other by an interval during which visuals appear or continue to appear” (Kracauer 1966: 278–280, 306, 308).

Not all bass-heavy environmental sounds that were important for the aesthetics of “documentarism” in the 1930s could be recorded live with contemporary sound film cameras. This was particularly true of the noise of airplane engines, for example, whose acoustic pressure was far too great for microphones at the time. As a result, in early motion pictures, airplane engines were imitated by means of electronic table-top fans. Nevertheless, the sound picture achieved an unquestionable reality effect. Gradually, the noise of airplane engines migrated from fictional genres into documentary films. In German, British, and Soviet newsreels after 1936, the engine became the most popular sound effect and was used to accompany approximately every tenth episode underscored with voice. In the

famous newsreel No. 451, which was shot on the occasion of the Hitler's 50th birthday, the basses of airplane engines were underscored by Wagner's music. Forty million Germans went to the cinema to see this movie, in the production of which fifteen kilometers of film were used. At the same time, left-leaning English intellectuals such as Paul Rotha and Humphrey Jennings which represented the British documentary film movement and were in close contact with Dziga Vertov and Soviet documentary film makers, dispensed with music and achieved an unprecedented reality effect through the use of low pitch noise and low commentator voices alone. Although the film *If War Should Come* (shot in 1939 and seen by 2,3 Million British) did not depict the real war, its viewers could hear it. Sounds of explosions taken from the sound library of the British Ministry of Information were juxtaposed with the baritone voice of Jack Livesey.

Conclusions

We have to assume that sound effects which were initially designed for fictional genres gradually migrated into the genre of the newsreel. While music helped reduce correspondences with reality, noises combined with voice increased the reality effect of the film. The synthesis of animal-monster voices in fictional film projects on the one hand, and the choice of news speaker voices in documentary film projects on the other hand, were both subject to similar selection criteria. Coarse, deep male voices were used to define and symbolically depict the borders of primordial communality. The primordialization of communal borders implies the reduction of macrosystems to microelements. In this process, state institutions are portrayed as quasi-familial institutions. An aesthetics with ties to a primordial community emphasizes the seemingly pre-social: oral communication techniques, uncomplicated manners, and nature-oriented life forms. It despises the exuberance of the baroque, elaborate culture of speech and excessive symbolism.

To conclude the results of my analysis, it appears that a form of "bass fetishism" became the organizational principle that characterized filmic as well as radio reality across genres during the pre-war era. Because sound film cameras at the time were far too heavy for on-site use, war reports had initially been recorded as silent films that were later transposed with voices and background noises taken from sound libraries. From this time on, however, real people (not fictional heroes) were dying on the images under the accompaniment of roaring airplane engines. Based on this interpretation, sound film roused archaic sound landscapes from their slumber and thus opened a Pandora's box. Only in the 1960s, as Adorno's studies have shown, did European society accumulate enough experience to gain a certain distance from this "bass fetishism" of the chest voice and its

primordial logic. The phenomenon itself has been tamed, grasped aesthetically, and delimited socially. It has shifted into the sphere of musical youth cultures, such as Hard Rock and Heavy Metal, and is thus far from obsolete.

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