

Austria's Legacy in Early Radio Broadcasting: Lessons for Audio Media in the 21st Century

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Early radio broadcasting represents a vital part of media history. It offers an important foundation of mediated storytelling and other content forms in the first electronic medium of mass communication. Contributions from Austria to the development of radio as a medium of mass communication in the early 20th century have been under appreciated in the research literature, despite the fact the very first study of radio and therefore broadcasting was conducted in Austria in 1932 by Lazarsfeld. In the early years of radio broadcasting around the world in the 1920s, Austria was among the countries with the greatest radio content or programming production, following the United States, the United Kingdom, Germany and France. A systematic examination of early Austrian radio based on broadcasting archives in Vienna reveals several insights into both early radio programming. Moreover, it also suggests an enduring influence in audio media content that still can be heard in the 21st century. Among the key Austrian influences in early radio are classical and folk music, literary dramatizations of the intellectual and artistic figures, culture and geopolitics that have characterized Austria, and innovation in wireless communications. This paper will examine the lessons to be learned from early Austrian radio programming and will outline their implications for contemporary audio content in the 21st century's age of digital, online and mobile media, including podcasting. As a methodological foundation, this paper draws upon a systematic examination of materials available in the Dokumentationsarchiv Funk. The Dokumentationsarchiv Funk/Documentary Archives Radio Communication – AKA DokuFunk is an essential source of data on early Austrian radio, including some 500 scripts from early radio plays, that had been lost since the rise of fascism in Central Europe in the 1930s and the subsequent second World War.

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Austria's Place in the Early World of Radio

In the early 20th century radio was emerging as an audio medium of mass communication around the world. Pioneers across a wide spectrum of society were experimenting with the new communication possibilities radio represented. Much research has examined the development of radio in terms of its technological underpinnings. Researchers have also extensively explored the development of radio programming. Theorists have posited that part of the unique quality of radio as a medium of communication was its invisible sound stage and ability to engage the listener's imagination (Guralnick, 1996) Moreover, the "secondariness" of radio as an audio medium enables it to engage the listener's heart and mind while leaving him or her free to engage in other activities (Chignell, 2009, p. 70). This essential quality of radio, whether analog or digital, gives it a continuing relevance in the 21st century's mobile, networked and interactive age. Similarly, producers of early Austrian radio sought to draw on then-contemporary radio theory. Viennese broadcasting historian Wolfgang Pensold, for instance, notes that early Austrian radio pioneers drew on the work of art critic Rudolf Arnheim in their efforts to produce "broadcasting as audio art" (Chignell, 2009, p. 2).

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It is worth noting that broadcasting research began with a seminal Vienna investigation by Austrian-born sociologist Paul Lazarsfeld. His classic 1932 study of Austrian radio laid the foundation for an entire field of research (Desmond, 1996). Of note are some of the remarkable findings in the study concerning the musical program. In particular, listeners thought there was "too much classical music" and they "want more popular music" (Lazarsfeld, 1940).

The Lazarsfeld study used an empirical research approach, including a comprehensive questionnaire and sampling plan, to examine the preferences of the listeners of Radio Wien. Lazarsfeld helped to create the modern field of media research, initially through his Radio Research Project at Columbia University, and then his founding of the Bureau for Social Research (Lazarsfeld, 1940).

But much radio research has had a focus on developments in the US and in Western Europe, especially the UK, France and Germany. Since Lazarsfeld's pioneering research, less of the published research literature has examined explicitly the role of Austria in the early development of radio, especially in terms of radio programming, or the audio content transmitted over the airwaves.

Internationally, approaches varied in the development of programming on radio. In Austria's case, a confluence of factors contributed to the development and form of early radio programming. These factors include Austria's cultural character, its people's individual talent and intellectual genius, and the country's unique places and geo-politics.

Pioneering radio company Czeija & Nissl directed the initial, unregulated radio test transmissions in Austria 1 April 1923 (Schlögl, 2005; Knezu, 2010).¹ Among these trial transmissions was the broadcast of an address by Austrian President Michael Hainisch (Knezu, 2010).

Public Radio-Verkehrs-Aktiengesellschaft ("Radio Communication Company Ltd.," or Radio Verkehrs AG, aka RAVAG) soon emerged (Ergert, 1974; Godler, 2014).^{2,3} In February 1924, RAVAG "was awarded the concession to begin broadcasting, with Czeija as its director-general."⁴ Using studios inside the former War Ministry building on the Stubenring in Vienna, RAVAG began regular radio transmissions on 1 October 1924.⁵ These transmissions came to be known as *Radio Wien* (Welle 530), which would also become the title of an important weekly publication about radio broadcasting in Austria. Dated October 12, the first issue of *Radio-Wien* was a report for internal use and newspapers. The first printed issue was published October 19, 1924. The weekly publication detailed each week's Austrian radio broadcast schedule and more.

By the late 1920s to mid-1930s studios and transmitters had been installed in other parts of Austria, including Graz and Innsbruck in 1927.^{6,7} By installing

¹ Wolfgang Pensold, personal communication, May 4, 2016.

² Wien Geschichte Wiki (Vienna History Wiki). Retrieved 14 April 2016 from goo.gl/KMgsUX.

³ Dokumentationsarchiv Funk: RAVAG-Geschichte (Documentary Archive Funk: RAVAG-Geschichte). Retrieved 14 April 2016 from goo.gl/TYGjwv.

⁴ Wikipedia. Retrieved 8 April 2016 from goo.gl/h7PncE.

⁵ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925), pp. 21, 23.

⁶ Ibid. p. 33, 35.

⁷ Ibid. p. 38.

relay transmitters across the country by 1934, Austrians nationwide were able to tune in to Austrian broadcasting.

Austrians who owned a radio set paid a monthly fee of two schillings, a monetary unit introduced in Austria in 1925 to replace the Austro-Hungarian krone. The Euro would later replace the schilling. At the time, two schillings would buy about two weeks worth of a typical daily newspaper in Austria.^{8,9} The Austrian Civil War, or uprising, in February of 1934 and the installation of Austrofascist rule in May of 1934 affected the development of Austrian radio, as would subsequent geo-political events of the next two decades.^{10,11}

While existing research investigations offer a helpful description of milestones in the development of early Austrian radio broadcasting, they offer limited theoretical analysis. Knezu, for example, provides valuable technical parameters of what is described as a pirate radio transmitter in Austria in the 1920s. The political-economy context for this early pirate radio merits further examination. In particular, an analysis that draws upon the contemporary "Austrian economics school" might provide valuable context for an analysis of the development of radio during this period (Holcombe, 1999, p. 273).

By the numbers alone, Austrian broadcasting was an important though far from dominant part of the early world broadcasting industry. The biggest player in radio broadcasting was the US, with the first licensed broadcast in 1920 (i.e., KDKA, Pittsburgh, Pennsylvania, October 27, 1920). By February of 1926, there were an estimated 5 million radio listeners in the US. This was followed by 1.85 million in the UK, and 1.25 million in Germany. Austria was fifth on the global radio list with 220,000 listeners as of February 1926, just behind France with 500,000 listeners.¹²

The audience for early Austrian radio was significant, with some 10,000 listeners tuning in from the first transmissions in 1924.¹³ This was thanks to "Radio Hekaphon" which built the audience until it was forced to close down shortly before RAVAG started. By the end of October 1924 Austrian broadcasting had an estimated 35,000 listeners, and by January 1925 the number had swelled to 100,000.¹⁴ Listenership, or subscriber growth, for radio was rapid across Austria in 1924. Wien, or Vienna, had the most subscribers, but there were also substantial numbers in Niederösterreich, Oberösterreich, Kärnten and Vorarlberg. Of the 35,000 radio subscribers in Austria in October 1924, 30,000 were in Vienna. Of the 220,000 total Austrian subscribers by May 1926, 169,000 were in Vienna.¹⁵ Nieder-Österreich was second with 30,000 in May, 1926.

But there are other important reasons, beyond these quantitative audience metrics, to study the role of Austria in the early development of radio.

⁸ Wikipedia. Retrieved 12 April 2016 from goo.gl/Ta2Vko.

⁹ Cover price of the *Arbeiter-Zeitung* in 1925, by ANNO database. Retrieved 18 April 2016 from goo.gl/OBhJP

¹⁰ Wolf Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

¹¹ Wikipedia. Retrieved 4 May 2016 from goo.gl/5ijcjh.

¹² Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925), p. 69.

¹³ Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

¹⁴ Ibid.

¹⁵ Ibid.

This paper asks two research questions. First, what was the nature of early radio broadcasting in Austria, especially during the 1920s and 1930s. Second, what is the legacy of early Austrian radio as manifested in the programming produced for and delivered over the Austrian airwaves and beyond.

Research Methodology

To conduct this investigation of early Austrian radio this paper draws upon multiple primary research methods. These methods include archival investigation, interviews with human experts, and direct observation such as listening to audio recordings though few in number. This paper also relies on some secondary sources of previously published research.

While on sabbatical from his post at Rutgers University, the author of the present study conducted the investigation between April and May of 2016. The focus of data collection was in three Austrian cities, Vienna, Hallein and Schwarzenau. Within these three cities the author utilized and visited many specific venues, which are listed in Appendix.

As a foundation, this paper draws upon the Dokumentationsarchiv Funk. Dokumentationsarchiv Funk/Documentary Archives Radio Communication – AKA DokuFunk is an essential source of data on early Austrian radio. The author visited this vital archive in April and May of 2016 and conducted research on site.

The recent discovery of some 4,500 scripts of literary dramatizations produced and aired on Austrian radio between 1924 and the late 1950s is an extraordinary research treasure at the DokuFunk. Among the findings of an analysis of some of these scripts is that many contained a multi-part structure comparable to scripts produced in early radio in the US and elsewhere. The main component: the words spoken by the actors. But complementary are sound directions, including occasional instructions for sound effects such as a gong.

Perhaps more importantly, many of these early scripts contain extensive, even complete original musical scores. These were often performed live during the plays on piano or cello, and some by entire orchestras when performances could be transmitted from Viennese theaters. One example of an early script with complete musical score is *Jackass Blues*. *Jackass Blues* was a comedic, vaudeville-inspired jazz production and often featured a performer on stage with a mule, although it's not known if a mule was involved in the Austrian radio production (Kenney, 1994). Americans Art Kassel and Mel Stitzel wrote *Jackass Blues* in 1926.¹⁶

Another example is *Rot-Weiß-Rot (Red-White-Red)* directed by Hans Nüchtern, the most productive director on early Austrian radio, and with original music composed by Rudolf Wallner. Wallner's *Musik der Fahnenchöre* (flag choir music) for *Rot-Weiß-Rot* is likely from the late 1920s or 1930s, although an exact date is hard to establish. Nüchtern also was head of the Literarische Abteilung der RAVAG.¹⁷

¹⁶ AbeBooks.com. (2016). *Catalog of Copyright Entries: Third series*.

¹⁷ Pensold, personal communication, May 4, 2016.

It is worth noting that Austrian radio during this early period was intended to be non-political, in contrast to the newspapers of the day, which were often aligned to particular parties.¹⁸ Consequently, much of the nature of radio programming, including the literary dramatizations helped to foster a national identity across Austria, where a network of relays made the programming available to all Austrians. Still, research indicates early Austrian radio was not free of political influences.

The DokuFunk archives contain some 208 academic investigations of Austrian broadcasting. However, few focus on early radio history, and none on specifically the literary dramatizations (Binder, 1960). The Phonogramm-Archiv at the Austrian Academy of Sciences contains references for a doctoral dissertation and several master's theses examining aspects of RAVAG, including one online (Walther, 2010). One notable investigation of relevance here is that of Walther (2010).

Walther's investigation focuses on the political forces that influenced Austrian broadcasting in the period between the World Wars and why early radio broadcasting success did not directly translate into immediate television broadcasting success (Walther, 2010). "The first radio station, named Radio Hekaphon, was run by amateur radio operators in 1923 and escaped licensing for more than a year, while offering valuable pioneer work for RAVAG," Walther writes. "However, political interferences during that time period prove not only the close connections between political parties and RAVAG but also why opportunities failed to advance radio towards television. Even though RAVAG enrolled television pioneers all over Europe, the ultimate success never materialised" (Walther, 2010).

For several reasons, the main focus of this paper is 1924-1938, the first period of regular Austrian radio broadcasting, or RAVAG. This comprises the era of the initial development of radio broadcasting on a programmed or scheduled basis in Austria and around the world. For the first ten years of this period Austrian radio broadcasting, RAVAG, was relatively independent of government or political control. RAVAG created, or produced, the programming and determined what would air and when. There were also amateur radio transmissions during the early 1920s in Austria. Harranth explains that these "(illegal) transmissions of stations with call signs "AUX," later "Ö," "EA" and "UO" continued and became legal in 1930. The authorities tolerated those transmissions provided they caused no interference to RAVAG programming. In fact, ÖVSV (Österreichischer Versuchssenderverband) asked its members repeatedly to concentrate on traffic at times when RAVAG was off air."¹⁹

In 1933-34, the fascist uprising in Austria would impact Austrian radio broadcasting.^{20,21} Importantly, from 1934 to 1938 RAVAG was no longer independent but influenced and partly controlled (news broadcasts) by the Austro-

¹⁸ Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

¹⁹ Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

²⁰ Wikipedia. Retrieved 11 April 2016 from goo.gl/WtzuEm.

²¹ *New World Encyclopedia* (2015). Retrieved 12 April 2016 from goo.gl/rdWKio.

fascist government (Thorpe, 2011).²² The Nazi Anschluss of 1938, or annexation of Austria by a Hitler-led Germany, marked the end of Austrian-controlled radio broadcasting and the dissolution of the Austrian radio broadcasting enterprise RAVAG. It "was replaced by Reichssender Wien subordinate to the national Reichs-Rundfunk-Gesellschaft network (Großdeutscher Rundfunk from 1939) in Berlin."²³

Several other periods followed but these are not the focus here. These other periods include from the Anschluss in March 1938 through the end of WWII in 1945, when the Nazis controlled Austrian radio and much of the programming was propagandistic. Austrian radio continued to evolve with the Allied Forces (UK, US, France, USSR) occupation of the country through 1955. The creation of the Republic of Austria in 1955 signaled a new era in Austrian broadcasting. It marked the commencement of the independent national Austrian Broadcasting Corporation (radio and television), or Österreichischer Rundfunk (ÖR, later ORF), which continues till today, although digitization and the Internet are bringing new challenges and opportunities to the enterprise. Its primary role is as a public service broadcaster, funded by required television or radio set ownership license fees paid by Austrians as well as limited advertising.

This paper also looks somewhat beyond the 1924-38 period in exploring the impact of early Austrian radio on radio programming internationally, providing selected case examples to illustrate the influence of Austria on the development of radio as a broadcasting medium. Other resources that have been employed in this research include the Jüdisches Museum Wien library, the Technisches Museum Wien Media Worlds exhibit, the Österreichischen Akademie der Wissenschaften (Austrian Academy of Sciences) Phonogramm-Archiv of the Institute for Audiovisual Research and Documentation, the Austrian State Archives, the National Library music collection, and the Austrian National Library, Austria Newspapers Online (ANNO) archive.^{24,25} The Phonogramm-Archiv is of particular note. Founded in 1899, the Phonogramm-Archiv is the oldest archive of its type in the world. Among the Phonogramm-Archiv collections are rare recordings of various RAVAG transmissions from the early years of Austrian radio. Among these are voice portraits of varied luminaries of early 20th century Austrian and world history, including "Stimmporträts" of Italian Prime Minister Benito Mussolini, Pope Pius XI and US President Franklin D. Roosevelt.²⁶

²² Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

²³ Wikipedia. Retrieved 14 April 2016 from goo.gl/h7PncE.

²⁴ Austrian Academy of Sciences Phonogramm-Archiv. (2016). Retrieved 14 April 2016 from goo.gl/q29qet. A part of the UNESCO Memory of the World Program. Retrieved 11 April 2016 from goo.gl/bomVdR.

²⁵ The Austrian National Library, AustriaN Newspapers Online (ANNO). Retrieved 12 April 2016 from goo.gl/OBhJP and goo.gl/dHuUXj.

²⁶ Akademie der Wissenschaften in Wien (Austrian Academy of Sciences) Phonogramm-Archiv (1939). Almanach für das Jahr 1938 (Almanac for the year 1938). Hölder-Pichler-Tempsky, A.- G., Wien und Leipzig Kommissionsverleger der Akademie der Wissenschaften in Wien Staatsdruckerei Wien (Vienna and Leipzig Commissioner of the Academy of Sciences in Vienna Staatsdruckerei Wien). pp. 189-190.

Findings

An examination of the *DokuFunk* archives from 1924 to 1938 reveals at least three sets of insights into early radio broadcasting in Austria.²⁷ First among these findings perhaps comes as little surprise to anyone familiar with Austrian culture. Early Austrian radio broadcast extensive amounts of Austrian music, which helped to fill the hours of daily airtime. This musical heritage is among the most important features of early Austrian radio and also signals much of its influence on and contribution to world radio. Austria's musical legacy in radio contains two major dimensions. Perhaps most familiar and visible is the music of classical and romantic composers and compositions from the 18th and 19th centuries. Celebrated composers from this period who were Viennese in training, identity, life or birth, had created many compositions that in the early 20th century were acknowledged masterpieces. They were widely loved and were natural selections for performances delivered through wireless broadcasting to Austrians subscribing to the new medium of radio.

Austrian radio pioneers recognized the extraordinary potential of the new medium to engage the public and developed a wide spectrum of programming forms (Godler, Jochum, Schlögl, & Treiber, 2004).²⁸ Among the types of programming were classical and folk music, news, education and dramatizations of literature and poetry. Austrian media scholar Wolfgang Pensold of the Technical Museum Vienna explains that RAVAG's musical director Max Ast, a trained composer and conductor, spoke of the need to find a balance between an artistic sophisticated program for the listener and light entertainment programs (Pensold, 2018).

Austrian radio developed programming in many ways targeting an educated audience. Three programming genres dominated the airwaves, including classical music, dramatizations of literature and informational lectures.^{29,30}

Music was a mainstay of early Austrian radio programming. In 1931, for instance, 2,917 hours or 65.2% of a total 4,473 "sendestunden" (hours broadcast), was music of various forms.³¹ Literary dramatizations were 344 hours or 7.7%. These numbers suggest that early Austrian radio was on the air about 12.5 hours per day or roughly half a typical day or 24-hour period (4,473 divided by 365 days), although the broadcast day gradually increased over time. In 1926, the average radio day started about 11am and lasted until about 10pm, and by 1932 the program schedule had been moved to a 9:20am start, concluding about 11pm.³² Like early radio around the world, Austrian broadcasts during

²⁷ DokuFunk Archives (2016). Retrieved from goo.gl/2eDWxA.

²⁸ Ergert, V., Andics, H., & Kriechbaumer, R. (n.d.). *Die Geschichte des Österreichischen Rundfunks* (The history of the Austrian Rundfunk). Retrieved from goo.gl/duUa8P.

²⁹ Austrian Public Broadcasting (ORF). "ORF. WIE WIR. ORF Kundendienst (in German). Customer Service." Retrieved 13 December 2014 from goo.gl/PTujny.

³⁰ MediaThek. (2016). *Österreich am wort (Austria at the word)*. Retrieved 8 April 2016 from goo.gl/Bd528Q.

³¹ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1931), p. 22.

³² *Arbeiter-Zeitung* program listings. (1925, 1932). Available 18 April 2016 from <http://anno.onb.ac.at/>.

this period were largely a combination of live, spoken word transmissions along with many daily hours of Schallplattenmusik (i.e., records).^{33,34}

Among these earliest transmissions were performances of the Vienna State Opera and the Salzburg Festival in 1925.^{35,36} Austrian media historians note that news programs played a relatively small role in Austrian radio, deferring to Austria's well-established newspaper industry.³⁷ In the aftermath of the 1934 Austrian civil war, the newly installed government of the new Austrian structure did produce official "newscasts."³⁸

Although there was limited news on Austrian radio initially there was what might be called information. Moreover, the 1925 weekly issues of *Radio-Wien* list "nachrichtendienst" which were "Verlautbarungen" (i.e., announcements), such as market prices, Danube water level, and public events.³⁹ The schedule for February 1, 1925, for instance, designates a ten-minute news break, "Von 1600 till 1610" (from 4 to 4:10pm).⁴⁰ Further, there is a listing for "Letzte Nachrichten" or *News Break* at roughly 2100 (9pm). News was often very brief and was also frequently accompanied by weather reports. Sports news is also listed in the 1925 issues of *Radio-Wien*, which is considered the definitive publication for the Austrian radio industry. And the 1933 yearbook, reports a total of 516 hours of news airtime for the year.^{41,42} The final issue of *Radio-Wien* during this era was in March 25, 1938, which coincides with the Nazi Anschluss. Much of the issue is devoted to Nazi propaganda.⁴³

Musical transmissions on early Austrian radio included a breadth of classical forms, including choral performance and a cappella concerts as well as church music.⁴⁴ In addition, there were nearly daily broadcasts of entire operas, such as *Tristan and Isolde*.⁴⁵ Also, there were concerts featuring a spectrum of Austrian composers, including Brahms, Schubert, and Josef Strauss.⁴⁶ The operetta *Die Fledermaus* by Johann Strauss aired on 23 November 1924.⁴⁷ Classical and romantic music compositions such as those of Mozart, Schubert and Strauss were widely broadcast on early radio in Austria and around the world. At 8pm on the evening of 1 November 1924, Austrian radio broadcast Mozart's *Requiem*,

³³ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1932), p. 19.

³⁴ Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria.

³⁵ Radio-Wien, 11 December 1925, p. 6.

³⁶ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925), p. 13.

³⁷ Koboltschnig. (1993). Retrieved 14 April 2016 from goo.gl/8yEQiV, p. 62.

³⁸ Harranth, DokuFunk, personal communication, 7 April 2016, Vienna, Austria.

³⁹ Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria.

⁴⁰ Radio-Wien, 11 December 1925, p. 1.

⁴¹ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925) pp. 12, 19.

⁴² Ibid.

⁴³ Radio-Wien, 11 December, 1925; Jahresbericht der Österreich Radio A-R (Yearbook or Annual Report of Austrian Radio). (1925). p. 12.

⁴⁴ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925), p. 12.

⁴⁵ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925), p. 11.

⁴⁶ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1927), p. 12.

⁴⁷ Radio-Wien, 11 December, 1925, p. 1.

written by the legendary composer in January 1791 in Salzburg.⁴⁸ Under the Direction of Prof. Ferd. Habel the Staatsopern Orchestra performed the *Mass*.

Austrian radio carried a variety of performances of the music of Franz Schubert, who was born in Vienna in 1797 (Austin, 1873). Among the most notable was a 1928 broadcast of a collection of Schubert compositions on the 100th anniversary of Schubert's death.⁴⁹ As part of the centennial, countries across Europe celebrated Schubert Week. Churches, concert halls and radio stations featured performances of Schubert's works (Newbould, 1999, p. 316). Schubert's music not only populated the airwaves of Austria, Europe and the US. His acclaimed *Sonata in A* for piano was reprised in 1992 as the theme music to the popular American television comedy, *Wings*.^{50,51}

Music represents a vital quality of radio, old and new, and Viennese music in all of its forms shaped the nature, function and form of musical content on radio since its earliest days. Notably, the classical music of Austria formed an important pillar of early radio programming around the world. This is for at least two reasons. First, classical music, especially that of great early Austrian composers, is considered to be a fine art, perhaps among the greatest in history. Early radio pioneers often sought to create programming of the highest quality, and classical music could not only fill considerable amounts of air time, but also fulfill the goal of delivering quality, non-controversial content. Second, classical music, especially that of Austria, was a century or two old, and was in the public domain; copyright had never applied or had expired for most or all of this body of work (Fishman, 2008, pp. 124-125). As a result, early radio orchestras and the like could present performances of this work without paying license fees or need to obtain permission to create adaptations of this work. Similarly, many early radio broadcasts in the US, for instance, featured performances of Austrian music, including classical, romantic, operatic and the like. Among the examples available online today are orchestral performances of Strauss in *The Enchanted Hour* and Händel's *Water Music Suite Highlight*.⁵²

One intriguing question about early Austrian radio was the extent to which it represented the diversity of Austrian culture, especially the breadth of musical contributions from various ethnic and religious groups across the entire nation. One ethnic or religious community of note during this period was Austria's Jewish population, which was at its numerical peak (some 200,000)

⁴⁸ Radio-Wien, 11 December, 1925, p1.

⁴⁹ Schubert, Franz. Wienerwald, voll Schubertmelodien (Vienna Woods Fully Schubert Melodies). 1928; Beschreibung: Anmerkung: Plattennummer: Description: Notes: Plate number: J.B.6598. - Widmung: Musikdirektor "With Music Director" Bert Silving dem Meister des Radio Wien in Verehrung zugeeignet "The master of Radio Vienna: in appropriate worship." In Gedenken an "Commemorating" Franz Schubert. Retrieved 13 April 2016 from the Austrian National Library collection, onb.ac.at, goo.gl/W677fg.

⁵⁰ Garrett, D. (2008). *Schubert Piano Sonata in A, D664*.

⁵¹ YouTube. Retrieved 13 April 2016 from goo.gl/p3oXQJ.

⁵² Old Time Radio Catalog. "*The Enchanted Hour*," featuring classical music including that of Strauss and *Handels Water Music Suite Highlight*. Retrieved 8 April 2016 from goo.gl/uVqZoq (October 23, 1949).

during the years before the Nazi Anschluss (Rabinbach, 1975, p. 48).⁵³ During the early 20th century there was a vibrant Jewish cultural scene in Vienna. In the Prater there were several threads to this arena of Jewish life, including live theater, comedy and music.⁵⁴ Mag. Dr. Brigitte Dalinger, scholar of early Vienna's late 19th and early 20th century Jewish theater, notes that several performers from that theater, especially some of the comedians, were often heard on early Austrian radio (Dalinger, 2009; Noggler-Gürtler & Dalinger, 2016).⁵⁵ Among those performers were Karl Farkas, Fritz Grünbaum and Stella Kadmon (Denscher, 2001). Vienna's Jewish theater was typically performed in cabaret style, often elaborate and grand as in the *Ziegfeld Follies* famous in New York, which began on Broadway and then aired on American radio in the 1930s (Green, 1980, pp. 462-465). Vienna's Jewish performers similarly contributed a lively and entertaining voice to early Austrian radio.

Of significance in this period was a boycott in Austria and Germany of Jewish businesses, artists and performers (Arad, Gutman, & Margalio, 1987, pp. 39-42). As Harranth notes, the boycott began slowly before 1933, and came to a tragic climax in 1938, with the Nazi Anschluss or German annexation of Austria.⁵⁶

Die Neue Welle (The New Wave), a weekly newspaper published during this period, contains some evidence that Austrian radio broadcast at least some Jewish music in 1931.⁵⁷ As noted in the newspaper archives at the Jüdisches Museum Wien Bibliothek, the 26 June 1931 issue of the newspaper contained the following headline: "Joachim Stutschewsky im Radio" (also noted in the *Radio-Wien* 7 November 1931 issue).⁵⁸ The short story reported that on Sunday 8 November Stutschewsky played on Wiener Radio. The item read, "seine eigenen Bearbeitungen klassischer Werke für Violoncello und Klavier." This translates to he played "his own arrangements of classical works for cello and piano."

Among the first Austrian radio broadcasts of a Jewish cultural production was the 24 May 1925 transmission of *Gräfin Mariza*, Hungarian-born composer Emmerich Kálmán's classic operetta (*Countess Mariza*).⁵⁹ Kálmán was born Imre Koppstein in 1882 in Siófok, then a part of Austria-Hungary.⁶⁰ *Gräfin Mariza* made its premier on 28 February 1924 in Vienna at the *Theater an der Wien*.⁶¹ It was broadcast in whole or part many times in the coming years on Austrian radio.

Such music not only filled much radio airtime in Vienna, Austria and around the world. It also provided an emotional foundation for the storytelling that emerged in much of the new medium, especially the dramatization of literary

⁵³ Austrian Census 1890, 1900, 1910 of the K. K. Statistischen Central-Kommission (K. K. Central Statistical Commission) and census 1934 and Statistisches Jahrbuch der Stadt Wien für das Jahr 1910 (Statistical yearbook of the city of Vienna for the year 1910).

⁵⁴ Wikipedia. *Leopoldstadt*. Retrieved 28 April 2016 from goo.gl/QEfzUL.

⁵⁵ Pensold, personal communication, May 4, 2016.

⁵⁶ Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria.

⁵⁷ *Die Neue Welle*, contained in the Jüdisches Museum Wien Bibliothek, 26 June 1931 issue of the newspaper, p. 8.

⁵⁸ *Radio-Wien*, 7 November 1931, p. 7. The Austrian National Library, AustriaN Newspapers Online (ANNO). Retrieved 12 April 2016 from archive.

⁵⁹ *Radio-Wien*, 24 May 1925 issue.

⁶⁰ Wikipedia. Retrieved 18 April 2016 from goo.gl/SRBEqJ.

⁶¹ Wikipedia. (2016). Retrieved from goo.gl/q9xGd9.

works, adapted from other media forms or created in original form for radio by contemporary playwrights and other writers.

A second dimension of Austria's 20th century musical contribution to old time radio comes from the arena of folk and popular culture. Folk music was popular throughout the Austrian provinces, especially the mountainous and agricultural regions surrounding Vienna and Salzburg. "Volksmusik," or music for the people, included various types of performances, including zither concerts.⁶² The first programming note about zither performances appears in the 1928/29 broadcasting yearbook.⁶³ Other popular musical forms broadcast during this period were modern dance music and recorded music.

As noted in a special "ancient musical instruments" collection in the Kunsthistorisches Museum (Fine Arts Museum), the zither is a 19th century Austrian and Bavarian folk instrument especially popular in Alpine music.⁶⁴ In the piano family, the zither is a box-like flat stringed instrument with a curved back.⁶⁵ Its unique sound blends guitar and harp. Small feet not only support the zither as it rests upon a table. The instrument's design enables the zither to transfer musical vibrations through the table to create a virtual sound box to project music. The player plucks with a plectrum on the thumb five melody strings over frets at the base of the zither and can create vibrato by holding a note.

The Phonogramm-Archiv is of particular importance in regard to Austrian folk music and early radio. Created in cooperation with the Austrian Broadcasting Corporation, its collections include audio recordings of a variety of materials of historical importance, including Austrian folk music.⁶⁶ Most relevant here are segments of radio broadcasts that featured Austrian folk songs recorded across the country in the 1930s.⁶⁷ "Volksliedersingen," or large "folk song singing" events, were held in all provinces between 1934-8. Folk song researcher Georg Kotek organized and recorded the events and RAVAG broadcast them. The collection is part of the United Nations Educational, Scientific and Cultural Organization (UNESCO) memory project.⁶⁸

The folkloric dimension of early Austrian radio broadcasts was also reflected in radio storytelling outside of Austria, where often little was known of Austrian culture beyond classical music, and unique folkloric musical patterns helped to evoke through radio's invisible sound stage a somewhat exotic imagining of a distant land.

⁶² Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio), 1933, p. 22, 26 in the digital PDF.

⁶³ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio), 1928/29, p. 21.

⁶⁴ Kunsthistorisches Museum in the Neue Burg, Collection of Ancient Instruments Audio Guide. Accessed 8 April 2016 from goo.gl/tdP6Ms.

⁶⁵ Kyger, D. (2016). *The Zithers of Anton Karas*. Retrieved 13 April 2016 from goo.gl/j4pVeP.

⁶⁶ Phonogramm-Archiv (2016). Retrieved 14 April 2016 from goo.gl/q29qet.

⁶⁷ Ibid.

⁶⁸ UNESCO Memory Project. Retrieved 14 April 2016 from goo.gl/RccnKg.

Dramatizations of Literature

In addition to the musical programming featured prominently on Austria's early radio, the archives reveal an impressive number of literary performances or dramatizations produced during this period and aired on Austrian radio. Austrian radio programming volume increased dramatically during the first few years, and much of this was an increase in literary dramatizations. Table 1 provides the number of literature performances aired on Austrian radio between 1926 and 1934, the year of the rise of Austrofascism. The RAVAG yearbook refers to these dramatizations as part of its "Radiobühne" or "Radiostage." Most productions were live, original broadcasts and a few were re-transmissions. In 1926 there were a total of 47 productions aired, roughly equal numbers of multi-act and one-act plays. By 1930 there were 100, and only a single drama was a one-act play.⁶⁹ By 1934, the number of radio stage productions was 114. Between 1926 and 1934 a total of 756 radio stage productions were aired.

Notably, multi-act plays required more than an hour of airtime, sometimes up to about two hours. Single act plays were much shorter. Over time, not only did RAVAG increase the total number of dramas aired, but also the proportion of multi-act plays. This indicates RAVAG was committing substantially more resources to producing dramas and devoting more total airtime to broadcasting these plays. In 1931, the first year the data are reported, RAVAG broadcast 344 hours of literary performances. Some 121.5 hours were on the radio stage, or nearly three percent (2.7%) of total radio airtime for the year. By 1934, the radio stage had climbed to 148.76 hours, or more than three percent (3.2%) of total Austrian radio airtime.

Table 1. Dramatizations of Literature Aired on Early Austrian Radio

Year	Multi-Act Dramas	One-Act Dramas	Combined Total
1926	24	23	47
1927	47	17	64
1928	66	7	73
1929	71	0	71
1930	99	1	100
1931	98	2	100
1932	88	2	90
1933	97	0	97
1934	114	0	114
TOTAL	704	52	756

Source: RAVAG Radio Yearbook and Annual Report, DokuFunk Archives.⁷⁰

With dramas broadcast on roughly a weekly or semi-weekly basis, the DokuFunk archives contain 510 scripts for the literary performances aired between

⁶⁹ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio), 1931, p. 41.

⁷⁰ Jahresbericht der Österreich Radio A-R (RAVAG Yearbooks of Austrian Radio and Annual Reports), 1926/27 (1928): 13-4, 28/29 (1930): 22-3, 1929/30 (1931): 38-9, 1931 (1932): 40-1, 1932 (1933): 40-1, 1933 (1934): 34-5, 1934 (1935): 36-7, Per DokuFunk 2016.

1924 and 1938.⁷¹ The scripts vary across a wide spectrum of genres, including comedy with at least 80 scripts. Fairy tales were second most common, with at least 39, and including those based on legend or myth. Drama was third most numerous, with at least 35 scripts. Other categories include musically themed, learning-lessons, and history-lessons, such as the geography and history of the River Danube.

Literary performances on early Austrian radio were roughly divided between original scripts written for radio and those adapted from the theater. About 200 of the scripts during this early period were adaptations of existing plays from the theater. Likewise, about 200 were written as original works for Austrian radio.

Authorship of these plays was diverse. Between 1924 and 1938, non-Austrians wrote the majority of early Austrian radio plays, although the productions included a wide variety of Austrian playwrights and others across Europe. Of the 510 scripts in the DokuFunk archive, 350 (about 70%) are works by non-Austrian writers. Austrians wrote 150 (about 29%).⁷²

Productions based on existing literature featured authors from across Europe, but with Austrian authors typically penning the adaptations. Among the adaptations drawn from theatrical playwrights, William Shakespeare was the author of the greatest number of radio plays, with nine. Johann Nestroy wrote eight and Arkadi Awertschenko seven. One of the earliest adaptations aired on 29 November 1924. It was an Austrian radio production of *Peer Gynt*, a musical drama by Norwegian playwright Henrik Ibsen. It aired from 1710-1900 (5:10pm to 7pm).⁷³

Although the majority of directors and writers of early Austrian radio plays were male, women writers and directors were not uncommon. The most productive women contributors to early Austrian radio literary performances were Elisabeth Boehmer v. Brandis (author and director), Tilde Binder (author), and Dora Miklosich (actress).

Among the works written as original scripts for Austrian radio, the most prolific was in fact Binder, with 20; Elisabeth Boehmer v. Brandis wrote eight; and Hans Nüchtern eight, as well.

Notably, some children's fairy tales on Austrian radio were adaptations of works of authors such as Denmark's Hans Christian Andersen. Austrian male playwrights generally wrote these adaptations. Over time, original scripts were developed. Women playwrights were often the authors of these original plays.

The number of dramas for children totaled 86 in 1929.⁷⁴ An example is *Jugend im Lied* or *Song for youth*, by Anton Rosner. It also translates into *Bundesstaat Österreich* 1934-38 (the State of Austria anthem), suggesting the program had a patriotic theme, reflecting the nation-building quality of early Austrian radio.⁷⁵

⁷¹ Jahresbericht (annual report or yearbook) O. R. A.-G., 1927.

⁷² DokuFunk archives 2016.

⁷³ Radio-Wien, 11 December 1925, p. 1.

⁷⁴ RAVAG Yearbook (1930).

⁷⁵ YouTube (2016). "Bundesstaat Österreich." Retrieved 28 April 2016 from goo.gl/z9cHhq.

There were also programs designed for women, and often written by women. Such programs totaled 45 in 1929. An example is *Was Kinder fragen*, or *What Children ask*, by Maria Luise Cavallar.⁷⁶

In 1925, 19 dramas aired on Austrian radio, including original productions, rebroadcasts or re-productions, or in German "Wiederholung ... Jugendbühne." Some were adaptations of existing works, such as *Ein idealer Gatte* (*An ideal Husband*) by Oscar Wilde. Some dramas (6) were for "jugendbühne" or the youth stage. An example is *Medea* by Grillparzer, aired on 22 January 1927. These dramas were typically multi-act plays. But there were also one-act productions counted separately in the Austrian radio yearbook. In 1926 there were 12 such one-act productions aired.⁷⁷ For 1926 there were a total of 37 dramatizations aired. There were also evening lectures; with 25 were aired in 1926.⁷⁸ One example is titled *Francis of Assisi*. It aired on October 30 of 1926. These lectures were designed as education, helping fulfill a central part of the mission of early Austrian radio.

The length of the early radio plays varied from the shortest at eight pages for *Winterhilfe* to the longest at 209 pages for *Die Überzähligen*. This translated into air times that ranged from short dramatizations of just a few minutes to full multi-act productions of about two hours.

Although few audio recordings exist of the earliest plays from Austrian broadcasting, the DokuFunk audio archives contain a recording of what appears to be the entire transmission of a play produced for radio and aired in May of 1938. The play is titled, *Maikäfer flieg!* or *May Beetle fly!*⁷⁹ There are two versions, one 55 minutes, and one 60 minutes in length. The script is ten pages in length.⁸⁰ A newspaper listing indicates that there were just thirty minutes slotted for the children's play, so the recordings may also include introductory or closing material.⁸¹

What may be most remarkable about this broadcast was the director of the production was Arthur Preiss (also Preisz), a Viennese Jewish actor. During the earliest period of Austrian radio Preiss was very active on Radio Wien and made his directorial debut in the 1938 production of *Maikäfer flieg!* It is especially notable that this came two months after the Nazi Anschluss. It was his last appearance on Austrian Radio because he was soon deported and died in the Holocaust in Auschwitz-Birkenau on 19 April 1943.⁸²

Radio-Wien reports that there was one Jewish theatrical production aired on Austrian radio on the local station in Graz in 1928.⁸³ It was a production of a

⁷⁶ Ibid., p. 45.

⁷⁷ Ibid., p. 14.

⁷⁸ Ibid., pp. 14-15.

⁷⁹ DokuFunk archives 2016.

⁸⁰ Christoph Hubner of DokuFunk, personal communication, 19 April, 2016.

⁸¹ Ibid.

⁸² The Austrian National Library, AustriaN Newspapers Online (ANNO). Retrieved 18 April 2016 from goo.gl/OBhJP.

⁸³ *Radio-Wien*, 28 November 1926, p. 1. DokuFunk archives, per ANNO database. Retrieved 18 April 2016 from goo.gl/OBhJP.

comedic play titled *Die Klabriaspattie* (Wacks, 2002).⁸⁴ Unfortunately, there is no recording of this live radio broadcast. *Die Klabriaspattie* was the most popular Jewish theatrical production in Europe. It was performed more than 5,000 times before the rise of Nazism in 1938 (Bohlman, 2008; Wacks, 2002, pp. 57-58). Adolf Bergmann was the author of the play, which premiered 8 November 1890 at the Budapest Orpheum in Vienna. *Die Klabriaspattie* is an allegory at times "crass and crude" that revolves around the playing of a popular card game, *Klabrias*, at Vienna's Café Spitzer (Bohlman, 2008, p. 204). In a lively mixture of German and Yiddish, the players debate, discuss and laugh over the struggles of modern life in a city, the relative merits of gambling, and their love for the world of the card game. M. O. Schlesinger wrote the play's music, *Klabriasmarsch* (Wacks, 2002, p. 36). *Klabrias* is also known as *Klaberjass* and is a type of trick-taking game usually involving two players (Parlett, 2008). The full text of the script for *Die Klabriaspattie* is available online.⁸⁵

Some snippets of a few plays and other programs from the 1930s are available through the *Radio Hören* exhibit of the Österreichische Mediathek.⁸⁶ One example is *Das grobe Hemd*, aired for the first time on 11 September 1926 (Bahr, 2013).⁸⁷ Meaning, *The coarse shirt*, the play's author was Carl Karlweis (sometimes written Carlweis; his pen name was Karl Weiss), who was born in Vienna in 1850 and died in 1901.⁸⁸ He wrote *Das grobe Hemd* in 1897. The play explores philistinism and the plot involves the life of an entrepreneurial young man in a time when "Money rules the world."⁸⁹ The estimated length of the full radio play is about two hours, with one original copy of the script running 101 pages.⁹⁰ The 5 minute 17 second audio snippet is from a 1 April 1934 airing, and features two actors in conversation.⁹¹ The director, or *Spielleiter*, of the production was Dr. Hans Nüchtern.

Some recordings of speeches and lectures are also available, including some from 1935. "Vorteile für Flugzeuge in der Stratosphäre" (or, "Advantages for aircraft in the stratosphere") is a speech by Auguste Picard. There is also "Surgical treatment of cancer." It is a lecture by "The famous surgeon Anton Eiselsberg, a pupil of Theodor Billroth." In the speech Eiselsberg offers what we would today call the "state of the art" of medical practices.

⁸⁴ Retrieved 18 April 2016 from goo.gl/tQSeSH.

⁸⁵ Archive.org "*Die Klabriaspattie script*." (2016). Retrieved 21 April 2016 from goo.gl/3U9MtL.

⁸⁶ Österreichische Mediathek, Technisches Museum Wien "Österreichische-Am-Wort" (2015). Retrieved 8 April 2016 from goo.gl/LmG3HS.

⁸⁷ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925), p. 13.

⁸⁸ DokuFunk archives (18 April 2016), original script dated 17 April 1946; Wikipedia (2015). *Carl Karlweis*. Retrieved 13 April 2016 from goo.gl/jSprVj.

⁸⁹ Karlweis, C. (1897). *Das grobe Hemd*. Volksstück in vier Acten, uraufgeführt am 1. Februar 1897 (Deutsches Volkstheater, Wien). Retrieved 13 April 2016 from goo.gl/JU9wyg and goo.gl/Am66aL.

⁹⁰ DokuFunk records, original script for *Das grobe Hemd* dated 17 April 1946, and a listing from *Radio-Wien* for an air date 23 October 1936 of 20:05-22:10.

⁹¹ MediaThek (2016). 11-01518 Hörspiel-Ausschnitt (Radio Play). "Das grobe Hemd" (The Coarse Shift): 1 April 1934 based on the play of the year 1901 von Carl Karlweis Ausschnitt ONLINE 11-01518_b02.

There is also a rare recording of organ music from the *Salzburger Stier* (*Salzburger Bull*). The historic barrel organ heard in this 1935 Austrian radio recording dates from the year 1502.

Finally, there are from 1935 Austrian radio some audio snippets of poetry written and read aloud by Richard von Schaukal, a Moravian-born Austrian poet (Mann, 2003).

There are several reasons for the lack of more records and recordings from early Austrian radio, explain Harranth and Pensold.^{92,93} Among the reasons are the fact that Vienna was in great turmoil during the period between WWI, when it became independent of Austria-Hungary, and 1955, when it emerged in post-WWII as the Republic of Austria.

Moreover, during the earliest years of Austrian broadcasting much radio programming was transmitted live and was not recorded as audio recording technology was still in its infancy, expensive, and of limited quality.⁹⁴

Austrofascism, the Nazi Anschluss, and the Allied Occupation of Vienna all may have contributed to the loss, removal and destruction of records and recordings of much of the programming history of Austrian radio. Much of the records and many of the recordings of Austrian radio that were produced were likely removed to Germany (possibly Berlin or Frankfurt) and to the Soviet Union (today Russia).⁹⁵

Early Austrian radio literary dramatizations uniquely tied together the intellectual, cultural and geo-political figures and forces that not only helped to define the parameters of an increasingly global 20th century. They also provided a conceptual foundation for storytelling in the audio-formatted medium of radio. This was a multi-part process. Within Austria, many radio plays were drawn from traditional sources, including familiar fairy tales. Others were adaptations of existing dramas from Austria and elsewhere in Europe.

Innovation and Early Austrian Wireless Communications

The third thread of Austria's early radio broadcasting legacy is the dimension of innovation in the arena of wireless communications. A cross-section of uniquely talented and creative individuals brought a powerful spirit of innovation and belief in the potential of the new medium of radio to contribute to the social welfare, especially its cultural enrichment and education (Koboltschnig, 1993). RAVAG founder Czejka stated, "The Austrian Broadcasting Corporation has a threefold task, namely to form and instruct, further entertain and finally for the spiritual and cultural level Austria and its inhabitants abroad a to make effective propaganda" (Koboltschnig, 1993, p. 60). Individuals such as Czejka helped to define the inventive nature and programming quality of the development of early 20th century radio broadcasting in Austria and around the world. The educational

⁹² Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

⁹³ Pensold, personal communication, May 4, 2016.

⁹⁴ Harranth, DokuFunk, personal communication, 6 April 2016, Vienna, Austria.

⁹⁵ Ibid.

mission endures in the philosophy of Austrian broadcasting in the 21st century, as notes Peter Klein, Head of Austria 1 (Ö1).⁹⁶ Moreover, a spirit of innovation continues as well. Klein explains that Ö1 still creates a substantial volume of radio dramas, some 20 original radio dramas a year, mostly scripted productions (Klein, 2013). Yet he would welcome experimental dramatic endeavors that dispense with scripts and offer more creative narrative approaches.

Another pioneer from the history of early radio development is inventor Nicola Tesla. Contemporary observers might not think of Tesla as Austrian, but he had roots in the "old" Austria. He was born in 1856 in a part of Austria-Hungary, now Croatia. Tesla was an extraordinary man, a true genius whose inventions enabled the development of radio in Austria and around the world. His legacy still resonates today. "Tesla invented the alternating-current generator that provides your light and electricity, the transformer through which it is sent, and even the high voltage coil of your picture tube (in analog television sets)."⁹⁷ He moved to New York in 1884, and then invented a technology that not only enabled the development of radio, but a whole array of other electronic equipment. This invention is the Tesla Coil.

An additional pioneer whose work directly shaped the innovative nature of early Austrian radio was Czeija himself. Czeija invented the Selenophon, a form of optical audio recording technology that used light to capture audio on a strip of paper. While working in the late 1920s to develop the Selenophon process, Czeija founded the Selenophon society in 1929 and obtained a patent for the Selenophon in 1930. Not only was the Selenophon important to radio, but also Czeija developed an application of the technology for "Tonfilm" or sound film recording including synchronized sound, which was then just taking shape around the world.⁹⁸

Czeija's work to develop the Selenophon was vital to the development of audio programming on Austrian radio. The great Italian conductor Arturo Toscanini was director of the Salzburg Festival at the time when early Austrian radio leaders hoped to broadcast the festival (Haggin, 1989). Pensold notes that because Toscanini was skeptical regarding the transmission quality of early radio, "the RAVAG-Director Czeija brought one of the best receivers to his hotel room and told him to listen in the evening. After the concert Toscanini was so pleased that he allowed the RAVAG to transmit his performance at the Salzburger Festspiele." Further, Toscanini also found the Selenophon-System impressive and requested that this innovative technology be used to record his performances at the Salzburger Festival (Schlögl, 2004, p. 88).

Harranth notes that other innovations in early Austrian radio included artists who helped develop a style of performance suited to the parameters of early radio. For example, the The Bert Silving Quartet gave its first performances

⁹⁶ Peter Klein, Director, Österreich 1/Kultur, personal communication, 27 April 2016, Vienna, Austria.

⁹⁷ Nicola Tesla. Retrieved 8 April 2016 from goo.gl/BIw68.

⁹⁸ Pensold, Technical Museum Vienna, personal communication, 11 April 2016.

at "Radio Hekaphon."⁹⁹ Harranth explains. "Imagine this paradigm: no audience, just a box in front of you in a windowless room with dark curtains."¹⁰⁰

Harranth further explains that Austrian radio was the most important commissioner of musical works (e.g., Kienzl, Korngold, Schreker) and employer of performing artists. Moreover, the public was able to read the lyrics of songs, which *Radio-Wien* regularly published. Moreover, some music was explicitly written for Austrian radio (including for radio-plays, children's hour). Details are provided in the ORF Kundendienst or Multimediales Archiv for the ORF broadcasts of/interviews with of maestro Ernst Theis.¹⁰¹ Harranth notes that he spent almost half a year researching at DokuFunk. Further, Harranth adds, "Well-known Composer Anton Webern was employed to monitor musical programs. He even was given a radio to control whether the programmes were aired according to schedule."¹⁰²

Another example of early Austrian radio innovation was the development of a sound-spitting audio recording technique. To improve the quality of audio recording fidelity, Austrian radio engineers experimented with a sound splitting technique that separated the audio into two transmission channels.¹⁰³ This effectively doubled the audio quality of the recordings and dramatically improved the fidelity of sound transmitted on the radio.¹⁰⁴ Harranth explains that they developed this technique to split the frequency range for transmission and recombined it in the studio.¹⁰⁵

In 1927-28, RAVAG also tested an early form of interactive radio called *Radio-Bild* (radio with pictures).¹⁰⁶ Radio program listeners who had purchased a device called a radio scope and had obtained photographic slides could participate in *Radio-Bild*. During a show, the announcer would instruct listeners when to look at photos displayed on the radio scope. Shows featuring *Radio-Bild* ranged widely, from features about the arts, to fairy tales for children, to educational materials. In one agricultural *Radio-Bild* program, listeners could view photographs that illustrated the role of the bee in producing honey (e.g., one slide showed a photo of bees in a hive). The *Technology Museum's* "medien.welten" exhibition features a "Radioskop" projector as well as examples of the early radio filmstrips.¹⁰⁷

RAVAG also transmitted photographs and facsimiles. Harranth notes that this "was a real innovation."¹⁰⁸

In 1930, RAVAG tried to broadcast a live performance of play called *Wien-Salzburg* from a moving train.¹⁰⁹ Unfortunately, the transmission failed. RAVAG

⁹⁹ "Die Kapelle Bert Silving." Retrieved 9 May 2016 from goo.gl/GrTXf7.

¹⁰⁰ Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria.

¹⁰¹ Wikipedia. Retrieved 9 May 2016 from goo.gl/W7PFq9.

¹⁰² Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria.

¹⁰³ Ibid.

¹⁰⁴ Sound Recording History. (2016). Retrieved 28 April 2016 from goo.gl/L3uMCF.

¹⁰⁵ Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria.

¹⁰⁶ DokuFunk, 18 April, 2016; MediaThek, 2016.

¹⁰⁷ Pensold, Technical Museum Vienna, personal communication, 11 April 2016.

¹⁰⁸ Harranth, DokuFunk, personal communication, 9 May 2016, Vienna, Austria; Retrieved 9 May 2016 from goo.gl/6D51Na, p. 71.

¹⁰⁹ DokuFunk, 18 April, 2016.

soon repeated the experimental effort combining radio, theater and the railway, successfully transmitting the live production, but this time from a stationary train parked at Vienna's Westbahnhof.

The unusual geo-politics and cultural history of Austria also contributed to an early Austrian radio innovation featuring an especially international approach to broadcasting, which often reached across borders, nations and languages. Multiple languages of early Austrian radio included German, English, French, Esperanto (an artificial language invented in 1887 as international common language based on English) and Italian.¹¹⁰

Notably, Radio Wien broadcast regular language instruction in Esperanto, including a Viennese dialect, "Aŭstria Esperantisto."¹¹¹ Extensive materials about the Esperanto language instruction on early Austrian radio are available online as part of the Austrian National Library's Espe*ranto collection.¹¹² The first Esperanto course on Radio Wien was in May 1925.¹¹³

Austrian physician and Nobel Prize winner Julius Wagner-Jauregg was also interested radio during its early development (Allerberger, 1997). Reflecting on the new medium in a recording dated 1 April 1934 (an actual "shellac" recording is dated 9 March 1937), he explains the process of creating a recorded program for the air.¹¹⁴ His comments are titled, "Vortrag im Rundfunk" or in English, "Lecture on the Radio." Records do not make it entirely clear if or when this recording was broadcast on radio but the recording was produced by RAVAG. In the three-minute audio recording, Wagner-Jauregg explains how to produce a "Schallplatte" record for a radio show. He notes that the vinyl recording process simplified the production of radio programs. Yet, he adds, beyond the technical challenges are the new rules for content and storytelling that needed to be invented for an audio-format medium such as radio. Among the rules, he says that when speaking on the radio, even from a script, one need not speak too loudly, and one should be sure to "open the mouth" and articulate clearly.^{115,116} As this recording suggests, Austrian radio dramatists, musical directors and other innovators were among those who helped design the grammar of the new medium.

¹¹⁰ Jahresbericht der Österreich Radio A-R (Yearbook of Austrian Radio). (1925).

¹¹¹ Bernhard Tuidier, Curator of the Esperanto collection at the Austrian National Library, personal communication, 13 April 2016, Vienna, Austria.

¹¹² Austrian National Library, Esperanto collection, *Joan Font i Giralt and Hugo Steiner at a radio interview, Vienna 1931*. Retrieved 14 April 2016 from goo.gl/oj8dgN; and *Hugo Steiner in front of a microphone of the RAVAG, Vienna 1935*. Retrieved 14 April 2016 from goo.gl/rK1DZf.

¹¹³ Radio-Wien, 10 May 25 issue.

¹¹⁴ Österreichischen Akademie der Wissenschaften (Austrian Academy of Sciences). Programmarchiv, shellac recording (stamped with date of March 9, 1937) of Wagner's audio broadcast on RAVAG examined on site by the author 13 April 2016.

¹¹⁵ MediaThek, Österreich am Wort. (2015). Undated historical audio recording of Wagner-Jauregg. Retrieved 8 April 2016 from goo.gl/LmG3HS.

¹¹⁶ *MediaThek* Catalogue. Retrieved 14 April 2016 from goo.gl/Wgj6T5.

Conclusion

Early Austrian radio broadcasting represents a remarkable period in 20th century media history. Not only was radio an increasingly vital form of mass communication in Austria and Central Europe during a pivotal period in the geopolitics of the region. Radio as developed in Austria brought compelling audio content to the people and exerted a global influence on the new medium of mass communication. This impact still resonates in the 21st century's digital age.

In particular, this paper has presented evidence that Austrian culture, people, and places featured prominently throughout much of the period in which radio was in development around the world, from the US to the UK to Austria. This legacy is particularly clear in the musical foundation of much early radio programming, especially plays or dramatic productions.

As well, Austrian contributions to the development of radio during its early days extend well beyond the realm of music, as important as this cultural arena is. In particular, there is extensive evidence that the spirit of innovation that characterized this period of broadcasting media development was especially strong in Austria, and from some unlikely sources, including an actress known to most more for her beauty than her brains. Moreover, the geo-politics of Austria especially from the end of WWI through the end of WWII and in the early years of the Cold War converged with a number of extraordinary Austrian cultural and intellectual figures to influence the development of radio. Together, these forces shaped both the substance and form of storytelling in the then new mass medium of radio. In fact, the psychological foundation of many radio dramas rests on the work of one of the 20th century's most monumental figures in the field of human psychology, the father of psychoanalysis, Dr. Sigmund Freud.

There are several important limitations of this research investigation. First, because there are so few recordings of early Austrian radio programming, especially within Austria, this study relies heavily on program documentation, scripts, and the like as indicators of the programming itself. These are likely accurate representations of the original programming, but there may be discrepancies between what was written and what was broadcast. Moreover, without a recording of the actual audio of these productions, one can only speculate about the nature and nuance of the music, acting and sound effects delivered in these radio plays.

Second, because few if any of the individuals actually involved in the early period of Austrian radio are still alive, the author could not conduct any personal interviews with early radio pioneers from Austria. Therefore, their thoughts and reflections on an important historical period in radio could not be incorporated into this study.

Third, while there may be additional recordings available yet in Germany or Russia, the author was not able to conduct the extensive research needed to locate, access and examine these potential resources. Locating any remaining existing audio recordings of early Austrian radio is a subject for future research.

Appendix Research Sites Utilized in Austria

In Vienna

1. *DokuFunk*, including 7-8 April 2016 meetings with Prof. Wolf Harrant, CEO, *DokuFunk*, Retrieved 12 April 2016 from <http://www.dokufunk.org/common/team/index.php?lang=EN>
2. *Technology Museum*, including 11 April 2016 meeting with Wolfgang Pensold, custodian of the "Medien.Welten" exhibition; see <http://www.technischesmuseum.at/language/en-us/home/ausstellungen/ausstellung-detail/articleid/453/urlmaster/false>
3. *Jewish Museum of Vienna*.
4. *ORF*, including 27 April 2016 meeting with Peter Klein, Head of Austria 1 (Ö1).
5. *Austrian Academy of Sciences Phonogramm-Archiv*, the Institute for Audiovisual Research and Documentation.
6. *The Austrian National Library*, AustriaN Newspapers Online (ANNO) archive, the Department of Music archive, and Sammlung für Plansprachen und Esperantomuseum, and the *Hofburg Palace Museum Ancient Instruments exhibition*, Retrieved 12 April 2016 from <http://anno.onb.ac.at/>
7. *Austrian State Archives*, Retrieved 12 April 2016 from <http://www.oesta.gv.at/DesktopDefault.aspx?alias=oestaen&init>
8. *National Library Music Collection*, Retrieved 12 April 2016 from <http://www.onb.ac.at/ev/collections/music.htm>
9. *MediaThek*, <http://www.oesterreich-am-wort.at/ausstellungen/radio-hoeren/1924-1938/das-neue-medium/>
10. *Institut für Musiksoziologie*.
11. *Freud Museum*.

In Salzburg

1. *Silent Night Museum*, Hallein.

In Schwarzenau

1. *Schloss Schwarzenau Museum*.

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