



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SYLLABLE AND WORD DIVISION IN FRENCH AND ENGLISH

Considered from the point of view of the mechanism of their production, English possesses two kinds of consonants: "initial" and "final"; whereas in French there is but one, "initial." Of what consequence is this difference in determining the formation and division of syllables and words?

In English, because of the continuity of the articulative effort, the syllable or word division occurs frequently within a consonant. In the pronunciation of *easy*, there are two *z* sounds: one, the implosion, is produced while the position for *z* is being assumed; the other, the explosion, while the tongue is leaving the same position. In such cases, one of the sounds is much weaker than the other, and usually we are not observant of it.

Whether the implosion or the explosion will be strong is determined by the place of the accent. In *position*, the *s* (= *z*) is pronounced with the second or accented syllable; in *difference*, the *f* is pronounced with the first or accented syllable. The plainly audible implosion or explosion is determined by the accented syllable.

In like manner, owing to the continuity of pronunciation in English, combinations of consonants are produced with a remarkable economy of movement. In *head department*, or *sit down*, the *d* of *head* or the *t* of *sit* is produced while the tongue is assuming and holding the position of closure for *d* or *t*; the *d* of *department* or the *d* of *down*, while the tongue is holding and leaving the same position. In such cases, the consonant belonging to the accented syllable is strong; the one belonging to the unaccented syllable is weak, and at times scarcely audible.

This economy of movement does not characterize the production of French consonant groups. In pronouncing *fête de l'indépendance américaine* (Fig. 1), there is a cessation in the expulsion of breath just before the tongue assumes the position for the *t*; after the tongue has assumed position against the teeth and palate, the expiratory effort is resumed; the air in the mouth is maintained an instant

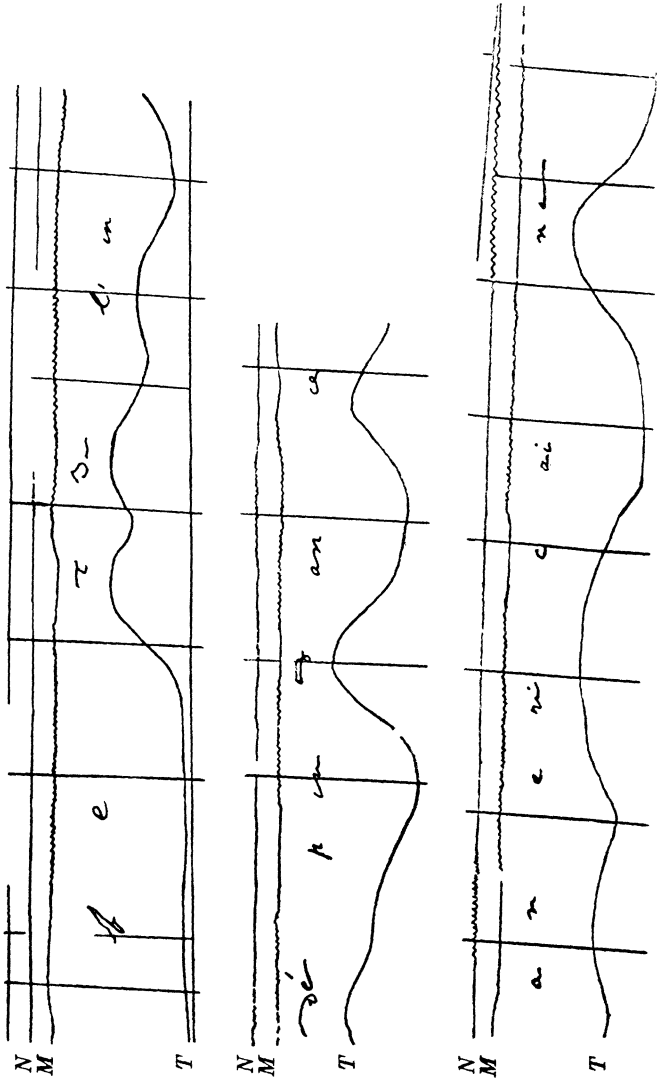


FIG. 1.—fête de l'indépendance américaine

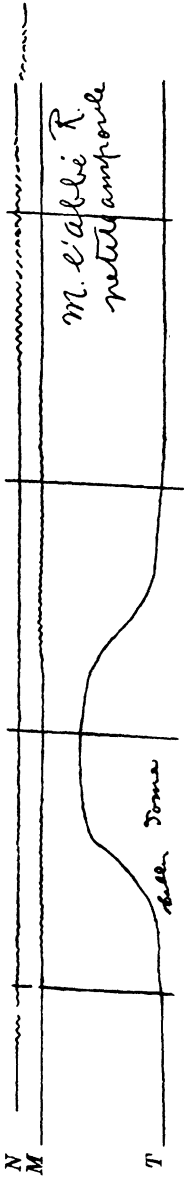


FIG. 2.—*belle dame*. (French)

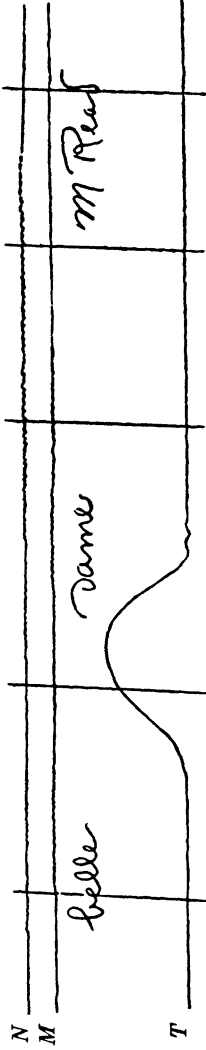


FIG. 3.—*belle dame*. (American)

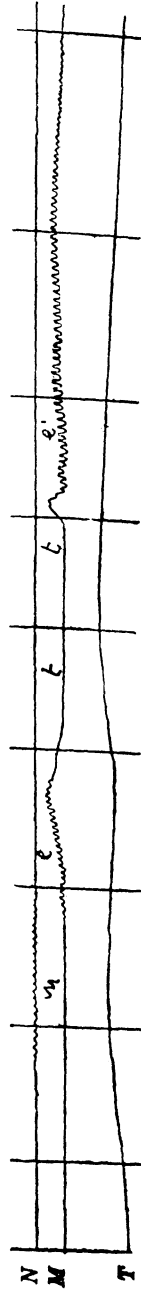


FIG. 4.—*net*. (English)

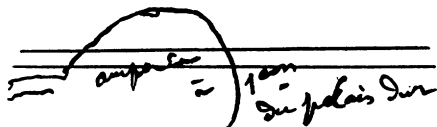
under pressure behind the tongue, and, as the tongue leaves the position against the teeth, this pressure is released; the simultaneous downward movement of the tongue and the resultant explosion may be noted on the tracing by the upward movement of the line of the mouth (*M*) and the downward movement of the line of the tongue (*T*). Following the explosion of the *t*, the tongue again takes the same position for *d*, and *d* is then pronounced by means of the following mute *e*. Both the *t* and *d* are initial; the *t* of *fête* and the *d* of *de* (Fig. 1) are not produced by a single movement of the tongue as are the *t* and *d* of *sit down*, or the *l* and *d* in the American pronunciation of *belle dame* (Fig. 3), or of the two *t*'s in *netteté* (Fig. 4), but a separate movement of the tongue may be noted in the line *T*, for each consonant.

If the end-consonant and the beginning-consonant are both voiced or both mute, the tongue leaves the position of closure of the end-consonant sufficiently to permit of the explosion of the consonant, but does not return to a neutral position which would permit the *ampoule*¹ to refill with air, and, on its expulsion as the tongue assumes position for the beginning-consonant, produce a separate distinctive curve.²

Thus in the French pronunciation of the *l* and *d* in *belle dame* (Fig. 2), or of the two *t*'s in *netteté* (Fig. 5), or the two *l*'s in *qu'elle l'a dit* (Fig. 6; cf. *qu'elle a*, Fig. 7), two separate curves do not appear in the tracing for the line *T*, but the time is that of a double articulation.

The treatment of consonant groups in English and French pronunciation is radically different: in English as many consonants as

¹ The size of the *ampoule*, or rubber bulb, is indicated by the accompanying figure.



² The experiments reproduced in this article were made with the *appareil inscripteur* at the laboratory of experimental phonetics directed by Abbé Rousselot at the Collège de France.

The upper line, *N*, gives the vibrations of the larynx taken through the nose; the second line, *M*, the vibrations from the mouth; the lower line, *T*, the movement of the tongue. For further detail, cf. my former article, *Modern Philology*, XIV (1916), 414.

For a description of the *appareil inscripteur*, cf. Rousselot, *Principes de Phonétique*, I, 61-101, or his *Précis de Prononciation française*, p. 14.

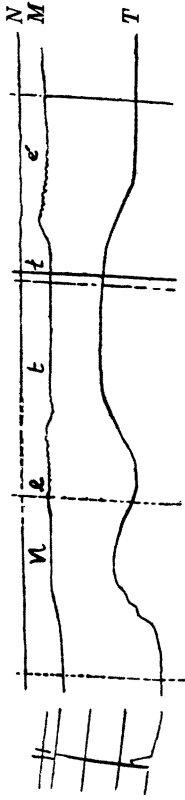


FIG. 5.—*netté*. (French)

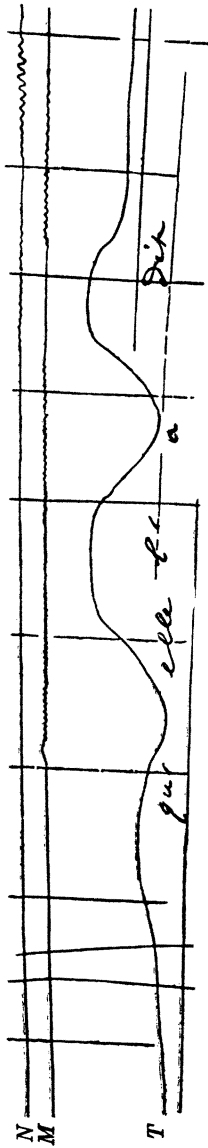


FIG. 6.—*qu'elle l'a dit*. (French)

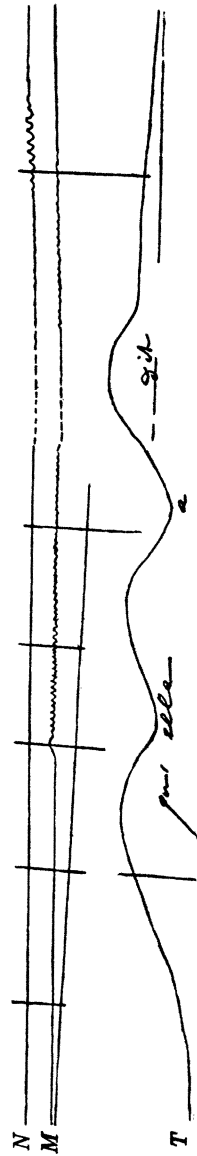


FIG. 7.—*qu'elle a dit*. (French)

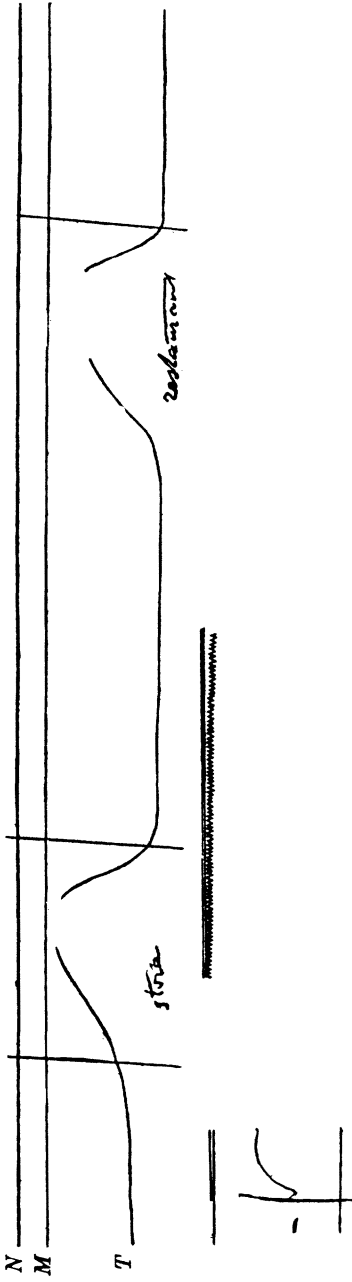


FIG. 8.—store; restaurant. (Parisian)

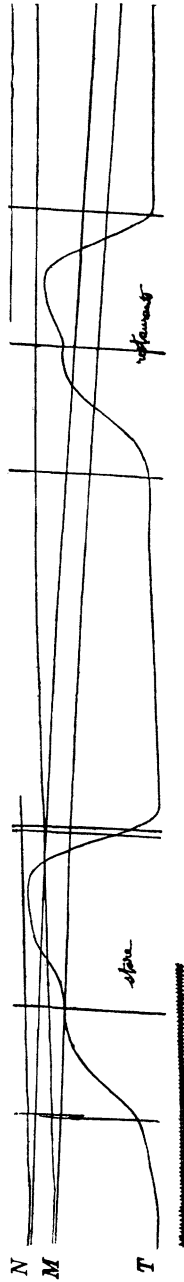


FIG. 9.—store; restaurant. (M. Lote)

possible are pronounced with the accented syllable; in French, the whole group is placed with the second syllable, or, where mechanical difficulties make this impossible, the first consonant is pronounced as an initial consonant with the first syllable, and the remainder of the consonant group is pronounced with the second syllable.

In Mr. Paillard's Parisian pronunciation of *store* and *restaurant* (Fig. 3), the line of the tongue, *T*, presents the same sort of curve for *st* in both words; *s* and *t* are pronounced initially also and belong with the second syllable, Mr. Paillard pronouncing the word *re s'to rã*, the spacing representing the place of syllable division.

In Mr. Lote's pronunciation (Fig. 9), one may note the similarity of curve for *st* of both words, and, in addition, that Mr. Lote takes more time for the pronunciation of *st* in *store* than for *st* in *restaurant*; were the word divided into syllables between *s* and *t*, *s* and *t* would occupy more time in *restaurant* (because of the pause for the syllable division) than in *store*, where the pronunciation is continuous.

The curve of the line *T* for *st* in Figures 8 and 9 is characteristic of "initial" consonants;¹ the curve of the line *T* for *st* in Figure 10 (Eng. *restaurant*) is typical of final consonants. In the pronunciation of the English word, the consonants tend to be pronounced with the accented syllable; *s* is final or produced with the preceding vowel and the syllable division occurs between the implosion and the explosion of the *t*.

In the French word *extase* (Fig. 11), the movement of the tongue as indicated by the line *T* produced a separate curve for each of the consonants of the group *k s t*. The pronunciation may be figured *e k' s'ta z'*; *k*, as shown by the sudden curve, is an initial consonant pronounced by means of the explosion (') and not by means of the preceding vowel *e*; *s* and *t* are initial consonants; *s* with its separate explosion produces the effect of vocalization; *t* is pronounced by means of the vowel *a*. As indicated by the spacing, the syllable

¹ As I have shown in my former article (p. 419), all end-consonants in French, if analyzed with respect to the manner of their production, are not final at all, but initial, that is, produced by means of a following explosion. In English words the end-consonants are normally final or produced by means of the preceding vowel, while the vocal organs are assuming and maintaining the position characteristic of the consonant; initial consonants occur in English at the end of a word as a result of a phonetic necessity only, brought about by an accidental combination of consonants.

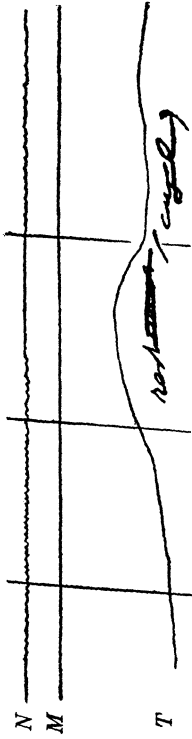


Fig. 10.—rest. (English)

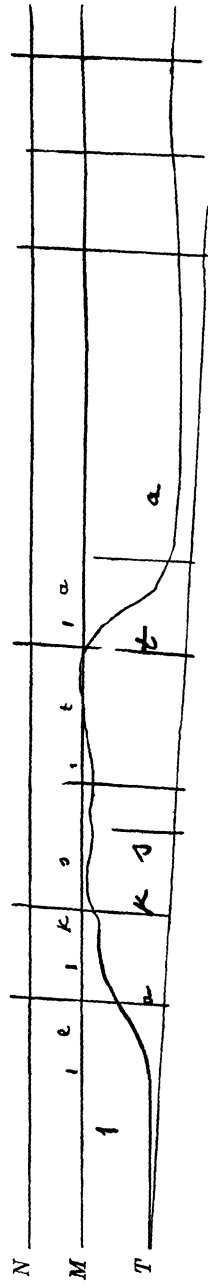


Fig. 11.—ecstase. (French)

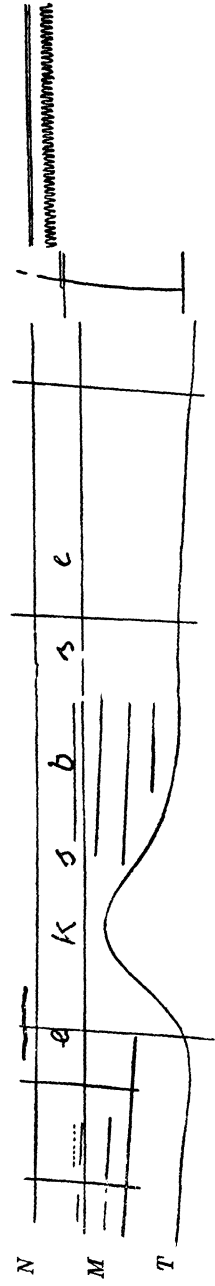


Fig. 12.—ecstasy. (English)

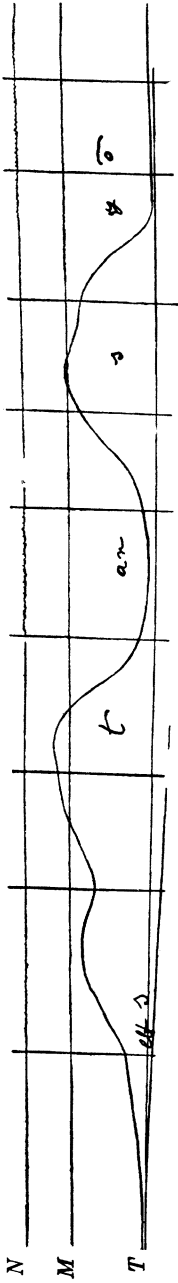


FIG. 13.—Fr. *extension*. (Abbé Rousselot)



FIG. 14.—Eng. *extension*. (F. Durant Fox)

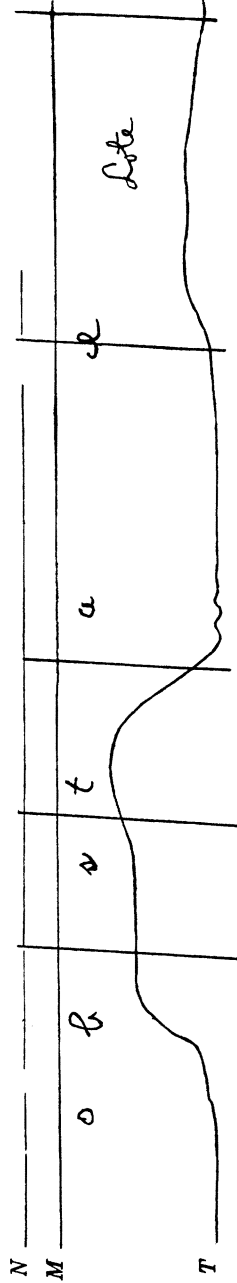


FIG. 15.—Fr. *obstacle*. (Lote)

division occurs after *k*, and *s* and *t* are pronounced with the second syllable.

In English *ecstasy* (Fig. 12), *k* and *s* are pronounced with the first syllable, *t* with the second; the pronunciation is continuous, the consonant positions are not held, and the transition from one consonant position to the other is so rapid that *k s t* presents but a single curve. *Ecstasy* is divided into syllables thus, *eks ta si*.

In Abbé Rousselot's pronunciation of *extension* (Fig. 13), the first curve of the line *T* is *k*, the second, *s't*; in the pronunciation of the English word *extension* (Fig. 14) by Mr. F. Durant Fox, of the University of London, there is but one curve for all three consonants.

o b' s'ta k'le figures Mr. Lote's pronunciation of French *obstacle* (Fig. 15), and *obs ta kel*, Mr. Jackson's American pronunciation of the English word *obstacle* (Fig. 16).

Figures 17 and 18 present types of the pronunciation in the two languages of the groups *tr*, *pr*, *kr*, etc. In English (Fig. 18), the transition from *t* to *r* is so rapid that the two consonants offer but a single curve and from a comparison of the lines *T* and *M*, the explosion of the *t* and the production of the *r*, in part of their duration, are simultaneous. In Figure 17, there are two distinct curves for *t* and *r*; the explosion of the *t*, registered in the line *M* by a slight upward curve precedes the production of the *r*. The English pronunciation may be indicated *tras*, and the French, *t'ra s'*.

At the end of words, the difference in treatment of the consonant group is no less marked. In French *théâtre* (Fig. 19), by comparing the curves of *t* and *r* in *trace* (Fig. 17), one may note the separation of *t* and *r* and their characteristic "initial" curves (cf. my former article, p. 417). Likewise, that they are initial is shown by the vibrations in the lines *N* and *M* after *r*, marking the voiced explosion by means of which *r* is pronounced. In Figure 20, note the low, flat curve of the final *t*; *r* is also a final consonant pronounced by means of an indistinct vowel preceding it (cf. so-called vocalic *m*, *l*, etc., in the Germanic languages). In Figure 20, *theater* is purposely accented on the second syllable and divided thus, *the at er*; French *théâtre* (Fig. 19) is pronounced *thé á t're*.

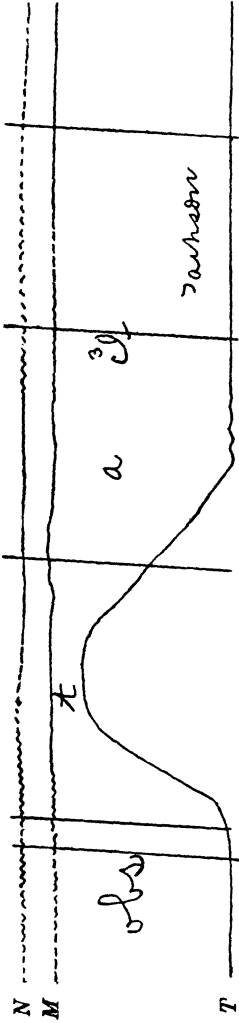


Fig. 16.—Eng. obstacle. (American)

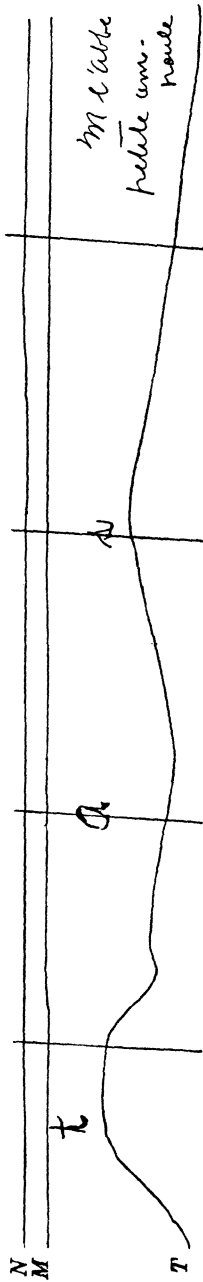


Fig. 17.—tras. (French)

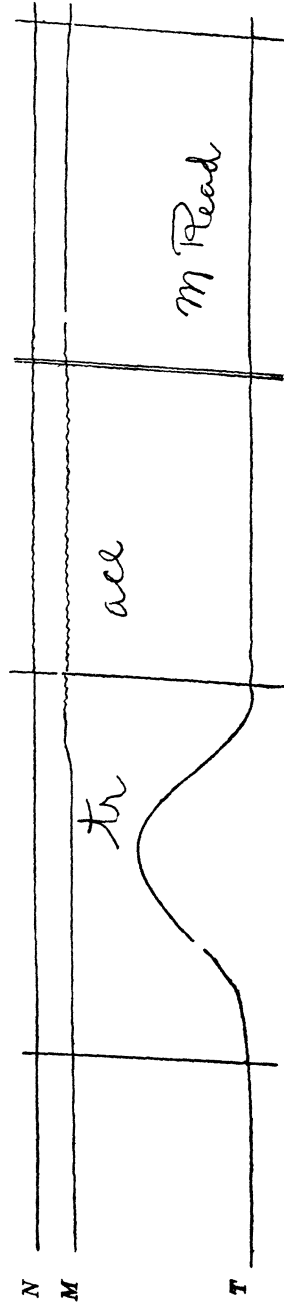


Fig. 18.—tras. (English)

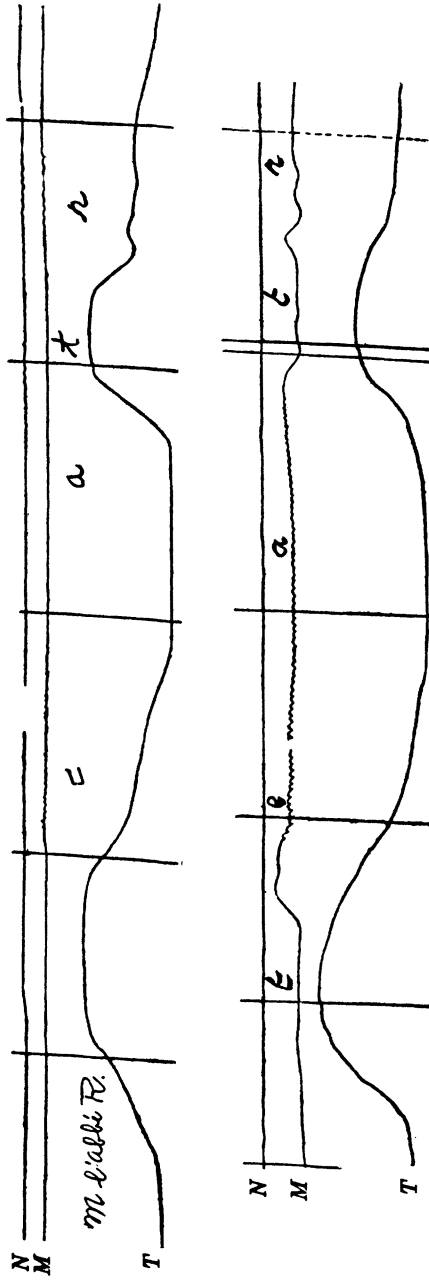


FIG. 19.—*théâtre*. (French)

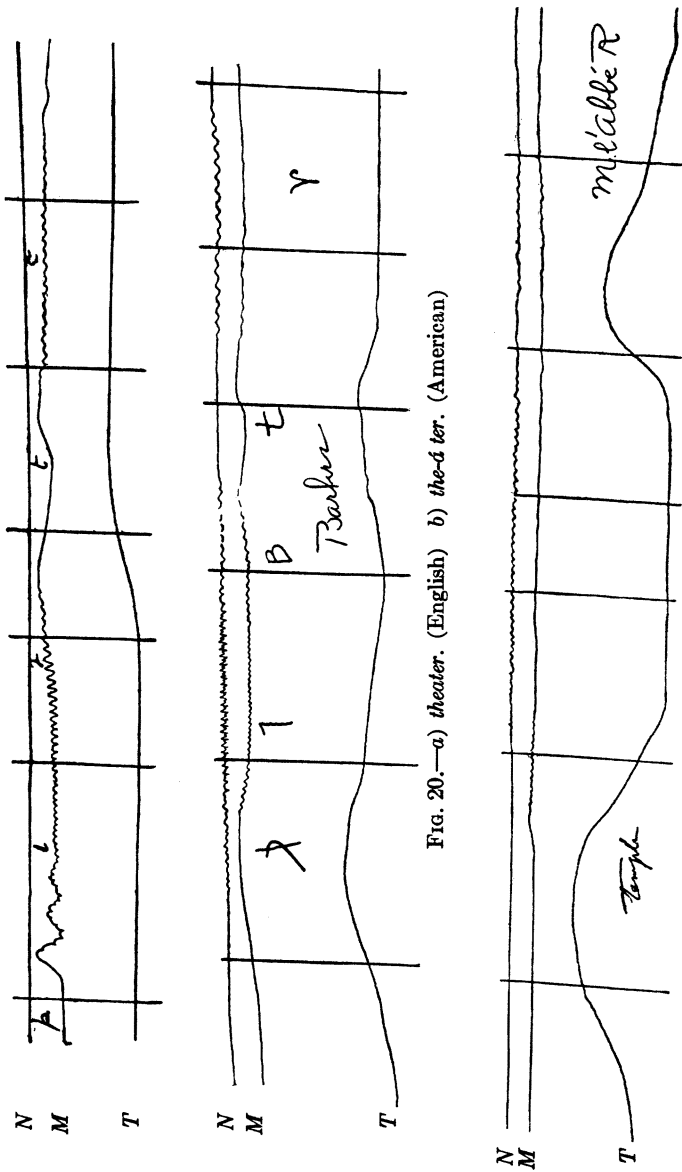


Fig. 20.—a) theater. (English) b) the-à ter. (American)

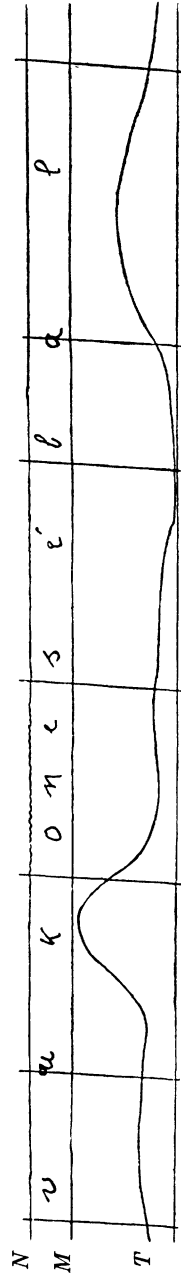
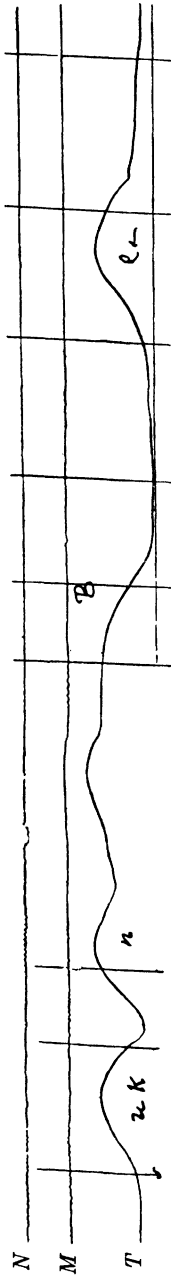
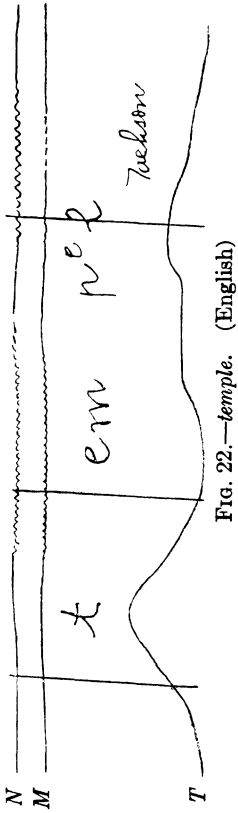
Fig. 21.—Fr. temple. (Abbé Rousselot)

In Figure 21, French *temple* is pronounced *tã p'le*, and in Figure 22, English *temple* is pronounced *tem pel*; the pronunciation of the English word is continuous and the syllable division occurs between *m* and *p*. However, one lip-position serves for both consonants: the implosion is *m*, the explosion, *p*.

Diphthongs proper abound in English and even single vowels are all more or less diphthongized. These diphthongs are distinguished by the continuous articulative effort and the gradual shifting of position of the vocal organs, characteristic of English pronunciation in general. French, on the contrary, possesses no diphthongs at all in the English sense of the term; thus in *oui*, the *u* position is taken definitely, held an appreciable length of time, then a quick transition is made to the *i* position which is held in turn without change in position of the vocal organs. In English *we*, the position of the vocal organs is ever changing during the pronunciation of both *w* and *e*. French efforts to imitate the English pronunciation of *they*, *though*, etc., do not afford examples ordinarily of a gradual change of position of tongue, jaw, etc., but rather the pronunciation of two distinct vowels with a rapid transition between them.

Like French, English makes certain *liaisons* or *linkings*, but in a wholly different manner. In French, a consonant between two vowels does not "link" the vowels together, but is pronounced entirely with the second vowel. A consonant at the end of the final word of a breath-group or of a sentence is pronounced by means of an explosion (or indistinct vowel which may be voiceless) following it; if there is no pause between the word to which the consonant belongs and the next word beginning with a vowel, then a separate indistinct vowel or explosion is unnecessary for the pronunciation of the end-consonant; the consonant utilizes the beginning vowel of the following word, thus *il a* is pronounced *i la*; *ils ont*, *i l'zõ*, etc. The term *linking* is descriptive of the English pronunciation of *when ever*, *not at all*, and similar word groups. One may figure the pronunciation, *hwen nev ver* and *not ta tal*.

Because of the constant change of position of the vocal organs required in the production of "final" consonants, a drawl in English is only a normal pronunciation "slowed down"; whereas, owing to the absence of final consonants in French, *positions are held and*



transitions are rapid; no Frenchman draws, the mechanism of the language does not permit it.

This difference in general movement may be best appreciated by comparing Abbé Rousselot's (Fig. 23) and Mr. Fox's (Fig. 24) pronunciation of *Vous connaissez Bâle?* The respective curves for *k* indicate that Mr. Fox pronounced with more energy than Abbé Rousselot, but in the tracing of Abbé Rousselot's pronunciation, there are distinct curves for *n* and *s*, for which curves are very slight or even lacking in Mr. Fox's pronunciation. In Mr. Fox's pronunciation there is gradual change, and positions of vowels and consonants are not held but are only points of passage on the path to the next position, which, on being reached, is likewise only a point of transition. On the contrary, Abbé Rousselot takes positions definitely, holds them an appreciable length of time, and makes his transitions during the cessation of the articulative effort.

JAMES L. BARKER

UNIVERSITY OF UTAH