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# Radio Documents

## Broadcasting, Sound Archiving, and the Rise of Radio Studies in Interwar Germany

**CAROLYN BIRDSALL**

**ABSTRACT:** This article investigates the relationship between broadcasting, sound archiving, and the rise of radio studies through the case of Germany's first radio studies institute, led by linguist Friedrichkarl Roedemeyer at the University of Freiburg from 1939 to 1945. I outline an emergent notion of radio research starting in the early 1920s, which contributed to a concept of radio content as both documentation and commodity object. The work of Wilhelm Doegen at the Lautabteilung ("sound department") in Berlin proved key to the development of radio research based on archival documentation, recording media, and multidisciplinary research agendas. The Nazi takeover in 1933 gave further ideological impetus to radio as a culturally and politically significant form that was worthy of costly archival documentation. Roedemeyer's institute of radio studies gained substantial support, but after it was closed down in 1945, researchers and archivists hastened to downplay their involvement with Nazi-era broadcasting and knowledge production.

In the late 1950s, there were a number of efforts in West German radio to put archival collections of recorded sound "on display." A striking example is a Frankfurt radio feature, "Sixty Years of Sound Documents: A Visit to the German Radio Archive," aired in November 1958.<sup>1</sup> The program

Carolyn Birdsall is associate professor of media studies at the University of Amsterdam. She leads the project "Mapping Transnational Conflict Heritage" (supported by the Netherlands Organization for Scientific Research), which examines the early history of sound recording and archiving in European radio broadcasting (1930–60). She thanks the "Epistemes of Modern Acoustics" group at the Max Planck Institute for the History of Science for supporting this research, and Kate Sturge, Birgitta Mallinckrodt, and Urte Brauckmann for their assistance. Additional thanks to Jeanpaul Goergen, Arnulf Kutsch, Carola Jüllig (Deutsches Historisches Museum), Jörg-Uwe Fischer and Jörg Wyrchow (Deutsches Rundfunkarchiv), and Irene Hilden (Lautarchiv, Humboldt-Universität zu Berlin).

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1. Käthe Beckmann, "60 Jahre Tondokumente: Besuch im Lautarchiv des Deutschen Rundfunks." 2 November 1958. Hessische Rundfunk, 29 mins., sound recording. Archive no. 2652074, in DRA.

takes the listener on a tour of the German Radio Archive (Lautarchiv des Deutschen Rundfunks) in Frankfurt, which was launched in 1950 by the new West German consortium of public broadcasters ARD and is today known as the Deutsches Rundfunkarchiv. In the feature, Hans-Joachim Weinbrenner, the archive's politics and economics specialist, tells the reporter it is possible to narrate recent German history between 1918 and 1945 using just a few historical sound clips. To illustrate the Weimar Re-public, Weinbrenner plays a clip of the declaration of the Republic on 9 November 1918 by Social Democrat Philipp Scheidemann, followed by a mix of parliamentary recordings from 1931 to 1932 in which cheering, booing, and singing by the Communists and Nazis can be heard. The re-porter exclaims that this compilation allows one to practically hear the rise of Adolf Hitler and the NSDAP; Weinbrenner agrees that it is only through such recordings, rather than stenographic parliamentary reports, that one could now know how these events actually occurred.<sup>2</sup> In this showcase of the historical sound archives, the various interviewees subscribe to the self-evident value of the recordings—as “sound documents” and “living his-tory”—and reveal an affinity with the subdiscipline of contemporary his-tory in postwar Germany, which was heavily invested in the preservation and reuse of audio and audiovisual sources.<sup>3</sup>

The story of how the German Radio Archive in Frankfurt started to build its post-1945 collection of historical sound recordings includes one detail of particular importance. In 1953–54, the archive acquired its first holdings from the private collection of Berlin phonetician Wilhelm Doegen (1877–1967), who had spearheaded a research-oriented sound archive during and after World War I.<sup>4</sup> Despite this, the Frankfurt archive's first official catalogue, compiled by Weinbrenner in 1958, makes no mention of Doegen in the introduction or individual entries.<sup>5</sup> Weinbrenner and many others involved in the postwar establishment of institutions such as the German Radio Archive—and of related disciplines such as journalism, communica-tion studies, and, later, media studies—were keen to downplay the signifi-cance of pre-1945 institutions and their own involvement in these.<sup>6</sup> In the

2. Ibid.

3. Ibid. (Here and throughout, all translations are my own unless otherwise attributed.) See also Thomas Lindenberger, “Vergangenes Hören.”

4. In the wake of World War II, many German radio recordings were destroyed or confiscated by Allied forces, but by 1955 the German Radio Archive in Frankfurt was able to obtain copies of Nazi-era recordings held by the BBC in London, acquire mate-rials from private collectors and institutions, and solicit donations from the general public. See Carolyn Birdsall, “Sound in Media Studies.”

5. Lautarchiv des Deutschen Rundfunks, ed., *Tondokumente zur Zeitgeschichte*. Doegen had kept this selection of recordings at home after his official dismissal in 1933 and hidden them in his garden during the war. See “Zwei gelehrte Hühner.”

6. See Arnulf Kutsch, “Hans-Joachim Weinbrenner”; Joachim-Felix Leonhard, “Hans-Joachim Weinbrenner”; Hans-Joachim Weinbrenner, “Das Deutsche Rund-funkarchiv.”

1958 feature, radio pioneer Kurt Magnus insisted that the postwar German Radio Archive had “had to start completely from scratch,” and figures later involved in founding the eminent Hans Bredow Institute for Media Re-search, a joint initiative of Hamburg University and the regional broadcaster NWDR, in 1950 asserted that their work had been “without precedent.”<sup>7</sup>

This article proposes to challenge that insistent emphasis on the “new-ness” of postwar institutions, and instead to investigate pre-1945 relation-ships between broadcasting, sound archiving, and scientific research. It takes as its focus the rise of broadcasting research, through the case of Ger-many’s first dedicated department of radio studies, which was led by lin-guistics researcher Friedrichkarl Roedemeyer (1895–1948) at the Univer-sity of Freiburg from 1939 to 1945.<sup>8</sup> This early history of German radio studies, with its dual orientation on sound and the use of archives in re-search, has largely remained unacknowledged.<sup>9</sup> More prominent have been U.S. radio research projects pursued in the same period by German-speaking exiles, such as Paul Lazarsfeld and Herta Herzog.<sup>10</sup> These projects relied far less on the use and development of recording technologies or sound archival praxis—this was chiefly social scientific and consumer research, bolstered by industry and government funding during and after World War II.<sup>11</sup>

The creation of the radio studies department in Freiburg was champi-oned by the Reich Radio Chamber president Hans Kriegler with the sup-port of Walther Heide, who headed the national association of newspaper studies. During the six years of the institute’s official existence under Roedemeyer, it followed multiple disciplinary impulses, many of which applied an archive-based concept of radio based on what Roedemeyer later dubbed the “acoustic document” and “acoustic documentation.” Leaving

7. Beckmann, “60 Jahre Tondokumente,” in DRA; Gerhard Maletzke, “Aufbau eines neuen Instituts.” For a criticism of such discourses, see the essays in Wolfgang Duch-kowitsch, Fritz Hausjell, and Bernd Semrad, eds., *Spirale des Schweigens*. See also Irmela Schneider, “Spuren einer Wissenschaft der Medien.”

8. After serving in World War I, Roedemeyer trained in speech studies and also fol-lowed Eduard Sievers’s German studies classes at the University of Göttingen. Arnulf Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 1.

9. See, for example, Irmela Schneider and Cornelia Epping-Jäger, eds., *Formationen der Mediennutzung III*; Peter Simonson et al., eds., *Handbook of Communication His-tory*. For an exception, see Lauren Bratlavsky, “The Archive.”

10. Herta Herzog’s “Stimme und Persönlichkeit,” completed under Karl Bühler’s supervision in Vienna in 1931 and published in 1933, was one of the first German-lan-guage dissertations on radio. See Cornelia Epping-Jäger, “Herta Herzog and the Vien-nese School of Radio Research”; Desmond Mark, ed., *Paul Lazarsfelds Wiener RAVAG-Studie*.

11. See John Durham Peters and Peter Simonson, “World in Turmoil”; Irmela Schneider, “Auf den Spuren der Medienforschung.”; Christopher Simpson, *Science of Coercion*. For a Nazi-inflected comparative account of German and American radio re-search, see Elisabeth Noelle-Neumann, *Amerikanische Massenbefragungen*, 128–36.

broader topics of radio research—radio form and aesthetics—to his employees and guest researchers, Roedemeyer's personal agenda was largely defined by interests in sound archival documentation and empirical research on listening in general and radio listening in particular.

Although Roedemeyer largely avoided overtly political topics concerned with policy or institutional organization, the existence of his research and teaching institute was facilitated by a National Socialist investment in radio. Its research agenda was directly influenced both by the regime's support for applied research and by developments related to World War II. During this period, Roedemeyer's broad program gradually shifted from its initially archive-based institutional model towards a narrower interest in applied acoustics and technological development, and eventually—in 1945—to a redefinition in terms of humanities-based language research.

Some scholarship exists on Roedemeyer's radio studies institute, but there has been too little recognition of the influential concepts of sound archiving and radio research that prefigured and influenced Roedemeyer's own project.<sup>12</sup> In this essay, I thus aim to identify key developments in the establishment of radio as an object of scholarly investigation in interwar Germany, as grounded in a particular confluence of technological, institutional, and political-economic conditions. To that end, I outline various dimensions of how, from the early 1920s, radio was recognized as a potential experimental object and research tool, most prominently with lab-based experimental practice and studio-based science communication strategies that were articulated in the development of new instruments and purpose-built spaces.

One of the most significant figures in that development was Wilhelm Doegen and his sound archive in the Prussian State Library. Established in 1920 with an emphasis on recording spoken languages and the voices of famous people, Doegen's project created an intersection between research based on archived sound and a new engagement in radio research after the advent of regulated broadcasting in 1923. The emergence of sound archival practice became significant in radio, too, with the Berlin radio station Funk-Stunde launching its own radio archive in January 1930. It is against the background of these new developments and archival logics in radio, I argue, that an emergent concept of "radio studies" can be framed.

## Radio as Experimental Object and Research Tool

When Friedrichkarl Roedemeyer took up the directorship of the radio studies institute in 1939, his personal research interest in radio speech and listener psychology built on a long-term interest among German linguists

12. The most far-reaching study of Roedemeyer to date is Kutsch, *Rundfunkwissenschaft im Dritten Reich*.

and psychologists in the potential of new media technologies for experimental practice. Soon after the official start to German broadcasting in 1923, university-based researchers in these fields had begun intermittent investigations of the possibilities offered by radio as a research tool, in terms of both its content and its public reach.<sup>13</sup> Following the establishment of the second German station, MIRAG (Mitteldeutsche Rundfunk AG), in Leipzig in January 1924, Otto Klemm, a newly appointed professor of applied psychology, published experimental findings in a magazine dedicated to “advances in broadcasting.” Klemm carried out a mass psychological associative experiment, for which he received 200 written responses from listeners to a series of questions that he posed on radio.<sup>14</sup> At the phonetics laboratory in Hamburg, meanwhile, comparative musicologist Wilhelm Heinitz was exploring the use of radio to investigate how consonants were communicated through broadcasting.<sup>15</sup> If such early examples do not provide evidence of a sustained engagement with the new medium of radio, they did posit the potential of using radio for experimental purposes—for Heinitz in the university laboratory, for Klemm through the airwaves, as studio transmission was a means of addressing domestic listeners whose written answers could subsequently be analyzed at the research institute. Linguist Wilhelm Doegen presents a similar case as regards the expansion of potential sites—field, lab, studio—in which radio research might be conducted. The Royal Prussian Phonographic Commission, founded in 1915 under the leadership of Carl Stumpf with Doegen as managing director, had recorded the language and music of World War I prisoners of war mainly in camps near Berlin.<sup>16</sup> This “field” was constituted through acts of recording in makeshift recording setups, mainly indoors, following protocols in which sound recordings were produced in conjunction with visual and print documentation. Doegen’s proposal for a sound office (Lautamt), successfully established in April 1920 as the Lautabteilung (“sound department”), resulted in a combination of in-house recording studio, laboratory, and library or archival collection, which was situated within the Prussian State Library rather than being a department of the nearby University of Berlin. It was in this hybrid insti-

13. On early twentieth-century German wireless research and development, see, for instance, Michael Friedewald, “Beginnings of Radio Communication”; Roland Wittje, *Age of Electroacoustics*, 67–71.

14. Klemm had previously been an assistant to Wilhelm Wundt at the Institute of Psychology in Leipzig. See Otto Klemm, “Der Rundfunk,” 993; Ernst Smigelski, “Experimentelle Psychologie”; Eberhard Loosch, Otto Klemm, 76.

15. Wilhelm Heinitz, “Konsonantenübertragung.” This appears to have been a short-lived interest for Heinitz; there is only one later radio collaboration, when the Hamburg radio station archived four of Heinitz’s recordings from Cameroon. See the overview of Heinitz’s collection at [www.esra.uni-hamburg.de/esra/search/results/col-lection\\_id/1.16](http://www.esra.uni-hamburg.de/esra/search/results/col-lection_id/1.16). Britta Lange, “Ein Archiv von Stimmen.” See also Julia Kursell in this issue.



**FIG. 1** “A playback machine with an electrical (sound amplification) box, connected with radio reception.” (Source: Doegen, *Jahrbuch des Lautwesens* 1931, 122.)

tutional setting that Doegen projected a vision of how the Lautabteilung could facilitate research within multiple disciplinary fields, but with attention to broadcasting as one of the main tasks of its phonetic laboratory, in accordance with “scientific, pedagogical, or cultural concerns.”<sup>17</sup>

Apart from in the institutional lab, Doegen also appears to have pursued radio research in the context of his own home, which he designated as the main laboratory or workshop for his personal research activities and experiments in building instruments, such as the Lauthalter (“sound-holder,” fig. 1) that was patented in 1925 as a phonograph arm and needle able to select parts of disc recordings and replay them for the purposes of linguistic research. Doegen’s annual reports at the Lautabteilung mention

17. Doegen, “Lautbibliothek und Lautbund,” 44. An organizational chart (1928/ 1929) in the Humboldt University collection indicates that Doegen, along with his assistant Dr. Karl Ketterer and technician Karl Tempel, would be responsible for this radio research. “Organisation der Lautabteilung an der Preussischen Staatsbibliothek Berlin,” Folder 1, in IL. See Viktoria Tkaczyk in this issue.

ongoing radio research in the early to mid-1920s but give few details on the exact experiments he carried out, either at home or in the department. It does appear, though, that Doegen was highly responsive to new opportunities during the “experimental” phase of German radio broadcasting, between roughly 1923 and 1926, when program forms and organization were still in flux. In January 1924, the various regional stations formed a new, joint organization subsequently named the Reichs-Rundfunk-Gesellschaft or RRG (Reich Radio Board), not only to represent their interests, but also to stimulate and support research on radio.<sup>18</sup> Probably aware of this, Doegen wrote to Hans Bredow, the head of the RRG and its governance of German radio, in early May 1925 to ask permission to make recordings of live broadcasts. Doegen explained that he intended to build a receiving station in his home in the Zehlendorf district of Berlin—where he would record live transmissions and use them for research.

Doegen received what seems to have been a unique endorsement by the RRG, with Bredow granting permission for a Telefunken reception device and numerous loudspeakers on condition that the results were shared with Bredow’s office after a one-year trial.<sup>19</sup> Despite the scant archival record, two points are apparent in Doegen’s early work with radio. In terms of research, he appears to have been strongly oriented toward radio speech. This focus is suggested by Doegen’s efforts, from 1925 onwards, to commission Roedemeyer to make recordings and publish on speech techniques for the Lautabteilung in Berlin.<sup>20</sup> Roedemeyer, who had become increasingly active in radio journalism and occasionally program-making during the 1920s, wrote an article in February 1930 in which he credited Doegen as one of the first to take on the important challenge of generating an “acoustic portrait” of a person on the basis of their voice, an issue he considered crucial for the analysis of radio speech.<sup>21</sup>

In terms of technology, Doegen decided to couple his “sound-holder” invention with the new medium of radio. Writing in 1930, he characterized his device as having been remodeled for radio, in an image caption that described it as “a playback machine with an electrical (sound amplification) box, connected with radio reception.”<sup>22</sup> The significance of this coupling is

18. Out of this initial organization, the RRG was formed on 15 May 1925 with Hans Bredow as its head. It was a central body for financial and legal provisions for all stations, as well as the organization of news and publicity. *Geschäftsbericht der Reichs-Rundfunk-Gesellschaft mbH für das Geschäftsjahr 1925/26*, 3, RRG 1/002: 1926, in DRA. On the experimental phase of German radio, see Solveig Ottmann, *Im Anfang*; Eva Susanne Bressler, *Von der Experimentierbühne*, 109, 287.

19. Wilhelm Doegen to Hans Bredow, 1 May 1925; Hans Bredow to Wilhelm Doegen, 2 May 1925; Wilhelm Doegen to Hans Bredow, 5 May 1925, all Folder 7, in IfL.

20. Friedrichkarl Roedemeyer, *Sprechtechnik*. See also Friedrich Roedemeyer to Wilhelm Doegen, 28 November 1927; Friedrich Roedemeyer to Wilhelm Doegen, 16 December 1927, Folder 7, both in IfL.

21. Friedrichkarl Roedemeyer, “Vom akustischen Porträt.”

22. Wilhelm Doegen, *Jahrbuch des Lautwesens* 1931, 122.



the new possibilities it offered for selecting and repeating broadcast content and long-term storage for posterity. Doegen appears to have been a pioneer in combining radio-based scientific experiment with his interest in research-based sound archival praxis. This was an early effort to stabilize the ephemeral sounds of radio at least five years before such practices became more common in either radio production or commercial releases (as I will discuss in the following section), and set an important precedent for the later work of the radio studies institute in Freiburg. It also reflects an investment in the “stability and savability of inscriptions” by means of such technologies as the phonograph, which, as historian Lisa Gitelman has observed, also reminds us that the introduction of a new medium—and institution—of radio broadcasting should be seen less as a rupture than as part and parcel of existing social negotiations with media technology.<sup>23</sup>

The early, experimental period of radio research was dominated by a notion of practicing experimental research via radio, but we can see in Doegen’s work the nascent idea of radio broadcasting both as an object of academic study and as connected to archival praxis. Doegen’s engagement with radio, in fact, mainly took the form of delivering numerous lectures on Germany’s regional radio stations to local audiences. The first mention of Doegen in relation to radio is found in May 1924, when he delivered his tried-and-tested lecture on “Voices of the Peoples” on the Berlin radio station.<sup>24</sup> The lecture title specified the format “als Laut- und Bildvortrag” (as a sound and image presentation), suggesting an assumption that his talk would be delivered in a lecture-style setting with both sound playback and a slide projector. Doegen’s private photo collection, now held at the German Historical Museum, includes several copies of a photograph of this 1924 presentation. Reusing the image for a publication in 1930, Doegen added the following caption to the 1924 photo: “It is worth noticing that the playback of sound discs was not done—as it is nowadays—through electric pickup boxes; they were played purely by acoustic means towards the microphone”<sup>25</sup> (fig. 2). Here, Doegen indicates to his reader the amateurish nature of early radio broadcasts, but also that by the time of writing in 1930, radio was fully able to accommodate recorded sound replay via plugged-in cables.

Since Doegen was known for speaking without notes, no scripts of his lectures exist. However, in the period before sound recording, editing, and storage praxis became established in German broadcasting, the Berlin station compiled lectures in a more traditional documentation form, namely

23. Lisa Gitelman, *Always Already New*, 6–7.

24. Letters between Funk Stunde-Berlin and Wilhelm Doegen, 1 May 1924, 6 May 1924, 15 May 1924, Folder 7, all in IfL. From the 1920s until at least the 1950s, this title— “*Stimmen der Völker*”—was the standard one that Doegen tended to use for public engagements. It implicitly references Johann Gottfried Herder’s folksong collection in the posthumous edition of 1807. Herder, *Stimmen der Völker in Liedern*.

25. Doegen, *Jahrbuch des Lautwesens* 1931, 93.



**FIG. 2** “Wilhem Doegen at the Berlin Radio microphone.” (Source: Doegen, *Jahrbuch des Lautwesens* 1931, 93.)

a print anthology titled *Das Wissen im Rundfunk* (Knowledge in radio, 1927). The anthology cites the planning of a “college of the airwaves” launched at Hamburg radio in July 1924, and introduced in Berlin in November 1924—the initial impetus for the idea of broadcasting lectures as a bridge to listeners on topics around research and technology.<sup>26</sup> Doegen’s May 1924 presentation is included in *Das Wissen im Rundfunk*, and starts with a preamble that emphasizes his *Lautabteilung*’s work in creating, processing, and distributing recorded sounds worthy of academic study:

The Sound Library [*Lautbibliothek*] . . . is a research institute aiming to address all things related to sound [*Laut*]. The most recent development in sound, radio, thus also falls within the scope of the Sound Library. . . . Until now libraries have transmitted knowledge with the book, the manuscript, sheet music. Now we have gone one step further: the dead alphabetic characters are supplemented by the sound disc [*Lautplatte*] to create a genuine, speaking, living library.<sup>27</sup>

In this introduction, Doegen portrays the *Lautabteilung* as having an archival collection that is accessible for on-site study, made possible by lis-

26. Andreas Schott, “Die Hans-Bredow-Schule.” Editor Theodor Kappstein notes that he checked the scripts for their usability for “documentation purposes” and entered a selection of 400 into a card system before finalizing 100 talks for publication. See Theodor Kappstein, “Einleitung,” xi.

27. Wilhelm Doegen, “*Stimmen der Völker*,” 169.

tening stations in the department's rooms within the State Library. The published text of Doegen's lecture is barely more than a page, unlike most of the other more academic lectures included in the volume, and its filing under the heading Technik is suggestive of his reputation as an inventor-archivist and facilitator of research, rather than as a prolific scholar.<sup>28</sup> The remainder of the lecture transcript indicates that Doegen played examples from the two major sections of the Lautabteilung collection, namely ethno-graphic recordings and "the voices of famous personalities."<sup>29</sup> Although Doegen's lecture primarily presented the Lautabteilung as an archive collection and research facility supporting scientific disciplines invested in recording and archiving sound data, this on-air presentation of recordings offered an inkling of how radio sounds could be recorded, stored, and re-used for the purposes of study as well.

Doegen was thus not only a sound archive pioneer, but also a "boundary shifter"—actively moving between knowledge institutions, researcher networks, technology development, and commercial and media channels.<sup>30</sup> Before a radio studies research agenda gained traction during the 1930s in the context of Nazi political agendas, there was a crucial intermediate stage, to which Doegen belonged: radio was defined as epistemic object in early experiments in linguistics and social psychology. That epistemic status also depended on a process by which the sounds of radio were redefined as being suited to the purposes of academic study, and through presentations of radio as a form of documentation that could be produced by recording and archival technologies.

#### Knowing Radio: Publishing and Publicly Presenting

Archived SoundInterwar radio culture circulated various forms of popular knowledge about radio, for instance in program magazines, in radio criticism, in tech-

28. Indeed, Doegen occupies no more than a single footnote in a 2004 history of his disciplinary field, English language and literature, in Germany: Frank-Rutger Haussmann, *Anglistik und Amerikanistik*, 176n25. The poor quality of Doegen's contribution raises the question of why his lecture was selected for the anthology. The most obvious connection is the editor, Kappstein, who had also worked as the compiler and editor of Doegen's 1921 publication *Kriegsgefangene Völker*.

29. The first part of the radio demonstration was a compilation that included a Swiss folk singer, a Scottish bagpipe player, and other voices of "foreign peoples" (English dialect, African languages, and a Muslim call to prayer). The second part presented a short illustration of "recent history" through three clips: a 1917 parliamentary speech by former chancellor Theobald Bethmann-Hollweg, the 1919 swearing-in of the first president, Friedrich Ebert, and a 1921 statement by Indian philosopher Rabindranath Tagore proposing reconciliation between all peoples.

30. On the concept of "boundary shifter," see Pinch and Trocco's discussion of Robert Moog, moving between the domains of engineering and music. Trevor Pinch and Frank Trocco, *Analog Days*, 314.

nical handbooks and amateur publications, and in the yearbooks and reports produced by the RRG and regional stations.<sup>31</sup> Against this general development, I will focus more narrowly on the process by which the largely ephemeral sounds of broadcast transmission acquired the status of archival documentation and commodity objects, a process that I conceive as a necessary precondition for the radio research agenda later spearheaded by Roedemeyer in Freiburg. Of particular interest in this respect is the re-contextualization of radio sound via two key genres—public exhibitions and commercial publications—in which the capturing of radio sounds in time and space was increasingly connected to archival practices of collection, preservation, access provision, and use. In both genres, the presentation of radio sound was dependent on, and filtered through, existing discursive frameworks concerned with the social and cultural significance of music, technological progress, and modern education techniques.

Public exhibitions were a major feature of Weimar cultural and public life, fostering innovations in terms of content, presentation strategies, and new media.<sup>32</sup> The two examples I examine here are significant in their dates, before and shortly after the official launch of sound archiving at the Berlin radio station by its recently appointed director Hans Flesch in early 1930.<sup>33</sup> They are also significant in their particular locations (Frankfurt, Berlin), as assemblages of relevant institutional actors, practices, and technologies that would become important for the presentation of radio sounds as documentation and object, and as responses to the growing economic and political value of recorded radio in interwar Germany.

The aim of the 1927 exhibition *Musik im Leben der Völker* (Music in the lives of nations), curated by the musicologist and librarian Kathi Meyer-Baer and facilitated by Ludwig Koch of the Frankfurt Trade Fair Office, was to consider the impact of music in society, encompassing a broad sweep of historical periods and musical cultures.<sup>34</sup> In this musical world exhibition, Doegen's presentation of the Lautabteilung was situated next to a display by Hans Flesch, then still director of the Frankfurt radio station, who had gained a reputation for new radiophonic experiments.<sup>35</sup> Doegen had arranged with the organizer Ludwig Koch to have his two-room display placed in the final section, devoted to sound technology and new music. Doegen's first room "Musik der Völker" (Music of the peoples) included a history of record production, his own soundholder device, and a playback machine with several sound recordings<sup>36</sup> (fig. 3). In the second

31. See, for instance, Herbert Antoine, "Marksteine"; Bressler, *Von der Experimentierbühne*, 323–25; Irmela Schneider, *Radio-Kultur*.

32. See, for instance, Noam Elcott, "Rooms of Our Time"; Kerstin Barndt, "Diormas of a New World."

33. See Birdsall, "Sound in Media Studies."

34. Hansjakob Ziemer, "Musik im Leben der Völker," 124.

35. Carolyn Birdsall, "Sound Aesthetics"; Ottmann, *Im Anfang*.

36. Writing to Koch, Doegen requested not to be placed in the "geographic" part of

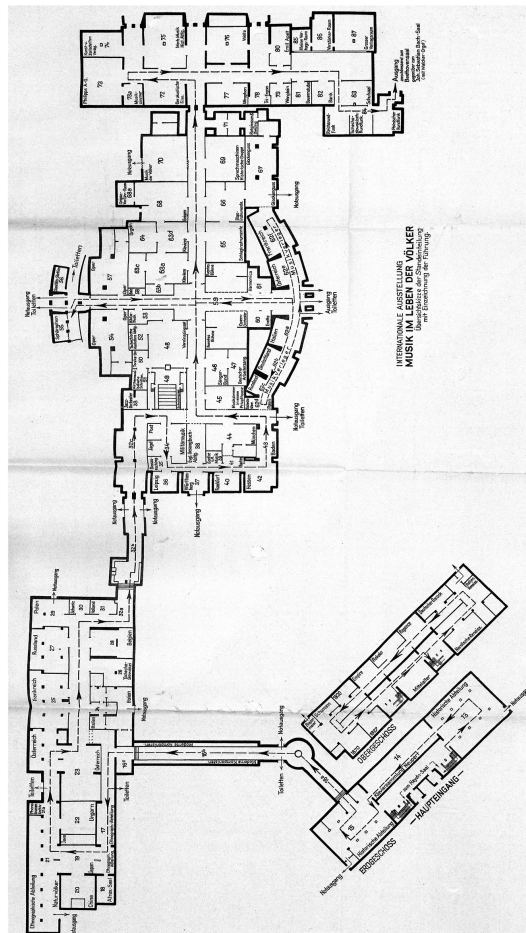
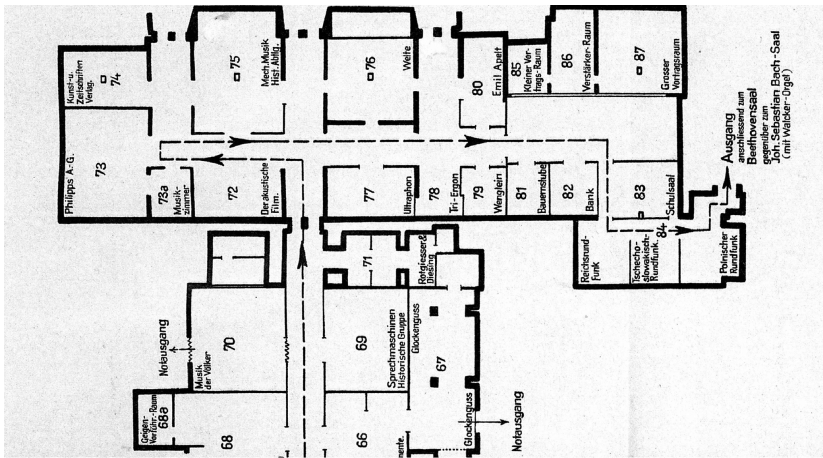


FIG. 3 Floor plan and detail (Rooms 69 to 87), *Musik im Leben der Völker* (Music in the lives of nations) exhibition in Frankfurt. (Source: Max Bartsch, *Führer durch die Ausstellung Musik im Leben der Völker*, n. p.)

room, visitors could observe how a recording for his collection of famous people's voices was created, from start to finish. This section gave a spatial display of a modern sound archive, with multiple recordings compiled side by side; it also enabled an encounter with a listening public and allowed these visitors to entertain the idea of listening repeatedly to the sound documents, even if they could not possess recordings of these voices outright.

Although Hans Flesch did not yet explicitly meditate on the archivability of radio sounds at this time, his extensive display, titled "Radio" and occupying the final seven rooms of the music exhibition, engaged with the specific qualities of radio sound through its spatial presentation and documentary materials. Despite the caveat that radio had not yet produced noticeable new forms, the radio rooms celebrated broadcasting's purchase on the public imagination and its potential for producing new acoustics and medium-specific sounds, and narrated the rapid developments that had already occurred in its short history.<sup>37</sup>

The scale of this display, and its entertainment value (with live broadcasts), clearly already outstripped the two rooms allocated to Doegen. Nonetheless, given Doegen's concern with archiving and radio research, there is a significance in the spatial proximity between his reuse of archival sound and the documentary presentation of radio praxis. In turn, Flesch's walk-through presentation of Frankfurt radio production, starting with a scale model of the Frankfurt broadcasting house, demonstrated the spatial conditions and techniques used for Flesch's and others' efforts to produce radio-specific sound. It was this modern broadcasting house that later became the prime model first for the music and radio lab where Roedemeyer worked in Frankfurt (from circa 1935), and later for the layout of the radio studies institute in Freiburg (from 1939).

In other words, the 1927 exhibition situated Doegen's Berlin sound archive in relation to a new set of actors, including Flesch and Koch, as well as—by association—a number of Frankfurt-based figures who most likely would have attended these events and who became significant in the later development of the institute of radio studies (Friedrichkarl Roedemeyer, Reinhold Merten, and Friedrich Trautwein). At this time, Roedemeyer was intermittently collaborating with Doegen, regularly contributing to Frankfurt radio programs, and teaching in various educational institutions, including speech training at the University of Frankfurt. From 1930, he was also involved with the establishment of a studio at the Frankfurt Süwrag station dedicated to experiments with new presentation formats and uses of technology in music and spoken-word programming.<sup>38</sup>

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the exhibition, which also featured recordings of non-European music made by his former colleagues Carl Stumpf and Erich von Hornbostel and held at the Berliner Phono-gramm-Archiv. Wilhelm Doegen to Ludwig Koch, 19 May 1927, Folder 1, in IfL; Kathi Meyer, Katalog, 328–35.

37. Meyer, Katalog, 333–35.

38. Kutsch, Rundfunkwissenschaft im Dritten Reich, 74.

The rising status of radio content as a recordable and archivable object within exhibition praxis can be more fully discerned in the annual German Radio Exhibition between 1924 and 1939, which attracted a general public as well as industry members, researchers, journalists, and radio employees. In 1930 and 1931, the organizers collaborated with the film and gramo-phone industries for an expanded event titled the “Great German Radio Exhibition and Phono-Show.”<sup>39</sup> During the first of these events, in August 1930, Doegen presented a selection of twelve recordings of contemporary “leading personalities.”<sup>40</sup> This archival sound presentation was categorized in the historical section and focused on speeches (often recorded years after the original events), while Flesch, since July 1929 director of the Ber-*lin* station, attained a more prominent position for a demonstration of his radio sound archive, founded in January 1930.<sup>41</sup> Flesch presented clips from his monthly program “Rückblick auf Schallplatten” (Retrospective on Records) and used the new radio archival collection to create an innovative collage of sound bites.<sup>42</sup> By the time of the 1932 radio exhibition, the RRG’s presentation of its own collection of “the voices of famous personalities” suggests that Doe-*gen*’s project had been all but superseded. Indeed, in January 1931, the Berlin radio archive moved to a purpose-built space in the new Haus des Rundfunks (fig. 4). The joint facility meant that the archive now serviced not only the Berlin station, but also the RRG national radio board and the nationwide Deutsche Welle station. Doegen’s sizable collection was thus rapidly eclipsed by the RRG, a state-governed media institution with scores of staff and ample resources for the expensive process of recording pro-grams in order to reuse them and present them in an accessible way to lis-*teners*. Although access to Doegen’s archive was largely confined to the Lautabteilung itself, he did sell copies of his ethnographic music and lan-*guage* recordings via the Prussian State Library—mainly to other scholars and, very occasionally, to radio stations.<sup>43</sup> And despite insisting that the “leading personalities” recordings were not for sale, he tried, though un-successfully, to sell this entire collection to the RRG in early 1932, most likely due to the Lautabteilung’s dire financial situation.<sup>44</sup>

39. Bressler, *Von der Experimentierbühne*, 38–40.

40. Wilhelm Doegen to organizers of the Great Radio Exhibition and Phono-Show, 10 August 1930, Folder 7, in IFL.

41. “Der Film auf der Funk-Ausstellung.”

42. See Birdsall, “Sound Aesthetics.” In 1930, Doegen acknowledged Flesch’s “interesting” monthly program, noting “that Flesch puts the clips into a new context, and that one day in the future it will be possible to share the history of radio in an entertaining manner.” Doegen, *Jahrbuch des Lautwesens* 1931, 149.

43. Doegen had sometimes sold ethnographic recordings to German radio stations in the mid-to-late 1920s, though the stations mainly wanted animal sounds and foreign-language recordings for their sound effects libraries. A catalogue published in June 1932 states that the recordings from the ethnographic collection must not be used in radio programs. Lautabteilung, *Katalog der Lautbibliothek*.

44. Around the same time, complaints were made by several colleagues against



**FIG. 4** Haus des Rundfunks (Broadcasting House), Berlin, in 1947. (Source: B 145 Bild-F005427-0045 [CC-BY-SA 3.0], in BArch.)

Alongside exhibitions, a second important dimension of radio content as archival documentation and commodity object is that of commercial publications. Before the 1930s, very few (if any) radio programs were issued as gramophone publications for sale. In Germany, the primary for-mat for the commercial distribution of radio program content was “sound books” (tönende Bücher), pioneered by Ludwig Koch. After the 1927 music exhibition in Frankfurt, Koch had left the Trade Fair management to join the Lindström record company in Berlin. As head of the cultural department there, he pursued the further legitimization of gramophone records by means of educational materials and research documentation, also publishing articles by prominent figures in the areas of research, radio, and the gramophone industry in his bulletin *Kultur und Schallplatte*, which appeared between July 1929 and May 1931.<sup>45</sup> Following a number of publications on language acquisition, Koch started to work on a series of sound books combining sound, image, and text. Doegen, who had an existing association with the Lindström company, seized the opportunity to publish a sound book with Koch’s cultural department in 1930.<sup>46</sup> This Jahr-

Doegen, and he was officially dismissed following a protracted court case in 1932–33. Max Vasmer to Dr. Karl Büchsel, 23 April 1932, Folder HUB 903, in AHU; official documentation in the folder titled “In der Lautabteilung bei der Preussischen Staatsbibliothek, II, vom Januar 1931 bis Dezember 1934,” R 4901, Folder 1475, in BArch.

45. Stefan Gauss, Nadel, Rille, Trichter, 80–91. On Koch’s other “sound books,” see Joeri Bruyninx in this issue.

46. Lindström’s subsidiary Odeon had pressed the Lautabteilung’s recordings since



buch des Lautwesens 1931 was published with a small-format disc holding just one recording, a World War I prisoner-of-war recording titled “Ge-betsruf der Mohammedaner” (The Mohammedans’ call to prayer), dating from 1916, which Doegen had frequently used in his “Stimmen der Völker” lectures.<sup>47</sup> The Jahrbuch imitated radio-related print genres such as the yearbook, calendar, and handbook, but a year earlier, Doegen had created a considerably more audio-oriented sound book, for which the Berlin radio’s studios were used to record short English-language dia-logues between the BBC radio personality and linguistics researcher Arth-ur Lloyd James and his wife Elsie Lloyd James.<sup>48</sup>

Despite the intensified economic hardship of the years after 1929, Koch produced more sound books, which made use of archived radio record-ings.<sup>49</sup> His collaboration with the RRG radio board can be interpreted as indicating a growing state investment in the costly process of archival doc-umentation, reproduction, and distribution. In 1933, for example, the Lindström cultural department produced the popular book Vom 30. Janu-ar zum 21. März (1933), for which Hitler and the RRG gave permission for archived radio speeches from the early days of the new regime to be re-leased on two accompanying records.<sup>50</sup> This practice of replaying and reliving the sounds of recent media events was perpetuated through to the final project conceived by Koch before he was forced into exile: Olympia Tonbuch 1936, which was promoted after the Berlin Olympics as a selec-tion of “original RRG recordings” that would enable a “lasting memory.”<sup>51</sup> These examples indicate the ideological stakes in the archival documenta-tion of culturally significant radio programs. Sound recordings were em-bedded in richly illustrated publications and accorded a cultural prestige in

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the early 1920s. See, for instance, “Vertrag” (contract), 4 October 1921, Folder 9, in IfL. Another possible motivation may have been that Doegen was aware of his former col-league Erich von Hornbostel’s preparation, from 1928 onwards, of the “sound book” Musik des Orients (1931). Hornbostel’s close collaborator, the musicologist and collec-tion specialist Curt Sachs, also produced a concise history of Western music called 2000 Jahre Musik auf Schallplatte (1930), accompanied by twelve records. See Rainer Lotz, “Das tönende Buch.”

47. Muhammed Hisameddin, “Gebetsruf der Mohammedaner, Arabisch von e. Ta-taren gespr.,” 30 December 1916, PK 626, in LAHU.

48. Wilhelm Doegen and Will Potter, eds., With Camera and Record throughout England; A[rthur] Lloyd James to Wilhelm Doegen, 29 December 1928, Folder 1, in IfL.

49. The publications included a number of RRG commissions for internal use, such as Hindenburg’s radio speech on New Year’s Eve 1931 and another marking Hindenburg’s birthday on 10 October 1932. Lotz, “Das tönende Buch,” 20. For further evidence of Koch’s similar status to Doegen as a “boundary shifter” working across multiple do-mains, see Joeri Bruyninckx in this issue.

50. Erich Czech-Jochberg, Vom 30. Januar zum 21. März.

51. Lotz, “Das tönende Buch,” 22. Under growing anti-Semitic pressure, Koch went into exile in 1935. During a business trip to Switzerland, he decided to flee to England, where he worked for the BBC and helped produce a number of sound books. Ludwig Koch, Memoirs, 32–50.

keeping with the “record/book analogy.”<sup>52</sup> The status of sound books as archival objects asserted a capturing of live radio content, which could now also provide a resource for repeated listening in teaching and research. Although the engagement of Doegen, Flesch, and Koch with the recording, archiving, and presentation of radio sounds was halted either just before or after the Nazi takeover in 1933, Friedrichkarl Roedemeyer continued to make use of the radio exhibition and publishing genres to disseminate his radio research, which was formalized with the establishment of a purpose-built radio studies institute.

### New Institutional Spaces for Teaching and Researching Radio

Roedemeyer occupied a rather ambiguous role during Nazism. Immediately after the Nazi takeover in January 1933, accusations that he had given preferential treatment to Jewish and Catholic students led to his secondary appointment for speech training in Darmstadt being retracted.<sup>53</sup> In May 1933, Roedemeyer joined the NSDAP, and he remained in his primary teaching role at Frankfurt University from 1934 to 1939, during which time his research—often supported by state and private commissions—was mainly concerned with German pronunciation and speech pedagogy, including for radio.<sup>54</sup>

The creation of the radio studies department at Freiburg University under Roedemeyer was instigated mainly by an appeal to German universities in 1938 by the Ministry of Propaganda’s Reich Radio Chamber, whose president Hans Kriegler asserted a need for more research about radio beyond the existing regime and industry support for applied acoustics and radio engineering.<sup>55</sup> There were, however, several experimental initiatives prior to this, in the 1920s and early 1930s. I will read these earlier instances as important institutional contributions to a future discipline based on archival and documentation practice, audio recording media and studio experimentation, and research in a multidisciplinary framework. Institutional practices treating radio as teachable and researchable provided important groundwork for the development of radio studies. One of those precedents was the Rundfunkversuchsstelle (radio experimental lab), based at Berlin’s Academy of Music from May 1928 and best known for the work of electronic instrument inventor Friedrich Trautwein and the composers Paul Hindemith and Oskar Sala.<sup>56</sup> Although the Berlin

52. Colin Symes, *Setting the Record Straight*, 230.

53. The discontinuation of Roedemeyer’s engagements with Frankfurt radio was also due to his Weimar-era collaborations with Ernst Schoen and Franz Wallner, who were both fired after the Nazi takeover. Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 76.

54. *Ibid.*, 67–76.

55. *Ibid.*, 1.

56. Dietmar Schenk, *Die Hochschule für Musik*, 257–72; Thomas Patteson, *Instruments for New Music*, 114–51. The Berliner Phonogramm-Archiv (under Erich von

station director and radio archive initiator Hans Flesch was associated with the Rundfunkversuchsstelle, those working there were more concerned with using recording equipment to produce new tonalities for radio than with recording, archiving, or reusing existing programs.<sup>57</sup> In Leipzig, the local MIRAG station opened its radio school in October 1932, which both dealt with technological “radiophonic problems” in broadcast production and trained students to become radio professionals, particularly in creative and research roles.<sup>58</sup> Again, there is no available documentation indicating that these teaching programs resulted in on-site sound archives and library facilities.<sup>59</sup>

A further important precursor was the Frankfurt Süwrag station and its radiophonic experiments, led by Hans Flesch, Ernst Schoen, and Reinhold Merten in the period 1924–29.<sup>60</sup> After heading the Frankfurt station until 1929, Flesch began to experiment with recording, editing, and archiving sound following his arrival at the Berlin radio station. In 1931–32, he was subjected to anti-Semitic attacks in right-wing newspapers, and his proposals for sound recording and archiving practices were criticized as an impediment to both radio liveness and efforts to innovate radiophonic forms.<sup>61</sup> A very different example in the same period is the career of Hans-Joachim Weinbrenner—the later sound archivist at the German Radio Archive, mentioned at the start of this article. From 1930, Weinbrenner was involved in the National Socialist “radio subscribers” lobby group. This helped him to gain a position in the NSDAP’s own sound studio in Berlin, where he

Hornbostel) was housed in the same musical academy, yet there appears to have been little common ground or exchange between the Phonogramm-Archiv’s largely historical recorded sound collection and the Rundfunkversuchsstelle’s interest in new instruments and musical experimentation. For one exception, see Georg Schünemann to Frau Kaza-rowa, 31 March 1931; Erich von Hornbostel to Georg Schünemann, 11 April 1931, both Bestand Ib, Nr. 12, in AÜdK. The author thanks Myles Jackson for sharing this reference.

57. See Alfred Braun, “Rundfunk – Bühne – Tonfilm.” Music students in Berlin could also take radio classes in a studio lab at the Klindworth-Scharwenka conservatory’s studio lab, which had also planned to set up a “microphone institute” in 1932–1933. See Alfred Szendrei, *Im türkisenblauen Garten*, 152.

58. Unlike the Rundfunkversuchsstelle in Berlin, the Leipzig initiative was entirely arranged by the management of the MIRAG radio station and had a looser connection to the conservatory. E. Kurt Fischer, “Das Rundfunkinstitut in Leipzig,” 429.

59. *Ibid.*, 428.

60. Merten had initiated a school for sound engineers in Frankfurt, which was moved to Dresden when he joined the Leipzig MIRAG station in 1930. See Jörg Clemen, *Mitteldeutscher Rundfunk*, 78–79; August Soppe, *Rundfunk in Frankfurt*.

61. For criticisms of sound recording in radio, see the collection of responses in the three-part series “Die Schallplatte im Rundfunk.” For legal disputes about the use of records in radio programming at this time, see Wolfgang Mühl-Benninghaus, *Das Ringen um den Tonfilm*, 53–80, 264–84. Hans Flesch was dismissed in August 1932, shortly after the introduction of new, more restrictive radio legislation in June the same year. See Marianne Weil, *Hans Flesch*, 231–39; Marlies Flesch-Thebesius, *Hauptsache Schweigen*, 78–79.

gave radio training to party members. Following the Nazi takeover, Weinbrenner performed various roles, mainly related to radio publications and documentation, in the Radio Chamber that was formed on 3 July 1933.<sup>62</sup>

Finally, the University of Berlin's department of newspaper studies, led by Emil Dovifat, provided another disciplinary framework for radio teaching and research in the Nazi era. Due to Dovifat's own primary focus on newspapers and journalism, it did not have an extensive library collection, a sound studio, or a sound archive. In this department—and in the Leipzig University newspaper studies department—the lessons on radio were given by journalist Kurt Wagenführ (along with former government press chief Walther Heide in Berlin).<sup>63</sup> As editor of the regime-endorsed journal *Welt-Rundfunk* from 1937 to 1944, Wagenführ himself was mainly interested in the area of print-based documentation and publishing about radio. It bears mentioning that whereas Dovifat and Wagenführ used their 1940s "Berlin institute" as the model for the post-1945 Hans Bredow Institute, Roedemeyer's Freiburg project was largely discontinued after 1945.<sup>64</sup>

Many of the early initiatives fed into the 1939 founding of Roedemeyer's new radio studies institute in Freiburg. A crucial component of the new institute in Freiburg was its spatial design, which not only took its cue from modern radio buildings, but was premised on an archival logic of radio. Roedemeyer based the studio setup on the electroacoustics department at the Frankfurt Institute of Musicology, which he had planned and led in 1935–37 with Josef Müller-Blattau and the latter's assistant Wilhelm Stauder.<sup>65</sup> He modeled the interior layout and organization on the Frankfurt Süwrag radio station, as evidenced by the two ground-floor recording rooms (marked "Senderraum"), each facing the control room, at the heart of the institute's radio research and teaching (fig. 5). Both rooms were equipped for speech and music recording and playback using Tefifon and Magnetophone tape and shellac records, and had padded doors, sound-proof windows, and sound-absorbent panels on the walls and ceiling. The room marked "Sekretariat" was made into an extra space for technical and acoustic experiments in April 1940, when new electrotechnical equipment

62. See Reichsverband Deutscher Rundfunkteilnehmer (RDR) e.V. Berlin, *Rundfunk im Aufbruch*, 6; Hans-Joachim Weinbrenner, personnel file card, undated (ca. 1937–39), File R 9361-V/107881, in BArch. For the organization of Nazi-era radio more generally, see Carolyn Birdsall, *Nazi Soundscapes*.

63. These activities in Berlin produced nine doctoral dissertations and one post-doctoral habilitation on radio broadcasting between 1939 and 1945. See "Rundfunk in Forschung und Lehre."

64. See Schneider, "Spuren einer Wissenschaft der Medien," 93–98.

65. The decision to locate the radio studies institute in Freiburg arose from consultation with musicology

professor Josef Müller-Blattau, who had moved to Freiburg from the University of Frankfurt in 1937. It was on Müller-Blattau's recommendation that his former Frankfurt employee Roedemeyer was appointed director in 1938 and the institute was founded in October 1939. Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 67.

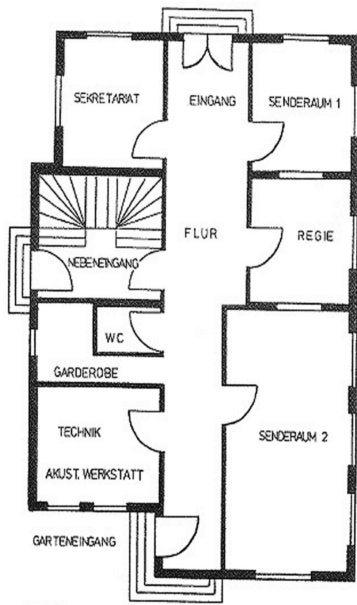


Abb. 1  
Institut für Rundfunkwissenschaft  
Grundriss des Erdgeschosses

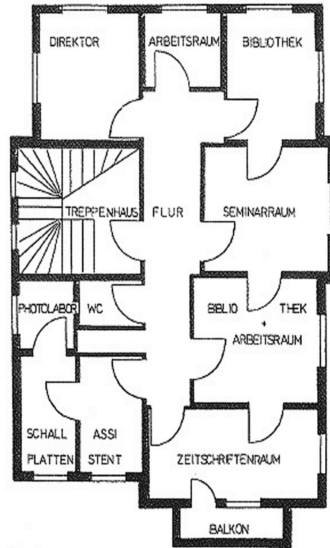


Abb. 2  
Institut für Rundfunkwissenschaft  
Grundriss der 1. Etage

FIG. 5 Floor plan, ground and first floor, Institut für Rundfunkwissenschaft, Freiburg. (Source: Arnulf Kutsch, *Rundfunkwissenschaft im Dritten Reich: Geschichte des Instituts für Rundfunkwissenschaft der Universität Freiburg*, Munich: Saur, 1985, pp. 137–38, Figs. 1 and 2. Courtesy of De Gruyter.)

was installed.<sup>66</sup> Roedemeyer's office was on the first floor, along with the seminar room for teaching, the library, print collection room, copy room, and the recorded sound archive (Schallarchiv).

The impression of the institute as a modern "sound house" was heightened by the installation of a closed-circuit system that allowed sound transmission from various rooms to be heard elsewhere in the building.<sup>67</sup> Preparing to simulate a radio station building and studios, Roedemeyer sent his student assistants to Berlin radio and other stations to examine their technical setups. His assistant Arthur Pfeiffer, who had worked at Berlin radio in the mid-1930s, also acquired donations of sound recordings and publications from the RRG and various radio stations, along with a large donation of print materials from the Munich University newspaper studies department.<sup>68</sup> As a result, the sizable holdings of the Freiburg sound archive included a collection of 1,700 in-house magnetic tape re- recordings and clips from radio broadcasts, 800 commercial gramophone

66. *Ibid.*, 144–45.

67. On such buildings and their relationship to modern architecture, technology, and acoustics, see Staffan Ericson and Kristina Riegert, eds., *Media Houses*; Emily Thompson, *Soundscape of Modernity*.

68. Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 150–55.

records, 6,000 acetate discs from German radio stations, and more than 300 recordings of wartime frontline reports.<sup>69</sup>

Roedemeyer's institute thus had impressive technical facilities from the outset and engaged in a large number of research projects, publication series, and courses for a group of approximately ten students, who generally followed the radio studies program as a minor subject within their musicology or German studies degrees, taking one to two seminars each trimester. The institute attracted prominent guest lecturers including Kurt Wagenführ, Reinhold Merten, radio architect Eugen Michel, television director Herbert Engler, psychology researcher Willy Hellpach, and celebrated war reporters Paul Laven and Horst Slesina. Some of these guests, such as Merten (and later Friedrich Trautwein), were also commissioned to undertake research for Roedemeyer's publication series from 1941 on.<sup>70</sup>

Even though the institute received substantial support—and a fairly free rein—from its sponsors at the Freiburg city and regional government, it came under pressure in the first two years of its existence. The Propaganda Ministry official Alfred-Ingemar Berndt tried to have it moved to Berlin in 1940, then to the new university in occupied Strasbourg in 1941. Berndt recruited Hans-Joachim Weinbrenner (whose name was initially listed in the institute's board of trustees) to inform Roedemeyer by telephone of the requirement to move to Berlin.<sup>71</sup> Although Roedemeyer deflected both attempts, historian Arnulf Kutsch has suggested that this political climate caused him to take a cautious stance in formulating the institute's research agenda and public activities. Kutsch's 1985 study of the Freiburg institute argues that its research scope was also quite diffuse—in part due to a short-age of personnel to carry out the various research projects, but also because Roedemeyer's own concept of radio science remained rather general.<sup>72</sup>

### Institutional Experiments in Acoustic Documentation and Listener Research

When working at the Frankfurt University sound studio in 1935–37, Roedemeyer had installed radio equipment for use in acoustic experimentation and developed an interest in two areas that would become the trade-mark of his radio institute in Freiburg. The first was acoustical documentation, initially defined as the creation, collection, and preparation of sound recordings for teaching and research; the second was listener research, especially perceptual psychology, connected to the listener experience of speech and music transmission.<sup>73</sup> Shortly before taking up his position in Freiburg

69. Ibid., 151.

70. Ibid., 152–53, 204–20.

71. Ibid., 151, 156.

72. Ibid., 136, 201–2.

73. Ibid., 1–3. See also Friedrichkarl Roedemeyer and Franz Türk, Einsatz der *Schallplatte*.

in October 1939, Roedemeyer and a group of his Frankfurt students were invited to present their own display, taking up six rooms at what was to be the last radio exhibition in Berlin before the outbreak of war (28 July–6 August 1939).<sup>74</sup> The annual radio exhibition in Berlin, as discussed above, was an important platform for displaying knowledge formation around radio, and from 1937 its organization was led by Kriegler and other NSDAP functionaries.<sup>75</sup> Roedemeyer and his students titled their display “Rundfunkarbeit, von welcher der Hörer nichts weiß” (Radio work of which the listener is unaware), and used it to assert the need for new fields of research for radio studies, particularly in listener research.<sup>76</sup> The first four rooms displayed radio program analysis on paper; sound recording experiments with various test transmissions, studio spaces, and microphone or speech techniques; and examinations of listener attention and experience. The remaining two showed acoustical research devices (such as a pneumograph, pitch level recorder, sound frequency spectrometer, and electron beam oscillograph) and the latest AEG and Telefunken loudspeaker and sound recording devices. Noting that the Frankfurt speech research department was affiliated with the Reich Radio Chamber, a reviewer particularly praised the last part of the display, with its audiovisual documentation of the department’s research: it showcased experiments that would be useful to National Socialist radio, such as monitoring the reactions to radio programs in a communal listening situation. The new field of radio research, the reviewer concluded, had the potential to produce future excellence in reporting, program production, and station management.<sup>77</sup>

Upon founding the institute in Freiburg, Roedemeyer and his three paid employees decided that their work would focus on evaluating folklore-oriented radio programs; analyzing variables in announcer speech; comparing sound recordings (radio, commercial, and in-house recordings); examining symphonic music on radio; analyzing the history, creation, and realization of radio plays and features; and using recordings to analyze the psychology of radio talk (especially the art of interviewing). More generally, the thematic emphasis would be the voice and musical instrumentation in radio, the production of “acoustic atmosphere,” and the history of radio.<sup>78</sup> These

74. The students involved in the radio exhibition moved with Roedemeyer to the University of Freiburg, where they played a key role in helping him establish the new institute; the majority also went on to conduct graduate research there. See Kutsch, *Rundfunkwissenschaft im Dritten Reich*.

75. Most of the other exhibition displays in 1939 were devoted to themes ranging from the success of Nazi radio and the popularity of Volksempfänger receivers, to television transmission and programming for young people and rural areas. See Bressler, *Von der Experimentierbühne*, 343.

76. Hans Sutaner, “Rundfunkarbeit.” On the historical development of radio listener research in Germany, see Hansjörg Bessler, *Hörer- und Zuschauerforschung*.

77. Sutaner, “Rundfunkarbeit,” 315.

78. See Friedrichkarl Roedemeyer, “1. Tätigkeitsbericht (18.10.39 bis 31.3.1940),” p.

2, cited in Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 136.

themes suggest a very broad, multidisciplinary scope and an expectation of strong reliance on archived radio sound in both teaching and research. In the course of 1940, once the institute's facilities were set up, Roedemeyer created three divisions: the technical and library department, acoustics and technology, and printed literature and archive.

But Roedemeyer's concern with sound-based documentation in teaching and research was even broader than this program implies. One illustration is the institute's 1940–42 focus on new, wartime-related radio formats. This led to one of the former Frankfurt students, Kurt Reuschling, being sent to Berlin in late 1940 to visit the Armed Forces High Command and make a selection from hundreds of "front reports" (Frontberichte), to be added to the archive for the purposes of teaching and research. From 1940, student assistants were also enlisted for a variety of in-house recording activities to build a collection of examples for teaching and experimentation. These collection activities ranged from recording and listening to national and regional programs, to designing acoustic experiments and tests of transmission sound quality. Outside the institute premises, Roedemeyer developed listener research protocols for one-on-one interviews with listeners in remote parts of the Black Forest.<sup>79</sup> Such activities were expanded in the academic year 1941–42, when a student project was charged with producing recordings of "spoken village histories."<sup>80</sup> These recordings were primarily meant to be added to the archive for the purpose of analyzing the relationship between dialects and landscape, but they also generated material for a politically charged soundscape analysis of "acoustic atmosphere."<sup>81</sup>

However, the most important motivation for recording radio sounds for research purposes was the new responsibility given to Roedemeyer by the Propaganda Ministry's radio research unit. This wartime unit—in which Kurt Wagenführ also played a key role—was tasked with setting up a central archive to gather information on broadcasting in occupied Europe and internationally, starting with a large and unsorted collection of materials confiscated from broadcasting organizations from 1940 onwards.<sup>82</sup> In addition to providing best-practice advice about radio archiving and documentation, Roedemeyer's institute was requested to monitor foreign radio and send reports to Berlin, and Roedemeyer and Wagenführ were put in charge of a joint publication series, although each ultimately pursued separate publication projects.<sup>83</sup>

79. See Friedrichkarl Roedemeyer, "Die Befragung des Rundfunkhörers."

80. Friedrichkarl Roedemeyer, "Die erste gesprochene Dorfgeschichte"; Roedemeyer, "Volkskunde und Rundfunkwissenschaft."

81. See Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 181.

82. On confiscations of broadcast recordings from occupied European countries, see Birdsall, "Sound in Media Studies."

83. The first three volumes of Roedemeyer's series, "Schriften des Instituts für Rundfunkwissenschaft an der Universität Freiburg," were published in 1941–42, with



If the early years of the institute saw an initial flurry of activity, by 1943 and early 1944 it seems that little, if any, radio teaching and research was still being carried out. In 1941, Roedemeyer had authored an essay on “The Acoustic Document,” followed by a series on “Acoustic Documentation” that explicitly aligned his work with the fields of archive and book studies, but he now gradually shifted away from the earlier archive-based projects to an increasing involvement in research on the blind. This interest led to experiments in blind auditory experience and radio listening, along with a funded project to construct prosthetic vision by electroacoustic and photoelectric means with a reading machine that would translate optical information into acoustic signals.<sup>84</sup> For this research, Friedrich Trautwein, whose work at the Rundfunkversuchsstelle lab in Berlin had been discontinued in 1934, was initially brought to Freiburg, then allowed to set up an acoustics lab as a Berlin outpost of the Freiburg radio institute to create new technological prototypes with two blind scholars, Willy Wittstock and Annemarie Wettstein.<sup>85</sup>

In the same period, Roedemeyer struggled to perform his various tasks, partly due to health problems, partly to ongoing difficulties with the institute’s staffing and war-related shortages. When the institute was bombed out in November 1944, its recovered items were relocated—with the remaining staff—to a village outside Freiburg, but its work was more or less discontinued. Roedemeyer himself, realizing the difficulty of financing the institute’s rebuilding, proposed even before the 1945 capitulation that it be absorbed into Freiburg University’s linguistics department.<sup>86</sup> The remaining equipment was confiscated by the French military, and in autumn 1945, a new commission at Freiburg University dismissed Roedemeyer and his staff, deciding it was not worth maintaining the discipline or rebuilding the institute’s premises.

## Conclusion

This essay has investigated the conditions under which radio broadcasting became the object of a growing discipline between the 1920s and 1945, with particular attention to the relationship between radio, archiv-

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a number of further monographs completed but not published. Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 214–17.

84. Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 257–60. On historical conceptions of deafness and technological development, see Mara Mills, “Deafness”; Mills, “On Disability and Cybernetics.” Friedrichkarl Roedemeyer, “Das akustische Dokument”; Roedemeyer, “Akustische Dokumentation.”

85. Kutsch, *Rundfunkwissenschaft im Dritten Reich*, 260–66.

86. Kutsch suggests that Roedemeyer’s effort to portray the field as a humanities-based, nontechnical endeavor was due to the expertise of Dr. Arthur Pfeiffer, briefly re-hired as an assistant between June and August 1945, who was mainly interested in questions of radio aesthetics and genres. *Ibid.*, 274.

ing, and scientific research. I have argued that Wilhelm Doegen helped to build an important bridge between research-oriented sound recording and archiving and, from the mid-1920s, an emergent interest in the study of radio as communications technology and new cultural form. Doegen's en-gagement in science communication via radio, too, provided an early model for the reuse and presentation of archival sound in radio programming. Doegen presented his archival collection as a commodity in the Wei-mar public sphere in exhibitions and commercial publications; ultimately, this was eclipsed by German radio broadcasting's ever-expanding activities in sound archiving and commodification. Together, such activities formed the preconditions for new institutional spaces for investigating radio to be established, up to the rise of a regime-authorized discipline of radio stud-ies in the late 1930s that was driven by Nazi investments in radio research.

Friedrichkarl Roedemeyer's department of radio studies in Freiburg constituted an early blueprint for a radio research agenda—as an endeavor that was to be supported by sound recording and archival practice, techni-cal equipment and studios, and a well-equipped print library. Roedem-eyer's own definition of the field remained rather vague, but the multidis-ci-plinary activities within his institute revealed some interest in mediality and the formal dimensions of radio programming, and, increasingly, in lis-tener psychology and audience research.<sup>87</sup> The decision of Freiburg University to discontinue the department of radio studies also brought an end to the idea of dedicated institutes with in-house sound archives for the purposes of teaching and research.

Although none of Roedemeyer's staff or students pursued radio stud-ies after 1945, a number of the guest researchers and lecturers from the Nazi era continued their careers in related fields.<sup>88</sup> Many of those em-ployed as radio teachers in Berlin and Leipzig during Nazism also contin-ued their work under the rubric of newspaper and journalism studies and, later, communication studies. Of the seventeen Nazi-era university departments for newspaper and journalism studies, the three that survived in West Germany were led by professors—Emil Dovifat (Berlin), Walter Hagemann (Münster), and Karl d'Ester (Munich)—whose careers had been advanced, or at least not impeded, by National Socialism.<sup>89</sup> Kurt

87. Despite the presence of “media theory” in Germany between the 1880s and early 1930s, Albert Kümmel suggests there are very few examples of modern mass media being part of German university research and teaching curricula in that period, with the field of newspaper studies constituting an early, rare exception. Albert Kümmel, “Pa-pierfluten.”

88. War reporter Horst Slesina worked in advertising; Hans Wenke, a professor of psychology and education, went on to head the Hans Bredow Institute from 1967 until his death in 1971; reporter Karl Holzamer was appointed professor of philosophy, psy-chology, and education in Mainz in 1946, followed by duties on the board of SWF radio and as director general of the ZDF television station between 1963 and 1977.

89. Rudolf Stöber, “Emil Dovifat, Karl d'Ester und Walter Hagemann,” 123.

Wagenführ, who had taught in Nazi-era Berlin and Leipzig, was hired to teach in the journalism (later, communication) departments in Hamburg and Münster and participated in research at the Hans Bredow Institute in Hamburg in the early 1950s.<sup>90</sup> E. Kurt Fischer, who taught in Leipzig, also became a radio studies teacher in Münster between 1957 and 1963, and his celebrated 1964 book on radio drama gave a selective account of developments during National Socialism.<sup>91</sup> Nonetheless, the Nazi-era support for the broader field of communication studies led to a credibility problem in the postwar period. The gradual decline of the field prompted a decade-long debate from 1960 about whether it should be a humanities-based discipline or an empirical social science.<sup>92</sup>

The postwar departments and research institutes for journalism or communication studies do not appear to have created extensive sound archives for the study of radio. The task of rebuilding historical radio collections seems to have been prompted primarily by the establishment of the German Radio Archive in Frankfurt in 1951–55 as a collaboration between the main regional stations in West Germany. This archival project of German radio was assisted by former Propaganda Ministry employee Hans-Joachim Weinbrenner, who had been hired by Hans Bredow in Wiesbaden in 1949 to organize his personal papers into the “Hans Bredow Archive.” In 1949 and 1950, Weinbrenner also taught radio at the performing arts academy in Wiesbaden, itself equipped with new radio studios, before being appointed in 1952 as the first head of the politics and economics section by the German Radio Archive.<sup>93</sup> Between 1962 and 1975, Weinbrenner headed the historical commission of the West German broadcasting consortium ARD, and was one of the founders of the ARD’s Radio and History Study Group in 1969, directing it until 1975. Not only had Nazi-era employees such as Wagenführ, Fischer, and Weinbrenner held positions of institutional influence, but none of them publicly distanced themselves from those activities after the war. In fact, they continued to promote themselves as providers of “new” impulses for radio research and its archival documentation up until the 1960s and early 1970s.

90. For further detail on the influence and controversies around Wagenführ in the postwar period, see Schneider, “Spuren einer Wissenschaft der Medien.”

91. E. Kurt Fischer, *Das Hörspiel*.

92. Maria Löblich, “German Publizistikwissenschaft.” The debate took place in the main specialist publication, *Publizistik*, founded in 1956 by Dovifat and former newspaper editor Walter Hagemann. See also Hans Bohrmann, “Als der Krieg zu Ende war,” 107.

93. The poster for the 1950 semester at this academy can be viewed at Europeana Collections, in EC, [www.europeana.eu/portal/en/record/00733/BB572CE8AC6C0A40A\\_F09F1DCE4CF3A8C3C581FDE.html](http://www.europeana.eu/portal/en/record/00733/BB572CE8AC6C0A40A_F09F1DCE4CF3A8C3C581FDE.html).

Additional archival materials relating to this article can be accessed at the database “Sound & Science: Digital Histories,” <https://acoustics.mpiwg-berlin.mpg.de/sets/clusters/listening-archive/>.

Bibliography



### **Archival Sources**

Bundesarchiv, Berlin (BArch)

Archiv der Humboldt-Universität zu Berlin (AHU)

Institut für Lautforschung collection (IfL)

Archiv der Universität der Künste Berlin (AUdK)

Archiv des Deutschen Historischen Museums, Berlin (ADHM) Deutsches Rundfunkarchiv, Frankfurt (DRA)

Europeana Collections, [www.europeana.eu/portal/en](http://www.europeana.eu/portal/en) (EC)

Lautarchiv der Humboldt-Universität zu Berlin (LAHU)

### **Published Sources**

Antoine, Herbert. “Marksteine: Erzählende Chronik des deutschen Rundfunks.” In *Rundfunkjahrbuch 1931*, edited by Reichs-Rundfunk-Gesellschaft Berlin, 215–32. Berlin: Union Verlag, 1931.

Barndt, Kerstin. “‘Dioramas of a New World’: Siegfried Kracauer and Weimar Exhibition Culture.” In *Culture in the Anteroom: The Legacies of Siegfried Kracauer*, edited by Gerd Gemünden and Johannes von Moltke, 166–82. Ann Arbor: University of Michigan Press, 2012.

Bartsch, Max. *Führer durch die Ausstellung Musik im Leben der Völker in Frankfurt a. M., 11. Juni bis 28. August 1927*. Frankfurt am Main: Union, 1927.

Bessler, Hansjörg. *Hörer- und Zuschauerforschung*. Munich: Deutscher Taschenbuch Verlag, 1980.

Birdsall, Carolyn. *Nazi Soundscapes: Sound, Technology and Urban Space, 1933–1945*. Amsterdam: Amsterdam University Press, 2012.

\_\_\_\_\_. “Sound Aesthetics and the Global Imagination in German Media Culture around 1930.” In *Sounds of Modern History: Auditory Cultures in 19th and 20th Century Europe*, edited by Daniel Morat, 257–77. New York: Berghahn, 2014.

\_\_\_\_\_. “Sound in Media Studies: Archiving and the Construction of Sonic Heritage.” In *Sound as Popular Culture*, edited by Jens Gerrit Papenburg and Holger Schulze, 133–48. Cambridge, MA: MIT Press, 2016.

Bohrmann, Hans. “Als der Krieg zu Ende war: Von der Zeitungswissenschaft zur Publizistik.” In *Die Spirale des Schweigens: Zum Umgang mit der nationalsozialistischen Zeitungswissenschaft*, edited by Wolfgang Duchkowitsch, Fritz Hausjell, and Bernd Semrad, 97–122. Vienna: LIT, 2004.

Bratlavsky, Lauren. “The Archive and Disciplinary Formation: A Histori-

cal Moment in Defining Mass Communications.” *American Journalism* 32, no. 2 (2015): 116–37.

Braun, Alfred. “Rundfunk – Bühne – Tonfilm: Erfahrungen an der ‘Rundfunkversuchsstelle’: Ein Brief an den ‘Funk.’” *Funk* 7, no. 13 (1930): 72. Bressler, Eva Susanne. *Von der Experimentierbühne zum Propaganda-instrument: Die Geschichte der Funkausstellung von 1924 bis 1939*. Cologne: Böhlau, 2009.

Clemen, Jörg. *Mitteldeutscher Rundfunk: Die Geschichte des Sinfonieorchesters*. Altenburg: Kamprad, 1999.

Czech-Jochberg, Erich. *Vom 30. Januar zum 21. März: Die Tage der nationalen Erhebung*. Leipzig: Verlag “Das neue Deutschland,” 1933. Doegen, Wilhelm.

*Jahrbuch des Lautwesens 1931*. Berlin: Lehner, 1930. \_\_\_\_\_. “Lautbibliothek und Lautbund.” In *Radio-Jahrbuch 1927*, vol. 2,

edited by Adolf Ihring and Rudolf Lothar, 43–47. Berlin: Verlag Dr. A. Ihring, 1927.

\_\_\_\_\_. “Stimmen der Völker als Laut- und Bildvortrag.” In *Das Wissen im*

*Rundfunk: Auswahl von Rundfunkvorträgen*, edited by Funk-Stunde Berlin, 169–70. Berlin: Verlag der Funk-Dienst G.m.b.H., 1927.

\_\_\_\_\_, and Theodor Kappstein. *Kriegsgefangene Völker, Band 1: Der Kriegsgefangenen Haltung und Schicksal*. Berlin: Verlag für Politik und Wirtschaft, 1921.

\_\_\_\_\_, and Will Potter, eds. *With Camera and Record throughout England / Mit Kamera und Lautplatte durch England*. Berlin: Laut-Verlag, 1930. Duchkowitsch, Wolfgang, Fritz Hausjell, and Bernd Semrad, eds. *Die*

*Spirale des Schweigens: Zum Umgang mit der nationalsozialistischen Zeitungswissenschaft*. Vienna: LIT, 2004.

Elcott, Noam. “Rooms of Our Time: László Moholy-Nagy and the Still-birth of Multi-Media Museums.” In *Screen/Space*, edited by Tamara Trodd, 25–52.

Manchester: Manchester University Press, 2011.

Epping-Jäger, Cornelia. “Herta Herzog and the Viennese School of Radio Research.” In *What Do We Really Know about Herta Herzog? Exploring the Life and Work of a Pioneer of Communication Research*, edited by Elisabeth Klaus and Josef Seethaler, 43–59. New York: Peter Lang, 2016.

Ericson, Staffan, and Kristina Riegert, eds. *Media Houses: Architecture, Media, and the Production of Centrality*. New York: Peter Lang, 2010. “Der Film auf der Funk-Ausstellung.” *Film Kurier* 196 (20 August 1930): n.p.

Fischer, E. Kurt. *Das Hörspiel: Form und Funktion*. Stuttgart: Alfred Kröner, 1964.

\_\_\_\_\_. “Das Rundfunkinstitut in Leipzig.” *Rufer und Hörer* 2, no. 9 (1932): 427–29.

Flesch-Thebesius, Marlies. *Hauptsache Schweigen: Eine Familiengeschichte*.

Frankfurt am Main: Societäts-Verlag, 2008.

Friedewald, Michael. "The Beginnings of Radio Communication in Germany, 1897–1918." *Journal of Radio Studies* 7, no. 2 (2000): 441–62. Gauss, Stefan. Nadel, Rille, Trichter: Kulturgeschichte des Phonographen und des Grammophons in Deutschland (1900–1940). Cologne: Böhlau, 2009. Gitelman, Lisa. *Always Already New: Media, History, and the Data of Culture*. Cambridge, MA: MIT Press, 2006. Haussmann, Frank-Rutger. *Anglistik und Amerikanistik im "Dritten Reich"*. Frankfurt am Main: Klostermann, 2003. Heinitz, Wilhelm. "Konsonantenübertragung durch Rundfunk." *Vox: Mitteilungsblatt aus dem Phonetischen Laboratorium der Universität Hamburg* 12 (1926): 7. Herder, Johann Gottfried. *Stimmen der Völker in Liedern: Volkslieder*. Edited by Heinz Rölleke. Stuttgart: Reclam, 2001. Herzog, Herta. "Stimme und Persönlichkeit." *Zeitschrift für Psychologie* 130 (1933): 300–69. Hornbostel, Erich von. *Musik des Orients*. 12 analog discs [78 rpm]. Berlin: Carl Lindström A.G., 1931. Kappstein, Theodor. "Einleitung." In *Das Wissen im Rundfunk: Auswahl von Rundfunkvorträgen*, edited by Funk-Stunde Berlin, ix–xiii. Berlin: Verlag der Funk-Dienst G.m.b.H., 1927. Klemm, Otto. "Der Rundfunk als neues Hilfsmittel für massenpsychologische Versuche." *Radio Umschau: Wochenschrift über die Fortschritte im Rundfunkwesen* 33 (1924): 991–93.

Koch, Ludwig. *Memoirs of a Birdman*. Boston: Charles T. Branford, 1955. Kümmel, Albert. "Papierfluten: Zeitungswissenschaft als Schwelle zu einer universitären Medienwissenschaft." In *1929: Beiträge zur Archäologie der Medien*, edited by Stefan Andriopoulos and Bernhard Dotzler, 224–52. Frankfurt am Main: Suhrkamp, 2002. Kutsch, Arnulf. "Hans-Joachim Weinbrenner." *Rundfunk und Geschichte* 6, no. 4 (1980): 165–66. *Rundfunkwissenschaft im Dritten Reich: Geschichte des Instituts für Rundfunkwissenschaft der Universität Freiburg*. Munich: Saur, 1985. Lange, Britta. "Ein Archiv von Stimmen: Kriegsgefangene unter ethnografischer Beobachtung." In *Original/Ton: Zur Mediengeschichte des O-Tons*, edited by Nikolaus Wegmann, Harun Maye, and Cornelius Reiher, 317–41. Konstanz: Universitätsverlag Konstanz, 2007. Lautabteilung, ed. *Katalog der Lautbibliothek: Phonetische Platten und Umschriften*. Berlin: Lautabteilung, 1932. Lautarchiv des Deutschen Rundfunks, ed. *Tondokumente zur Zeitgeschichte: Politik und Wirtschaft, 1901–1933*. Frankfurt am Main: Das Lautarchiv, 1958. Leonhard, Joachim-Felix. "Hans-Joachim Weinbrenner (1910–1995)." *Rundfunk und Geschichte* 21, no. 4 (1995): 265–67.

Lindenberger, Thomas. "Vergangenes Hören und Sehen: Zeitgeschichte und ihre Herausforderung durch die audiovisuellen Medien." *Zeithistorische Forschungen / Studies in Contemporary History* 1, no. 1 (2004): 72–85.

Löblich, Maria. "German Publizistikwissenschaft and Its Shift from a Humanistic to an Empirical Social Scientific Discipline: Elisabeth Noelle-Neumann, Emil Dovifat and the Publizistik Debate." *European Journal of Communication* 22, no. 1 (2007): 69–88.

Loosch, Eberhard. *Otto Klemm (1884–1939) und das Psychologische Institut in Leipzig*. Berlin: LIT, 2008.

Lotz, Rainer. "Das tönende Buch." In *The Lindström Project: Contributions to the History of the Record Industry*, vol. 3, edited by Pekka Gronow and Christiane Hofer, 17–30. Vienna: Gesellschaft für Historische Ton-träger, 2011.

Maletzke, Gerhard. "Aufbau eines neuen Instituts ohne Vorbilder: Die 50er Jahre." Hans-Bredow-Institut website. [www.hans-bredow-institut.de/de/geschichte/zur-geschichte-des-hans-bredow-instituts](http://www.hans-bredow-institut.de/de/geschichte/zur-geschichte-des-hans-bredow-instituts).

Mark, Desmond, ed. *Paul Lazarsfelds Wiener RAVAG-Studie 1932: Der Beginn der modernen Rundfunkforschung*. Vienna: Guthmann-Peter-son, 1996.

Meyer, Kathi. *Katalog der Internationalen Ausstellung Musik im Leben der Volker*. 11. Juni–28. August 1927. Frankfurt am Main. Frankfurt am Main: Hauserpresse Wemer und Wintger, 1927.

Mills, Mara. "Deafness." In *Keywords in Sound*, edited by David Novak and Matt Sakakeeny, 45–54. Durham, NC: Duke University Press, 2015. \_\_\_\_\_. "On Disability and Cybernetics: Helen Keller, Norbert Wiener, and the Hearing Glove." *differences* 22, no. 2–3 (2011): 74–111.

Mühl-Benninghaus, Wolfgang. *Das Ringen um den Tonfilm: Strategien der Elektro- und der Filmindustrie in den 20er und 30er Jahren*. Düsseldorf: Droste Verlag, 1999.

Noelle-Neumann, Elisabeth. *Amerikanische Massenbefragungen über Politik und Presse*. Frankfurt am Main: Diesterweg, 1940.

Ottmann, Solveig. *Im Anfang war das Experiment: Das Weimarer Radiobei Hans Flesch und Ernst Schoen*. Berlin: Kulturverlag Kadmos, 2013. Patteson, Thomas.

*Instruments for New Music: Sound, Technology, and Modernism*. Oakland: University of California Press, 2016.

Peters, John Durham, and Peter Simonson. "The World in Turmoil: Communications Research, 1933–1949." In *Mass Communication and American Social Thought: Key Texts, 1919–1968*, edited by John Durham Peters and Peter Simonson, 79–90. Boulder: Rowman and Little-field, 2004.

Pinch, Trevor, and Frank Trocco. *Analog Days: The Invention and Impact of the Moog Synthesizer*. Cambridge, MA: Harvard University Press, 2002.

- Reichsverband Deutscher Rundfunkteilnehmer (RDR) e.V. Berlin. Rundfunk im Aufbruch: Handbuch des deutschen Rundfunks 1934 mit Funkkalender. Baden: Moritz Schauenberg, 1934.
- Roedemeyer, Friedrichkarl. "Das akustische Dokument." *Forschungen und Fortschritte* 17, no. 12 (20 April 1941): 136–37.
- \_\_\_\_\_. "Akustische Dokumentation: Grundsätzliches und Organisatorisches." *Dokumentation und Arbeitstechnik* (January/February/March 1944): 3–4; (April/May/June 1944): 8–9.
- \_\_\_\_\_. "Die Befragung des Rundfunkhörers." *Deutscher Wissenschaftlicher Dienst* 64 (3 November 1941): 4–6.
- \_\_\_\_\_. "Die erste gesprochene Dorfgeschichte." *Kulturpolitisches Mitteilungsblatt der Reichspropagandaleitung (der NSDAP)* 10 (15 November 1942): n.p.
- \_\_\_\_\_. *Sprechtechnik und mundartfreie Aussprache*. Kassel: Bärenreiter, 1929.
- \_\_\_\_\_. "Volkskunde und Rundfunkwissenschaft." *Deutsche Volkskunde: Vierteljahresschrift der Arbeitsgemeinschaft für Deutsche Volkskunde* 5, no. 2 (1943): 88–90.
- \_\_\_\_\_. "Vom akustischen Porträt." *Die Sendung* 7, no. 8 (21 February 1930): 123.
- \_\_\_\_\_, and Franz Türk. *Der Einsatz der Schallplatte in Forschung und Unterricht*. Berlin: Stollberg, 1939.
- "Rundfunk in Forschung und Lehre (Mitteilungen der Universitäten Berlin und Leipzig)." *Welt-Rundfunk* 5, no. 1 (1941): 44–45.
- Sachs, Curt. *2000 Jahre Musik auf Schallplatte. 12 analog discs [78 rpm]*. Berlin: Carl Lindström A. G., 1930.
- "Die Schallplatte im Rundfunk: Direkte oder fixierte Sendung?" *Der Deutsche Rundfunk* 9, no. 34 (21 August 1931): 5–7.
- "Die Schallplatte im Rundfunk: Direkte oder fixierte Sendung? (II.)." *Der Deutsche Rundfunk* 9, no. 35 (28 August 1931): 4–6.
- "Die Schallplatte im Rundfunk: Direkte oder fixierte Sendung? (III.)." *Der Deutsche Rundfunk* 9, no. 36 (4 September 1931): 5–7.
- Schenk, Dietmar. *Die Hochschule für Musik zu Berlin: Preußens Konservatorium zwischen romantischem Klassizismus und neuer Musik, 1869–1932/33*. Stuttgart: Franz Steiner Verlag, 2004.
- Schneider, Irmela. "Auf den Spuren der Medienforschung: Zum Princeton Radio Research Project." In *Formationen der Mediennutzung III: Dis-positive Ordnungen im Umbau*, edited by Irmela Schneider and Cornelia Epping-Jäger, 191–211. Bielefeld: transcript Verlag, 2008.
- \_\_\_\_\_. *Radio-Kultur in der Weimarer Republik: Eine Dokumentation*. Tübingen: Narr, 1984.
- \_\_\_\_\_. "Spuren einer Wissenschaft der Medien: Zur Gründungsgeschichte des Hans-Bredow-Instituts." In *Formationen der Mediennutzung II*:



Strategien der Verdattung, edited by Irmela Schneider and Isabell Otto,

93–110. Bielefeld: transcript Verlag, 2007.

\_\_\_\_\_, and Cornelia Epping-Jäger, eds. Formationen der Mediennutzung

III: Dispositive Ordnungen im Umbau. Bielefeld: transcript Verlag, 2008.

Schott, Andreas. “Die Hans-Bredow-Schule für Volkswissenschaft.” In *Die Norag: 2. Jahrbuch*, edited by Nordische Rundfunk A. G., 10. Hamburg: Rufu-Verlag, 1926.

Simonson, Peter, Janice Peck, Robert T. Craig, and John Jackson, eds. *The Handbook of Communication History*. New York: Routledge, 2013. Simpson, Christopher.

*Science of Coercion: Communication Research and Psychological Warfare, 1945–1960*. New York: Oxford University Press, 1994.

Smigelski, Ernst. “Experimentelle Psychologie im Rundfunk.” *Der Deutsche Rundfunk* 2 (1924): 1971–72.

Soppe, August. *Rundfunk in Frankfurt am Main 1923–1926: Zur Organisations-, Programm- und Rezeptionsgeschichte eines neuen Mediums*. Munich: Saur, 1993.

Stöber, Rudolf. “Emil Dovifat, Karl d’Ester und Walter Hagemann: Die

Wiederbegründung der Publizistik in Deutschland nach 1945.” In *Die Spirale des Schweigens: Zum Umgang mit der nationalsozialistischen Zeitungswissenschaft*, edited by Wolfgang Duchkowitsch, Fritz Hausjell, and Bernd Semrad, 123–43. Vienna: LIT, 2004.

Sutaner, Hans. “Rundfunkarbeit, von der der Hörer nichts weiß.” *Funkschau* 12 (8 October 1939): 314–15.

Symes, Colin. *Setting the Record Straight: A Material History of Classical Recording*. Middleton, CT: Wesleyan University Press, 2004. Szendrei, Alfred. *Im türkisblauen Garten: Der Weg des Kapellmeisters*

A.S. von Leipzig in die Emigration, erzählt von ihm selbst. Edited by Max Pommer. Leipzig: J. G. Seume, 2014.

Thompson, Emily. *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933*. Cambridge, MA: MIT Press, 2002.

Weil, Marianne. “Hans Flesch: Rundfunkintendant in Berlin.” *Rundfunk und Geschichte* 22 (1996): 223–43.

Weinbrenner, Hans-Joachim. “Das Deutsche Rundfunkarchiv Frankfurt.”

In *Zeitgeschichte im Film- und Tondokument*, edited by Günter Moltmann and Karl Friedrich Reimers, 281–97. Göttingen: Musterschmidt, 1970.

Wittje, Roland. *The Age of Electroacoustics: Transforming Science and Sound*. Cambridge, MA: MIT Press, 2016.

Ziener, Hansjakob. “‘Musik im Leben der Völker’: Musik und Gesellschaft in Frankfurt am Main um 1927.” In *Musik in Frankfurt am Main*,

edited by Evelyn Brockhoff, 111–24. Frankfurt am Main: Waldemar Kramer, 2008.  
“Zwei gelehrte Hühner: Professor Doegen und seine Henne ‘Üti.’” Abend,  
15 March 1952: n.p.