is, when the three breath-streams are articulated exactly) the ensuing three-way tension of the pharynx causes the pharyngeal inlets of these tubes to open. Through these inner passages the vocal impulses and the vibrations of the column of air can be computed, correlated and registered; namely, pitch and form can be recorded aurally as "frequencies". The resonances (over-tones and undertones) of the body, and the consonances (highest frequencies) of the mouth cannot be registered, however, until the complex sound-waves have emerged into the atmosphere and been detected through the outer ear passages. This is the reason why no one can judge his or her own voice quality or "vocal tone" correctly; and why every singer must learn to vocalize by coenaesthetic and kinaesthetic sensation, rather than by ear. Failure to tension open the eustachian tubes explains why incorrect articulation and uncertain pitch are sometimes to be found in conjunction with a finely discriminating aural faculty!

In conclusion: when the body is muscularly co-ordinated on a more or less mean tension, and all the orificial suctorial activities are correlated functionally on a happy mean in relationship to "breath", the physical energy of the individual form "finds vent" in vocal expression. This constitutes the natural exercise of the body for establishing the vocal instrument and inducing the phenomenon of voice.

A technology of vocal exercise can be re-established on its natural basis of "respiration". It can be shown how the mysterious conceits and tenets of the ancient Athenian vocal tradition and of the old Italian "Bel Canto" tradition are really based upon natural physiological laws; and, moreover, how this "acquired" exercise of respiration leads to that co-ordinate development of body and mind which is the aim of all "education", and the intangible substance of all "arts".

FRIDAY, 26 JULY. AFTERNOON

PEDAGOGICAL SESSION

Chairman: Prof. J. S. KENYON

60. Prof. J. S. Kenyon (Hiram, Ohio): Phonographic records of American dialects.

The phonographic records that were demonstrated were made, some by the Columbia Phonograph Co. under the direction of a committee from the Modern Language Association of America, and some by the Victor Talking Machine Co., under the direction of Professors Harry M. Ayres and W. Cabell Greet, of Columbia University. With one exception they represent cultivated American speech of the different regional varieties (Eastern, Southern, and General American) with, however, considerable admixture of local

and dialectal features. The reproduction of the small parts of these records that the very limited time permitted was mostly confined to certain particular features to which attention was called. The general effect of the different types can be experienced only by hearing the records; hence only a few points will be mentioned.

Records from all the regions showed the preservation of the o sound before r pronounced or silent, as in more mor, board bord, boad, etc. The Eastern records showed the occasional, but rather inconsistent, use of a or a in words of the ask type, as ast, ant, gras, last, kant, haf; but ænsa, kænt, ræftaz; the New England a for a in undaunted andantid, haunted hantid; and the New England local as

for ax, as in barn barn, marched martst, etc.

Some of the Southern records showed the use of do before vowels (or occasionally the glottal stop), which normally occurs only before consonants, as the idea of it do ardiovit, the order do 20do, the old rat ðə 201d ræt; the suppression of the non-syllabic element of the diphthong as or or, as \vec{l} don't know a do no, ma maind, maind, line lain; the South western mixture of forms with and without r (not before vowels) characteristic of some border regions between r-less and r territory, as answer ænsə, but bear bær; the Virginian differentiation of the av diphthong according as it occurs before a voiceless or a voiced sound or a pause, as out out (varying as Aut, out, out)—ground græund, etc.—a distinction also heard in bordering regions and in Canada, and suggesting interesting connexions with the similar behaviour of the ar and av diphthongs in certain Scottish dialects, as well as the history of the development of these diphthongs from Middle English is and us. The diphthongization advanced more rapidly in positions where the vowel was longer (before voiced sounds and finally), so that some of these diphthongs before voiceless sounds are similar to the seventeenth-century form in standard speech.

Resemblance to the Scottish "stopped vowels" is heard in the record of a South Carolina speaker of maternal Scotch descent, in the short close vowels of make mek, chief tsif, roof ruf (also rof), place ples, wait wet. In the same region there are apparent echoes of the breaking of long vowels shown by Wright from Cumberland to Dorset, as in unsafe anseəf, rain reən, face fees, came keem, etc., which somehow strike the ear quite differently from the more recent Southern diphthonging of "short" vowels, as in yes jees, said seed,

often referred to as "the Southern drawl".

In the dialect record of an East Side New Yorker there is a distribution of a and æ sounds along unusual lines; as in rat rat, carry karı, back bak, that ðat, exactly ıgzaklı, happened hapnd, had had; but asked æ skt, answer æ nsə, aunt æ nt, care kæ r, grass græ s, crash kræ ʃ, rather ræ ðr, rafters ræ ftəz, last læ st, stamping stæ mpin, half hæ f.

In this record also appears the well-known New York variety of the ar sound, popularly described as an oi sound, as in bird "boid", thirty-third "toity-toid", which is not at all an or diphthong, but something nearer to 31, as in shirk \(\int_{31}k, \) shirker \(\int_{31}ka, \) certain sound,

OF PHONETIC SCIENCES

search saits. This ar, which seems to result from the substitution of r for r, is occasionally found elsewhere, as in a record from Macon, Georgia, saika; it is also reported from New Orleans and the Carolinas. It is suggested by a North Carolina record in which hair is pronounced hær, with a faint r taking the place of the r. Curiously enough, this East Side speaker's or diphthong in choice, joist is acoustically almost identical with his ar in shirk, etc.

These samplings were presented as suggestive of the possibilities for discovering and confirming historical relations between British and American English that should add materially to our knowledge of the development of English sounds and dialects—possibilities that will be greatly extended on the completion of the Linguistic Atlas of the United States and Canada.

61. Prof. R. Ramirez (Santiago, Chile): The teaching of phonetics in Chile.

Résumé

I. Chile was fortunate to have had the help and wise leadership of Dr Rudolph Lenz, the well-known German phonetician, in the teaching of modern foreign languages, both in her Secondary Schools and at the University.

2. Dr R. Lenz arrived in Chile under a Government contract in August 1889. He very soon introduced some kind of phonetic drill in the teaching of foreign languages (French, English and German) in the Secondary Schools of the country, and in 1902 opened a regular course of "General Phonetics" at the Instituto Pedagógico, which is the School of Education of the University of Chile. [The Secondary School teachers receive their higher education at the Instituto Pedagógico; here they get their University Diploma which allows them to compete for appointments in Secondary Schools.]

3. Paul Passy's *Petite Phonétique Comparée* was used as a textbook for Dr Lenz's course in the University, and many of the students in that class became members of the Association Phonétique Internationale or regular subscribers to the *Maître Phonétique*. During the period between 1889 and 1902, and as an extension to his course in the University, Dr Lenz delivered a number of public lectures on this subject, and wrote several pamphlets in explanation.

4. The knowledge acquired in the new studies of phonetics was used in Chile in three main ways: 1st, in teaching foreign languages in all the schools where this instruction was given; 2nd, in studying the "Chilean dialect" of the Spanish language and folklore; and 3rd, in studying "Mapuche", the language of the natives of the territory, the Araucanian Indians.

5. In 1915 a specialized course on English Phonetics (both theory and practice) and one on French Phonetics were added to the regular curriculum of the Instituto Pedagógico.

6. The good results of the learning of phonetics were soon made evident, and this in various ways: 1st, the teachers of foreign languages were enabled to master the principles of the so-called "Direct

Method" in language teaching, and use it in their classes with remarkable skill and good results. The clear improvement attained in this subject in the Secondary Schools throughout the country was recognized by school inspectors and other education authorities in their official reports: 2nd, with the collaboration of his class, Dr Lenz published some time in 1904, both in German and Spanish, the first part of his great dictionary of Chilenismos and dialectal expressions. 1 3rd, there developed in Chile what may be termed a nationalistic literature in the fields of romance, the short story and the drama, in which domestic subjects, the Chilean countryside and the peculiarities of the lives of the peasant formed the centre of the plot. 4th, several works on Chilean folklore and collections of popular verse and sayings were published at this time. Among others, to mention only two of the most comprehensive and important ones, we could mention Mr RAMON LAVAL'S Chilean Refrains and Popular Tales of Chile, and Mr Julio Vicuna-Cifuentes's The Coa or Prison Slang of Thieves and the Underworld in Spanish America.

7. Since 1925 there has been a noticeable change in this particular field of studies in Chile: 1st, due to new regulations issued by the education authorities for all Secondary and Elementary Schools, the direct method is being gradually replaced in the teaching of modern languages by other means of instruction; 2nd, languages (i.e. French. English, German or Italian) are no longer taught having both an educative or general aim in view as well as a utilitarian purpose. but it is evident that following some widely spread tendency of the times the second or practical aim is being emphasized; 3rd, the parents and education authorities wish the language masters to drill their pupils in reading (silent reading) and understanding the foreign tongue and that a minimum of time (or no time) should be devoted to any form of expression (oral or written), or in fact any other kind of learning and mental training; 4th, language teachers complain now more than before that the phonetic transcript is a true puzzle for young students and that the passage from phonetic script to ordinary spelling is a matter of great confusion to them, and accordingly they refuse to employ any such means of instruction in their class-work; 5th, this attitude is naturally reflected in the higher course of Phonetics in the University; fewer students take a real interest in this subject from the theoretical viewpoint, though they still maintain a certain amount of interest for the practical work in the specialized courses.

8. The point explained in no. 5 of the preceding items is vital to the future of phonetic teaching in Chile (and I presume elsewhere). I should venture to urge the Congress to give some time to its discussion, taking into account conditions prevailing in the world at the present moment.

¹ Imp. Cervantes, Santiago, 1904.