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Hörspiel in the Lab

The Politics of Interdisciplinary Radio Research in Germany (1928–45)

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Hörspiel in the lab: The politics of interdisciplinary radio research in Germany (1928–45)

ABSTRACT

This article focuses on the establishment of new laboratories for radio research in Germany between 1928 and 1945, whereby the new discipline of radio studies and the collective work of artists, engineers and humanities scholars crucially advanced the development of the German Hörspiel (radio play). In turn, the embedding of the Hörspiel in these new 'radio labs' serves as an instructive prism for understanding the interdisciplinary and simultaneously highly political nature of these endeavours. Examining three case studies for radio research in this period, in Berlin, Leipzig and Freiburg, the article demonstrates how each adapted the laboratory culture of the engineering sciences to the needs of research in the humanities and their relationship to changing political conditions during the Weimar and National Socialist periods. It highlights a forgotten chapter in radio history and humanities research, particularly amidst the current enthusiasm for 'humanities labs' in the era of digital humanities.

KEYWORDS

radio play
audio technology
laboratory humanities
radio studies
aesthetic
experimentation
politicization of radio
Weimar Republic
national socialism

1. This article partly builds and expands on earlier work (Tkaczyk 2021, 2023; Birdsall 2019).

In 1931, the Berlin radio station's artistic director Hans Flesch compared the new genre of the *Hörspiel*, or radio drama, to a child that has found their feet but is still unable to walk properly (Flesch 1931). Yet instead of lamenting the genre's lack of maturity, Flesch suggests that his contemporaries should enjoy the first radio plays produced for the medium of broadcasting. Moreover, he stresses the creative pursuit of a radio-specific genre like the *Hörspiel* as a collective mission to be fulfilled by writers, directors, actors, musicians, sound engineers and speech educators alike.

Flesch's remarks reveal that interdisciplinary collaborations were key to the early years of radio and the experimental development of radio-specific content. As we will argue, Flesch's words found infrastructural support in the foundation of a series of new laboratories for radio research in Germany between 1928 and 1945, some of which crucially advanced the development of radio, and the *Hörspiel* in particular. In turn, the embeddedness of the *Hörspiel* in these new 'radio labs' serves as an instructive prism for understanding the highly political nature of these endeavours. As a genre that could be recorded and widely distributed, the *Hörspiel* responded both to the search for new forms of social-democratic art and education in the Weimar Republic and, with the rise of National Socialism, to strategies of mass propaganda. In this sense, the aestheticization of radio as a means not only of the technological reproduction of art but also of its widespread dissemination under National Socialism paralleled the fascist misuse of photography and film analysed by Walter Benjamin ([1935–36] 2008).

By focusing on experimental, laboratory-based and interdisciplinary radio research, this article seeks to explore how collective efforts by artists, humanities scholars and engineers were involved in this process. We build upon the work of historians of science and scholars of science and technology (STS) who have pursued research in what has come to be known as the field of 'laboratory studies' (Knorr-Cetina 1995). While early work in this field provided a structuralist and *longue durée* approach to the laboratory sciences (e.g. Kuhn 1962), follow-up studies were dominated by ethnographic and microhistorical approaches to everyday work of human and nonhuman actors, demonstrating that the 'manufacture of knowledge' is situated within the contingent local power structures of a given laboratory (Knorr-Cetina 1981) and that 'laboratory life' constructs its own scientific facts (Latour and Woolgar 1979). More recently, laboratory studies scholars have proposed delve further into how laboratory research practices correspond to the political agendas, legal frameworks and technological infrastructures of a particular place and moment in time (Kohler 2008; Slota and Bowker 2017; Huising and Silbey 2017; Strasser 2019).

In what follows, we shift attention away from the well-documented trajectory of the modern laboratory sciences to lesser-known developments in the field of 'laboratory humanities'.¹ At the turn of the twentieth century, humanities disciplines such as phonetics, linguistics and psychology adapted the laboratory culture of the sciences to the needs of their respective disciplines, working collectively, like scientists, in newly established venues with state-of-the-art facilities. Among the most prominent examples are the phonetics laboratory at the Collège de France in Paris, established in 1897 by the phonetician Abbé Pierre-Jean Rousselot to study human speech production using a variety of newly invented devices; the Institute for Psychology at the University of Berlin, directed by the philosopher and psychologist Carl Stumpf from 1894 to 1921, which studied, among other things, the perception of phonograph

recordings and telephone speech under laboratory conditions, and the laboratory for experimental psychology at Harvard University, built by psychologist Hugo Münsterberg between 1905 and 1916, which conducted research on human psychophysical activities.

These early humanities projects are important predecessors of the radio labs addressed in this article, which had few international parallels and were key to the development of new radio genres such as the German *Hörspiel*.² However, radio studies thus far has been slow to recognize the broader significance of such laboratories in radio history, and the few existing studies that address them fail to place these radio labs in broader sociopolitical and epistemological contexts.³ As such, we will focus on three of these initiatives: the Radio Laboratory (Rundfunkversuchsstelle) at the Academy of Music in Berlin, led by musicologist Georg Schünemann from 1928 to 1935; the Radio Institute in Leipzig, directed by writer and broadcaster E. Kurt Fischer beginning in 1932, and Germany's first Department of Radio Studies, at the University of Freiburg, run by linguist Friedrichkarl Roedemeyer from 1939 to 1945. All three initiatives set up laboratories for broadcasting technology, while also opening up these dedicated spaces to accommodate musicians and musicologists, linguists and literary scholars, actors, speech educators and psychologists to cultivate new radiophonic formats and practices.

At the same time, these experimental radio labs were state-sponsored, shaped by government agendas and (mis)used for political purposes. More generally, the development of broadcasting in Germany was marked from the beginning by the involvement of state postal and military authorities. In 1919, the German postal service established a department for wireless telegraphy and created a radio network, with nine regional stations launched in 1923–24. Political instability and hyperinflation reinforced the view that radio should be a public trust above party politics, and radio was seen as having the potential for cultural and educational improvement, leading to much programming during the Weimar period that reflected bourgeois cultural tastes (Ross 2008: 82–95). Overall, the first decade of Weimar radio was marked by an intensive engagement by prominent authors, playwrights, composers and musicians, many of whom advocated for experiments in radio-specific genres and new musical forms of expression (Cory 1994). However, during the transitional, politically fraught period between roughly 1930 and 1933, radio employees were subject to heavy attacks by the right-wing press and the National Socialist radio group. This led to a more cautious approach to radio programming, a situation further exacerbated by new regulations in June 1932 granting the state expanded control and ownership of all German radio stations. Following the National Socialist takeover in January 1933 a purging took place, whereby those considered politically or 'racially' undesirable were forced to cease working for radio, along with enforcing greater centralized control of radio and its use for propaganda purposes (Dussel 2006). In taking up radio lab projects during this increasingly tense political period, we seek to explore how they were conceived as experimental and interdisciplinary endeavours for the study and creation of radio technology, and new explorations in the 'art of radio', albeit under opposing political banners.⁴

BERLIN: RADIO ART AS A SOCIAL-DEMOCRATIC ENDEAVOUR

The first institution for interdisciplinary radio research was founded in 1928 at the Academy of Music in Berlin, involving leading figures in the

2. While there are no comparable examples to the German radio labs, there were other university-based initiative to study radio in the social sciences, for instance in the United Kingdom (Lloyd James 1925; Pear 1931) and Austria (Herzog 1933; Mark 1996).
3. The Berlin Radio Laboratory (Rundfunkversuchsstelle), for instance, has mainly been treated in English-language scholarship in terms of aesthetic experimentation with electroacoustic musical instruments (Gilfillan 2009; Patteson 2016). The emergence of the radio studio as a site of creative experimentation in the 1920s also drew from a longer history of the studio as 'a site of technology and musical innovation' in the commercial music industry (Schmidt Horning 2013: 6).
4. The term 'radio art' was invoked by two of the three institutions (in Berlin and Leipzig) addressed in this article in response to Kurt Weill's article 'Möglichkeiten absoluter Radiokunst' (Weill [1925] 2000).

arts, engineering and the humanities. The initiator of the Radio Laboratory (Rundfunkversuchsstelle) was social democrat Leo Kestenberg, head of the music department at the Prussian Central Institute for Education and Instruction. Kestenberg considered radio a promising medium for the political and cultural-artistic education of the masses, bringing to every household equipped with a receiver political news and information, introducing listeners to classical music and opening their ears to new music and radio drama. In this effort to advance the new medium, Kestenberg appointed music educator Georg Schünemann as director of the Berlin Radio Lab in 1928, asking him to create a site for the further development of broadcasting technologies, musical and literary genres, and radio-specific modes of address (Schenk 2004: 257–72).

According to Schünemann, 3000 people were involved with the Berlin Radio Lab during its first year alone (Schünemann 1930). Many of them were unemployed artists and journalists hoping to retrain for careers in broadcasting, though the Radio Lab was initially intended less for educational purposes than as a site for experimental research about radio art (Schünemann 1929b). In this, Schünemann drew inspiration from his former mentor Carl Stumpf's Institute for Psychology in Berlin, whose team of humanities scholars and engineers had conducted research on the perception and technological improvement of the telephone, phonograph and film (Schünemann 1929a). Schünemann hoped to create a similarly interdisciplinary laboratory for radio research in Berlin. Yet in contrast to Stumpf, who insisted that his institute convey nothing but pure research, Schünemann actively sought to connect with the many laboratories of applied acoustics research established at technical universities, political institutions and large industrial firms across Germany after the First World War (Wittje 2016: 115–71).

At the same time, Schünemann saw his radio laboratory as an economically independent initiative with a social-democratic mandate and a search for new forms of 'radio art' that were 'based upon the inner and outer laws of broadcasting' and combined avant-garde forms of expression with a social-democratic agenda (Schünemann 1928: 154). In this regard, Schünemann's project also corresponded with Ernst Cassirer's philosophy of technology, as outlined in an article 'Form and technology' edited by Kestenberg in 1930 (Cassirer [1930] 2013). Here, Cassirer calls for an understanding of technology that recognizes its status as not only a tool but also as an object that facilitates human self-awareness and access to the world. This dual relationship, Cassirer argues, must be constantly redefined, in parallel with the question of the uses of technology within particular social and political settings. By establishing a 'close working community' (Schünemann 1929b: 131) of engineers, humanities scholars and artists for the formation of a new radiophonic art and technology, Schünemann was giving a practical twist to Cassirer's philosophical aspirations.

The Radio Lab's interdisciplinary work in the field of *Hörspiel* is exemplary in this respect. Some of this work is documented in the archival photograph documentation of the Radio Lab's teaching programme, which depicts Leopold Jessner, a committed social democrat, one of the leading directors of German Expressionist and political theatre and head of the acting school at Berlin's Academy of Music, teaching young actors at the Radio Lab how to adapt their acting methods to radio drama (Figure 1).

Alfred Braun, too, the 'star' radio announcer at the Berlin Funk-Stunde station and later head of its *Hörspiel* department, was contracted to lead a



Figure 1: Leopold Jessner with students of the Radio Lab. Universität der Künste Berlin, University Archive, Fonds 1, no. F 55.

course for students in 1930 and is depicted working collaboratively with student participants at the Berlin Radio Lab (Figure 2). When Braun taught this course, he had just directed Friedrich Wolf's radio play 'S.O.S.... rao... Foy - "Krassin" rettet "Italia"', which was broadcast on 5 November 1929 in Berlin. In the preserved version, the twenty scenes are guided by Walter Goehr's experimental *Hörspielmusik*, which plays creatively with the noise of radio signals, ship sirens and the sounds of Soviet icebreakers rescuing the Italia airship. For the opening to this *Hörspiel*, Braun adopts a plain, factual tone of voice. With a staccato rhythm, he and his fellow actors perform the radio communication between the naval accident victims and their Soviet rescuers. With an explicit socialist ethos, the piece sailed close to the wind of Weimar-era radio censorship (Hagen 2014). Aesthetically, it was celebrated as one of the first radio plays that 'really intended to be acoustic and not pictorial' (Anon. 1929: 1465) and cast in a similar light to 'Der Flug der Lindberghs' ('The Flight Across the Ocean') produced earlier that same year by Bertolt Brecht and Elisabeth Hauptmann, with composers Kurt Weill and Paul Hindemith.

In a similar manner to the above quote from Hans Flesch, Braun considered radio drama as a genre that was not yet fully developed, speaking of the 'possibility of *Hörspiel*, and first attempts in search of *Hörspiel*' (Braun 2000: 96). At a 1929 conference on 'Poetry and Broadcasting', Braun provoked the eminent writers present – such as Arnolt Bronnen, Alfred Döblin and Arnold Zweig – by claiming that the *Hörspiel* was not a task of literary authorship alone. For



Figure 2: Alfred Braun (left) carrying out microphone tests at the Berlin Radio Lab with students (c.1930). *Universität der Künste Berlin, University Archive, Fonds 1, no. F 42.*

his own early productions, Braun preferred the term 'acoustic film' for *Hörspiel*, arguing that the genre's main goal was not to air literary pieces but to emancipate radio from literature and create radiophonic 'tapestries of sound' (Braun 2000: 96). Accordingly, Braun's primary aim of teaching at the Berlin Radio Lab was to raise his students' awareness of this sonic potential of radio, which could be used to create a new vocal art. 'We tried to learn more by listening to a voice', Braun reported in late 1930, 'to understand that the voice, the language, the word and its spoken delivery hold greater potential than ever before' (Braun 1930). In order to optimize speaking techniques, Braun encouraged his students to experiment with their posture, to step away from the microphone and to record their speech using disc or wire tape recording, 'taking the perspective of a listener and critic of their own performance' (Braun 1930).

Finding one's own radio voice was not a purely aesthetic undertaking, but a political one, aimed at giving voices to the various individuals in German society. At the Berlin laboratory, this was also a primary goal of another Radio Lab teacher, speech educator and phonetician Vilma Mönckeberg-Kollmar, whose contribution testifies to the important influence of phonetic knowledge in this early radio laboratory initiative. In her course 'The Art of Speaking into the Microphone', Mönckeberg-Kollmar emphasized that radio's 'disembodied voice' should not imitate theatrical performance or public speaking. Instead, she proposed an almost scientific exploration of 'what the speaker makes of language, how he or she forms language: the rhythm, structure, melody – the construction of the whole' (Mönckeberg-Kollmar 1929: 190). This ambition sat somewhat uneasily with the programmatic manual *Rundfunkaussprache (Radio Pronunciation)*, published two years later by the linguist Theodor Siebs, who saw radio as the ideal channel for his zeal to standardize the pronunciation of the German language and spread German as a 'world language', which became highly influential in the Nazi era (Siebs 1931; Tkaczyk 2019). Mönckeberg-Kollmar, by contrast, was not interested in propagating a uniform pronunciation of the national language, but in expressing a polyphonic mixture of voices on air.

Unfortunately, there is no archival evidence of how this vocal polyphony sounded. In the winter of 1929–30, Mönckeberg-Kollmar received an invitation from Deutsche Welle, the national radio station in Berlin, to produce Hugo von Hofmannsthal's 'Der Thor und der Tod' ('Death and the Fool') with a group of students from the Berlin Radio Laboratory, a play that takes a critical look at the bourgeois and morally bankrupt societies of nineteenth-century Europe. There is no recording of this *Hörspiel* currently available, however Mönckeberg-Kollmar's report suggests how actively these creative practitioners and humanities scholars, based in the interdisciplinary environment of the Radio Lab, participated in the era's search for new forms of radio drama.

In parallel, the Radio Lab's artists and humanities scholars worked closely together with sound engineers to optimize available broadcasting technology, with special attention to the sound quality of radio plays. Exemplary in this respect is the lab's cooperation with Erwin Meyer, head of acoustics at the Heinrich Hertz Institute for Oscillation Research, affiliated with the Technical University Berlin. In 1928, Meyer and Schünemann began collaboratively assessing the quality of several different carbon microphones used in broadcasting. Schünemann had requested that the electroacoustic technology companies Reisz and Siemens & Halske supply microphones for the tests free of charge. Meyer developed a 'search tone' method to test them under laboratory conditions (now standard in electroacoustics), and he additionally asked his colleagues at the Berlin Radio Lab to investigate the creative possibilities of microphones in their *Hörspiel* courses (as shown in Figure 2).⁵ Additionally, Meyer began offering electroacoustics courses for radio actors, musicians and *Hörspiel* directors at the Radio Lab as a practical introduction to both the potential and challenges of broadcasting technology (Meyer 1930). With his broad expertise, Meyer was involved in the Radio Lab's attempts to constantly expand and improve its teaching and research facilities at the Academy of Music's main building in Berlin's Charlottenburg neighbourhood. Shortly after the Radio Lab's opening, Siemens & Halske supported the project by installing a model microphone and loudspeaker system, which connected several teaching rooms, lecture and concert halls, a recording studio and the amplifying and broadcasting facilities of the academy (see Figures 3–5).

5. The correspondence between Schünemann, Reisz's company and Siemens & Halske is preserved in the UdK-Archiv Berlin, 1b/11, fols. 170–76.

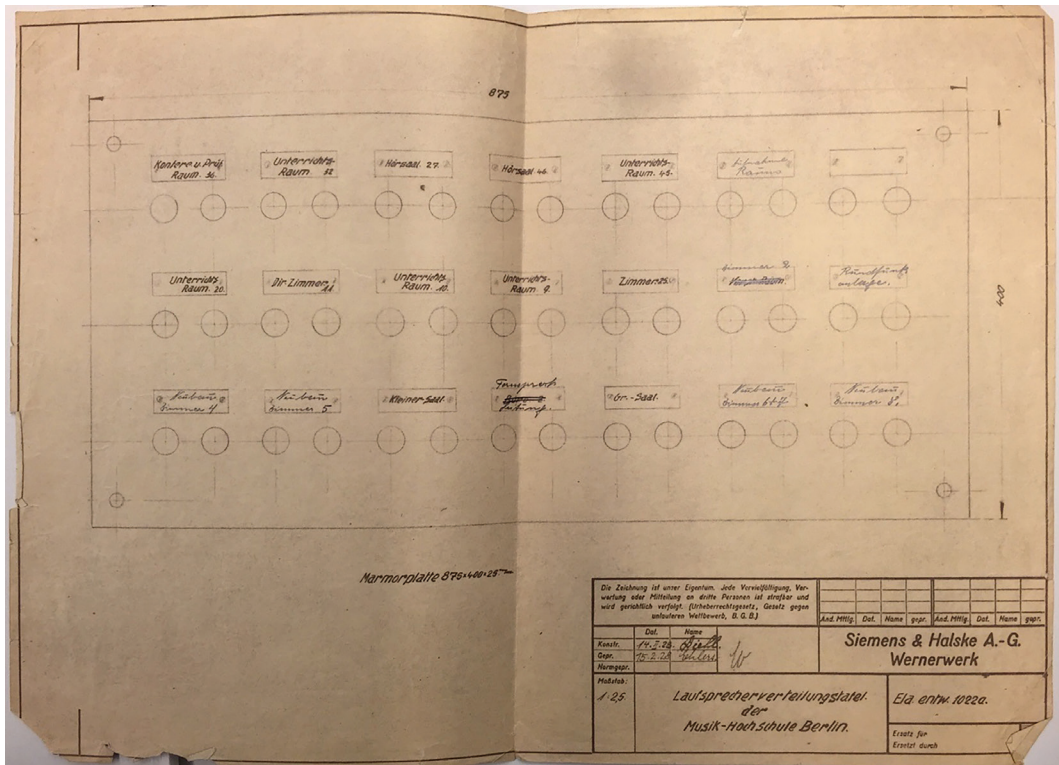


Figure 3: Scheme by Siemens & Halske for its microphone and loudspeaker system at the Berlin Radio Lab. Universität der Künste Berlin, University Archive, Fonds 1b, 14.

6. Parts of the correspondence between Meyer and Schünemann is preserved in the UdK-Archiv, 1b/25.
7. See the correspondence with various firms in the UdK-Archiv, 1b/4.

Meyer helped supervise this process, acting as an acoustics consultant to the Berlin Lab during the following years,⁶ while the institution's correspondence with broadcasting institutions and decorating firms suggests ongoing experiments with noise-reduction materials in the project's facilities to give the *Hörspiel* its own acoustic characteristics.⁷

The Berlin Radio Lab may thus be seen as Germany's first fully fledged institutionalized attempt to establish an interdisciplinary initiative to advance the art of radio, with the radio-specific genre of *Hörspiel* making the close collaboration between artists, engineers and humanities scholars in search of a social-democratic and avant-garde artistic genre particularly explicit. This experimental phase remained short-lived, however, and the search for a cutting-edge radio art that allowed different voices of a society and new social ideas to be heard gave way to an aestheticization of a politics that no longer explored values of social equality, but rather an authoritarian ethno-nationalism. This shift represented a profound change in German radio. After a campaign of political and anti-Semitic criticism in right-wing publications, Hans Flesch was forced to relinquish his position as artistic director of the Berlin radio station to the National Socialist Richard Kolb in 1932 and was thus only able to observe the development of the Berlin Radio Lab from a distance. And in 1935, two years after the Nazi takeover, the Berlin Radio Lab itself was closed on the grounds that radio-specific art, especially when

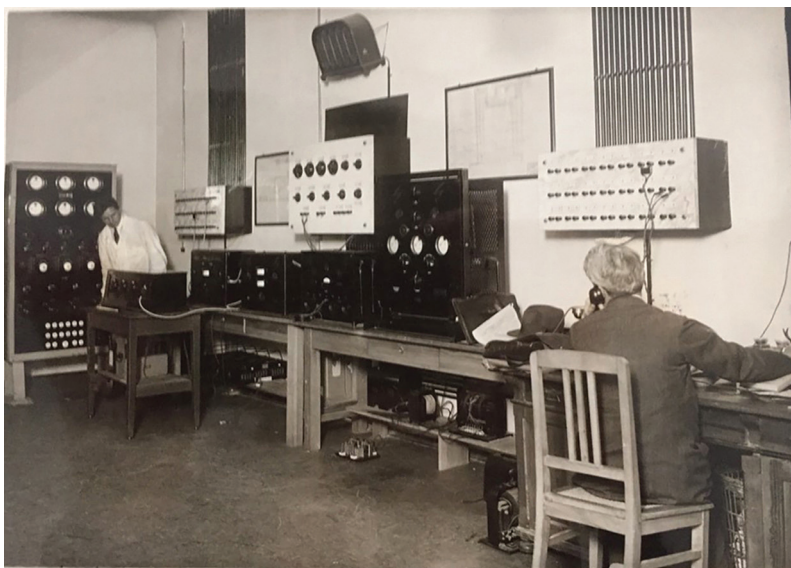


Figure 4: The Radio Lab's amplifying equipment. Universität der Künste Berlin, University Archive, Fonds 1, no. F 80.



Figure 5: The Radio Lab's recording studio. Universität der Künste Berlin, University Archive, Fonds 1, no. F 126.

informed by the social-democratic ideas described above, was no longer viable (Schenk 2004: 271–72). While radio continued to play an important, if not the leading, role in Nazi propaganda (Birdsall 2012), it was believed that future technological experiments with radio would best take place in the context of the broadcasting corporations, the electroacoustics industry or academic initiatives sympathetic to the regime, as the following two sections demonstrate.

LEIPZIG: A REORIENTATION OF THE *HÖRSPIEL* DURING POLITICAL TRANSITION

In 1932, several years after the inception of the Berlin Radio Lab, the first students were admitted to the Radio Institute in Leipzig. Similar to Berlin, the Leipzig Radio Institute was based in a music academy, yet all core teaching staff came from the literary, musical and technical departments of the local radio station Mirag, and its experimental engagement with the *Hörspiel* is indicative of the fragile autonomy of such initiatives. The institute, co-founded by the State Conservatory for Music (see Figure 6) and the Mirag station, intended to provide ‘appropriate training of the next generation as well as for the further development of a distinctive radio-specific style in music and radio plays’ (Kunath 1975: 85). This mission statement reflected a dual emphasis on applied training and the need for new experiments to achieve a medium-specific radio style. However, this initial impulse was short-lived in the context of the political crisis and transition, and its main initiator, Dr E. Kurt Fischer, reverted to a more conventional position with regard to both radio research and the *Hörspiel* (as literary genre) in the context of National Socialism.

Between 1929 and 1932, E. Kurt Fischer served as head of the literary department at Mirag, known from the mid-1920s on for encouraging formal experimentation and the exploration of new radio formats such as the *Hörspiel*. Having previously worked as a university researcher in literary studies, a newspaper critic and a playwright, Fischer had a strong interest in artistic experimentation, though his own early radio work during the 1920s mainly focused on literary adaptations to radio for the Königsberg station. In his new role in Leipzig, Fischer continued to write, adapt and direct radio productions, but he also commissioned works from a variety of established authors as well as younger, unknown ones, some of whom began to make use of new recording technologies (sound recording, disc cutting and editing) that Fischer had introduced to Mirag in late 1929/early 1930 (Leonhard 1997: 293).

From the outset the Radio Institute in Leipzig distinguished itself from the research-oriented work of the Berlin Radio Lab due to its central aim of training students to become radio professionals, envisioned as ‘new helpers’ in developing ‘radio-specific art, radio-specific styles of presentation and a pronounced radiophonic manner of programming’ (Fischer 1932a: 428). Moreover, the courses on offer largely took place in three separate tracks (technical, literary and musical) rather than forming the more integrated synthesis achieved by the curriculum in Berlin. The literary course, for instance, included a theoretical overview of radio genres and conventions and how to write radio criticism, combined with practical exercises in a broadcast studio, with disc-based sound recordings and the production of interviews, short features and *Hörspiel* (Fischer 1932a: 428). The lab was set up across two main spaces in the conservatory, fitted with new technical equipment from the Mirag. The first was a large teaching room containing a radio director’s booth with a standard studio set-up, including a disc-cutting machine connected to an amplifier and



Figure 6: Course catalogue for 1933–34, which also depicts the Leipzig State Conservatory for Music. HMT-Archiv, Hochschule für Musik und Theater, Leipzig.

loudspeakers in the hall (Kunath 1975: 85). It was in this room that teachers delivered lectures and initiated practical exercises on the *Hörspiel*, its dramaturgical possibilities and its staging techniques. As part of these practical exercises, students were encouraged to develop short *Hörspiel* scripts, which were then rehearsed and cut on wax – the outcome was assessed on the basis of formal qualities and staging. The activities in the Radio Institute also took place in conjunction with a biweekly experimental programme at the Mirag called *Studio*, which by 1932 was characterized by a strong mandate to explore new creative possibilities for the *Hörspiel* with the staging of sound

8. This is verified by several sources and also cited in Fischer's denazification file (*Entnazifizierungsakte* n.d.).

elements as well as the use of sound recording technologies (Liebermann-Roßwiese 1930); Fischer noted that the best student work would be selected to be recorded and subsequent broadcast by Mirag.

An illustrative example of a recording produced during this period for the *Studio* programme series is an experimental piece authored by Fischer and entitled 'Trommel, Trommel, Gong...ein Zeitgedicht in Stimmen, Klängen, Geräuschen in 5 Hörbildern' ('Drum, Drum, Gong...A Contemporary Poem in Voices, Sounds, Noises in 5 Sound Portraits'). The 50-minute programme, which aired in April 1932, was not fully preserved, yet one part is still available at the German Radio Archive and consists of a twenty-minute pre-recorded clip of '5 Sound Portraits' incorporated into the programme. These scenes, the result of a collaboration with the renowned choreographer Mary Wigman, were created in the sound effects studio (*Geräuschstudio*) of her modern dance school in Dresden. For this piece, however, a dynamic use of percussion instruments as a means of contrasting noise and silence in dance theatre inspired Fischer to explore new sounds in radio. The recording invokes an Expressionist staging with a pared-down narrative centring on scenes about the plight of the individual in the face of political unrest and social turmoil. The dialogue of the two main protagonists is offset by a group of three male voices and three female voices, talking in unison in a staccato-like speaking choir (*Sprechchor*) style, interspersed with rhyming couplet parts that help build dramatic tension across the five scenes. In each part, the use of drums, gongs and musical illustration intervene as experimental sound 'pulses' that serve as rhythmic intervals.

This piece reflects the desire to forge new creative partnerships as a means of testing out radio's aesthetic potential for new forms of sonic expression. Overall, the 'Trommel, Trommel, Gong' radio piece is consistent with the Radio Institute's attempts to experiment with vocal, musical and sonic components of the *Hörspiel*. Yet despite its allusions towards urgent social questions of modern urban life, it is harder to ascertain as much of the explicit social-democratic agenda articulated in Weimar-era *Hörspiel* and experimental productions aired several years earlier. Indeed, amidst the political tensions of the late Weimar years, Fischer and other staff at regional radio stations like Mirag were already exercising increased caution in their programming, due to an intensification of right-wing pressure and personal attacks during the period 1930–33 (Birdsall 2013). When the Nazis began purging radio in 1933, Jewish staff fled Germany, among them Mirag's music director Alfred Szendrei and cultural programmer and *Hörspiel* advocate Arno Schirokauer, while Fischer's Radio Institute teaching partner Erich Liebermann-Roßwiese (Mirag's director of concert programming and recorded sound collections) was eventually deported to the Riga ghetto, where he was murdered (Szendrei 2014; Fetthauer 2010).

The Radio Institute in Leipzig was a short-lived initiative; curriculum brochures show that this course option was only offered by the conservatory for one additional academic year after its founding in October 1932 (Landeskonservatorium der Musik 1934). Following the National Socialist takeover, Fischer promptly reoriented his previous commitment to radio aesthetic experimentation. After leaving Leipzig in early 1933 to coordinate *Hörspiel* production at a national level and contribute to radio teaching at the Radio Lab in Berlin (Lerg 1964), Fischer took up high-profile appointments at several regional stations and the shortwave station in Berlin during the decade that followed.⁸ He pursued new radio research collaborations, including a

‘radio study group’ in Cologne, a lecture series on radio as a ‘tool of propaganda’ in Berlin and publications in which he asserted the political expediency of the spoken word in *Hörspiel*, thereby conforming to mainstream Nazi ideology about the centrality of the voice in radio propaganda (Fischer 1939, 1942: 74–81, 186–87).

The studio-style ‘laboratory’ of the Radio Institute initiative within the educational framework of the Leipzig Conservatory appears to have been discontinued by mid-1934.⁹ During the Second World War, however, Fischer’s reputation in the area of *Hörspiel* led to his recruitment by a ‘cultural production facility’ (*kulturelle Produktionsstätte*) established in a confiscated monastery in occupied Austria. Proposed by NS party functionary Dr Heinrich Glasmeier with the direct support of party leaders Adolf Hitler and Joseph Goebbels, this initiative was intended to be a fully equipped and dedicated space for developing high-quality cultural programming for German radio, which was understood to be stifled at other radio stations by overzealous Nazi party ideologues (Fischer 1960). While this utopian concept, as Fischer himself later described this problematic scheme, might be read as a last-ditch effort to create a laboratory-like ‘free space’ for experimenting with forms like the *Hörspiel*, its limited output ultimately reflected a high-culture agenda skewed towards orchestral and symphonic music performance.

Compared to the other cases discussed in this article, which resulted in media technological development and the building of local infrastructures and institutions, Fischer’s vision for the Radio Institute was firmly grounded in the literary tradition and of the three cases demonstrated the strongest impulse to prepare students for future employment. Despite an interest in developing a framework for radio education and experimentation, as reflected in the Mirag’s *Studio* series and works like ‘Trommel, Trommel, Gong’, this intervention remained remarkably short-lived. The initial experimental impulse of the Radio Institute’s activities notwithstanding, the conditions of political crisis and transition, as well as Fischer’s career within National Socialist radio, necessitated the re-emphasis of a narrower understanding of the radio play as a literary genre.

FREIBURG: LISTENER PSYCHOLOGY AND ACOUSTIC DOCUMENTATION UNDER NATIONAL SOCIALISM

Unlike the first two case studies, where the main founders were primarily engaged from a musicological and literary research background, Friedrichkarl Roedemeyer specialized in linguistic research with a particular interest in speech psychology, language pedagogy and ethnology. Roedemeyer’s Radio Studies Institute (Institut für Rundfunkwissenschaft) was established at the University of Freiburg in 1939, following an appeal from the Ministry of Propaganda for more university-based radio research (Kutsch 1985: 1). Roedemeyer had been initially removed from his various teaching positions in 1933, allegedly due to his favourable treatment of Catholic and Jewish students, although after joining the Nazi party in May 1933 he regained his position at the University of Frankfurt, where he remained employed until 1939.¹⁰ As this section will explore, an interdisciplinary radio research agenda was reflected by an initial interest in *Hörspiel* research and experimentation, which, in turn, gave way to a broader research agenda under National Socialism, focused on listener psychology and blind assistive devices.

9. It should be noted that a number of Ph.D. dissertations about radio were prepared at the University of Leipzig in the years leading up to 1945; many of these were in law and economics rather than in the humanities or social sciences, where undergraduate teaching did not include any radio-specific courses (Kutsch 1994).
10. This was a claim made by Roedemeyer in his 1948 Denazification appeal files but was not possible to verify in other available sources (‘Lebenslauf’: 2–3).

11. Roedemeyer's activities are cited in various sources, including a curriculum vitae in his Denazification file 'Lebenslauf' (1948: 8–9).

Roedemeyer began to teach speech studies at the University of Frankfurt in 1921, and in the ensuing years he occasionally worked at Frankfurt's local radio station on the possibilities for voice experimentation in programme production, including the *Hörspiel*.¹¹ Once appointed as chair of speech studies in 1932, Roedemeyer was keen to use new technologies, including radio and phonography, to analyse music and speech. Roedemeyer's speech division was housed in the same building as the Frankfurt musicology department, and from 1935 on, he began to collaborate with musicology Professor Josef Müller-Blattau. Together they worked on establishing their purpose-built Sound Studio (Tonstudio) as part of a new 'electroacoustic division' within the department of musicology, in order to conduct acoustic experiments in research and teaching. The Sound Studio was modelled on a radio studio (with acoustic features such as soundproofing) and fitted out with the latest sound recording devices and loudspeaker models along with acoustic research devices (Sutner 1939). Thanks to this expertise in sound recording methods for linguistics research, Roedemeyer was invited by the National Socialist Propaganda Ministry to organize an international conference in 1938, intended to foreground the 'exemplary' work of the Sound Studio. A review of the exhibition display that Roedemeyer created with his students for the 1939 German Radio Exhibition noted that his division was affiliated with the Reich Radio Chamber and praised its activities – such as monitoring listener reactions to programmes in communal settings – as valuable to National Socialist radio (Anon. 1939: 315).

In Freiburg, Roedemeyer continued the laboratory research and teaching collaboration established with the Sound Studio. The Radio Studies Institute was characterized by a strong interrelationship between its research agenda and teaching curriculum, which ran for just four years, during which time it expanded in thematic scope and size, with most students drawn from disciplines such as musicology and German studies. For the first two trimesters (in 1940) Roedemeyer ran two lecture series: 'Fundamental Questions of Radio Studies' and 'Sound Report, Sound Portrait, Radio Play', which focused on radio-specific formats, with a strong emphasis on the *Hörspiel*. In this first year, the tutorials offered alongside these lectures, co-taught with Müller-Blattau, were entitled 'Exercises for the Typology of Listeners and Speakers' and 'Voice, Speech, Instrument, and Microphone'. The latter course involved both model radio broadcasts and exercises in the studio and was co-taught with guest researcher Reinhold Merten, a former Frankfurt radio employee.

The humanities basis for research about the *Hörspiel* and other radio formats, however, was largely the responsibility of Arthur Pfeiffer, an assistant professor hired to manage the library collections and organize all teaching deemed 'non-technical'. Pfeiffer's main contribution to the Institute's research was the commission he received from Roedemeyer in late 1940, which appeared as *Rundfunkdrama und Hörspiel (Radio Drama and Radio Play)* in 1942 (Pfeiffer 1943), as part of a book series supported by the Ministry for Propaganda. Another important contribution by Pfeiffer was to the domain of what Roedemeyer described as 'acoustic documentation', relating to the creation of sound recordings for the Institute's needs, consisting of off-air recordings of radio transmissions and self-produced recordings. As part of the teaching programme, students were allowed to experiment with sound recording and pursuing survey-based

empirical methods for listener research. The most striking realization of this work clearly built upon practices of field-based linguistics research that Roedemeyer himself had been involved in during the 1920s and 1930s (e.g. Roedemeyer 1924), with various initiatives focused on field recordings documenting spoken language and landscape around Freiburg. One of the few original recordings from the Radio Institute still accessible today is a six-minute clip created during a student group exercise in a nearby village called Bickensohl (Anon. 1944). Taking the form of a model broadcast, the announcer introduces the village, describing its history, geographic location and cultural tradition in a style similar to the *völkisch* 'sound portraits' (*Hörbilder*) featured on German radio from the early 1930s on, with limited use of illustrative sound or musical accompaniment (Birdsall 2013). Such experiments in 'acoustic documentation' indicate a shift away from the aesthetic study of radio forms, such as the *Hörspiel*, as its use of recording technologies demonstrated a stronger affinity with the fieldwork practices of ethnology and linguistics.

Nonetheless, the *Hörspiel*, and its potential for exploring sound and space, served as a departure point for lab-based experiments at the institute. In the lead up to his *Rundfunkdrama und Hörspiel* publication, Pfeiffer wrote several pieces on how to theorize radio from the perspective of Gestalt theory; Roedemeyer sought to use this theoretical account as a basis for the institute's elaboration of listening perception and psychology experiments (Pfeiffer 1941a, 1941b). Subsequently, the research and teaching began to expand more in that direction, with new courses devoted to 'Introduction to Methods in Listener Research' or 'The Evolution of Music [Radio] Programs and their Psychological Effects' (Kutsch 1985: 206–09).

Beyond a more specific interest in the *Hörspiel*, a 1942 publication by guest researcher and Gestalt psychologist Wolfgang Metzger, *Das Räumliche der Hör- und Sehwelt bei der Rundfunkübertragung*, reported on a series of studio experiments about the possibilities of creating spatial impressions and exploring the acoustic space of radio transmission and its perception (Haid 2020: 37–45). Initially such experiments were focused on radio transmission reception quality for spoken word and music programming and how listeners experienced the sounds of radio transmission. Yet from mid-1941 on, Roedemeyer led various experiments in blind psychology, which by 1943 took up much of the Institute's focus at the expense of its research on radio, which was largely set aside.

We can find evidence of this expanded research agenda with a 1943 conference entitled *Radio Studies and the Study of the Blind*. Here, staff members reported on their psychological-acoustic lab tests with blind research participants, while a talk by former Berlin Radio Lab employee Dr Friedrich Trautwein focused on possibilities for constructing technical aids for the blind. In late 1942, Roedemeyer lobbied for Trautwein to be hired by Freiburg University given his potential to help develop technical spatial orientation aids for the blind (Trautwein 1942). Though this attempt was unsuccessful, Roedemeyer secured external research funding, so that Trautwein's lab in Berlin became designated as an outpost of the Freiburg Institute. Alongside these developments, staff members intensified their psychological perception and applied acoustics research with a strong focus on prosthetic instruments for blind spatial perception. With this reorientation of their core activities, Roedemeyer applied to have the

Institute's name changed to 'Institut für Rundfunkwissenschaft und akustische Sondergebiete' ('Institute for Radio Studies and Acoustic Special Areas') (Kutsch 1985: 262–65).

We can therefore observe how Roedemeyer's establishment of purpose-built radio research spaces in Frankfurt and Freiburg was driven by an initial interest in radio aesthetics with a strong focus on the *Hörspiel*, and later *Hörbilder*, as indicated by the 1944 'Bickensohl' recording reflecting the strong influence of Nazi-era *völkisch* ideology. In contrast to the first two case studies, the research and teaching agenda of the Freiburg Institute was most explicitly informed by its founding with the support of the Propaganda Ministry and in the context of National Socialism's instrumentalizing of radio as a tool of political propaganda. The years of its existence ran parallel to the Second World War, during which time well-known radio war correspondents were included among the guest lecturers, and the Institute was given additional tasks to monitor foreign radio and send reports to the Propaganda Ministry. While the Institute developed a lab environment for research and teaching on radio aesthetics and experience, it shifted its agenda towards listener psychology and blind assistive devices, also framed in terms of the rehabilitation of war invalids. Officially discontinued in 1945, Roedemeyer passed away in 1948 and none of his staff continued to work in radio research, nor was the laboratory set-up of the Institute adopted by post-war media or communication departments in Germany (Birdsall 2019: 118–21).

CONCLUSION

Since the nineteenth century, the laboratory has been conceived as the 'iconic space of modern science' (Jackson 2016: 296), the guarantor for the maintenance of practical skills, research and training in the sciences. An extensive literature has demonstrated the great importance of the laboratory for different scientific disciplines and regions of the modern world. In contrast, less attention has been paid to the role of the laboratory for humanities research, and this article has examined three radio laboratories founded in Germany between the 1920s and 1940s, all of which were directed and shaped by humanities scholars and arts practitioners. Examining the internal dynamics and external circumstances of these radio laboratories reveals that these initiatives took up already existing methods, technologies and practices in the laboratory sciences, while creating fairly new possibilities of cooperative experimental research among humanities scholars, artists and engineers. These early radio laboratories engaged with, among other concerns, the *Hörspiel* as a new radiophonic genre that began to exist as a 'possibility' still in need of new literary works, new ways of acting and directing, a genre of music unique to *Hörspiel* and new broadcasting technologies.

The three radio laboratories addressed here were deeply contingent upon their political embedding. Georg Schünemann's social-democratic endeavour intended to establish a new, avant-garde radio art for everyone. The Berlin Radio Lab became a site of applied research and interdisciplinary teaching that united pioneering artists and engineers, inventive humanities scholars, and a large group of unemployed musicians, journalists and speech educators during the Weimar period. Shortly after, in 1932, Kurt Fischer established his Radio Institute in Leipzig to promote his Weimar-era pedagogy and research on the *Hörspiel* as an 'art of speech',

subsequently realigning this commitment with the dominant norms of National Socialist and post-war discourse. In a comparable manner, Friedrichkarl Roedemeyer, another pioneer in radiophonic experimentation, established the Freiburg Radio Studies Institute in 1939 with the help of high-level Nazi functionaries. Again, an initial research interest in radio aesthetics and *Hörspiel* served as a gateway for an expanded agenda spanning spatial hearing, listener psychology and sonic propaganda, and blind prosthetic devices for war invalids.

In the trajectory that has been observed here, the *Hörspiel* has been enlisted to bring into sharp relief the interdisciplinary nature of the radio labs that emerged in Germany between 1928 and 1945, the various intellectual influences they incorporated and an overall shift from radio laboratory as creative environment (Berlin) through to its instantiation as a site of instrumentally driven research (Freiburg). The fierce battles for political control over radio in the Weimar Republic and National Socialist Germany were accompanied by a shift from radio as a medium for making the voices of social democracy audible, for creating a *sensus communis*, and democratizing art and education, to one that abused the population's desire for equality to, in line with Benjamin, aestheticize both the masses and the violence that held the masses together.

In response to these early German initiatives in radio research, similarly structured laboratories were founded at different universities and radio stations in Europe and the United States from the late 1930s onwards. Most significant is the Office of Radio Research (ORR) at Princeton and Columbia University, founded in 1937 and directed by the Austrian sociologist and emigre Paul Lazarsfeld. This project, too, involved a large group of artists and humanities scholars in new research on radio formats, including the German exile Theodor W. Adorno, who firmly rejected Lazarsfeld's commercially oriented understanding of applied radio research and ultimately found himself in the role of an internal antagonist to the ORR's agenda, calling for critical reflection on the medium of radio and its mechanisms of popularization (Tkaczyk 2021).

After the war, applied research in the humanities became a hotly debated issue: many scholars withdrew from praxis-oriented, politically or industrially commissioned projects in favour of more theoretical research agendas. The rise of communication studies as an academic discipline in the 1950s and media studies in the 1960s reflects this development (Simonson and Peters 2008). From here on, radio and other media became objects of theoretical study, and very few laboratories were founded and maintained in media and communication studies departments worldwide (Parikka 2019). When radio art resurfaced as a major concern in West Germany with the 'Neues Hörspiel' in the 1960s, such experimental work took place in broadcasting studios remote from university research and interdisciplinary laboratories (Schöning 1970).

In contrast, artists and humanities scholars in the present day are enjoying a veritable boom in the creation of new laboratories. This renewed enthusiasm for 'humanities labs' is indeed facilitating groundbreaking research, new collaborations in the arts and important developments in the digital realm. Most of these initiatives understand themselves as sites of political intervention and seek to reverse the isolation of the laboratory from the outside world (Fisher and Mahajan 2010; Pawlicka 2017; Wershler et al. 2021). Hopefully, future initiatives in the humanities will maintain an awareness of the political

implications of laboratory research, while being wary of ideological appropriations such as those that occurred in Germany from the 1920s to the 1940s. By casting attention here to the agendas of early German radio laboratories, our research has highlighted the process by which newly developed genres such as the *Hörspiel* were all too easily incorporated into an increasingly instrumentalized vision of both research and cultural production, despite the strong potential of their laboratory infrastructure to generate and facilitate critical voices.

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