

Provenance Report

regarding two human laryngeal specimens in the Sound Archives at Humboldt-Universität zu Berlin

Disclaimer

The report contains quotations from archival reports and other documents from the 20th century. Several of the terms used at that time to refer to ancestors and forebears are considered to be offensive today. Throughout the text of this report direct quotations from historical records are presented as indented paragraphs or in quotation marks. These terms are in part offensive today, yet reflect the attitude of the period in which they were written.

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Summary

Research into the provenance of two human laryngeal specimens at the Lautarchiv (Sound Archives) of the Humboldt-Universität zu Berlin

The Lautarchiv of the Humboldt-Universität zu Berlin consists of an acoustic collection of around 7,500 shellac records, wax cylinders and tapes. In 2021, the Sound Archives was the only collection of the Humboldt-Universität to move to the Humboldt Forum. There, it is presented in detail in the opening exhibition of the Humboldt Lab. During the preparation of the exhibition, two human laryngeal specimens of unknown provenance were found in the archives. At this time, no further information like documentation, notes or directories existed in the Sound Archives just as the curators had no knowledge of the history of the two specimens.

The starting point of the provenance research was an anatomical and preparatory evaluation of the specimens. These results made it possible to date the specimens. On this basis, a hypothetical acquisition context of the larynxes was identified as well as several locations in medical institutes of the Berlin University before their entry into the “Institut für Lautforschung” (Institute for Sound Research). Subsequently, various contexts of research and usage at the “Institut für Lautforschung” and its successor institutions were researched and described.

The preparatory evaluation came to the conclusion that the laryngeal specimens are definitely of human origin and indicate a professional anatomical preparation as well as conservation. The production of dry specimens was common between the 18th century and World War I. Due to the technique used it can be assumed that the specimens were manufactured in the decades before and after WWI (1900–1930). Both larynxes were preserved in the same manner, which indicates that they derive from the same context.

A tentative, i.e. hypothetical, object biography follows an assumption already made in 2010/11 that the two specimens come from a colonial genocidal context of acquisition in German Southwest Africa. As a result of the colonial war waged by the German colonial power against the Herero and Nama in Namibia in 1904–1908, large numbers of human body parts were brought to scientific institutions in Germany for racial anthropological research. The Anatomical Institute of the Berlin Friedrich Wilhelm University / Charité was one of the main recipients of human remains from the colonies.

During this period, precisely in June 1913, doctoral student Werner Grabert (*1890) received his doctorate with a dissertation on “Anthropological investigations of Herero and Hottentot larynx” at the Anatomical Institute of the Friedrich Wilhelm University. Numerous larynxes of Nama and Herero were sent from concentration camps to the institute by military doctors of the imperial colonial troops. In the archives of the Anatomical Institute there are no indications of the further ‘fate’ of the larynxes examined by Grabert. They may have been disposed of or used in other contexts.

A possible recipient would have been the Phonetic Laboratory of the ENT clinic at Charité, founded by Hermann Gutzmann Sr. In addition to his work as a physician, Gutzmann also did comparative research on language learning as well as phonation processes in non-European cultures. For instance, he studied the learning of clicking sounds in Khoekhoegowab, which was the language of the Nama in the colony of German Southwest Africa. Therefore, it can be assumed that Gutzmann was interested in laryngeal specimens of Khoekhoegowab speakers. The Phonetic Laboratory of the ENT clinic might therefore have been a potential recipient for specimens of Namibian origin that were no longer needed at the Berlin Anatomical Institute.

Sources indicate that Gutzmann's successor, Franz Wethlo, brought the two specimens to the experimental phonetic laboratory of the "Institut für Lautforschung" (Institute for Sound Research) in the 1930s. Therefore, it seems plausible that Wethlo took them with him from the ENT clinic. The laryngeal specimens remained there as phonetic teaching material and objects for demonstration purposes. During the 1930s and early 1940s research at the "Institut für Lautforschung" focused on the relation between voice, language and 'race', especially with regard to languages in southern Africa. It therefore could be assumed that they had a considerable interest in using the two specimens for research purposes (especially if they were attributed to what is now Namibia).

There is an institutional continuity between the "Institut für Lautforschung" and today's Lautarchiv at the Humboldt-Universität zu Berlin. The laryngeal specimens were kept as teaching aids at the Institute for Phonetics during the post-war and GDR period – without any knowledge about their provenance and without being mentioned in any documentation or inventory. After the institutional structures dissolved in the 1990s, the larynxes were archived as an undetermined, unregistered relict at today's Lautarchiv. Shortly thereafter, they were institutionally 'forgotten' and finally reappeared as sensitive objects in the 2010s.

The research found no concrete evidence of the provenance of the two larynxes. A colonial context of injustice could neither be confirmed nor denied. However, because of institutional structures, research approaches and personal ties, it seems plausible – but remains hypothetical – that they came from the colonial war against the Herero and Nama (1904–1908), entered the Berlin Institute of Anatomy and were used for racial anthropological research. Likewise, the transfer of the laryngeal specimens from the Anatomical Institute to the Phonetic Laboratory of the ENT clinic at Charité seems plausible, but remains hypothetical.

Table of Contents

1. Information Regarding the Specimens	5
2. Results of the anatomical and dissectional assessment of the two human laryngeal specimens	6
2.1. Smaller specimen, with Label No. 17 (ID 9299)	6
2.2. Larger specimen, with Label No. 18 (ID 9296)	6
2.3. Summary	7
3. About the Discovery	8
4. A Tentative Object Biography of the Laryngeal Specimens	10
4.1. Original information and methodological approach	10
4.2. Contexts	
Context 1: Larynxes from the Colony. Anatomy and Genocide	12
Context 2: The Phonetic Laboratory of the ENT Clinic of the Charité	15
Context 3: The Institute for Sound Research	16
The Sound Department of the Prussian State Library	17
The Institute for Sound Research	19
Context 4: Phonetic research on the larynx: voice, language, “race”	21
<i>Roman Stopa</i>	23
<i>Fritz Bose</i>	24
Context 5: Postwar and GDR: De-historicized Objects	26
Context 6: 1990 onwards	28
5. Summary: Hypothesis regarding Provenance	30
6. Bibliography	31

1. Information about the specimens

ID 9296
Description: Human larynx with tongue and upper section of trachea
Labeling: Handwritten with fine-liner on adhesive label: 18
Enclosed notations: None
Documentation: None

ID 9299
Description: Human larynx
Labeling: Handwritten with fine-liner on adhesive label: 17
Enclosed notations: None
Documentation: None

2. Results of the anatomical and dissectional assessment of the two human laryngeal specimens

The assessment of the laryngeal specimens was performed on February 11, 2019 by: *Evelyn Heuckendorf*, dissector at the Institute for Integrative Neuroanatomy of the Charité – Berlin University of Medicine, and *Prof. Dr. med. Andreas Winkelmann*, Professor of Anatomy at the Brandenburg Medical School Theodor Fontane, Neuruppin, former lecturer at the Institute for Integrative Neuroanatomy of the Charité – Berlin University of Medicine and head of the Charité Human Remains Project.

2.1. Smaller specimen, with Label No. 17 (ID 9299)

Dimensions: height: 6.5 cm
 depth: 5.0 cm
 width: 3.5 cm

The person from whom the specimen came was probably a little older than 10 years of age, i.e. juvenile, and probably male.

The specimen consists of:

- complete laryngeal skeleton (the thyroid cartilage was cut median)
- mucosal folds of the laryngeal inlet
- inner and outer laryngeal muscles were dissected
- 1.5–2 cm trachea
- hyoid bone, but without tongue
- without pharynx

The specimen is – probably since dissection – in fragile condition. The aim of the dissection was obviously the movable position of one of the thyroid cartilage plates for demonstration purposes.

2.2. Larger specimen, with Label No. 18 (ID 9296)

Dimensions: height: 13.5 cm
 depth: 11.5 cm
 width: 5.0 cm

The person from whom the specimen came was most likely adult and male.

The specimen consists of:

- complete larynx
- pharyngeal muscles and esophagus
- approximately 3 cm trachea
- thyroid gland

- Tongue and hyoid bone (the pharyngeal wall was removed above a horizontal incision just above the hyoid bone, which also severed the rearmost end of the cornu majus of the hyoid bone)

2.3 Summary

Both laryngeal specimens are clearly of human origin and indicate professional anatomical preparation and conservation. The specimens were prepared as dry specimens, i.e., the larynxes were fixed with a preservative (such as soaked in formalin or alcohol solution) and then dissected and dried. They were then externally lacquered (shellac or varnish). The production of dry specimens was common in a period from the 18th century until around the First World War.

Based on the method of dry preparation that was used it may be assumed that the probable period of creation of the two specimens was in the decades before and after the First World War, i.e. approximately between 1900 and 1930. Both specimens were produced in the same manner, which speaks for the same manufacturing context. The vocal cords in both specimens are fixed in a maximally wide position and the areas of the glottis are difficult to see, so that the didactic value with regard to an anatomical explanation of voice formation appears to be minimal.

3. About the Discovery

In September/October 2017 two human laryngeal specimens were found during an inspection of the Sound Archives in preparation for its move to the Humboldt Forum.¹ The specimens were located in a larger archival carton stored in the upper half of office cabinet No. 4. Various instruments, utensils, and equipment (parts) were found in the archive box. It also contained a cardboard box with a model made of rubber, metal, and wood, apparently for demonstrating sound production; a cardboard box labeled “Toboldt”² with three ceramic models of human organs wrapped in absorbent cotton and tissue paper; and a black cardboard box (labeled “Ossicles” and “22”) with a model of a human ear pinna wrapped in absorbent cotton. The two laryngeal specimens were in another smaller cardboard box, loose and unpacked, together with a preparation of a human inner ear, a special light bulb (apparently for an older technical apparatus) and a folded paper. The laryngeal specimens are labeled with smaller, nonspecific adhesive labels on which the numbers 17 and 18 are handwritten. The inner ear preparation bears a similar label with the number 21.³ The nature of the adhesive labels suggests that they were applied no more than about 20-30 years ago. In the folded paper there were two more such labels with the numbers 4a and 37, which had apparently fallen off other objects and could no longer be assigned to them.

The surviving style of the inner ear preparation and the models indicates that they did not derive from the same context of origin as the laryngeal specimens, but probably from a common context of use. The storage of the laryngeal specimens together with a teaching aid preparation and with models does not at first signify a connection with the sound recordings of the sound archives, but rather their subsequent addition from an external collection, the purpose of which was primarily the demonstration and possibly the teaching of processes of human hearing and speech or sound formation.

A connection between the two laryngeal specimens with the collection of the Sound Archives consisting mainly of phonetic plates or with another, external collection is not immediately recognizable. Both specimens had previously been photographed in connection with the processing of the university collections of the Humboldt-Universität zu Berlin and published on the portal “Wissenschaftliche Sammlungen an der Humboldt-Universität zu Berlin. Portal der Sammlungsaktivitäten und Sammlungserschließungen” (*Scientific Collections at the Humboldt University of Berlin. Portal of collection activities and collection developments*) with a photo and a brief description of the object.⁴ In the course of research for the exhibitions “Speaking without lips, thinking without brain. Chess automaton and the speaking machine of Wolfgang von Kempelen” (foyer of the Humboldt University, 2005) and “World Knowledge. 300 Years of Science in Berlin” (Martin Gropius Bau, 2010/11) Jürgen-K. Mahrenholz, the then curator of the Sound Archives came across the two laryngeal specimens.⁵ After consultation around the years 2010/11 with the Africanist Dr. Anette Hoffmann, a specialist in colonial sound archives, it was suspected that the two laryngeal specimens were related to linguistic research on the Khoisan of southern Africa and came from colonial acquisition contexts; specifically from victims of the colonial war against the Herero and Nama in the colony of German Southwest Africa in 1904–1908.⁶ In the years that followed years the laryngeal specimens disappeared from the focus of attention again.

¹ E-mail correspondence between Britta Lange, Karsten Lichau, Dieter Mehnert, Thomas Schnalke, September/October 2017, provided by Britta Lange.

² Possible reference to Adalbert von Tobold (1827-1907), physician, laryngologist, personal physician to Emperor Frederick III, author of *Lehrbuch der Laryngoskopie und des local-therapeutischen Verfahrens bei Kehlkopfkrankheiten (Textbook of laryngoscopy and local therapeutic procedure in laryngeal diseases)*, Berlin 1863.

³ The model of the inner ear consists of three parts and can be opened. According to the information on a label on the base, it comes from the “Hermann Eppler Lehrmittelwerkstätten Rudolstadt i[n] Thür[ingen]”. Another label on the underside of the base refers to the “Council of the City of Karl-Marx-Stadt / Central Administration” as the former owner, but without an inventory number. Cf. <https://www.sammlungen.hu-berlin.de/objekte/lautarchiv/9216/>, December 15, 2020.

⁴ <http://www.sammlungen.hu-berlin.de/dokumente/9299/> and <http://www.sammlungen.hu-berlin.de/dokumente/9296/> (as of 10/2017).

⁵ Communication from Jürgen Mahrenholz, November 30, 2020.

⁶ Communication from Anette Hoffmann, December 15, 2020

Around the year 2017 the objects were examined again and repackaged. It was only after their renewed “discovery” in 2017 that the specimens were removed from the online collection portal of the Humboldt University due to the possibility that they might derive from a colonial context, but above all due to the sensitivity of the object photos. This was the information that was available in May 2018, when provenance research on the two specimens was first discussed.

4. A Tentative Object Biography of the Laryngeal Specimens

4.1. Initial Information and Methodological Approach

There are no labels, enclosed notations or collection documents with references to the origin and collection history of the specimens. The numbers on the affixed labels merely indicate that the specimens were once listed in some form or another; however, there are no references to the numbers. A complicating factor for provenance research is the fact that the specimens remained in the status of non-inventoried, and thus temporary, collection items for the longest period of their existence in the preserving institutions – for which permanent storage was apparently never intended – and that they were ultimately preserved after all. Such an “inferior” status is typical, especially in natural science institutions, for specimens that are intended to be “consumed” in research or “exploited” as teaching aids.⁷ Curatorial appropriation of the specimens through the assignment of collection numbers (ID.9296 and ID.9299) presumably only took place in the Sound Archives between the years 2000 and 2010, when the original knowledge of former collection managers with regard to their origin had long since been lost.

A DNA analysis or comparable scientific investigations of the material substance of the specimens would not have yielded any useful results. Suitable material for examination cannot be extracted from the interior of the specimens, which essentially consist of cartilage tissue treated with formalin. Any DNA present on the surface is more likely to be attributable to users. Moreover, a relationship between DNA on the one hand, and regional origin as well as ethnic and social identity on the other hand, has in any case not been proven. For this reason, the origin, a concrete acquisition context and a definite object biography of the two laryngeal specimens could not be reconstructed. The regional origin and ethnic affiliation of the persons from whom the two specimens originated could not be determined with certainty – this much can already be stated here. There is no evidence for a colonial or other context of injustice or the opposite.

The only thing that is certain is that the specimens were found in a cabinet at the Sound Archives, in spatial proximity to the sound collection. Based on the aforementioned findings the present provenance investigation thus attempts to determine why the two specimens are in the present Sound Archives, the routes and stations through which they arrived there, and the purposes for which they were used. As its point of departure a tentative, i.e. hypothetical, object biography adopts the hypothesis already put forward in 2010/11: that the two specimens were acquired in a colonial, genocidal context in German Southwest Africa, and in the following establishes their potential acquisition, institutional stations, and integration into contemporary contexts of exploitation with well-founded plausibility. The tentative object biography describes the conceivable path of objects from one context of origin to an institution (and possibly from there to the next institution or collection) – a path that cannot be definitively proven in accordance with the body of source material researched, but which can be plausibly traced with numerous indicia and which represents a thoroughly “typical” fate for such objects.⁸

The starting point of the tentative object biography is the colonial war waged by the German colonial power against the Herero and Nama in Namibia in the years 1904 through 1908, as a result of which human

⁷ Cf. Förster/Stoecker 2016, pp. 34-37.

⁸ Ibid, pp. 66-68.

bodies and body parts of Namibian victims of the war were transferred to German scientific institutions in large numbers for racial anthropological research. The Anatomical Institute of the Berlin Friedrich-Wilhelms-University / Charité represented a preferred address for consignments of human remains from the colonies of that time. Research interests at the time, dynamic collection structures, and the actors involved form the cornerstones for the subsequent, gradually condensed object biography, which leads over a period of more than one hundred years to today's sound archive.

The objects found in scientific collections usually had and continue to have various statuses. Many objects are permanently stored in collections, used for research, curated, and inventoried – not least of all as proof of ownership. Their object history can be traced to a greater or lesser extent. However, it is also part of the practice of scientific collections that quite a few objects are only needed temporarily for specific research purposes. They are not intended for permanent storage and are therefore not included in the institution's collection after their use. The specimens are not considered to represent historically significant cultural heritage, but as replaceable teaching aids intended for consumption. After their use they are disposed of, passed on to other interested parties, or remain in the institution without the context of their origin and use being documented.

In the absence of the object documentation, the occasions, reasons, and paths of their migration from one institution to another, as well as their “abandonment” and “being forgotten” in the respective institutions, are difficult to trace. One may assume that there were usually external causes for migration or transfer which can be determined at least on a tentative basis in the course of provenance research. These may have been structural changes in the institutions holding the items or a new interest in using the items in another, neighboring institution. On the other hand, no concrete reason is required for objects to be “left lying around” and “forgotten” by institutions. However, when it comes to provenance research, the reasons why such objects remained in the institutions and what they were possibly used for are of particular interest.

The two unregistered laryngeal specimens were apparently subjected to such an “inferior” object status for the longest period of their keeping during the institutional stations of their object history.⁹ They probably first migrated through several institutions and then lay dormant and were gradually forgotten until they were institutionally appropriated by the Sound Archives through the assignment of collection numbers, presumably around the year 2010, only to again disappear and eventually reappear as sensitive human remains.

The following tentative object biography aims at a plausible reconstruction of the acquisition contexts, collection migrations, and exploitation in response to questions of contemporary research and teaching. In the absence of any documentation for the specimens, the historical provenance report focuses on both the broader and narrower institutional and scholarly contexts in which the laryngeal specimens might have been acquired, produced and used, and ultimately left lying around. This is because provenance research of objects in collections gleans its evidence from contexts, from the knowledge systems into which such objects were sorted. We know from other provenance research projects that objects which appear to be separate today, were in some cases intimately related in past decades. The focus of collections, research topics, and networks of actors overlapped, and objects were actively circulated across disciplinary boundaries and between individual actors.¹⁰ At times the objects remained disregarded in any inventory.

4.2 Contexts

Context 1: Larynxes from the Colony. Anatomy and Genocide

⁹ Förster/Stoecker 2016, pp. 34-37; Braun 2015.

¹⁰ Förster/Stoecker 2016.

An appraisal of the dissection itself by dissectors has dated the production of the specimens to the years around the First World War. During this period, specifically in June 1913, the doctoral student Werner Grabert (*1890) earned a doctorate in medicine at the Anatomical Institute of the Friedrich Wilhelm University in Berlin. The director of the institute, Wilhelm Waldeyer, judged the submitted dissertation on “Anthropological Investigations of Herero and Hottentot Larynxes” as “valuable” and awarded it the grade “very good”.¹¹ In the work Grabert investigated the existence of “racial differences” between people from Africa and Europe on the basis of the larynx, which “as the sound-producing organ occupies an important place in the entire language mechanism.” Grabert placed his examinations in a series with examinations already undertaken “of larynxes derived from members of foreign races” and which were devoted above all to the “existence of racial differences”. Among others, Grabert’s academic teacher, the anatomist and anthropologist Paul Bartels, private lecturer and third assistant at the Anatomical Institute, had compared the accessory spaces of the laryngeal cavity of Europeans, primates, and Africans (in Bartel’s characteristic wording: of “human beings,” “mammals, especially among the apes,” “foreign races”) for a “racial anatomical” investigation in 1904.¹² Bartel was particularly interested in finding “theromorphs”, i.e. animal-like formations in humans, which he believed to have identified in African larynxes.

The works mentioned demonstrate that the investigation of a postulated connection between voice, language and “race” was already on the research agenda around 1900. However, they were mostly based on studies of living people; moreover, “the research material used was always limited and unequal.”¹³ Grabert, on the other hand, was able to base his study on a disproportionately larger amount of material taken from cadavers, namely 50 larynxes from Europeans, seven larynxes from primates, and 50 larynxes from Nama and Herero (“racial larynxes (38 Hottentots and 12 Hereros)”). “Three larynxes from newborn Hereros” were added to the latter. While Grabert received the larynxes of European origin from the Pathological Institute of the Charité, he received the total of 53 larynxes from members of the Nama and Herero through his mentor Bartels.

As Grabert noted in his introduction, the Anatomical Institute had received “a really rich and similar material of larynxes” on the occasion of the “Afrika-Wirren” (*African turmoil*) from staff physician Hugo Bofinger and senior physician Wolff.¹⁴ The term “Afrika-Wirren” referred to the war waged by the German colonial army in the then colony of German Southwest Africa from 1904 to 1908 which resulted in the genocide of the Herero and Nama peoples. Both military physicians served in the imperial colonial troops during the war. Bofinger, who had previously studied under Waldeyer, was in charge of the “Sick-Native Station”¹⁵ and the “Bacteriological Laboratory” on Shark Island¹⁶, offshore from the town of Lüderitz Bay, from August 1905 to July 1907. Both facilities were assigned to the concentration camp for interned Herero and Nama located on Shark Island. Senior physician Wolff served from 1905 to 1907 as deputy chief physician of the Warmbad staging hospital in the south of the colony, which was predominantly inhabited by Nama communities.¹⁷

Living conditions for prisoners in the concentration camps in German Southwest Africa were catastrophic. In the notorious prison camp on Shark Island, accommodation in tents under harsh climatic conditions, vitamin-deficient malnutrition, and forced labor in railroad construction resulted in nearly four thousand deaths; the mortality rate among the internees there was over fifty percent. In view of the devastating

¹¹ Notification regarding doctorate/comments by Waldeyer, May 21, 1913, in: HUB Archive, Medical Faculty I, Doctoral Degree Awards, 810, p. 111.

¹² Bartels 1904. Bartels used eleven larynxes of Africans for this purpose, some of which came from victims of German colonial expansion in East Africa in the 1890s and some from Africans from Portuguese colonies who were taken to Brazil as slaves around 1830, killed there in an uprising, and whose preserved heads subsequently ended up in the Anatomy Institute in Berlin and were not used for anatomical research until after the year 1900. Cf. Stoecker 2021.

¹³ Grabert 1913/14, p. 65.

¹⁴ Ibid, p. 66

¹⁵ Sanitätsbericht 1909, p. 245.

¹⁶ Ibid, p. 149. See Bofinger 1910 with regard to Bofinger’s activities on Shark Island.

¹⁷ Sanitätsbericht 1909, pp. 138, 254.

camp conditions that prevailed on the “Island of Death,” it seems justified to speak of an annihilation of human life caused by neglect.¹⁸

In Field Hospital XII of the camp on Shark Island the corpses of internees were autopsied in large numbers under the direction of staff physician Bofinger; organs and body parts were removed from them in profusion for research purposes. Dozens of severed heads were preserved in a formalin solution, packed in tin canisters, and shipped to the Anatomical Institute in Berlin.¹⁹ The military physicians of the colonial troops thus filled the “orders” placed by the metropolitan anatomy institutes, which saw the war in the colony of German Southwest Africa as a welcome “opportunity” in order to obtain examination material, i.e., skulls, skeletons, entire corpses, and individual organs. The director of the institute, Waldeyer, had already received the severed heads of dead Herero and Nama in 1905 through the command of the colonial troops.²⁰ Waldeyer passed on these specimens to his assistant Bartels, who himself carried out anatomical examinations of the facial musculature on 25 of the heads received.²¹ Bartels made several of the preserved heads available to his doctoral students Werner Grabert, Christian Fetzer and Heinrich Zeidler for racial anthropological studies.²²

The studies by Waldeyer, Bartels, Grabert, Fetzer, Zeidler as well as the anatomists Hans Virchow, Gustav Fritsch and others were not the first such investigations with comparative racial anthropological questions at the Berlin Anatomical Institute, which “exploited” human body parts obtained under colonial conditions. However, they were based on a comparatively extensive “material” due to the metropolitan location and, not least of all, owing to the good connections of the Berlin Anatomical Institute to colonial troop physicians in African colonies. This “material” was used for various research questions and was certainly not completely “used up” following completion of the investigations. There are no indications with regard to the further “fate” of the larynxes examined by Grabert in the collection documents of the Berlin Anatomical Institute. They may have been completely or largely disposed of and thus lost; especially with soft tissue specimens, this was and often still is practiced in medical research. However, it would certainly have been in line with the logic of effective utilization to transfer still usable laryngeal specimens to other contexts of use, especially if the institutes involved belonged to the same faculty.

Context 2: The Phonetic Laboratory of the ENT Clinic of the Charité

One such institutionally and thematically obvious addressee of laryngeal specimens was the Phonetic Laboratory of the Ear, Nose and Throat Clinic of the Charité, which was founded by Hermann Gutzmann Sr. The physician Gutzmann operated a “Sanatorium for Speech Disorders” in Berlin-Zehlendorf since the year 1896, and established phoniatics (speech therapy) as a clinical teaching subject with his habilitation on “Speech Disorders as a Subject of Clinical Teaching” in 1905. From 1906 he taught at the University of Berlin, and in 1912 he was appointed as a professor at the ENT Clinic of the Charité. Gutzmann soon incorporated the private phonetic laboratory which he had built up into the ENT Clinic.²³

In addition to his medical work, Gutzmann carried out theoretical and practical research and published on speech disorders, voice disorders, experimental phonetics and hearing disorders. In doing so he also took a comparative look at language learning and sound formation processes in non-European cultures an early stage. Thus, for example, in a paper on “The speech sounds of children and primitive peoples” he examined the learning of clicks in Khoekhoegowab, the language of the Nama (in Gutzmann’s wording: “language of the Nama Hottentots”) in what was then the colony of German Southwest Africa. For this he referred to reports

¹⁸ Erichsen 2008.

¹⁹ Schulze 1912.

²⁰ Waldeyer 1906.

²¹ Bartels 1909; Bartels 1911.

²² Grabert 1913/14; Fetzer 1913/14; Zeidler 1914/15; Zeidler 1921.

²³ Gosepath 1966; Lindner 1976, p. 190; Zehmisch 2005; Hermann Gutzmann Sr. [Wikipedia entry], https://de.wikipedia.org/wiki/Hermann_Gutzmann_sen., 12 February 2021.

from the German missionaries Carl Büttner and Carl Hugo Hahn and, like them, put the speech sounds of children and of “primitive peoples” on the same level.²⁴

It can thus be assumed that Gutzmann, as a physician and phoniatriest, not only had a general theoretically comparative interest in the processes of sound formation and speech learning in other linguistic cultures, but also a very practical interest in specimens of that organ which was instrumental in forming the sounds, i.e. specifically in laryngeal specimens from Khoekhoegowab speakers. Thus, Gutzmann Sr. and the Phonetic Laboratory of the ENT Clinic of the Charité appear to be a potentially interested party for those laryngeal specimens of Namibian origin that were no longer needed after the completion of Grabert’s investigations at the Berlin Anatomical Institute. Gutzmann was in the position to act as a hinge between the Anatomical Institute and the ENT Clinic when it came to passing on the specimens.

After Gutzmann Sr. died in 1922, the former elementary school and voice instructor Franz Wethlo was commissioned by the Prussian Ministry of Culture on March 2, 1926 to give lectures and courses on experimental phonetics at the Second Ear, Nose and Throat Clinic of the Charité (medical faculty) and to take over management of the phonetic laboratory of the clinic. This was explicitly linked to the task of collaborating with members of the faculty of philosophy,²⁵ i.e., primarily with members of linguistic and linguistic science institutes. A recommendation to this effect from full professors of the medical and philosophical faculties preceded Wethlo’s assignment.

Under Wethlo’s management, the laboratory and Wethlo himself were to be available not only to the phonetic department of the ENT Clinic (under the direction of Carl Otto von Eicken), but also to members of the philosophical faculty “for all phonetic work for themselves and their students.”²⁶ In June 1934 Wethlo received the extended teaching assignment “to take over management of the laboratory for experimental phonetics at the Institute for Sound Research at the University under the guidance of the director of the Institute for Sound Research, as well as lectures and exercises in connection therewith, and to assist in the research work there.”²⁷ At the Institute for Sound Research Wethlo continued the experimental phonetic courses held at the Phonetic Laboratory of the ENT Clinic, at times together with the Africanist and linguist Diedrich Westermann, the director of the Institute for Sound Research.²⁸

With regard to potential migration of the two larynxes, Franz Wethlo thus appears to be the hinge person who had free access to the specimens in the ENT collection and who may have had a professional interest in transferring the laryngeal specimens from the collections at the ENT Clinic of the Charité to the Institute for Sound Research.

Context 3: The Institute for Sound Research

Dieter Mehnert, the later chair holder responsible for the phonetic collection at the Humboldt University in Berlin, reported that Franz Wethlo used the laryngeal specimens as items for demonstration in his lectures. In Mehnert’s opinion the laryngeal specimens made it into the inventory of the then Institute for Sound Research through Wethlo in the 1930s.²⁹ While we were only able to approach the preceding contexts in hypothetical terms, Mehnert’s communication about Wethlo and the specimens’ entry into a predecessor institution of today’s Sound Archives now provides the furthest-reaching, historically tangible information with regard to the biography of the laryngeal specimens.

²⁴ Gutzmann 1899, esp. p. 39 f.

²⁵ Lammers (Prussian Ministry of Culture) to Wethlo, March 2, 1926, in: HU-UA, Med.Fak.01, No. 1416: Lectureships 1919-1930. Medical Faculty, Sheet 171.

²⁶ Phonetic Commission: Carl Otto von Eicken, Diedrich Westermann, Eugen Mittwoch, Gustav Neckel, Eduard Wechsler, Alois Brandl, Schumacher, Roetkau, Schäfer, Carl Stumpf to the Philosophical Faculty of the University of Berlin, June 18, 1925, in HU-UA, Med.Fak.01, No. 1416: Lectureships 1919-1930. Medical Faculty, Sheet 169 f.

²⁷ Vahlen to Wethlo, 12 June 1934, in: HU-UA, Med.Fak.02/02, No. 0100/81: Lectureship Franz Wethlo in Phonetics 1934-1950, Sheet 389.

²⁸ Lindner 1976, p. 190.

²⁹ Oral communication from Dieter Mehnert, December 1, 2020.

At the time, the Institute for Sound Research was the institutional body within the Berlin University that was responsible for the curatorial, scientific and administrative aspects of the sound recordings of the Phonographic Commission and for subsequent studio recordings, and which stands for institutional continuity with today's Sounds Archive. In the following its history will be examined in greater detail with reference to the two laryngeal specimens.

Today's Sound Archives represent a scientific collection at the Humboldt University of Berlin. It currently holds approximately 7,500 shellac records with speech and vocal recordings, most of which were taken from foreign prisoners of war in German camps during the First and Second World Wars, but also foreign speakers who were in Berlin during the years between the wars. Today it is one of the leading sound archives in Europe. As a university collection facility, the Sound Archive with the record collection, its actual core holdings, has been institutionally assigned to the Hermann von Helmholtz Center for Cultural Technology at the Humboldt University of Berlin since 1997. Prior to that the sound collection was part of various non-university and university institutions.³⁰

The Sound Department of the Prussian State Library

On April 1, 1920 the "Sound Department at the Prussian State Library" was founded in Berlin and the English specialist Wilhelm Doegen was appointed as its director. Doegen had previously been the initiator and driving force behind the "Royal Prussian Phonetic Commission" during the First World War, which had made 1,651 recordings of voices in about 250 languages and dialects in German prisoner-of-war camps.³¹ The core task of the Sound Department was essentially to curate the collection of phonetic recordings stored on shellac discs, to provide for their scientific evaluation, to expand on them with additional recordings of foreign speakers, and also to produce copies of the existing recordings and to sell them to interested parties in Germany and other European countries. The various tasks of the Sound Department were soon reflected in a rather sprawling internal structure with a total of fourteen fields of activity, including a professorial advisory board at the Berlin University ("Phonetic Commission") and the establishment of German and European "experts" with whom the Sound Department was networked.³²

((Graphic: Organization chart of the Sound Department, 1927))

An organization chart of the Sound Department from the year 1927 lists, among other things, the "Eighth Phonetic Laboratory" with a "sound physiology department: Palatographic³³ and radiographic subdivision for the study of articulation, etc."³⁴ Doegen noted the following with regard to the activities of this phonetic laboratory in the annual report of the Sound Department for 1926: "A Zimmermann kymograph³⁵ with guttural recorder³⁶ [...] was purchased for the phonetic laboratory. [...] Investigations of the movement of sound and questions of an articulatory nature were carried out with these apparatuses. In addition, attempts were made to graphically represent the vibrations of the gramophone membrane through direct transfer to a guttural recorder."³⁷ It is clear from this that Doegen understood the Sound Department at the Berlin State Library not

³⁰ Cf. <https://www.lautarchiv.hu-berlin.de/>; Stoecker 2008, pp. 122-146.

³¹ Cf. especially Lange 2019; Stoecker 2008, pp. 122-125.

³² Organization of the Sound Department at the Prussian State Library Berlin [organization chart], 1927, *Institute for Sound Research (IfL)* 1.

³³ Palatography (from Latin palatum = palate + ... graphy) refers to a method for analyzing and mapping the contact points between the tongue and palate in the formation of linguistic sounds; cf. Scholz 1966

³⁴ Organization of the Sound Department at the Preussische Staatsbibliothek Berlin, in: Humboldt-Universität zu Berlin, University Archives, Institute for Sound Research (IfL), 1, unpag.

³⁵ Graphic wave recorder for experimental purposes manufactured by Zimmermann in Leipzig

³⁶ Device for determining speech pitches and displaying them in the shape of a curve, cf. Wethlo 1959.

³⁷ Wilhelm Doegen: Jahresbericht 1925 [draft], January 25, 1926, in: Humboldt-Universität zu Berlin, University Archives, Institut für Lautforschung (IfL), 9, Sheet 13. Doegen noted something similar in the report for the following year: Wilhelm Doegen: Jahresbericht 1926 [draft], August 10, 1927, *ibid*, Sheet 21.

only as a “phonetic library” within the meaning of a collection to be increased, but also as a facility for linguistic, phonetic and physiological experiments which – equipped with corresponding technical instruments – was available as a research laboratory to scientists at the Berlin University and beyond.

Prompted by inadequacies in Doegen’s leadership, more profound institutional changes came about in the early 1930s. In 1931 the Sound Department was removed from the State Library, and placed under the direct control of the Prussian Ministry of Culture as the “Sound Archive” and affiliated with the University with regard to its administration. After lengthy legal disputes, Doegen was removed from office in September 1933.³⁸

The Institute for Sound Research

Diedrich Westermann, professor of African languages and cultures at Berlin University since 1921 and member of the Phonetic Commission³⁹ since 1928, was appointed as the new, initially provisional director of the Phonetic Archive. With the assumption of his new position, Westermann pursued the aim of transforming the phonetic archive into a phonetics institute at the university.⁴⁰ The intended transformation into a central phonetic teaching and research facility for all of the philological chairs at the university was associated with an increased scientific orientation for the phonetic collection, which was open to questions from the natural sciences as well as the humanities and medicine.⁴¹

After the institutional transformation of the Sound Department into the “Institute for Sound Research” (IfL) was completed on February 14, 1934,⁴² Westermann developed further ideas with regard to its reorganization.⁴³ Thus the institute was divided into *three departments* according to the most important fields of activity: Westermann himself took over the *linguistic-phonetic department* of the institute, which was established for the “recording of spoken texts and their scientific processing” by linguists. According to Westermann, the technical equipment available at the institute for these purposes ensured “phonetically flawless reproduction at an almost unique level.”⁴⁴ The supervision of the musical recordings in the *music department* of the Institute for Sound Research was taken over by Fritz Bose, a former doctoral student of the emigrated Berlin ethnomusicologist Erich Moritz von Hornbostel and previously assistant at the Phonogram Archives.⁴⁵

The *experimental phonetic laboratory* of the Institute was intended for investigations of sounds and phonetic processes “whose nature cannot be determined by eye and ear, but only by experimental means. Every representative of linguistics who deals with living languages and dialects has to deal with such problems all the

³⁸ Staatsbibliothek Berlin – Preußischer Kulturbesitz, Handschriftenabteilung/Hausarchiv, PSB III, C 59, Vol. 5, p. 47. The institution remained located in the building of the Preußische Staatsbibliothek until 1945.

³⁹ Ministry of Culture to the Director General of the Prussian State Library, June 12, 1928, in: SBB PK, PSB III, C 59, Vol. 2, Sheet 237.

⁴⁰ Stoecker 2008, p. 133 f.

⁴¹ Cf. *Ausgestaltung der Lautabteilung zu einem Institut für Lautforschung*. Memorandum by Westermann to Büchsel (Ministry of Culture), received January 31, 1934, in: BArch Berlin, R 4901-1475, Sheets 393-395.

⁴² Cf. Administrative Director of the University to Minister of Culture, Oct. 2, 1934, in: BArch Berlin, R 4901-1475, Sheet 546. – Westermann’s official appointment as Director of the Institute for Sound Research at the University of Berlin took place on May 22, 1934 (cf. Ministry of Culture to Westermann, May 22, 1934, in: SBB PK, PSB III, C 59, Vol. 5, Sheet 111).

⁴³ Cf. Westermann to Ministry of Culture, March 15, 1934, in: BArch Berlin, R 4901-1475, Sheets 474-478; Westermann: Memorandum on “Ausbau des Instituts für Lautforschung an der Universität Berlin” (*Expansion of the Institute for Sound Research at the University of Berlin*) to Undersecretary Wildhagen (Ministry of Education and Cultural Affairs), May 30, 1934, in: *ibid.*, Sheets 535-540.

⁴⁴ Cf. Westermann to REM, January 10, 1935, in: BArch Berlin, R 4901-1476, Sheet 73; cf. also Westermann to the Administrative Director of the University of Berlin, June 19, 1935, in: *ibid.*, Sheet 76; Westermann to REM, June 20, 1935, *ibid.*, Sheet 82; Westermann to the Administrative Director of the University of Berlin, February 5, 1936, *ibid.*, Sheet 104; Westermann to REM, October 2, 1936, *ibid.*, Sheet 148.

⁴⁵ Westermann: Memorandum on “Ausbau des Instituts für Lautforschung an der Universität Berlin” (*Expansion of the Institute for Sound Research at the University of Berlin*) to Undersecretary Wildhagen (Ministry of Education and Cultural Affairs), May 30, 1934, in: BArch Berlin, R 4901-1475, Sheet 536; Westermann to Ministry of Education and Cultural Affairs, March 5, 1934, in: BArch, R 4901-1475, Sheets 474-478. Fritz Bose’s work at the IfL was initially reflected in Bose 1935 and Bose 1936.

time, and it has long been felt by many linguists to be an untenable state of affairs that there is no facility for such investigations at the Berlin University.”⁴⁶ For these investigations Westermann recruited Franz Wethlo, a former teacher who since 1926 had administered the experimental phonetic laboratory founded by the phoniatrician Hermann Gutzmann Sr. at the ENT Clinic of the Berlin Charité. It was intended that Wethlo would continue to curate, teach, and conduct research at the experimental phonetic laboratory of the Charité and at the same time at the Institute for Sound Research.⁴⁷ Both Wethlo and Bose gave lectures and exercises on experimental and musical phonetics, respectively, at the university.⁴⁸

The distribution of tasks outlined above basically remained in place until 1945.⁴⁹ The departmental structure was not least an expression of the fact that the focus of the Institute for Sound Research had shifted significantly compared to its beginnings in 1920: The linguistic-phonetic department under Westermann was primarily concerned with the Institute’s phonetic recordings, while the experimental-phonetic department basically had little to do with the record collection that primarily characterizes the present-day phonetic archive at Humboldt University. There the laryngeal specimens as phonetic teaching and demonstration items remained for decades in the status of subordinate objects that were used but not inventoried.

Context 4: Phonetic research on the larynx: voice, language, “race”

At the beginning of the 20th century phonetics established itself as an independent scientific discipline and proceeded to “objectify with experimental methods [...] the results that had been determined purely subjectively until then.”⁵⁰ The aim was to underscore “the audible ascertained facts through experimental results”.⁵¹ The larynx as one of the organs of human phonation was the constant focus of scholarly interest. In the first half of the 20th century, linguistics, ethnology, physiology, and biological anthropology also participated in such experimental and sometimes systematic data collection, each pursuing specific interests in the “alien”.

A linguistic study by the Hamburg linguist and Africanist Maria von Tiling from 1925, in which she had worked out a Somali grammar with the Somali Mohamed Nur, was characteristic for this mixture of scientific approaches.⁵² Mohamed Nur came to Germany with a human zoo or so-called ethnological exhibition before the First World War and was interned as a foreigner in the civilian prison camp in Ruhleben (Berlin) during the war. The Hamburg Africanist Carl Meinhof recorded Nur’s voice there for the Phonographic Commission and recruited him as a voice assistant for the Hamburg Institute for Colonial Languages in 1917.⁵³ Meinhof’s assistant Maria von Tiling worked there with Nur to produce a grammar of Somali. Tiling published the study as her dissertation in 1925 without naming Nur as her co-author.⁵⁴ Tiling devoted the initial principal part of her dissertation to “Phonetic studies on the articulation of the ‘pressed’ sounds d and q and the laryngeal sounds [...] in Somali” and observed the interaction of laryngeal and tongue base muscles in the articulation of laryngeal sounds.⁵⁵ Tiling’s object of study was primarily Nur himself,⁵⁶ whose larynx she depicted in two X-

⁴⁶ Memorandum on “Ausbau des Instituts für Lautforschung an der Universität Berlin” (*Expansion of the Institute for Sound Research at the University of Berlin*) to Undersecretary Wildhagen (Ministry of Education and Cultural Affairs), May 30, 1934, in: BArch Berlin, R 4901-1475, Sheet 537.

⁴⁷ Westermann to Ministry of Education and Cultural Affairs, March 5, 1934, in: BArch, R 4901-1475, Sheets 474-478.

⁴⁸ Westermann: Bericht über die Tätigkeit des Instituts für Lautforschung an der Universität Berlin im Kalenderjahr 1934 (*Report on the Activities of the Institute for Sound Research at the University of Berlin in Calendar Year 1934*), December 18, 1934, in: BArch Berlin, TR 4901-1476, Sheets 2-4.

⁴⁹ Thus recognizable, for example, in a letter from Westermann to the Reich Ministry of Education, Dr. Wacker, October 22, 1937, in: Humboldt-Universität zu Berlin, University Archives, Institut für Lautforschung (IFL), 9, Sheets 413-415.

⁵⁰ Lindner 1976, p. 189.

⁵¹ Ibid p. 190

⁵² Tiling 1925.

⁵³ Sound Archives Berlin, recordings PK 860, 861: Mohammed Nur – Somali; Mahrenholz / Stoecker 2013, p. 67; Hoffmann (under review), p. 78.

⁵⁴ Tiling 1925

⁵⁵ Ibid., pp. 8-37. Unfortunately, the reproduction of diacritical marks must be omitted here.

⁵⁶ Hoffmann 2020, pp. 115–128.

ray images in various positions in the appendix to her dissertation. Tiling's study, like much other research of the time, explicitly imagined the human larynx as an organ and site in the human body where cultural (linguistic) and "racial" difference manifested itself.

((Graphic:

Articulation of k

The black round spot is the image of the shot grain, which in the resting position at the level of the cricoid cartilage was taped to the skin of the test person by a piece of leucoplast; it serves

Articulation of q

as a starting point in the comparative assessment of the vertical movements of the larynx; cf. p. 27.

X-rays of the larynx of Mohamed Nur, 1925

X-ray images of a larynx at the moment of formation of vowels and consonants at different pitches testify to a comparable research approach.⁵⁷ They were made by Hermann Gutzmann Jr. in the Phonetic Laboratory of the ENT Clinic of the Charité.⁵⁸ The prints are still in the phonetic archive today as a non-inventoried remnant of the collection that can no longer be assigned.

Around the middle of the 1930s the Institute for Sound Research had become part of a phonetic research network in Berlin. Phonetics itself was in the process of "developing into an independent and interdisciplinary discipline."⁵⁹ And the prerequisites for this at the Berlin University were good. The Africanist and linguist Diedrich Westermann, director of the Institute for Sound Research, regarded phonetics as a component of linguistics and needed it for the characteristic study of African languages. Franz Wethlo conducted experimental phonetic studies in the experimental phonetic laboratory of the Institute for Sound Research. The physician Hermann Gutzmann Jr. did the same in the phonetic laboratory of the ENT Clinic of the Charité with a focus on speech disorders. At the same time, the physicist and acoustician Ferdinand Trendelenburg at the Berlin University was strongly advancing the development of methods of sound and phoneme research, while his brother Wilhelm Trendelenburg, director of the Physiological Institute of the Berlin University, devoted himself to the physiology of the voice.⁶⁰ A broad, interconnected interest from the fields of medicine, natural sciences and the humanities in the connection between voice and speech – which invariably focused on the human larynx – became apparent.

This inter-faculty interest in research found expression, for example, in the series of events entitled "Phonetic Lectures", jointly organized by the Institute for Sound Research and the Society for Phonetics. In this context Wilhelm Trendelenburg reported in December 1937 on "Recent Studies on Voice Physiology," emphasizing the new knowledge about the processes in the larynx that had been gained owing to an "electroacoustic recording method for sounds (F. Trendelenburg) and the unification of this method with the recording of vocal fold vibrations on the laryngeal specimen (improved shadow technique according to W. Trendelenburg), as well as Backhaus's condenser method." Now there is "the prospect of reaching objective conclusions with regard to good and bad voices."⁶¹

⁵⁷ The use of X-ray technology in order to visualize speech processes experienced a boom from the 1920s onward, cf. Vöhringer 2012.

⁵⁸ Gutzmann to Westermann, January 15, 1948, in: HU-UA, Phil.Fak.02, No. 132: Institute of Phonetics, correspondence Westermann, Feyer, Sheet 169.

⁵⁹ Lindner 1976, p. 190.

⁶⁰ See, for example, W. Trendelenburg 1928; W. Trendelenburg / F. Trendelenburg 1937; W. Trendelenburg 1940.

⁶¹ Institute for Sound Research: press release, December 6, 1937, in: Humboldt-Universität zu Berlin, University Archives, Institut für Lautforschung (IfL), 15, pp. 15–16.

These networked research interests were further reflected in the joint involvement of external (up-and-coming young) scientists. In 1937, for example, Westermann placed the Polish phonetics student Stanislaw Skorupka,⁶² who was studying the acoustic structure of vowels in Polish, with the physiologist Wilhelm Trendelenburg and the acoustician Martin Grützmaker, both at Berlin University, for experimental phonetic studies.⁶³ The question of the connection between voice and speech was consistently expanded in the first half of the 20th century to include its connection with the component of “race.” This extension was latent throughout, although to varying degrees. Such questions experienced a certain boom at the Institute for Sound Research in the 1930s, for example in the topics of two other scientists, for whom the laryngeal specimens, especially with an African origin, certainly had considerable potential.

Roman Stopa

The Polish Africanist Roman Stopa carried out linguistic and ethnological studies among the San and the Nama in Southwest Africa in 1935/36 and dealt with clicks in African languages.⁶⁴ Among other things, he pursued the thesis already put forward by the German-South African linguist Wilhelm Bleek in 1868, which was also taken up by the Austrian anthropologist Rudolf Pöch in 1919, that clicks and click consonants in South African languages represent a missing link between humans and apes.⁶⁵

In 1938/39 Stopa came to Berlin⁶⁶ as a visiting scholar at the Institute for Sound Research, after Westermann contributed to Stopa’s habilitation in Lemberg (Lwów, today Lwiw in the Ukraine) in 1937. In a lecture in the Phonetic Lecture Series in January 1939 Stopa reported in Berlin on the “Characteristics of the Isolating Speech Type of Africa on a Morphological and Psychological Basis”.⁶⁷ In an article on “The clicks in connection with the other sounds of the human language” for the “Archive for Comparative Phonetics” published by Westermann, Stopa discussed the formation of individual clicks and first described physiological processes, including respiration and the muscular strain on the organs of speech, and in this context also addressed the function of the larynx. Finally, Stopa described the “application” of various clicks using the example of the Nama language in order to compare its clicks with those in the languages of the Korana, San, Zulu, Sotho and Swazi in southern Africa as well as the Sandawe and Hadzapi (Wakinda) in East Africa and “Pygmy” societies in Central Africa.⁶⁸

Fritz Bose

This scientific interest in the connection between voice, language and “race” was represented at the Institute for Sound Research above all by the musicologist Fritz Bose. In 1934 Bose took over as head of the *music department* of the Institute for Sound Research; his focus was on the collection and research of the German folk song.⁶⁹ At the same time, he cooperated with the German Ancestral Heritage Research Association (*Forschungsgemeinschaft Deutsches Ahnenerbe*), an SS organization created by SS leader Heinrich Himmler for the purpose of providing a scientific foundation for Nazi ideology. On trips taken by the “Ahnenerbes” to Scandinavia, Bose dealt with “Germanic” and “Proto-Nordic” music.⁷⁰ In 1935 Bose began work on his habilitation, which he submitted in 1939 under the title “Klangstile als Rassenmerkmale” (“*Sound Styles as Racial Characteristics*”). In 1943/44 the study appeared in two chapters in the “Zeitschrift für Rassenkunde”

⁶² Stanislaw Skorupka (1906–1988), studied at Friedrich-Wilhelms-Universität in Berlin in 1937/38, founder of Polish phraseology.

⁶³ Feyer to Skorupka, December 22, 1937, in: Humboldt-Universität zu Berlin, University Archives, Institute for Sound Research (IfL), 15, Sheet 76.

⁶⁴ Stopa 1935.

⁶⁵ Hoffmann, under review.

⁶⁶ Stoecker 2008, p. 137

⁶⁷ Humboldt-Universität zu Berlin, University Archives, Institute for Sound Research (IfL), 28, Sheet 38.

⁶⁸ Stopa 1939, pp. 99-105.

⁶⁹ Bose 1935; Bose 1936.

⁷⁰ Lange 2016; Hoffmann, under review, p. 53.

(*Journal for Racial Studies*) with its pronounced focus on racial anthropology and edited by the Breslau anthropologist Egon von Eickstedt.⁷¹ Due to the wartime circumstances the third chapter did not appear until 1948 under the title “Measurable Racial Differences in Music.”⁷²

In his study Bose adopted Eickstedt’s “race” concept, in which he distinguished between “nation” as a political unit, “people” as a cultural unit, and defined “race” as a “potential of disposition.” Proceeding on this basis, Bose concluded for musicology that “racial psychology could only be stylistics.”⁷³ In the performance of music the “sound style” of the musician manifests itself and is predetermined by his “racial conditions”: “However, the musician’s bodily and spiritual aspects take effect in the sound style; he cannot make music sound any other way than through the organs of his body, he cannot shape it in any other way than according to the laws of motion of his bodily soul.”⁷⁴

For this purpose Bose examined not only “Germanic” and “Nordic” sound samples, but also African sound recordings. Here again the larynx became the focus of Bose’s interest. From his correspondence with the director of the Kaiser Wilhelm Institute for Anthropology, Eugenics and Human Heredity, Eugen Fischer, a leading “racial anthropologist” of the Third Reich, it is clear that Bose wanted to study the anatomy of the larynx in more detail in order to explain differences in the sound of the voice in Africans and Europeans:

“For years I have been engaged in the study of the variations in the sound of the voice and in the manner of singing and speaking among the various peoples, and through experiments and sound analyses I have established the dependence of these factors on the racial affiliation of the speakers and singers. The investigation was carried out on Germans and Northern Europeans of predominantly Nordic race on the one hand and on West African Negroes on the other. The difference in the sound of the voice between the two groups must be anatomically caused by the different construction of the resonance chambers, possibly also by deviations in the construction of the vocal organ itself.

I would now like to ask you if you could kindly inform me whether there are already comparative anatomical studies on the vocal organs and the skulls with special regard to the nasal and frontal cavities and the oral cavity of Negroes and Europeans.”⁷⁵

Fischer saw no explanation for the differences in voice in the anatomy of the larynx. Nevertheless, he recommended that the question “as to what extent such differences are hereditary or learned [...] be examined on the hereditary side, for which twins and families would have to be studied.” Fischer assured, “Here would still be a large, promising field of work.”⁷⁶

From the correspondence between Bose and Fischer it becomes clear that, at least until the end of the “Third Reich,” the human larynx was regarded at the Institute for Sound Research and its disciplinary environment as an organ in which “racial” differences could be manifested. Thus regarded, the two laryngeal specimens – especially being attributed to Southwest African origin – were certainly of the highest interest.

Context 5: Postwar and GDR: De-historicized Objects

Wethlo’s dual function as curator of the phonetic collection of the ENT Clinic of the Charité and as head of the experimental-phonetic department at the Institute for Sound Research, including corresponding teaching activities at the medical and philosophical faculties, continued beyond the end of World War II into the 1950s.

⁷¹ Bose 1943; Bose 1944.

⁷² Bose 1948.

⁷³ Bose 1943, p. 79.

⁷⁴ *Ibid.*, p. 84.

⁷⁵ Fritz Bose to Eugen Fischer, January 31, 1939, in: Humboldt-Universität zu Berlin, University Archives, Institute for Sound Research (IfL), 15, Sheet 200.

⁷⁶ Fischer to Bose, May 5, 1939, in: Humboldt-Universität zu Berlin, University Archives, Institute for Sound Research (IfL), 15, Sheet 202.

As Dieter Mehnert reported, the laryngeal specimens, continued to serve as teaching aids and objects for demonstration purposes in his experimental-phonetic courses.

The institutional succession of the Institute for Sound Research after the new beginning within the Berlin University in 1945/46 was quite changeable, so that the institutional trajectory of the laryngeal specimens took convoluted paths. Immediately after the reopening of the Berlin University, the Institute for Sound Research was reorganized as the Institute for Phonetics, although without the former internal departmental structure. Wethlo's teaching assignment continued to be directed at philologists and physicians, but now also at speech therapy instructors and teachers of the speech- and hearing-impaired.⁷⁷ Wethlo's lectures included topics such as the "Investigation of the human vocal organ by means of mirror imaging, autolaryngoscopy, stroboscopy" as well as "Observation of the basic settings of the larynx and the vocal inserts".⁷⁸ The old and new director of the institute, Westermann, certainly appreciated Wethlo's "more scientific approach" from which "valuable suggestions for the linguistic work of our institute" emanated.⁷⁹ However, the situation was increasingly characterized by institutional fragmentation.

In 1950 Wethlo headed both the Phonetic Laboratory of the ENT Clinic (at the Faculty of Medicine) and the Phonetic Laboratory at the Institute for Phonetics (at the Faculty of Philosophy).⁸⁰ However, Wethlo received his teaching assignment for Experimental Phonetics as part of the training for special education at the Faculty of Education,⁸¹ from which the 75-year-old also received an honorary doctorate in 1952.⁸² The state of fragmentation of responsibilities and multiple affiliations continued until the 1960s, when a series of inter-faculty mergers and newly established institutes occurred. After the departure of Ursula Feyer, Diedrich Westermann's successor as head of the institute, the Institute of Phonetics was merged with the Department of Linguistic Communication Research from the Institute of Linguistics in 1961 to form the Institute of Phonetics and Communication Science at the Faculty of Philosophy,⁸³ into which the dissolved Institute of Rhetoric was additionally integrated in 1962.⁸⁴ The new institute was divided into three departments: Applied Linguistics, Genetic Phonetics and Speech Education as well as Gennematic Phonetics and Speech Electronics.⁸⁵ The linguist and communication scientist Georg Meier was appointed its director.⁸⁶ In 1964, Gerhard Lindner, previously a lecturer at the Institute for Special Education, was appointed to the Institute as a professor of phonetics.⁸⁷ In order to consolidate space and the workforce, Meier ensured that the Phonetic Laboratory, which in the meantime had been subordinate to the Institute for Special Education, was again merged with the Institute

⁷⁷ Remarks on the lectures on: Experimental Phonetics, undated [1947] in: HU-UA, Med.Fak.02/02, No. 0100/81: Lectureship Franz Wethlo on Phonetics 1934–1950, Sheet 384.

⁷⁸ Wethlo: Program of lectures summer 1947, in: HU-UA, Med.Fak.02/02, No. 0100/81: Lectureship Franz Wethlo on Phonetics 1934–1950, Sheet 386.

⁷⁹ Westermann: Certification, January 20, 1947, in: HU-UA, Med.Fak.02/02, No. 0100/81: Lectureship Franz Wethlo on Phonetics 1934–1950, Sheet 385.

⁸⁰ Administrative director HUB to Wethlo, March 16, 1950, in: HU-UA, Med.Fak.02/02, No. 0100/81: Lectureship Franz Wethlo on Phonetics 1934–1950, Sheet 370; Administrative director of HU Berlin v. Pritbuer to Wethlo, May 19, 1950, in: HU-UA, Med.Fak.02/02, No. 0100/81: Lectureship Franz Wethlo on Phonetics 1934–1950, Sheet 369.

⁸¹ Rector of the University of Berlin to Wethlo, July 2, 1948, in: HU-UA, Päd.Fak.02. Honorary doctorate 12: Franz Wethlo, unpagged; Rector of the University to Wethlo, August 22, 1950, *ibid.*

⁸² Certificate (draft), December 12, 1952, in: HU-UA, Päd.Fak.02. Honorary doctorate 12: Franz Wethlo, unpagged.

⁸³ Minutes of the meeting of the Council of the Faculty of Philosophy of the Humboldt University of Berlin on May 24, 1961, in: Phil.Fak.02, No. 260: Faculty Council Meetings 1961–1964, Sheet 324; Waltraut Falk: Document on the Establishment of an Institute for Phonetics and Communication Science at the Faculty of Philosophy of the Humboldt University of Berlin, June 27, 1962, HU-UA, Rek.02 – Rectorship 1945–1968, No. 579: Institutes founded and dissolved at the faculties, Sheet 410; also in: HU-UA, VD.02. No. 61: Administrative director, 1952–1968, Sheet 285.

⁸⁴ Otto (Dean of the Faculty of Philosophy) to State Secretariat for Higher and Technical Education), October 4, 1962, in: HUUA, Rek.02 – Rectorship 1945–1968, No. 579: Institutes founded and dissolved at the faculties, Sheet 361.

⁸⁵ Guhr to the Dean of the Faculty of Philosophy, 3 August 1962, in: HU-UA, Rek.02 Rectorship 1945–1968, No. 579: Institutes founded and dissolved at the faculties, Sheet 362; Meier to the Dean of the Faculty of Philosophy, September 27, 1962, in: HU-UA, Phil.Fak.02, No. 215: Correspondence with institutes, 1951–1968, Sheet 55.

⁸⁶ Rector to Meier, 23 November 1961, in: HU-UA, VD.02. No. 61: Administrative director, 1952–1968, Sheet 286.

⁸⁷ Rectorate to Dean Phil. Fak, August 4, 1964, in: HU-UA, VD.02. No. 61: Administrative director, 1952–1968, Sheet 284.

for Phonetics and Communication Science. In the course of the third university reform in the GDR, the Institute of Phonetics and Communication Science was integrated into the Section of Rehabilitation Education and Communication Science as the Department of Phonetics/Speech in 1968.⁸⁸

As Dieter Mehnert reports, there was little interest for the historical record collection in the newly established institutions, i.e. for the actual phonetic archive.⁸⁹ However, the laryngeal specimens continued to be used in the lectures as items for demonstration purposes by Gerhard Lindner as well, as was already the case with Franz Wethlo.⁹⁰ The different nature and presumably also different intensity of use meant that the specimens were kept separate from the record collection. The latter, at the initiative of Jürgen Elsner, professor of ethnomusicology at Humboldt University from 1975 to 1993, was housed at the Institute of Musicology at Humboldt University, Am Kupfergraben 5, where it is currently to be found.⁹¹

Their inferior status as teaching items, the absence of any documentation since their creation, and frequent changes at the responsible institutions certainly promoted the “institutional oblivion” that befell the two specimens. The people in charge obviously never showed any interest in recording and documenting the knowledge about the history of the origin and collection of laryngeal specimens, which certainly existed at one time, but which was becoming increasingly scarce among the actors involved. That disinterest in the specific history of the laryngeal specimens correlated with a more general disinterest in the second half of the 20th century in the institutions responsible for their preservation in the GDR when it came to the pre- and acquisition history of items from (potential) colonial contexts.⁹² In this respect, the two laryngeal specimens are not bizarre, scattered individual pieces, but quite representative and characteristic for the history of such items at the end of the 20th century.

Context 6: 1990 Onward: New Structures

At the beginning of the 1990s Dieter Mehnert, who was Professor of Phonetics at Humboldt University until 1996, took over responsibility for maintaining the phonetic collection. The pending structural reform at the Humboldt-Universität zu Berlin following German reunification led, among other things, to dissolution of the Section of Rehabilitation Education and Communication Sciences and thus also of the Department of Phonetics/Speech Science in 1996. In 1997 the sound collection with the historical record collection became the responsibility of the Helmholtz Center for Cultural Technology at Humboldt University, but remained on the premises of the Institute for Musicology and the Institute for Musicology and Media Studies, which was subsequently founded in 2009. In 1999 the systematic indexing of the sound archive, i.e. the sound collection and the archival holdings, was begun by the ethnomusicologist Jürgen-K. Mahrenholz.

According to Dieter Mehnert, several of the items still present in the Phonetics/Speech Science Department originally came from the phonetic-experimental laboratory of the Institute for Sound Research, including the two laryngeal specimens. They did not belong to the historical sound collection, but were (provisionally) deposited at the premises of the phonetic archive when the department was dissolved, without any historical reference to the sound recordings in terms of the collection, without further assignment and without the history of their collection and their context of use being documented. Only then did an institutional process of appropriation of the laryngeal specimens take place through their labeling with affixed numbers, presumably in the 2000s, when knowledge of their origin and history in the collection had already been lost. Detached from their history the specimens subsequently disappeared from the focus of curatorial attention as an

⁸⁸ Mehnert 1996, p. 37.

⁸⁹ *Ibid.*, p. 37.

⁹⁰ Mehnert, personal communication, 1 December 2020.

⁹¹ Cf. Mehnert 1996, p. 37 f.; Doris Knöfel: *The Sound Archives. History of Events* (undated documentation at the Sound Archives, after the year 2000)

⁹² Cf. Heumann/ Stoecker/ Vennen 2018, pp. 267–270; Stoecker 2022.

unrecorded remnant of the collection in the sound archive, only to reappear in the 2010s as sensitive objects in a sensitized environment.

5. Summary: Hypothesis Regarding Provenance

The research did not yield any concrete evidence with regard to the contexts surrounding the acquisition and production of the two larynxes. Institutional structures, research approaches, and personal networks make their origin from the German colonial war against the Herero and Nama in 1904-1908, their entry into the Berlin Anatomical Institute, and their use there for racial anthropological research plausible – however, these remain hypothetical. Transfer of the laryngeal specimens from the Anatomical Institute to the phonetic laboratory of the Ear, Nose and Throat Clinic of the Charité appears equally plausible and hypothetical. However, it is known that the head of the institute, Franz Wethlo, brought the two specimens to the experimental phonetic laboratory of the Institute for Phonetic Research in the 1930s, so that their removal from the ENT Clinic by Wethlo seems obvious. In the 1930s and early 1940s research at the Institute for Sound Research focused on the relationship between voice, language, and “race”, specifically with regard to languages in southern Africa. Therefore, it can be assumed that there was considerable interest in using the two laryngeal specimens (especially if their origin was attributed at the time to what is now Namibia) for relevant research.

There is an institutional continuity between the Institute for Sound Research at the Humboldt University in Berlin to the present-day Sound Archives. In the post-war and GDR periods, the laryngeal specimens, probably together with other specimens and models, remained as teaching aids at the Institute of Phonetics, which was repeatedly renamed and incorporated into changed structures. However, their origin remained unknown there or was not documented, the specimens were never inventoried. After the dissolution of the institute’s structures in the 1990s, the laryngeal specimens were deposited as an undetermined, unrecorded remnant of the collection at the premises of today’s Sound Archives and were soon institutionally “forgotten”, only to reappear as sensitive objects in the 2010s.

This provenance report on two human laryngeal specimens at the Sound Archives of the HumboldtUniversität zu Berlin was created within the scope of the inaugural exhibition “Regarding Nature” of the Humboldt Laboratory at the Humboldt Forum and was funded by the German Center for the Loss of Cultural Property. The Sound Archives and the Humboldt Laboratory are located at the Hermann von Helmholtz Center of the Humboldt-Universität zu Berlin.

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