

Original Contribution - Originalbeiträge

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Music in the mind and *primitive sounds*: «only differences in kind»

Franz Boas's contribution to the *vergleichende Musikwissenschaft* through his correspondence with Carl Stumpf and Erich Moritz von Hornbostel

No other art moves me as deeply as music.

Franz Boas, 1883

The mind of the “savage” is sensible to the beauties of poetry and music and it is only the superficial observer to whom he appears stupid and unfeeling.

Franz Boas, 1887

1. Correspondence between Boas, Stumpf and von Hornbostel: a score of scientific resonances

The present contribution addresses the correspondence that the anthropologist Franz Boas (1858-1942) held from the end of the nineteenth to the first half of the twentieth century both with the German philosopher and psychologist Carl Stumpf (1848-1936) and the Austrian ethnomusicologist and chemist Erich Moritz von Hornbostel (1877-1935). Throughout his scientific career, Boas maintained assiduous contacts with the European scientific community, prevalently with the German-speaking part: Carl Stumpf¹ and Erich Moritz von Hornbostel² in particular, united by an experimental scientific education and musical³ training, joined Boas in his research in the budding field of ethnomusicology. This contribution therefore aims to observe more closely some epistemological and cultural pivotal moments, starting with the pioneering research in the musical field conducted by Boas, a German Jew with solid scientific training acquired in Germany. He moved to the United States in 1886 and became the recognised founder of American anthropology.

¹ For the biography of Carl Stumpf, see Sprung (2006) and the Stumpfian autobiography (1930).

² For a general picture of the figure of Erich Moritz von Hornbostel, see Busse Berger (2000, pp. 27-38).

³ Boas, as will be illustrated later, studied the piano, instrument also played by Hornbostel; Stumpf, in addition to devoting himself to the cello and violin, wanted to pursue a career as a music professor (Kursell, 2019; Stumpf, 1930).

Unpublished correspondence with Carl Stumpf (16 letters, from 1886 to 1928) and Erich Moritz von Hornbostel (46 letters, from 1906 to 1935) can be found in the *corpus* of the Boasian correspondence, its originals preserved at the *American Philosophical Society* (APS) of Philadelphia⁴. Critical literature has not so far devoted systematic attention to these exchanges⁵, which nevertheless offer a lateral view in observing the rise of a new discipline, ethnomusicology, to which Franz Boas continued to dedicate his scientific pursuits until the end of his career. This implies the opportunity to investigate simultaneously the history of the human sciences, philosophy and science from a meta-disciplinary perspective: this derives not only from the object of the research, which crosses the strict boundaries of the disciplines, intertwining the history of anthropology and of science with philosophy, but also reverberates from the very authors of the research of the period in question, with their composite training and institutional activity in natural and human sciences - in the fields of physics, chemistry, anthropology, psychology, philosophy.

Carl Stumpf, pupil of Brentano and Lotze and teacher of Husserl in Halle, is remembered not only as a philosopher and psychologist, founder of the Institute of Psychology in 1894, but also as promoter of the Phonographic Archive in Berlin in 1900 and pioneer of ethnomusicology. Stumpf's philosophical contribution, based on Brentano's intentionality and on the psychology of the perceptual phenomena of the human mind, was progressively enriched by his genuine scientific curiosity and interest in investigating music, customs and practices of non-European peoples (Martinelli, 2014). Stumpf approached this field of research when he began to study systematically a group of Bella Coola Native Americans in Halle, in November 1885. After a few months, the same group, who were travelling through Germany at the time, were also studied by Boas in Berlin. From then on, the correspondence between the two researchers mainly concerned the scientific aspects of the emerging ethnomusicological studies.

The beginning of Boas's correspondence with von Hornbostel in 1906, also marks an important date in the intellectual biography of the Austrian ethnomusicologist, as it coincides with his journey to Oklahoma to study the Pawnee Indians. In the late 19th and early 20th centuries, American Indians

⁴ The correspondence can be found in the digitized archive of the *American Philosophical Society* - Franz Boas Papers APS, Franz Boas Papers: Inventory. (Mss.B.B61. Inventory 05. 1862-1942). <https://search.amphilsoc.org/collections/view?docId=ead/Mss.B.B61-ead.xml#top>

⁵ Noteworthy are the important studies by Christensen (1991), Jacknis (2003) and Liebersohn (2018), which however do not deal extensively with the correspondence between Boas, Stumpf and Hornbostel.

were the predominant subject of American anthropological research: the institutions greatly promoted fieldwork, organising expeditions and commissioning researchers to document native populations *in situ*. On the other hand, the European museums and ethnological institutions did just as much. They viewed the Northwest Coast as a geographical area of extraordinary interest, because of the composite presence of Native Indian populations and the need to preserve cultures at risk of becoming extinct from the incipient industrial progress of modernity, as had already happened in other parts of the American continent (Cole, 1999). The fieldwork, therefore, not only aimed to investigate the origins of Native Americans in the broader perspective of a study of human evolution, but also to preserve the heritage of the “vanishing tribes”, threatened by the advance of modernity. Hence the need to collect, record, catalogue and study both the material and immaterial culture, languages and religious beliefs of non-European populations.

In this historical, cultural and scientific context, lies the birth of comparative musicology, which further distinguished itself from the other areas of musical studies with the introduction of field research: according to Bohlman (1991, pp. 139-144) it was only when fieldwork became customary in the study of non-Western music that previous practices began to converge in ethnomusicology, practices such as the exegesis of the lyrics and viewing the images as an additional explanation of the lyrics.

With the invention of the phonograph (1877) by Thomas Alva Edison (1847-1931), the emerging discipline was handed a technical aid of primary importance: the commercialisation of the phonograph – thanks to the replacement of the initial tinfoil with the more resistant wax cylinder – did in fact make it possible to conduct field recordings, such as those carried out for the first time by Jesse Walter Fewkes among the Passamaquoddy in Maine, among the Zuni (1890) and the Hopi (1891). Stumpf, Hornbostel and Boas recognised the experimental potential of phonographic recording, which ensured reproducibility, replicability and preservation of sound material: integrating the recordings with their transcriptions and classifications, the scholars began to apply to ethnomusicological research a methodology learned in their respective scientific training (O’Neill, 2015).

After this phase, defined by Bruno Nettl as the “Seminal Eighties” (Nettl, 2010), the next step in ethnomusicological research saw the creation of sound archives, to catalogue, reproduce and analyse sound material. The first phonographic archives were founded in Vienna (1899) and Berlin (1900), later serving as institutional and scientific models for the American ones; Stumpf and von

Hornbostel were respectively the founder and first director of the *Berliner Phonogramm-Archiv*.⁶ Together with Boas and other scholars, they were protagonists of an unprecedented experiment, which enabled the analysis of sound data by reconstructing entire non-Western tonal systems, using techniques borrowed from linguistic and psychological analysis and innovating the more traditional modes of transcription.

From Germany, Stumpf and von Hornbostel also set up an extensive network of contacts with other scholars, to enrich the collections of the *Berliner Phonogramm-Archiv* with field recordings from all over the world. Regarding this period in the history of ethnomusicology, Nettl and Bohlman (1991) specifically highlight the value of scientific exchange among the scholars, so that the field research of one “provided the source for another’s experimentation (Stumpf, 1886, 1892), clearly indicating an institutionalization of scientific observation and the forms of data it employed” (Bohlman, 1991, p. 147).

Boas continued to send phonographic recordings from the United States to his colleagues in Berlin until 1933, when von Hornbostel was forced to resign from his position as director of the Phonographic archive for being a *Halbjude*. Only then did the expeditions stop. The racial policies of the Third Reich caused a dramatic shift in the study activity of the *vergleichende Musikwissenschaft* from Germany to the United States, but in the meantime comparative musicology had already gradually established itself as a discipline, through at least three lines of activity: the wide methodological debate, the establishment of the *Phonogram-marchive* and the start of the first academic courses (Ringer, 1991, pp. 187-188).

In this scenario of transatlantic relations, fieldwork and pioneering experimental research, lies the scientific and epistolary correspondence between Boas, Stumpf and Hornbostel, which highlights the emergence of methodological and technical issues – concerning transcriptions, phonographic recordings, copies, sending of equipment – intertwined with philosophical and psychological issues, providing a historical horizon to the relationship between ethnomusicology and anthropology. Starting from the microhistory of the scientific and personal relationship the three scholars shared, Franz Boas’s contribution to the birth of comparative musicology will be examined, beginning with his studies in Germany and subsequent field research conducted in British Columbia. We

⁶ Stumpf writes this about the foundation of phonographic archives: “In 1899, upon the suggestion of Sigmund Exner, the Vienna Academy of Sciences founded a phonogram archive which not only incorporates music but languages and dialects as well, and the collection has grown to a considerable size due to regular support by the Academy and the government. The first beginnings of our Berlin collection date from the fall of 1900, consisting of recordings of Siamese music that I made together with Dr. Abraham (see volume III of the present publication), but it took until 1904 and various monetary contributions that we were enabled to start the real collecting. At present the archive already comprises of some 3000 recordings from all parts of the world” (Stumpf, 1911, pp. 102-115).

will also try to highlight some lines of research through which the studies on music and sound – shared areas of research and discussion among Boas, Stumpf and von Hornbostel – led Boas to articulate a sound anthropology through the methodical exploration of “cultural minds” in their context, capable of deconstructing the theories of social evolutionism and their Eurocentric, if not racist, leanings. These developments in Boasian research also make it possible to demonstrate how some apparently minor areas of research, such as the emerging field of ethnomusicology, contributed significantly to the birth, definition and identity of cultural anthropology as a discipline.

2. Notes on the *Bildung* of the young Boas, from natural sciences to music

Born in Minden, Westphalia in 1848, into a German Jewish family that had embraced liberal and enlightened values, Franz Boas showed a keen interest in natural sciences from childhood, combined with an intellectual curiosity and a restlessness of spirit that would often cause friction with the academic and institutional authorities, as well as drive him to sharp criticism of the risks inherent in every dogmatic tradition, guilty of restricting the freedom of scientific and individual thought⁷.

In his German *Bildung*, his scientific studies and humanistic interests bore fruit: during his academic training, held in Heidelberg for one semester (1877), in Bonn for four (1877-1879) and in Kiel for two years (1879-1881), Boas took classes in mathematics, physics and chemistry, but also in geography and philosophy, with some of the leading scholars of the time in German academia. In 1879, for family reasons, he declined a position at the Berlin laboratory led by Hermann von Helmholtz, opting for Kiel instead, where in 1881 he defended a doctoral thesis in physics on the optical properties of water (Boas, 1881). During his military service (1881-1882) he published a series of articles with the results of his psychophysical experiments, before boarding the *Germania* in 1883 to spend a year doing research among the Inuit of Cumberland Sound in the Canadian Arctic.

Even from these brief biographical notes we can see the multidisciplinary scope of the Boasian *Bildung*, which – ranging from mathematics, physics and geography to philosophy – found fertile ground in the scientific mind of the young Franz, inclined, from childhood, to the observation and description of nature, and later to issues related to the classification and distribution of the data observed.

⁷ The two main monographic reconstructions dedicated to the biography of the Minden anthropologist are by Douglas Cole (1999) and Rosemary Lévy Zumwalt (2019); for young the Boas's formative years in Germany, please refer to the volume by Stocking, Jr. (1996).

In this seemingly scientifically-oriented educational and intellectual scene, music played an important role in Boas's life, both personally and in his later ethnographic and anthropological research. Franz began to study the piano as a child (Cole, 1999, p. 32): he played Haydn, Mozart and Beethoven, four-handed, with his sisters (Liss, 1996, p. 162), in order to learn the orchestral arrangements of these classical composers, who he continued to appreciate throughout his life. During his university years in Heidelberg, he kept a piano in his room; in Bonn he sang in a choir and formed a trio; he would also go regularly to concerts, attending those by Sarasate, Joachim and Clara Schumann (Cole, 1999, pp. 40, 46). Playing the piano was a source of pleasure for the future anthropologist, even after moving definitively to the United States, in 1886: while teaching at Clark University in Massachusetts (1889-1892), he rented a piano to practice the repertoire of the eighteenth century, especially Mozart "whose sonatas he played from beginning to end" (Cole, 1999, p. 141).

In order to cast light on the role of music in Boas's personal and intellectual life, some early notes are of particular interest, illustrating the dual inclination – emotional and cognitive – at play while listening to music. In a letter to his fiancée and future wife Marie Krackowizer, we can clearly gather the tone and the emotional charge with which music "filled the mind" of Boas, giving the fullest expression to his feelings:

This is about the way I feel, dear Marie. The entire last part of the ninth symphony is going around my head. Joy, only joy fills me [...] 9 p.m. All day my mind has been full of music, especially "Freude schooner Gotterfunken", the uplifting music! I am longing to hear some good music, but since I cannot, I shut my eyes and think of it. Later, when I shall be living a quiet, ordered life, I shall learn to play again. Then when my heart is full of happiness and love, you will be sitting at my side, and we will listen together to the unforgettable masterpieces. No other art moves me as deeply as music. It gives me the fullest expression to all my feelings (Boas, AED, July 20th 1883).⁸

A second indication comes from an early *Curriculum Vitae* written by the young Franz, where the precise motivation underlying his methodical study of the piano emerges:

The greatest advantage which I have in learning to play the piano lies less in the fact that I myself can play the things than in the fact that I can understand them to a certain extent when I hear them played by artists,

⁸ Arctic Expedition Diary (AED), 1883-1884, box 2, July 20th 1883.

because I was previously able to become acquainted with them. For that reason my aim is not to play really beautifully [...] but to be able to understand the others (Boas, 1876-1877, p. 15).

The cognitive function ascribed to the study of music, explained by the then very young student, is initially linked to the opportunity to examine the works of his favourite composers in depth. Yet, in a broader perspective, these considerations also offer a key to interpreting Boas's future pioneering research in ethnomusicology: music as a possibility and opportunity to get to know the Other.

3. Boas, Stumpf and Bella Coola: the first meeting

Returning to Germany after his first arctic *Forschungsreise* (1883-1884), the 27-year-old Boas was hired in autumn 1885 by Adolf Bastian, director of the Berlin *Königliches Museum für Völkerkunde*. The role involved cataloguing the collection of Indian artifacts and objects that the Norwegian brothers Johan Adrian (1853-1947) and Bernard Filip Jacobsen (1864-1935) sent from their explorations in British Columbia. It was the Jacobsen brothers who convinced nine Bella Coola singers from Fort Rupert⁹ (Virchow, 1886, p. 207) to follow them to Germany for thirteen months in keeping with the *Völkerschauen* fashion of the time, which involved the organisation of tours with public performances by native populations. The group arrived in Bremen on 15 August 1885, and the tour went from Leipzig in September, to Halle in November, Berlin in January and February 1886, Wrocław in February, and again to Berlin from March to May¹⁰. The program included dances and ceremonies accompanied by percussion and singing, culminating in the winter Hamatsa dance and an illusionistic performance with a shaman, to close the show.

While the singers were touring Saxony-Anhalt from 17 to 25 November 1885, Carl Stumpf was in Halle, working as a professor at the university: consequently, he was able to meet the Indian group from British Columbia at the *Salon zum Rosenthal* on 18 November. Assisted by Jacobsen as an interpreter¹¹, Stumpf devoted four days of sessions to Nuskilusta, one of the Bella Coola singers, to listen to the songs and to transcribe seven of them (Stumpf, 1886). After their time in Halle, the group performed publicly in Berlin: at the *Kroll'sches Etablissement* from 19 January until 7 February 1886 and at *Castan's Panoptikum* from 1 March until 1 May 1886. Special performances were also held for scientific

⁹ Village on the northwest coast of Vancouver Island.

¹⁰ For a detailed list of the dates of the Bella Coola tour, see Haberland (1987, p. 15, tab. 15).

¹¹ On the help received from Jacobsen, Stumpf writes: "Es fiel diesem aber nicht schwer (und du ist theoretisch bemerkenswerth), dieselben in einer anderen Höhe au singen, als ich ihn durch Herrn Jacobsen dazu auffordern ließ" (1886, p. 408).

organisations, such as the *Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*, with introductory lectures by, among others, Adolf Bastian and Rudolf Virchow¹².

The performances, which took place twice a day¹³, were also attended by the young Boas, entrusted by Stumpf with writing down the songs of the Bella Coola. Over the course of two weeks of intense work in January 1886, the future anthropologist studied four songs, of which he sent the transcriptions to Stumpf. The first letters between the two confirm the consignment of this singing material, like the postcard dated 25 January 1886 – with which the Halle professor thanks the young researcher for sending him the four songs; and the missives dated 8 and 26 March 1886, where Stumpf also appreciates the work done by the young collaborator on the healing songs and Hamatsa songs, their rhythm notation corrected from 6/8 to 5/8. Two songs transcribed by Boas in Berlin were later included in the Stumpfian publication “Lieder der Bellakula Indianer” (1886), and so was the translation of one of them, also carried out by the young scholar¹⁴.

Stumpf and Boas attempted not to apply European metre concepts and key signatures in their notation, although both noted the difficulty of transcribing the songs heard, which were based on a musical system with tonal intervals which didn't conform to any Western European tonal key, rhythm or metre. However, unlike Stumpf, – who initially dubbed the melodies heard in Halle *Teufelmusik* – the young Boas had already been exposed for extended periods to sound and linguistic systems far-removed from those of Europe. Indeed, during his *Erstlingsreise in Baffinland* (1883-1884), he had had to deal with his lack of knowledge of the Inuit language and had become aware of the fact that the European notation system was unfit for the purpose of transcribing local songs and music. Given these limitations, all the more relevant is Boas's methodological choice both to maintain the geographical terms for the mapping of the area in the local language (Kalinowski & Joseph, 2020), and to transcribe songs, stories and oral literature

¹² Virchow described the results of the observations and the data relating to the physical measurements carried out on the Bella Coola group in the article “Die anthropologische Untersuchung der Bella-Coola” (1886). Note the interest expressed by the physical anthropologist for the music heard on that occasion: “Von besonderem Interesse war es mir dabei, aus der Entfernung der Musik zuzuhören, welche sie bei diesen Aufführungen machen” (1886, p. 209).

¹³ The performance included a first session in the morning, from eight to twelve, followed by the second in the afternoon, from one-thirty to six (Haberland, 1987, p. 344).

¹⁴ “Als dieselbe Truppe später, 1886, in Berlin verweilte, notierte Herr Dr. Franz Boas dort noch zwei Gesänge und überließ mir dieselben gütigst, um sie den meinigen als No. VIII und IX beizufügen [...] Einen eigentlichen Text scheint nur I im 1. Theil und IX zu besitzen, und zwar steht der erstere nicht in der Indianersprache selbst, sondern im Tschinuk-Jargon, der aus Elementen verschiedener Sprachen, darunter der englischen, zusammengesetzt ist, und in welchem allein auch die Brüder Jacobsen sich mit den Indianern verständigten. Herr Dr. Boas hat diese Mischsprache sowie die der Indianer selbst genauer untersucht” (Stumpf, 1886, pp. 408-409).

of the Inuit. The theory, still in its embryonic stage at the time, was that the study of the local language and of the poetic and singing repertoire constitutes an indispensable tool in trying to understand the mental life of the population.

Although in the Stumpfian observations sometimes ethnocentric¹⁵ judgements are to be found (Stumpf, 1886, pp. 96, 103, 429), the final reflection of the article dedicated to the Bella Coola, called «*Vorzug unserer Kultur*», states the inappropriateness of defining the native populations as “savage”, also in light of the recent music research: “*Im Übrigen sollten wir aber auch in musikalischer Hinsicht nicht zu absprechend von ‘Wilden’, unkultivierten Völkern reden*” (Stumpf, 1886, p. 429). The young Boas was already convinced of this stance, which was to be adopted when observing the expressions of extra-European cultural life and the native populations.

In the letter sent on 25 January 1886, Stumpf also begged Boas to send him the article that his young colleague had just written for the *Berliner Tageblatt*. In the text published on 25 January in the Berlin newspaper¹⁶, Boas presented a twofold reflection: on the one hand he voiced criticism of the then popular fashion of the *Völkerschauen*, expressing his reservations, as a “friend of humanity”, about the admissibility of such exhibitions. On the other hand, at the same time, the Boasian analysis sought to promote the artistic repertoire and heritage which had been showcased by members of an “unfamiliar culture”: the highly developed artistic sense, dances as the most relevant aspect of the performances, interesting not only because of the diversity of dance forms, but also because of the uniqueness of the music on which they were based and the expressive power of the movements.

Here we behold with amazement a wonderful technique in the use of carver's knife and paintbrush and a finely developed artistic sense. The dances, which form the most important aspect of their performances, are not only interesting for an outstanding regularity of their forms, but also for the unique music on which they are based. None of the numerous peoples which have been presented here in the course of the years, have shown such a high level of cultivated dancing art. [...] We saw ourselves transplanted into a foreign world whose outlook, whose customs, have taken a quite different course from ours, but which we must acknowledge as a high cultural state (Boas, 1886, in Cole, 1982, pp. 119-120).

¹⁵ “Am Abend eines der Tage, an denen Freund Nuskilusta mir vorgesungen, hörte ich vom Riedel'schen Verein in Leipzig Bach's wunderbare Hohe Messe. Nuskilusta würde nach bekannten Erfahrungen schwerlich viel Gefallen daran gefunden haben. Ich hatte mich dagegen in manche seiner Melodien, selbst den traurigen Uai-Gesang, hineingefunden und hörte sie noch Tage lang ohne Unbehagen innerlich fortklingen. [...] Denn damit ein Tonsystem mit festen Stufen, damit ausdrucksvolle Tonwendungen in demselben erscheinen können, muß eine geistige Entwicklung vorangegangen sein, deren einzelne Stadien und innere Beschaffenheit uns noch Keiner psychologisch glaubwürdig geschildert hat, deren Ausdehnung und Bedeutsamkeit aber sich vielleicht mit dem Abstände zwischen Bach und Nuskilusta messen könnte” (Stumpf, 1886, p. 429).

¹⁶ The article was fully translated into English by Douglas Cole and is inserted at the end of his short essay focused on the Berlin encounter between Boas and the Bella Coola (1982, pp. 119-122).

The meeting in Berlin with the Bella Coola group directed Boas's interest towards the peoples of the Northwest Coast until the end of his career, so much so that he set sail for the United States as soon as he had gained the German academic qualification of *Privatdozent*. In the autumn of 1886, he saw some of the Bella Coola singers again in their homeland, while commencing a long period of field research on the Pacific Northwest Coast, which would engage him intermittently from 1886 to 1930. In an article published in *Science* on 22 April 1887, Boas presented several analyses concerning Inuit music, describing the two different types of key, one comparable to our major key, the other to the minor (1887, p. 385). The young anthropologist was clearly already applying a comparative methodology, pointing out the difference between the Inuit solo singing and the British Columbia choral singing he was now studying. Before going into the more analytical and philological considerations on the songs, the problems of translating and transcribing rhythm and intervals – which Boas always tried to work at scrupulously – the most relevant aspect of his observations concerns his clear orientation towards an epistemological and cultural relativism with which to consider also musical and poetically expressive phenomena.

No people is more fond of music than the Eskimos, the inhabitants of the extreme north. Though most explorers affirm that their music is nothing but a monotonous humming, the following tunes and texts, which were collected by me in Baffin Land, will show that this is not true (Boas, 1887, p. 383).

Ethnologists are well acquainted with the fact that there is no people and no tribe that has not some kind of poetry and music, but the study of this branch of aboriginal literature has hardly been begun. We will give here a few examples of aboriginal poetry which will show that the mind of the native enjoys as well the beauties of nature as we do; that he expresses his grief in mournful songs, and appreciates humorous conceptions (Boas, 1887, p. 383).

Listening to and studying the music of the native populations *in situ*, according to the anthropologist, allowed one to grasp the emotional effects that the musical and vocal performances had on the local audience; it made it easier to tune in to the expressive qualities that the songs and poems recited in public had in that specific cultural context. It also helped to prove that, just like the “mind of a European”, a native's mind could grasp the beauty of nature and manifest forms of aesthetic appreciation in many aspects of cultural life.

The awareness that the analytical and comparative study of the music and singing repertoire within the *vergleichende Musikwissenschaft* was but *one* of the levels of investigation also emerges from the correspondence with Stumpf. While communication between the two initially concerned the transcriptions of the

Bella Coola songs (songs of love, offerings, mourning, healing and dance) – studied closely by Boas during his stay in British Columbia – and then touched on some technical aspects of the budding ethnomusicological studies, such as transcription issues (intervals, melody) and the sending of the songs; after a time “the need to collaborate more and more with ethnologists” emerges from the correspondence between the two researchers (letter of 10 May 1912, BP, APS).¹⁷ There is also evidence of the network of contacts, both in Europe and in the United States, that the two academics constantly cultivated so as to promote the progress of their research. The fruitful intellectual exchange, to found the emerging ethnomusicological studies on a broader level than the strictly analytical and philological in the treatment of sound material, is also evident from the mutual references to the Boasian writings “*Anthropology*” (1907), *Handbook of Indian Languages* (1911a), *Primitive Art* (1927) and to the two Stumpfian volumes of *Tonpsychologie*.

4. Music to understand the mind

The most significant aspect of the pioneering studies in the fields of ethnomusicology, sound and linguistics that Boas shared with the directors of the *Berliner Phonogramm-Archiv*, Stumpf and Hornbostel, is not limited to the birth of ethnomusicology as a discipline, already of great scientific and historical value. Indeed, these studies focus on sound and music, areas not much considered and even less systematically examined by the German philosophy of the time – as noted by Hermann Lotze (Klotz, 2008).

Thanks to the Stumpfian works dedicated to *Tonpsychologie* (1883, 1890), received by Boas even after moving definitively to the United States, music came to have a broader scope, providing a new object of study and a model for the understanding of the mind and for the study of psychic complexity (Klotz, 2008): with regard to this Julia Kursell observes that “Stumpf was using music for understanding the mind” (2018, p. 329). Already proof of this extensive project is the experimental work conducted by Stumpf in 1883 on subjects both musically experienced and not – the so-called *amusoï* – to test the limits of musical judgment. According to Stumpf, the results of the experiments showed that the *amusoï* displayed a tendency to recognise a single sound, although they were exposed to several musical notes, different in pitch and time interval; not only that, even experts in the field of music sometimes encountered difficulties in analysing the sound perceived

¹⁷ Bruno Nettl identifies the specificity of ethnomusicology precisely in the attention paid by this branch of anthropology to the diversity of cultural forms and its intrinsically interdisciplinary constitution: “What has characterized ethnomusicology most throughout its history is a fascination with, and a desire to absorb and understand, the world’s cultural diversity. [...] And most characteristic [...] ethnomusicology is a field whose fundamental nature results from its association with several disciplines which have nourished it” (1991, p. XV).

and recognising it as composed of several notes. Stumpf, therefore, hypothesised the existence of a separation between two levels in the processing of musical notes: the first level based on sensation (*Empfindung*), in which the sound was initially heard without distinguishing the notes it was composed of; and a higher level of sound analysis (*Analyse*), which allowed only some subjects to isolate the individual notes. The study of the distribution of the judgments expressed by the experimental subjects allowed Stumpf to theorise in the second volume of *Tonpsychologie* (1890) the concept of tonal fusion (*Tönverschmelzung*), pointing out that fusion was not only a property of musical notes or physical sounds, but “a tendency in the subject’s judgments to remain in the state of sensation” (Kursell, 2018, p. 328).

Sound and music were thus studied by Stumpf in an anti-naturalistic key, therefore not in the Helmholtzian terms of auditory physics, but through a phenomenological consideration of sound perception that enabled a more general study of the mental functions and processes. As a musicologist and musician, Stumpf was interested in developing a psychological theory of musical perception: musical cognition, therefore, was so important as to go beyond the boundaries of the purely musical dimension, since it also included a set of not specifically musical faculties and functions more generally involved in sensory perception. As Julia Kursell aptly observes:

Stumpf pursued his work with amusical subjects as well with musically experienced ones, not in the expectation that they would tell him anything about music but as a window on the working of the human mind (2018, p. 329).

[...] he did not venture to explain music through the mind but rather the mind through music” musical faculty understood in terms of functions involved in sensing and perceiving more generally (2018, p. 331).

The Stumpfian research consequently followed a double course: the distinction between the phenomenal aspects of music in its historical development and the study of the human faculty for music as a general trait. In this context, the interest Stumpf showed in the ethnomusicological research undertaken in Halle from November 1885 and shared with Boas, becomes clear. The study of tonal and rhythmic systems, so different from those to which a European listener was normally exposed, entailed the need, on the one hand, to recognise their formal complexity; and, on the other, to consider the conditioning that one’s own culture could bring to the individual sound perception. Consequently, music was not just a culturally defined phenomenon, it was also defined by the individual way of experiencing it.

The introduction of phonographic recordings would prove to be a crucial aid in this research, because it made it possible to clearly distinguish the two separate phases: that of sound perception and the following phase of analysis and transcription of the material listened to.

5. The Boasian contribution to the *Berliner Phonogramm-Archiv*: the phonographic recordings

In 1908 Carl Stumpf wrote an article for the *Internationale Wochenschrift für Wissenschaft, Kunst und Technik* to officially present the Phonographic Archive¹⁸, whose collections were growing in the meantime. In the text, emphasis was placed on the innovative contribution to research that the new phonograph technology guaranteed: the phonograph, unlike traditional transcriptions, made it possible to faithfully reproduce the tonal and rhythmic structures of the recorded music (Stumpf, 1908/2000, pp. 225-226). Not only that: according to Stumpf and Hornbostel, the phonograph gave the opportunity to carry out repeated analyses on the “exotic” sound material, free of the subjective impressions of a European ear not accustomed to such sounds (Stumpf & Hornbostel, 1911, pp. 102-115). To these two functions another was added: the chance to create a sound archive of musical repertoires accessible also to future scholars, to avoid the risk of native cultural traditions dying out.

In this context, one can further appreciate Franz Boas’s contribution to the emerging field of comparative musicology, in terms of the phonographic recordings he sent and shared with colleagues of the *Phonogrammarchiv*: Boas was a valuable collaborator of the Berlin Phonographic Archive, sending sound material recorded overseas from 1893 until 1930. The *corpus* of recordings – housed in the *Berliner Phonogramm-Archiv, Ethnologisches Museum (Staatliche Museen zu Berlin – Stiftung Preussischer Kulturbesitz)*, consists of two parts, which together include two hundred traditional songs divided as follows: 44 traditional Thompson-River Indian songs, recorded at Spences Bridge, British Columbia in 1897; 156 recordings of Kwakiutl songs (Ziegler, 2006, pp. 108-110). The sound material, already precious for the sheer size of the collection, is enriched by the work of the “methodical fieldworker” (Nettl, 1991, p. 271) that was Boas: the material is contextualised thanks to field observations analysed in the light of theoretical reflections, accompanied by transcriptions and translations of the songs.

An example of this Boasian “in depth study” (McLean, 2006, p. 54) is the volume *The Social Organization and the Secret Societies of the Kwakiutl Indians* (1897), relating to the Kwakiutl phonographic collection. The text assembled 163 songs

¹⁸ Stumpf established the Phonographic Archive in 1900 as a section of the Berlin Institute of Psychology, starting from the phonographic recordings made with Otto Abraham of a group of Siamese musicians and dancers, who had visited Berlin in September of that year.

with their translation, partly transcribed¹⁹ during the anthropologist's recordings in 1893 at the *World's Columbian Exposition* in Chicago with the musicologist John Comfort Fillmore (Cole, 1999, pp. 152-166; Lévi Zumwalt, 2019, pp. 211-239), during four sessions which were saved on 116 cylinders. However, only 38 recordings survived so, in order to complete the phonographic collection of the Kwakiutl – of which Boas had already begun to transcribe the ceremonial songs and the music of the winter dances in his first fieldwork trip back in 1886 – the now 72-year-old anthropologist decided to organise his last field study, accompanied by his daughter Franziska. From 21 October to 26-27 December 1930, the elderly Boas returned to Fort Rupert, British Columbia, where he managed to add to the Kwakiutl collection, bringing it to 156 cylinders, recorded in at least 13 sessions (Hatoum, 2013).

From a technical point of view, it should be noted that the recordings kept at the *Berliner Phonogramm-Archiv* are electroplate copies, in accordance with the custom and scientific purposes of the Archive: Boas, like all the collaborators of the Archive in the ethnomusicological field, would send to Berlin the recordings on wax cylinders, which, due to the rapid deterioration of this material, had to be copied to electroplate. The Archive then provided the scholars who had made the recordings *in situ* with a copy, generally keeping the originals in order to be able to further duplicate the recordings at the request of German museums. In addition, the Archive provided free equipment, devices and tools for the recording of songs and music by the “*exotische*”, non-Western populations, which initially constituted the bulk of the Berlin phonographic collections.

On these new technical problems – related to both the reproduction of moulds with the method of electroplating and the preservation of copies of the recordings for the collections of the Phonographic Archive and the German museums (Berlin, Leipzig, Frankfurt, Cologne) – Boas and von Hornbostel would periodically exchange views. The beginning of their correspondence coincides with the Austrian ethnomusicologist's trip to Oklahoma, in the autumn of 1906, with a dual purpose: to study the Indian songs of the Natives of the reserves of that geographical area and to conduct experimental research on children and adults, so as to observe the differences in musical aptitude among the Pawnee. A few months later, in March 1907, Boas sent the first collection of cylinders recorded with James Teit among the Thompson Indians of Spences Bridge in 1897, agreeing to the distribution of copies to various German museums (letters 18 March, 1 and 11 April 1907, BP; APS) which had begun to request phonographic material from the Archive.

¹⁹ The work on the paper archive took place in Berlin from September to December 2021, at the *Berliner Phonogramm-Archiv* and the *Ethnologisches Museum* (Staatliche Museen zu Berlin – Stiftung Preussischer Kulturbesitz).

From 1906 to 1935 Boas and von Hornbostel – appointed director of the Berlin Phonographic Archive in 1905 and maintaining the position until 1933 – continued to discuss their pioneering work in ethnomusicological research. As attested by the correspondence, Boas was a key figure for the director of the *Berliner Phonogramm-Archiv*, in technical, methodological and theoretical matters relating to comparative musicology. Even on the last fieldwork trip, Boas tried to experiment with the new materials and equipment he was working with, for instance trying to make recordings on aluminium discs that required a fibre stylus (letters June-July 1930, BP, APS). The two scholars were then faced with methodological questions, including the opportuneness of organising the material recorded by Boas in British Columbia among the Kwakiutl and Thompson River Native American populations, not from a musical point of view, but from a purely ethnological one. In addition, von Hornbostel turned to Boas to discuss important theoretical questions, such as those relating to the motor expression and “motor habits” in the different populations: contesting an alleged “racial style” which, it was believed at the time, was mainly displayed in language, songs and motor habits; Boas instead firmly stresses the importance of learning and conditioning, both cultural and familial, at play in these fields (letters July-August 1920, BP, APS).

In 1931 the expedition of the second and last Boasian collection for the *Berliner Phonogramm-Archiv* came to an end: 156 cylinders, the electroplating of which took the Polish ethnomusicologist and composer Mieczysław Kolinsky about a year (letters October 1931, BP, APS). The correspondence of that period shows to the difficulties that Hornbostel, Jewish from his maternal side, and Kolinski, the technician tasked with copying the phonographic material, also of Jewish origins, were facing (letters April, May, July, August, December 1933, BP, APS): the former was forced to seek refuge in Switzerland and then in Cambridge (letter 28 January 1935, BP, APS), replaced by Marius Schneider as director of the Archive in 1933; whereas the latter was made to leave Berlin and moved to Prague (letters May 1933, March 1934, BP, APS).

Under the direction of Marius Schneider, starting in the summer of 1933, the system of lending equipment and collecting recordings was also put to use in the European context, as part of a progressive reorganisation and reconfiguration of the scientific aims of the *Phonogramm-Archiv* during the period of National Socialism. The examination and study of the entire archival documentation relating to the period of Schneiderian management (1933-1941)²⁰ made it possible to confirm the interruption of Boas's relations with the Phonographic

²⁰ The work on the paper archive took place in Berlin from September to December 2021, at the *Berliner Phonogramm-Archiv* and the *Ethnologisches Museum* (Staatliche Museen zu Berlin – Stiftung Preussischer Kulturbesitz).

Archive after the establishment of Schneider as director, and the absence of any correspondence with the Alsatian ethnomusicologist. The discovery of a letter dated 17 April 1935 (BPA, 1935-1939), with which the American Embassy in Berlin informed Schneider that it had been made aware by American educational institutions that the “Phonographic Archives [...] of the University of Berlin [...] may be discontinued and the records destroyed”; the Embassy therefore requested, in the event of confirmation of the news, that Boas’s recordings be returned (as well as those of Melville J. Herskovitz), to the competent American institutions. In his prompt reply, Schneider reassured the American authorities in Berlin both of the continuation of archival activities and the integrity of the preserved sound collections.

6. The problem of *alternating sounds* and the anthropology of the Boasian sound

When he met the Indians of British Columbia again in his fieldwork, after moving permanently to the United States, the young anthropologist had already faced the first phase of work on arctic languages and extra-European sound systems, as well as an initial scientific and methodological exchange with Stumpf on the accuracy of the transcriptions of extra-European songs and, more broadly, on issues related to sound perception. Therefore, Boas applied himself to the fieldwork making a constant effort to examine the sound system of idioms far-removed from his own linguistic system, employing an inductive method that would, above all, guarantee the accuracy of the transcription and pronunciation. The difficulties shared with Stumpf and Hornbostel in this area prompted a meticulous reflection on the perception of unknown languages and sounds, starting from the observation of the distortive effects produced by the accommodation processes with which the listener tends to perceive the foreign language through familiar sounds and words.

Research first among the Inuit of Cumberland Sound and then among the Indians of British Columbia provided Boas with the opportunity to verify *in situ* how exposure to unfamiliar sounds entailed the apperception of a new sound stimulus through the similarity with known sounds. These observations were initially analysed in the essay on the so-called *alternating sounds* (Boas, 1889), in which the anthropologist highlighted the influence of the subjective component on the perception of unknown languages: according to Boas, the phonological system of the listener’s or transcriber’s language exerts a bias in the act of listening, displayed in a series of phenomena, from *mishearing* to *sound-blindness* (Silverstein, 2015).

The experimental training and the epistemological framework acquired during his early studies in physics and psychophysics²¹ allowed Boas to treat the *biasing filter* problem in the perception of sounds with the utmost rigour. The first level of analysis indicated that the *alternating sounds* might refer both to different perceptions of the same sound, and to the single perception of different sounds; moreover, the anthropologist proved that both of these perceptual phenomena were due to the linguistic system and the culture of origin of the listener, since they could occur in any event of exposure to unknown or unfamiliar sound and language systems: the phenomenon of apperceptive alternating sounds was, in fact, also present in the interactions among Europeans.²²

Thus, Boas was able to critically discuss – in what was called a “sociocultural psychology of sound” (Silverstein, 2015, p. 103) – the traditional philological problem of alternating sounds, interpreted by evolutionary philologists as a mark of “primitiveness” in Indian languages (Stocking, 1968, pp. 158-159). The attribution of the phenomenon of alternating sounds solely to the Indian languages and the alleged inferiority of these non-European populations were therefore challenged, showing instead how the apperceptive alternating sounds also affected Europeans speaking different languages.

Following the microhistory of the personal relationship and correspondence with Carl Stumpf and Erich Moritz von Hornbostel, we learnt about the Boasian part in the birth of the *vergleichende Musikwissenschaft* discipline: from the phonographic collections sent to the *Berliner Phonogramm-Archiv* to the technical and methodological contributions tested in his extensive fieldwork²³. The pioneering research in ethnomusicology that Boas shared with Stumpf and Hornbostel was not limited to the methodological and theoretical definition of the future ethnomusicology, since it helped to investigate the mental processes involved in the adaptation models in one’s own culture. Said research would also prove to be a useful tool in Boas’s complex critical discourse with which he questioned the assumptions of the purported *primitive/civilised* distinction and

²¹ For the question of the psychophysical differential threshold in sound perception, see Mackert (1994, p. 353) and Stocking (1968, pp. 157-160).

²² To limit these distortions, Boas felt that specific training for scholars was necessary. One of the sub-disciplinary areas of the future Boasian *four field model* was thus emerging: that of linguistic anthropology, which would find in Edward Sapir the most direct and influential follower in the systematic investigation of the unconscious mental dimension of linguistic categories.

²³ Mervyn McLean includes Franz Boas among the «*pioneers of Ethnomusicology*», evaluating with these observations the contribution of the anthropologist to the ethnomusicological discipline: «Although not an ethnomusicologist as such, he deserves to be counted as one, because of the profound influence he exerted upon the subject, both through his anthropological writings and the legacy he left as a teacher of the next generation of anthropologists. [...] He was an early advocate of field work, phonographic recording, archiving, and the study of music as an integral element of culture, besides introducing key concepts which have become hallmarks of the discipline» (McLean, 2006, p. 116).

deconstructed the concept of race, two of the crucial issues on the anthropologist's agenda.

Boas articulated his gradual delegitimization of the biological and social determinism popular at the time, both on the European and the American front, supporting also through the evidence deriving from the research on music, sound and phonetic apperception, alternative and scientifically convincing explanations of the "human types". Indeed, through his research in the musical and linguistic field, Boas disputed the idea of a static and less complex tradition attributed to "primitive music", highlighting the formal and creative dimension present in the musical and poetic systems in non-Western performative expressions (Boas, 1887, 1888, 1889, 1911b). As he wrote in *The Mind of Primitive Man*,

In music as well as in decorative design we find a complexity of rhythmic structure which is unequalled in the popular art of our day. In music, particularly, this complexity is so great, that the art of a skilled virtuoso is taxed in the attempt to imitate it (Stumpf). If once it is recognized that simplicity is not always a proof of antiquity, it will readily be seen that the theory of the evolution of civilization rests to a certain extent on a logical error. The classification of the data of anthropology in accordance with their simplicity has been reinterpreted as an historical sequence, without an adequate attempt to prove that the simpler antedates the more complex (1911b, pp. 194-195).

Research in the fields of sound, music and language provided the anthropologist with empirical evidence that was crucial for the subsequent scientific formulation of his critical discourse on mental functions and representations, aimed at deconstructing the theories – and leanings – of social evolutionism, the concepts of *pristine culture*, of racial stability and superiority.²⁴ His public engagement was increasingly focused on the promotion of scientific, cultural and social events aimed at combating racial discrimination in the United States, and fighting the rise and establishment of National Socialism and Fascism in Europe.

Boas tried to make anthropology a science capable of ridding us of prejudice and of monitoring dogmatisms, both in oneself and in others; a discipline committed to shedding light, scientifically, on the "human variations", in the belief that cultural differences "appear less as differences in value than differences in kind" (Boas, 1907/1974, pp. 280-281).

²⁴ "An important theoretical consideration has also shaken our faith in the correctness of the evolutionary theory as a whole. It is one of the essential traits of this theory that, in general, civilization has developed from simple to complex forms, and that extended fields of human culture have developed under more or less rationalistic impulses. Of late years we are beginning to recognize that human culture does not always develop from the simple to the complex, but that in many aspects two tendencies intercross, – one from the complex to the simple, the other from the simple to the complex" (Boas, 1911b, p. 193).

Notes on Terminology

As regards the names of the native peoples and their languages, it was decided to keep those that Franz Boas and the authors quoted used in their texts. This choice was driven by the opportunity to dialogue historically with the Boasian texts maintaining a lexical uniformity that facilitates comparison with the original works, manuscripts, letters, while remaining well aware of the ongoing discourse within academic anthropology, which is rightly acknowledging the requests regarding cultural identity and self-determination on the part of the First Nations and the Inuit, also through terminology which is more respectful of the original languages. We therefore wish to include the current names of the aforementioned populations: Kwakwaka'wakw (Kwakiutl), Nuxalk (Bella Coola/Bellahoola/Bella Kula/Billechula/Bilhoola/Bilqula/Vilxula), Niaka'pamux (Thompson/Thompson River Indians), Inuit (Baffinland Eskimo).

Summary

During his prolific career, the German Jewish scientist Franz Boas (Minden, 1858 - New York, 1942) recognized as the founding father of American Cultural Anthropology – maintained assiduous contacts with the European scientific community, in a privileged way with that of the German area. The contribution addresses the Boasian correspondence with the two directors of the *Berliner Phonogramm-Archiv*, the philosopher and psychologist Carl Stumpf, and the ethnomusicologist Erich Moritz von Hornbostel. All three were united by a common scientific experimental training and a solid musical education, typical of their *Bildungsbürgertum*. With them, Boas consistently shared his fieldwork findings regarding music, sound, and language among the Indians of British Columbia: indeed, their epistolary exchanges intertwine epistemological reflections centered on the study of «*exotische Musik*» in context with technical problems, derived from the use of phonographic recordings and the relative shipments of wax cylinders by Boas to the Phonographic Archive. So far, the critical literature has not paid particular attention to their correspondence, that offer instead a privileged look in observing the birth of Ethnomusicology, at the time still defined as comparative Musicology (*vergleichende Musikwissenschaft*). Starting from a biographical contextualization and following the micro-history of the scientific and personal relationship of these scientists, the contribution aims to explore the hypothesis that the emerging Ethnomusicology significantly contributed to the definition of Cultural Anthropology as a discipline. In his painstaking research devoted to the Native Indian sounds and languages, Boas observed indeed what happens if a mind is exposed to a new sound, musical or linguistic context; he had therefore to rigorously deal with the phenomena of mishearing, sound-blindness and biasing filter related to the perception of «new sounds». Thanks to his fieldwork, Boas

would endorse a relativistic and “in context” approach to perception and mental representations of sounds, fostering his eventual lifelong, hectic concern about a broaden antiracist theory of human mental functions.

Keywords: Franz Boas, Carl Stumpf, History of Cultural Anthropology, Ethnomusicology, Berliner Phonogramm-Archiv.

Zusammenfassung

Der deutsch-jüdische Wissenschaftler Franz Boas (Minden, 1858 – New York, 1942), der als Begründer der amerikanischen Kulturanthropologie gilt, unterhielt im Laufe seines produktiven Schaffens rege Kontakte zur europäischen Wissenschaftsgemeinschaft, insbesondere zu jener des deutschen Raums. Der Beitrag befasst sich mit der Boas’schen Korrespondenz mit den beiden Direktoren des Berliner Phonogramm-Archivs, dem Philosophen und Psychologen Carl Stumpf und dem Musikethnologen Erich Moritz von Hornbostel. Alle drei verband eine gemeinsame wissenschaftlich-experimentelle Ausbildung und eine solide musikalische Erziehung, die für ihr Bildungsbürgertum typisch war. Mit ihnen tauschte Boas immer wieder seine Feldforschungsergebnisse über Musik, Klang und Sprache bei den Indianern von British Columbia aus: In der Tat verflochten sich in ihrem Briefwechsel erkenntnistheoretische Überlegungen zur Erforschung der “exotischen Musik” mit technischen Problemen, die sich aus der Verwendung phonographischer Aufzeichnungen und den entsprechenden Versendungen von Wachsylindern durch Boas an das Phonographische Archiv ergeben. Bislang hat die kritische Literatur der Korrespondenz der beiden keine besondere Aufmerksamkeit geschenkt, die stattdessen einen privilegierten Blick auf die Geburt der Ethnomusikologie bietet, die damals noch als vergleichende Musikwissenschaft definiert wurde. Ausgehend von einer biographischen Kontextualisierung Ausgehend von einer biographischen Kontextualisierung und der Mikrogeschichte der wissenschaftlichen und persönlichen Beziehungen dieser Wissenschaftler soll in diesem Beitrag die Hypothese untersucht werden, dass die entstehende Ethnomusikologie wesentlich zur Definition der Kulturanthropologie als Disziplin beigetragen hat. In seinen akribischen Forschungen über die Klänge und Sprachen der Indianer beobachtete Boas, was passiert, wenn ein Geist einem neuen Klang, einem musikalischen oder sprachlichen Kontext ausgesetzt wird; er musste sich daher rigoros mit den Phänomenen des Fehlhörens, der Klangblindheit und des Verzerrungsfilters im Zusammenhang mit der Wahrnehmung “neuer Klänge” auseinandersetzen. Dank seiner Feldforschung befürwortete Boas einen relativistischen und “kontextbezogenen” Ansatz für die Wahrnehmung und die mentalen Repräsentationen von Klängen und förderte damit sein späteres lebenslanges, hektisches Bemühen um eine erweiterte antirassistische Theorie der menschlichen mentalen Funktionen.

Schlüsselwörter: Franz Boas, Carl Stumpf, Geschichte der kulturellen Anthropologie, Ethnomusikologie, Berliner Phonogramm-Archiv.

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Candelieri, Music in the mind and *primitive sounds*: «only differences in kind»

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