

# Personal considerations on the origin of Italian Phoniatrics

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I was born in Turin and I spent the very first years of childhood in Turin.

As always happens when childhood is happy, and so was mine with both parents with a keen sense of family and duty, two sisters and four brothers all lined up by age to make noise and confusion together, the images of the wide tree-lined avenues which characterize the map of this city in winter covered with snow, come back to my mind, magnified by memory, very sweet and relaxing.

However, my birth in Turin is not accidental, but is closely linked to the memory of my father Giuseppe Bellussi (Figure 1) and his contribution to the birth and initial development of the Italian Society of Audiology and Phoniatrics.

Giuseppe Bellussi was born in Rome on June 25th, 1913 and not even eighteen, he had finished his classical studies at the "Liceo Torquato Tasso" at that time the most qualified Roman high school for the reputation of seriousness of studies as claimed by teachers and pupils. In Rome he graduated in medicine at the "La Sapienza" university. My father had not only been a model student, he was fluent in French and German, knew music, played violin and piano and in his youth he had developed a beautiful baritone voice.

His singing skills and a meeting at the age of 12 with the tenor Beniamino Gigli would probably have pushed him to pursue an artistic career, but his father Angelo Bellussi free lecturer in Forensic Medicine at the Rome University, despite being responsible of that meeting, would neither have approved nor indulge his son vocation.



Fig 1 : Giuseppe Bellussi, my father.

The meeting with Beniamino Gigli is told by my father in a publication (Bellussi, 1991) entitled "Considerations of a Foniatrician on the voice of a famous singer" (Figure 2) in which he analyzes the characteristics of the voice of the great tenor: "...it was an almost improvised concert organized for the inauguration of the Beniamino Gigli hall at the Soldier's House in Rome. The Soldier's House was a recreational and cultural institution commissioned by Count Augusto Saletta, an old Piedmontese gentleman friend of my father...that voice aroused in me a great impression which matured in the following years and after numerous auditions of Gigli and other singers, in evaluations and critical judgments more and more relevant and complete also due to my activity and my knowledge in the field of phoniatric sciences.."

That meeting not only ignites in my father the passion for singing and opera, but also suggests him the way to reconcile his vocation with the requests of my grandfather who, according to the tradition, wanted his son to be a doctor.

Thus, at the end of the 1930s, when Giuseppe Bellussi arrived in Turin as a young assistant to professor Arnaldo Malan (Figure 3), found the most fertile ground for cultivating his passion in the Oto-logopedic outpatient university department at that time directed by Renato Segre, also a pupil of Malan.

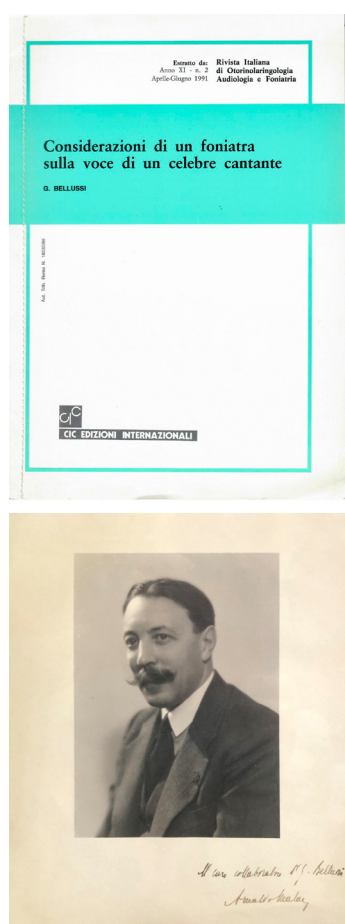


Fig 3 : Professor Arnaldo Malan in a picture dedicated to his pupil Giuseppe Bellussi.

The Oto-logopedic department, in Turin must be considered with good reason, the first Italian center for the diagnosis and treatment of hearing, voice and speech disorders (Pallestrini and Sperati, 1992, 155-156): when in 1939 Renato Segre, due to the racial Fascist laws is declared forfeited from university teaching and reserches and forced to emigrate to Argentina, my father takes his place.

Renato Segre, a pioneer of phoniatrics in our Country, never returned to Italy even if he was reinstated in teaching at Turin university in 1946. However, the collaboration and the bond of friendship and mutual esteem between these two Malan's pupils continued at an international level, as we will see later.

The war years and the immediate post-war years were years of intense activity of my father, who deepened his knowledge in Phoniatrics ranging from instrumental diagnosis at that time to the beginnings, to the clinical pictures up to the therapy with interesting researche ideas and results for the treatment of dysphonias and stuttering. In a publication (Bellussi, 1939) for example, he illustrates the principle of laryngostroboscopy, ( Figure 4) describes the devices at that time in use (for a long time I remember having observed with curiosity in his private office one of these instruments that today we would not to hesitate to define rudimentary),( Figure 5) and with the enthusiasm typical of the researcher, he lists its possible applications.

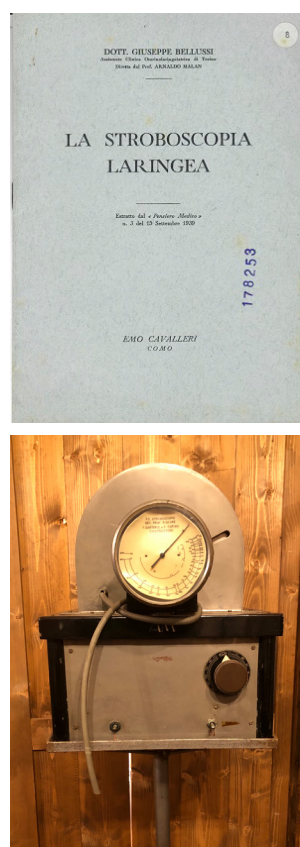
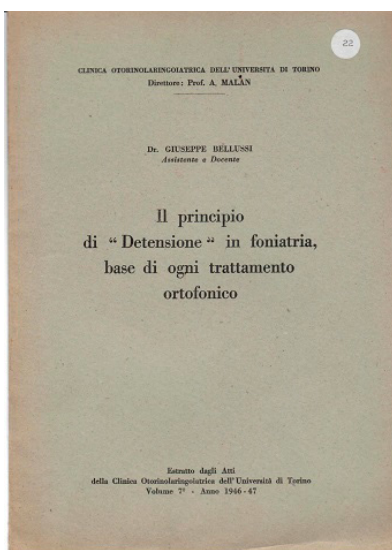
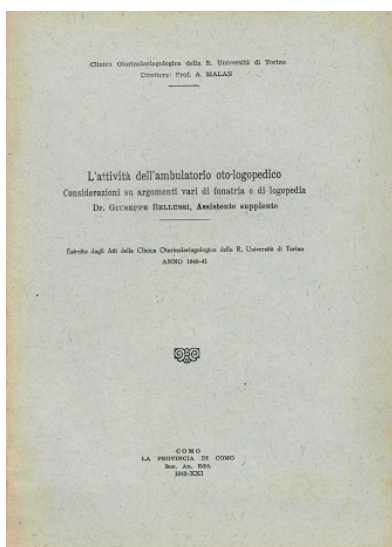
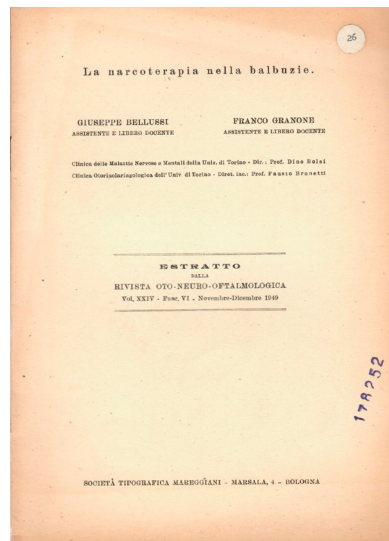


Fig 5: The laryngo-stroboscopy left to my father when professor Renato Segre was forced to emigrate to Argentina due to the racial laws.

The activity of the Oto-logopedic department in the years 1940-41 (Bellussi, 1940-41) (thus in the first year under his management) ( Figure 6) is described in details adding to the numerical list of the different voice and speech disorders, personal considerations for the daily clinical practice not only for those who care more specifically of phoniatics, but of every otolaryngologist. Certainly at the forefront for those times are, for example, the observations on the “principle of detention” (Bellussi, 1946-47) ( Figure 7) as the basis for any speech therapy and on narcotherapy ( Figure 8) in stuttering (Bellussi and Granone, 1949); with regard to the latter therapeutic option, my father argues that it is ineffective if not associated with valid psychiatric therapy, confirming the theories of the time on the neurotic basis of the disorder of verbal fluency.



If the meeting with Beniamino Gigli when he was little more than a child provided Giuseppe Bellussi with specific guidance in the field of medical studies, the meeting with Father Agostino Gemelli was decisive for the Italian Society of Audiology and Phoniatics. Edoardo Gemelli (Montini et al.,1960) was born in Milan on January 18th 1878 from a decidedly anticlerical family. During his classical studies at the “Parini” high school, which will become famous for the student revolt at the end of the 60s of the last century, he completely abandoned the religious practice. After high school he enrolled in the faculty of Medicine at Pavia university where he became a militant socialist. At the same time he began the scientific research in the laboratory of his teacher Camillo Golgi the Nobel Prize for Medicine in 1906. In Golgi’s lab, Edoardo matured his passion for biological sciences and experimental research. The passion for research characterizes Edoardo Gemelli’s entire life and leads him to always seek the confrontation of ideas by approaching men from different backgrounds without preclusions. His often stormy relations with the FUCI’s (Italian Catholic University Federation) students and his conversations with some franciscans who were companions during the year of volunteering in the military hospital in Milan, matured his vocation: in December 1904 he took his vows as a franciscan friar with the name Agostino.

The question of the relationship between religion and science continues to be at the center of his interest, and, as a consequence,



the idea that is necessary and urgent to provide for the formation of a modern catholic thought led him in 1921 to the creation of the Catholic University of Sacred Heart with the approval of Pope Benedetto XV.

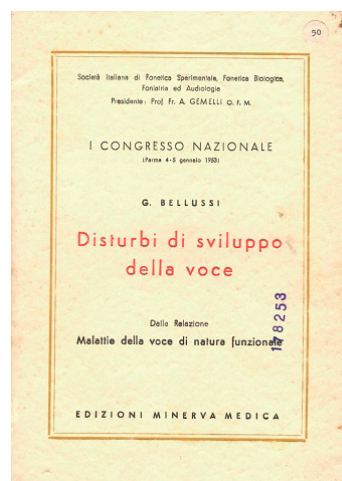
Later, his interest in man considered in his physical and spiritual unity, together with the elements provided by medical studies and the propensity for psychology led him in 1950 to the foundation of the Society of Experimental Phonetics, Biological Phonetics, Phoniatrics and Audiology (Schindler, 1992).

In 1968, 10 years after the death of Father Gemelli and the foundation of the Faculty of Medicine of the Catholic University with the Polyclinic named after him, the Society took the current name of the Italian Society of Audiology and Phoniatrics (S.I.A.F.) (Schindler, 1992)

The scientific activity of the Society was intense from the beginning: the first National congress was held in Parma in January 1953 (Figure 9) under the presidency of Father Gemelli; in the official Report of the congress on "Diseases of the voice of functional nature" Giuseppe Bellussi takes part with the chapter on "Developmental disorders of the voice" (Bellussi, 1953a), (Figure 10) in which the treatment of the development of the vocal organs is followed by the ontogenic development of the voice from the infant's voice to the senile involution to conclude with a careful examination of the vocal mutation pathology.

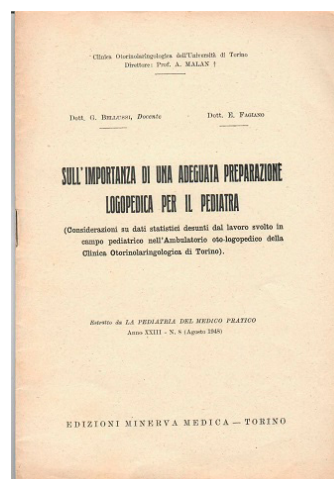


Fig 9: One of the first meetings of the Society of Experimental Phonetics, Biological Phonetics, Phoniatric and Audiology in Turin. Sitting from left to right you can recognize: professor Ettore Bocca, professor Faustino Brunetti, Father Agostino Gemelli and Giuseppe Bellussi.

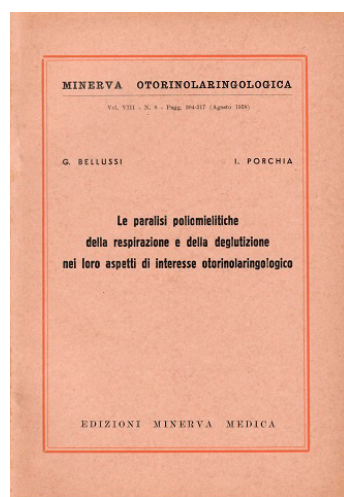
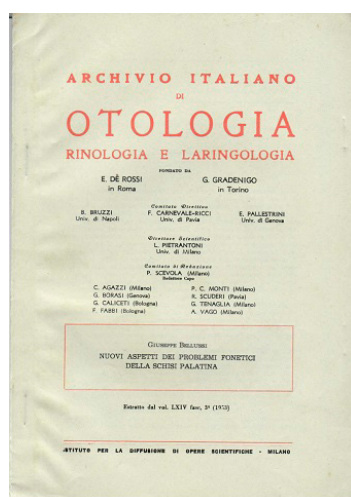


The study and treatment of hearing impairments and of voice and language development, will continue to interest my father in the following years. He writes in an article (Bellussi and Fagiano, 1948) entitled "On the importance of an adequate speech therapy knowledge for the pediatrician": "... Oto-speech therapy, as a branch of Otorhinolaryngology, has an indisputable social importance...dealing with...individuals disabled in two functions, such as hearing and voice, which are essential for the relationship life....

The problems of deaf-mutism and stuttering would be enough to justify the interest in this discipline....Especially the pediatrician can and must collaborate with the otorhinolaryngologist dealing of children who, due to causes acting during fetal life and childhood, or, due to neuropathic constitution easily predisposed to suffer the influence of physical and psychical trauma...are affected by hearing and voice deficits that so rightly grieve and worry parents..." (Figure 11)

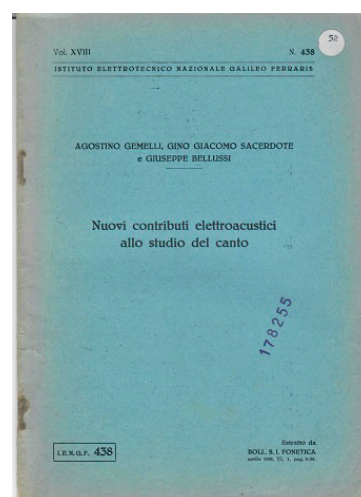


In the analysis of speech and language developmental disorders, my father not only emphasizes the importance of the neuropsychiatric component of stuttering, but does not neglect congenital anatomical alterations (Figure 12) such as cleft lip and palate, (Bellussi, 1953b) also taking into consideration the sequelae of poliomyelitic paralysis (Figure 13) on the respiratory and swallowing function of the larynx (Bellussi and Porchia, 1958). All these topics later will be summarized in the chapter on "Voice and speech diseases in childhood" (Bellussi, 1963) attached to the volume of Pediatric Otorhinolaryngology by Piero Meda.



Coming back to the Society, since its birth it has its own journal the "Bulletin of the Society of Experimental Phonetics, Biological Phonetics, Phoniatric and Audiology" on which my father continues to publish his studies and researches.

Among others, it seems to me important to highlight the paper (Gemelli et al., 1956) "New electroacoustic contributions to the study of singing voice" (Figure 14) by Agostino Gemelli, Gino Giacomo Sacerdote and Giuseppe Bellussi: in fact, what better foundations could the Society of Audiology and Phoniatrics have if not those born from the collaboration of Father Gemelli who, after overcoming the religious crisis became convinced that the empirical method of science and a solid faith are not in opposition, but can enrich each other; Gino Giacomo Sacerdote who, in those years as an engineer at the Galileo Ferraris National Electrotechnical Institute in Turin, was dealing with physical entities such as frequency and intensity; and Giuseppe Bellussi who, as a clinician was dealing with hearing and voice disorders, especially singing voice, a feature unique for the human being?



In August 1969, the IX Congress of IFOS (International Federation of Otorhinolaryngological Societies) was held in Mexico City. I remember that event well, I was no longer a child and with my older brother Angelo, I accompanied my father to the congress. For us it was the first trip beyond the Atlantic ocean with a visit to a Country undoubtedly of particular charm, preceded by a short stay in a Caribbean Island and followed by a few days in New York: an emotion and an experience that are difficult to forget! For my father and for the Italian phoniatrics the congress was an opportunity to consolidate and implement the collaboration and the bond of friendship with Renato Segre and colleagues from all

over the world who shared the same passion and interest.

In fact, during the congress Hans von Leden, (Figure 15) who was Chairman of the Laryngeal Section, invited colleagues from different Countries to meet for the purpose of founding an organization of physicians with a special interest in the voice of singers and actors.

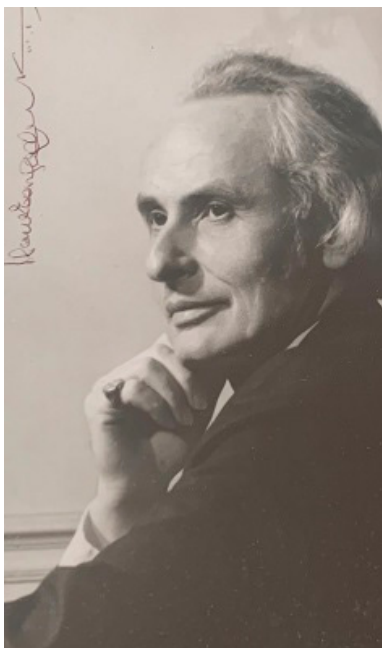


Fig 15: Professor Hans von Leden in a picture dedicated to my father.

Among others, there were: John Ballantine from London, Jorge Perello from Barcelona, Renato Segre, who was, at that point an Argentin citizen and Giuseppe Bellussi as representative for Italy. Segre suggested the name Collegium Medicorum Theatri and the acronym Co.Me.T which were adopted unanimously. Segre also presented an outline of the Constitution: "This organization shall be composed of physicians, scientists, voice coaches and voice pathologists from different cities around the world who are connected with major theaters, operas or academies of music who have demonstrated special dedication to the physiology and pathology of the voice in singers and actors". A more appropriate definition could not have been found for my father's professional goals!

Two years later Segre organizes the second meeting of the Co.Me.T. in Buenos Aires. Under the presidency of von Leden, the scientific program is completed with a guided tour and

practical demonstrations in the technical and medical offices of the famous Colon theatre. There are two round tables: in the first one on "Voice control" particularly interesting is the contribution of Prof Winckel from Berlin on "Acoustic support for singers' voices by the concert hall" (Winckel, 1973) in which the author states that the opera house with the best acoustics is exactly the Colon theater. (Figure 16) The contribution of my father to the second round table on "Training of singers" also presents completely original aspects; in his note entitled "The effects of the exigencies of different vocal styles from the second half of the XVIth century until modern times on the training of the singer's voice" (Bellussi, 1972) he in fact underlines how the preparation of an interpreter of Verdi or Wagnerian opera must be different from those who interpret "Les pecheurs des perles" or Bizet's "Carmen" or the romantic vocalism of Schubert's, Schumann's and Brahms's lieder.

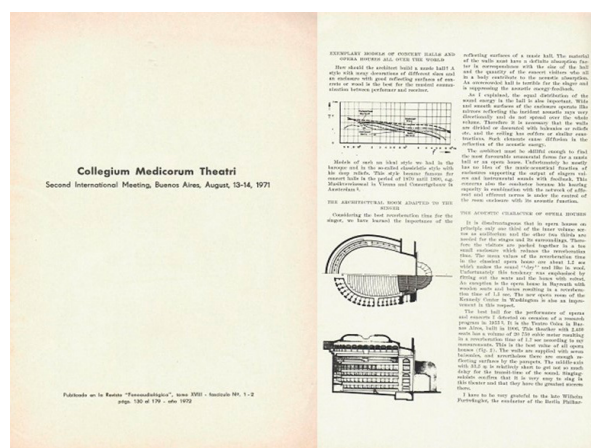


Fig 16: The program of the Second International meeting of the Collegium Medicorum Theatri with the paper of Professor Winckel on "Acoustic support for singers' voices by the concert hall".

My father did not leave his interest in the vocal organ and his passion for singing on the door steps, he brought it into the family letting us experience a particular atmosphere, but above all, teaching us that passion, together with great care, can lead to the realization of any aspiration.

Every Wednesday afternoon he was free from private office commitments and a singing teacher accompanied him on the piano in his favorite baritone pieces (the romance .."di Provenza il mare e il suol..." from Verdi's



Traviata and some Schumann's and Brahms's leaders which he will later record on a disc leaving us forever memory of his voice).( Figure 17)



Fig 17: The record my father recorded with some Schubert's, Schumann's and Brahms's "arias" he loved most.

These singing afternoon have been constant and regular as far as my memory can go back over the years. The piano was located in the waiting room of his private office and was also used for the therapeutic follow-up of the singers who often turned to him. At the end of the visit, my father was used to "try their voices" on the piano. He also kept a notebook in which he wrote down the vocal characteristics and the medical history of his patients singers.

Exercises on Wednesday afternoon were preparatory for home concerts during which my father was used to perform for a few close friends like him passionate about singing and opera.

With us children he had to work very early to correct some of our dyslalias (rotaxism, kapacism) that certainly would not have given him good publicity as a speech therapist. Certainly more willingly he introduced us to the world of opera: I remember the emotion of the first performances at the "Fenice" theater in Venice; the magic of the lights, the stalls and the boxes with the buzz of the spectators in evening dress accompanied by the chords of the orchestra; then the curtain that rises and the show: "Il Barbiere di Siviglia", "Aida", "Boeme", "Traviata", choices of music and entertainment that gradually and according to the age had to teach us to love the "bel can-

to". I think that for anyone it is unforgettable to have attended Verdi's Otello with the "... Esultate..." performed by Mario Del Monaco in the role of Moor of Venice on the Stair of Giants in the Doge's palace! ( Figure 18).



Fig 18: The tenor Mario Del Monaco in a picture dedicated to my father when he was his patient.

With less enthusiasm I remember having followed Borodin's "Prince Igor" or "The Valkyrie" and "Siegfried" from Wagner's tetralogy at the opera house in Rome with extremely simple and rigorous sets and costumes far from the fantastic world of Nordic mythology because they had to leave space for the greatness of Wagner music. And when the other spectators left the theater at the end of the third act (these are all four acts operas) because they were tired, my father was still there, not in the boxes or stalls, but in the balcony because "...the acoustics are the best..." and despite the late hour he managed to catch even the slightest out of tune of the tenor or soprano.

I would like to conclude my story by summarizing a note from my father on Enrico Caruso's voice: on the basis of his anatomo-physiological knowledge of singers' vocal apparatus and of documented medical certificates, he gathers the clinical history of the famous tenor and the causes which brought him to premature death. Here I report in full some notes found in his typewritten papers with corrections by hand: " The laryngoscopic examinations made by the doctors who visited Caruso showed that his vocal folds were

rather large and tick (which is not usually found in tenors) of a rather soft consistency (expression equivocal as it qualifies a tactile and non-optical sensation such as can be detected with laryngoscopy). However, the importance of this feature, which was invoked to explain the “velvety and mellow” quality of the timbre, which depends above all on the resonance cavities, must be excluded.”

In fact, the analysis of Caruso’s voice recorded on discs and performed by A. Gemelli, G. Sacerdote and G. Bellussi demonstrated a remarkable richness of harmonics for the entire duration of the note emission. The characteristics of Caruso’s phonatory apparatus are therefore “... indicative of a potential vocal ambivalence (bari-tenor)”, a circumstance not exceptional among singers when in occasional situations a tenor or a soprano must replace the baritone or mezzo-soprano for contingent reasons (for example sudden unavailability of a singer). This event, documented by a record, occurred to Caruso when in a performance of *Bohème* he sang the aria “Vecchia zimarra”, replacing the bass that was unwell. This kind of ambivalence is called occasional. In the event that an insufficient structural typing of the vocal organ determines the ambivalence, which in this case we define potential, it is evident that it will be the pedagogical address, together with psychological reasons, to develop the voice in a tenor rather than baritone direction or soprano rather than mezzo-soprano. And this is exactly the case of Enrico Caruso; before starting his artistic career Caruso occasionally was used to sing in church, for serenades and dancing parties; he sang with a spontaneous voice, not yet technically set, ambivalent between the tenor and baritone voice even if his vocal apparatus was probably more suitable for a baritone voice. His first singing teacher, Guglielmo Vergine in Naples, introduced him too early to the opera world as a tenor.

My father continues: “For these reasons it is understandable the difficulty of Caruso in the first period of his artistic activity, to reach the acute extremes as demonstrated by the fact that, at the first performance of the *Bohème* conducted by Toscanini, he emitted the acute “do” of the “Gelida manina” in falsetto and again he used the falsetto in the third perfor-

mance of the opera after Toscanini had lowered the whole romance by half a tone”.

This also explains the failures that Caruso had to endure in the first years of his career even at the S. Carlo in Naples.

However, he was not discouraged and continued his studies with more zeal and will to succeed under the guidance of the teacher Vincenzo Lombardi who, however, did not change the tenor setting of his voice. His voice rich in sonority and brilliance with baritone inflections allowed him to pass from the lyrical-light repertoire to the properly lyrical one, especially the realistic genre (*La cavalleria Rusticana*, *I pagliacci*) of which he was the unsurpassed interpreter, and in the last years in dramatic Verdi’s roles.

According to my father, the initial setting was not exactly suited to the anatomic-physiological characteristics of his vocal organ, but even later the roles played forced him to make considerable efforts on the respiratory and laryngeal muscles: “...As for the respiratory muscles, the pneumographic traces of Caruso detected by the otorhinolaryngologist Biaggi in 1911 are of historical interest, demonstrating a decreased control of respiration .... increased frequency .... at rest, irregularity of thoracic respiratory movements. ... We are not as far as Caruso is concerned, in possession of stroboscopic reliefs that could have shown dyskinesias of the laryngeal muscles. However, it is very likely that dyskinetic-hyperkinetic disorders were present ... and that these, together with the respiratory ones ... had as a consequence the formation of vocal nodules ... removed for the first time in the United States (right vocal fold) and subsequently ... in Milan by Prof. Della Vedova (left vocal fold).

It is not surprising that the greatest tenor of all time encountered manifestations of vocal pathology in stark contrast to Beniamino Gigli ... who was a perfect model of the physiology of the singing voice ... If Caruso had wanted to develop a baritone voice he would have succeeded, he would not have had the nodules..., (nor would he have developed the subphrenic abscess that caused his death in 1921), ..”but he would not have ascended into the Olympus of great singers.

Art cannot always be contained within the limits of physiology and, if Caruso had re-



spected them, we would not have today, among other things, that prodigious testimony of a bari-tenor voice ... " that made him unique.

These reflections lead me to a conclusion: if my grandfather, after my father's meeting

with Beniamino Gigli, had supported his potential and intentions to pursue an artistic career, perhaps the history of the Italian phoniatrics would have been different.

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