ARMANDO DE LACERDA AND THE FIRST PHONETICS LABORATORY IN BRAZIL

Jacyra Andrade Mota¹, Josane Moreira de Oliveira²

¹Federal University of Bahia / CNPq, Brazil, ²State University of Feira de Santana / Federal University of Bahia, Brazil

jacymota@gmail.com

Abstract: The text aims to remember Armando de Lacerda’s pursuit in implementing experimental phonetic techniques in various universities, with special emphasis on the establishment, in Brazil, of the 1st Experimental Phonetics Laboratory of South America, in 1956, at the then School of Philosophy of Universidade da Bahia, in the city of Salvador. The setting up of this Laboratory was due to the interest of Rector Edgard Santos and to the meeting of the Portuguese phonetician Armando de Lacerda with Professor Nelson Rossi, invited to give classes at Universidade da Bahia. Among Armando de Lacerda’s main activities, registered during the six months in which he remained in Bahia, were the presentation of the chromographic method and the introduction to notions of phonetic transcription, with the use of the Lacerda-Hammarström system, as well as dialectal researches in the cities of Juazeiro (Bahia) and Petrolina (Pernambuco). It is important to highlight the legacies from the Phonetics Laboratory, such as the establishment of a Sound Archive and the formation of researchers, which gave rise to Dialectology in Brazil, with the preparation of the first linguistic atlas, Atlas prévio dos falares baianos, in 1963. The Phonetics Laboratory, mainly after 1968, began suffering from lack of personnel and funding. In 1986, the installations were prematurely abandoned, after an accident in the physical structure of the building where it was located and which was later destroyed by fire.

1 Introduction

The expansion of experimental phonetic techniques implemented by Armando de Lacerda at the Experimental Phonetics Laboratory at the Faculty of Arts of Coimbra, in 1936, reached, as is common knowledge, various foreign universities (Harvard, Cambridge, Sorbonne, Uppsala) and, in South America, Universidade da Bahia¹, where, in 1956, the Phonetics Laboratory was established at the Faculty of Philosophy, in Salvador.

With reference to the Phonetics Laboratory of Bahia, Antenor Nascentes states, in the foreword to the publication Laboratório de Fonética na Bahia ([17]):

“Fortunately, a Laboratory was established at the Faculty of Philosophy at Universidade da Bahia, which has proved its importance.

The mentioned Laboratory was thanks to the benefaction of the Rector, Dr. Edgard Santos, to the efforts of the Portuguese phonetician, Dr. Armando de Lacerda, and to our fellow countryman, Professor Nelson Rossi.

[...] Without an in-depth and scientifically based study of phonetics, the desired ATLAS LINGÜÍSTICO DO BRASIL, which is legally entrusted to the house named in honor of the beloved son of Bahia, will be impossible” ([13: 7]).

¹ Universidade da Bahia began in 1808, with the implementation by D. João VI of the School of Surgery of Bahia, the first university course in Brazil. It became Universidade Federal da Bahia in 1950.
Nascentes ([13]) refers, in the above excerpt, to the task imposed to Casa de Rui Barbosa, by Decree 30643, of March 20, 1952 [1], through its Center for Philological Research, to prepare the Linguistics Atlas of Brazil (Atlas Linguístico do Brasil), which was already being demanded by philologists and linguists of that time, due to the lack of knowledge of the facts characterizing the Portuguese language in Brazil, which was different to the Portuguese language of Portugal.

The excerpt by Nascentes emphasizes the opportune encounter of three academics aware of their responsibility towards developing the Science: Edgard Santos, Rector responsible for the implementation of Universidade da Bahia, in 1946, a position he held until 1961; Armando de Lacerda, phonetician of international prestige, founder and director of the Experimental Phonetics Laboratory at Universidade de Coimbra and responsible for the creation of innovative instruments and methods, especially in the area of chromography; and Nelson Rossi, a young Arts graduate, with an internship at Institut de Phonétique in Paris, and a disciple of Armando de Lacerda between September 1954 and January 1955 at the Experimental Phonetics Laboratory of Coimbra.

During his internship in Coimbra, Rossi carried out with Lacerda the research published in 1958 at Universidade de Coimbra under the title Particularidades fonéticas do comportamento elocucional do falar do Rio de Janeiro (in comparison to the normal Portuguese language of Portugal). The methodology used is presented and the results delivered, with detailed descriptions and graphs, based on their own utterances. The first speaker represented what was identified as “normal Portuguese language” (i.e.: Portuguese without characteristic phonetic peculiarities of a determined area) and the second, the manner of speaking of Rio de Janeiro (carioca), which was his own manner of speaking.

In relation to the choice of the carioca manner of speech, it was observed during the First Congress of the Sung National Language, carried out in São Paulo in 1937, that the “carioca accent was considered as the most perfect one in the country”, proposing it as the “standard language to be used in theater, recitations and classical singing” ([11: 5]). They regretted, however, the lack, in Brazil, of knowledge about the phonetics of the carioca accent that does not result “from a simple exam of listening”, identified as “impressions” ([11: 6]).

2 Phonetics Laboratory at Universidade da Bahia

The history of the 1st Phonetics Laboratory of Brazil can be analyzed in two phases: the first, from 1955 to 1960, beginning with the advent of Nelson Rossi’s arrival to Salvador, following an invitation from Rector Edgard Santos, to occupy the chair as Portuguese Language professor at the then Faculty of Philosophy, Sciences and Arts of Universidade da Bahia and responsible for the Phonetics Laboratory that would be set up; the second phase, as of 1960, when the operation was impaired due to occurrences such as the aggravation of campaigns against the Rector, culminating in the non-extension of his position as Rector, the military coup of 1964, the university reform in 1968, with the cutting back of funds of the considered “supplementary bodies”, such as the laboratory and many others.

2.1 First phase – Implementation of the Phonetics Laboratory at Universidade da Bahia

For the implementation of the Laboratory at Universidade da Bahia, Edgar Santos invited the renowned phonetician Armando de Lacerda, who travelled to Salvador in November 1956, and

Reference to the relations of Edgard Santos with Portuguese Universities, see [15: 281–307].
remained there for six months, participating in the preparation of the students and performance
of the first analyses.

During such time, together with Rossi, Lacerda had discussions with the students in demo-
classes, presented the chromographic method, introduced fundamental notions of phonetic
transcription, using the Lacerda-Hammarström system (see [5]), and conducted training of the
techniques for obtaining phonograms, auditory perception and transcription to analyzable
graphs. He also carried out dialectal researches in the cities of Juazeiro (Bahia) and Petrolina
(Pernambuco), in Brazil.

In relation to the bibliography, various works brought by him were commented upon,
among which: Analysis of the phonetic structures through chronograms and oscillograms
(Análise de estruturas fônicas através de cromogramas e oscilogramas) ([6]); Portuguese
scientific contribution in the field of experimental phonetics (A contribuição científica
portuguesa no campo da fonética experimental) ([7]); Characteristics of Portuguese intonation
(Characterísticas da entoação portuguesa) ([8]); Analysis of sound expressions (Análises de
expressões sonoras) ([9]); and Factors of utterance variations (Facteurs de la variation
élocutive) ([10]).

The Phonetics Laboratory, as reported by Rossi ([16: 6]), occupied, at that time, five rooms,
all with acoustic design: a camera for microphonic reception; a room for measurement and
making graphs for publication; a sound archive and room for directorial works; a chromography
room, with sundry equipment for investigation, examination tables and classification of sound
registers and graphs; and a room for demonstration classes.

The equipment included two portable WEBCOR magnetic tape recorders for registering
sound; a BUTOBA recorder-player, capable of autonomous operation; a horizontal projection
electro-chromograph (translator of analyzable graphs); a Lacerda tonometry triangle to
determine tone line and levels; and the tonometry table for conjugation with the triangle
(devices for graph analyses).

In relation to the objectives of the recently created Phonetics Laboratory, emphasis was
given to: (a) carry out sound registers of speakers of Salvador and of localities in the interior of
Bahia, as well as other states of Brazil and elocutions of foreign speakers in order to establish
a Sound Archive with different samples of speech; (b) perform analyses and measurements,
using chromography and tonometry; (c) keep up the interchange with the Coimbra Laboratory,
as much as possible, “not only due to the fact of both fundamentally working with the same
language – but, mainly, because both were inspired and established within the standards and
methods of their true creator: Armando de Lacerda”, as observed by Rossi ([16: 6]).

The achievement of phonic registers and the development of the Sound Archive were
activities that were immediately started, and which continued even after the destruction of the
Laboratory, due to facts further described below. Analyses and measurements were interrupted
around 1960, when what can be considered the second phase begins, characterized by lack of
funds for maintenance and replacement of equipment and space reduction for allocation of
offices for professors.

2.2 Second phase – Difficulties in maintaining the Phonetics Laboratory
Concerning this period of time, two statements are enlightening: the first extracted from a
communication by Suzana Alice Cardoso to the II National Phonetics and Phonology Meeting
of 1988 at Universidade Federal da Paraíba, about the Phonetics Laboratory of Bahia; and the
second, by Professor Pedro Moacir Maia, quoted by Antonio Risério in the work Edgard Santos
e a reinvenção da Bahia.
In her communication, Cardoso states [2: 119]:

“The Phonetics Laboratory legally existed, in other words, justified by the work produced; never, however, becoming a supplementary body with financial autonomy. Nevertheless, it did rely, for a period, on specific allocation that guaranteed its subsistence.

With the university reform, this minimum allocation was removed and the Laboratory depended directly on global funds allocated to the Institute of Arts.

Apart from such difficulties for the maintenance and conservation of the equipment, there was also the lack of personnel for working regularly in this field [...] as well as the increasing constraints towards hiring educational personnel, which caused the shut-down of the Measurement and Analysis Sector, maintaining the two other sectors, Sound Register and Sound Archive”.

In his article, published in the newspaper from Bahia, A Tarde, on January 18, 1994, called “Edgard Santos, difficulties and misunderstandings” (Edgard Santos, dificuldades e incompreensões), Maia states:

“[...] In those years, in the decade 1951–1960, [difficulties and misunderstandings] were created or raised mainly by two important sectors: university scholars and professors, who did not wish for changes or alterations, and student entity leaders.

[...] In 1960, pressures by professors and students against Edgar Santos reached a peak, with almost daily unrest, as published in newspapers” (apud [15: 360–362]).

In 1985, Nelson Rossi requested his retirement for length of service and, disappointed with the new university, withdrew definitely from any activity at the university. He decided not to accompany the progressive abandonment of the installations that could no longer function as Phonetics Laboratory due to the absolute lack of maintenance and space, nor did he have any idea (we imagine!) of the fire that destroyed the instruments that Armando de Lacerda had conveyed.

Nelson Rossi’s suffering seems to have been similar to that of Armando de Lacerda, as recounted by Paulo de Lacerda, in the beautiful work of Quintino Lopes ([12]).

Nelson Rossi died on July 26, 2014, without being aware of the issue of the first volumes of the Linguistic Atlas of Brazil (Atlas Linguístico do Brasil), dedicated to him as “Pioneer of Geolinguistics in Brazil”, in October of the same year.

3 End of the 1st Experimental Phonetics Laboratory in Brazil and South America

In December 1986, an accident in the physical structure of the building of the Institute of Arts, where the Phonetics Laboratory was located, caused a precipitated emptying of the building, with abandonment of the installations and removal for a small quantity of material that was possible to be taken to other units of the University. Its permanence, in temporary and inadequate facilities at the Central Library of UFBA, lasted five years and the sound material that was possible to be recovered was kept in the audiovisual sector of the Library. In 1991, a new building was concluded at the Institute of Arts, in the Ondina campus, where a small room was reserved to accommodate the Sound Archive.

Sometime later, the old house suffered a fire without the material that had remained there having been recovered.

3 Suzana Alice Marcelino Cardoso died in 2018, having been responsible for the implementation of the Linguistic Atlas Project in Brazil, in 1996, presently with the first two volumes having been published and a third one on the way.
4 Legacies of the 1st Phonetics Laboratory in Brazil

As first legacy of the Phonetics Laboratory in Brazil, the first linguistic atlas of Brazil is registered, the *Atlas prévio dos falares baianos* ([18]), the 50th anniversary of which was celebrated in 2013.

The *Atlas prévio dos falares baianos*, alongside with linguistic information in relation to a part of the Brazilian linguistic reality (State of Bahia), boosted the formation of a “dialectological mentality” in Brazil, responding to the appeals of researchers who already clamored for it in the fifties of the XX century. This fostered the emergence of linguistic atlases in other states, such as the *Atlas linguístico de Sergipe*, carried also by the team from *Universidade Federal da Bahia*, concluded in 1973, despite only being published in 1987; the *Esboço de um atlas linguístico de Minas Gerais* (1977); the *Atlas linguístico da Paraíba* (1984), the *Atlas linguístico do Paraná* (1994); and the *Atlas linguístico de Sergipe II* (2005).

As to the importance of the Phonetics Laboratory of Bahia, reproduced below are the words of Nunes ([14: 63]), in “Two Cultures? The case of the Phonetics Laboratory of Armando Lacerda...” (*Duas Culturas? O caso do Laboratório de Fonética de Armando Lacerda...*):

“The public space of Lacerda is a space for the internationalization of science, which he was able to build with a string of doctorates, followers that projected him into a public international scientific space, through scientific congresses, pages in international publications and the space in Brazil, creating a school for students from Bahia on phonetic transcriptions, which spawned the *Atlas Prévio dos Falares Baianos*, edited in 1963 by Nelson Rossi, a disciple of Armando de Lacerda!”

In the field of Dialectology, it is important to include the Linguistic Atlas of Brazil project, related to the Portuguese language, gestated in Bahia in 1996 by Suzana Alice Marcelino Cardoso, a disciple of Nelson Rossi who, in 1996, decided to take up an old dream, inviting for such achievement all of the Brazilian dialectologists. The Linguistic Atlas of Brazil was prepared and the first two volumes have already been published (see [3]) and a third one is on the way.

The Linguistic Atlas of Brazil has given rise to a new dialectological era, with keen awareness on the diatopical and social linguistic variation, the integration of new methods, interaction with other areas, most importantly Sociolinguistics, Cartography and IT and, furthermore, arousing the interest of younger generations.

Another legacy of the Phonetics Laboratory worth mentioning is the Sound Archive, today comprised of what was possible to be partially recovered — corpora do *Atlas linguístico de Sergipe*, collected between 1963 and 1965 (see [4]) and of the Urban Standard Language Study Project (*Projeto de Estudo da Norma Linguística Urbana Culta - NURC*), registered in the decade of 1970 —, and new samples both of urban speech in Salvador, which broadened the data of the NURC Project, in the nineties, in relation to regional talk, established between 2001 and 2013, with available material today of around 3,500 hours of recording, used for preparing the Linguistic Atlas of Brazil.

Unfortunately, some of these recordings are once again inaccessible due to the lack of compatible devices, once the universities, as a whole, do not accompany the changes in information technology or the impositions of the Market.

5 Conclusions

Armando de Lacerda was instrumental in the implementation of experimental phonetic techniques in various universities. Emphasis is given to the establishment, in Brazil, of the 1st
Experimental Phonetics Laboratory in South America, at the then Faculty of Philosophy of Universidade da Bahia, in the city of Salvador, in 1956. Included among Armando de Lacerda’s main activities during his six-month stay in Bahia were the presentation of the chromographic method and the introduction to notions of phonetic transcription, with the use of the Lacerda-Hammarström system, as well as dialectal researches in the cities of Juazeiro (Bahia) and Petrolina (Pernambuco). The Phonetics Laboratory of Bahia, mainly after 1968, began suffering from the lack of personnel and funds. In 1986, the premature abandonment of the installations, after an accident in the physical structure of the building occurred and, later, a fire destroyed the building. Despite no longer existing, a legacy remained with the Sound Archive and formation of researchers who gave start to Dialectology in Brazil with the preparation of the first linguistic atlas, Atlas prévio dos falares baianos, in 1963. Keeping up its tradition in this dialectological mentality, the Universidade Federal da Bahia hosts the presidency of the Linguistic Atlas of Brazil Project and pays tribute to Armando de Lacerda, responsible for much of the history of linguistic studies in Brazil.

References


