BULL, WILLIAM E. SPANISH FOR TEACHERS: APPLIED LINGUISTICS. NEW YORK: RONALD PRESS, 1965, CHS. 3-5, PP. 40-77.

3

SPANISH SOUNDS AND THEIR SPELLING

To teach, rather than merely model, the sounds of Spanish implies that the teacher *guides* the student throughout the learning process. This may be done in two ways: covertly by carefully designed and properly programmed listening and repetition drills, or overtly by a description of what is to be learned plus instructions on how this can be done most efficiently. The choice of either procedure (or a combination of both) is, of course, ultimately determined by a variety of factors: the abilities of the students, the training and philosophy of the teacher, the goals of the class, etc. However, the teacher who wishes to be somewhat more than an informant or drill master cannot avoid the use of overt techniques. This choice, of necessity, assumes that the student can learn to acquire new habits by first having an intellectual understanding of what he is going to learn to do. This knowledge is not to be treated as a substitute for the habit, but it is worth remembering that it is this kind of understanding which establishes the difference between the amateur and the professional in most of man's endeavors.

To teach overtly, the teacher must be able to hear and identify all the Spanish sounds. To teach overtly also assumes that the teacher can describe not only how these sounds are made but also how the Spanish production process differs from the closest equivalent in the learner's speech. Students will naturally project their closest equivalent onto Spanish and this can either be a source of serious trouble or, contrary to common opinion, can be turned to good advantage with the proper help. Thus the student who can already make a close

approximation of a Spanish sound is considerably ahead of the native child whose development restricts him to baby-talk substitutes. It is easier to learn to convert the English sound of *d* in *dun* to the Spanish sound than to start from scratch. The English speaker need make only a slight adjustment in a habit already acquired. He has simply to shift the tongue tip from the gum ridge to the back of the upper front teeth. It is, in short, easier to adapt one speech habit to another than to adapt eating procedures to speech.

To be able to give useful descriptions of how sounds are made requires a very elementary knowledge of anatomy (see Fig. 1) and an understanding of how certain anatomical parts are used to make different sounds. The significant facts are shown in Figures 1 and 2.

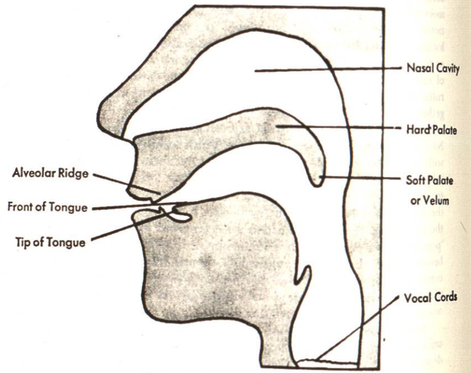


Fig. 1. The Organs of Speech

It is necessary, as previously indicated, to know how the Spanish (actually the speakers of the dialect being taught) and the learner classify the sounds of their respective languages, that is, what sounds used in message sending each considers to be the same or different, and, finally, to be able to state clearly the relationship between the two sound systems and the two alphabets.

All speech sounds important to the teacher of Spanish are made by forcing air out of the lungs, up through the throat, and out either the mouth or the nose. The student, obviously, already knows how to do this, and there is no need to explain the technical physiological details. Descriptions cannot be helpful in teaching, however, unless the students understand that all sounds are made either by using a different outlet (nose, mouth), by changing the shape of the air passageway, or by the special action of certain muscles in the throat or head.

An infinite number of fine gradations in the shape of the air passageway or the role of muscles is theoretically possible. There is no practical need for so much variation, and communication is simplified by treating almost all variations as though they belonged to one or the other of two contrasting polar categories. For most purposes, consequently, the differences between two related sounds are much like the difference between "tall" and "short." All degrees of tallness are tall; all degrees of shortness are short. In a system composed of just two contrasts there is usually nothing in between.

The paired sounds are described below.

1. The vocal cords are tensed so that they vibrate as the air rushes past them, or the vocal cords are relaxed and do not vibrate. The vibrating sounds are said to be **voiced;** their opposites are **voiceless.** All vowels are voiced. The student must learn only the difference between voiced and voiceless consonants. This can be taught in several ways. The vibrations can be heard when the hands are cupped tightly over the ears. They can be felt by touching the Adam's apple with the fingers. Voiced sounds can be sung to a musical note; voiceless sounds cannot. Care needs to be taken in any demonstration of this contrast to be sure the students say only a single sound and do not add a vowel to the model voiceless consonant. Since vowels are voiced, the student may be confused by the added sound and believe that the consonant is also voiced. The difference between the *s* and *z* of *seal-zeal, Sue-zoo, sip-zip,* and *sink-zinc* makes an effective model contrast.

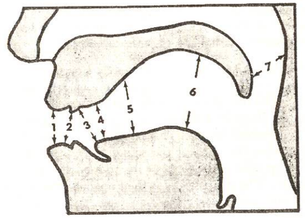
For advanced students learning to hear dialect differences (and baby-talk) it is useful to know that voicing produces the only difference in Spanish between the sounds represented by *p* and *b, t* and *d,* and *k* and *g.*

The voiced Spanish consonants are represented by the letters *b, d, g, l, ll, m, n, ñ, r, rr,* and *v.* The letters *c, ch, f,*[1] *j, k, p,* and *t* stand only for voiceless consonants. The letters *g, s,* and *z* represent both

[1] The letter *f* stands for a voiced sound in so few words, for example, *afgano,* that it is considered unwise pedagogically to include it in the group represented by *g, s,* and *z.*

voiced and voiceless sounds: *g* is voiced before *a, o,* and *u,* voiceless before *e* and *i; s* and *z* are generally (but not always) voiced when immediately followed by another voiced consonant. They are voiceless elsewhere. This is a Spanish convention which has to be taught and learned, that is, the learner will not automatically produce the right sound in a given sequence. The student, consequently, must eventually learn the cues for choice: the vowels following *g,* and the voiced and unvoiced consonants following *s* and *z.*

2. The air passageway is completely blocked and then rather abruptly opened or it is only partially closed. The blocked-passageway sounds are called **stops.** The others are called **fricatives,** because one identifying characteristic of these sounds is the friction produced by the air passing through the constricted passageway. The initial sound of the citation forms *voy* and *busca* is a stop. This is replaced by a fricative variant in the sequences *me voy* and *me busca.*



1. Bilabial
2. Labiodental
3. Dental
4. Alveolar
5. Palatal
6. Velar
7. Nasal

Fig. 2. Points of Articulation

The air may be stopped in only four ways and at four points of articulation (see Fig. 2) in Spanish speech:

a. By closing the lips, a **bilabial stop:** exemplified by the first sound in the citation forms *vaso, baso, vaca,* and *burro.*
b. By placing the tongue against the upper teeth, a **dental stop:** the initial sound of *dama, diente, tan,* and *tiempo.*

c. By pushing the tongue blade against the roof of the mouth or hard palate, a **palatal stop:** the first sound in the combination represented by *ch: chino, muchacho, chocolate.*
d. By arching the back of the tongue up against the back of the roof of the mouth, that is, against the soft palate or velum, a **velar stop:** the initial sound of *cara, queso, kilo,* and *quinto.*

Some fricative sounds are made by constricting (but never entirely stopping) the air at these same points. Thus *v* in *me voy* stands for a bilabial fricative. Fricatives are also made in three other ways:

a. By bringing the lower lip very close to the upper front teeth, a **labiodental fricative:** the sound of *f* in *conforme.*
b. By sticking the tongue between the front teeth, an **interdental fricative:** the sound of *d* in *todo.* A common variant of this sound is made by constricting the air passage between the tip of the tongue and the back of the upper front teeth, a **postdental fricative.**
c. By constricting the air passage between the tongue tip and the gum ridge above the upper front teeth: the initial sound, in Latin-American dialects, of *cinta, sin,* or *cero.*

In Spanish, *p, t, k,* and *qu* stand always for stops; *f, s, z,* and *j,* always for fricatives. The letters *b, c, d, g,* and *v* may represent either stops or fricatives. The difference is marked only by their environment.

Spanish, like English, combines a stop and a fricative to produce the sound represented by *ch.* This is called an **affricate.** The tongue tip almost touches the back of the upper front teeth, and the tongue blade pushes up against the front of the roof of the mouth. This stops the air passage. The passageway is then opened slowly, in comparison with other stops, and during the slow opening the escaping air produces friction.

3. The mouth is closed and the air escapes only through the nose, or the nose passageway is closed and the air escapes only through the mouth. Spanish has no paired sounds based on this difference, and the contrast, as a result, creates no teaching problem.

When the air comes out the nose, the sound is called a **nasal.** Only *m, n,* and *ñ* stand for nasals in Spanish.

4. The air passageway is neither blocked to produce a stop, nor sufficiently constricted to produce a fricative, but is altered in shape to modify the sound created by the vibration of the vocal cords. When the change of shape results in a partial closing or extreme narrowing of the passageway, the sound is identified as a consonant or semi-consonant. When the change in shape simply produces a difference in the resonating chamber, the sound is considered a vowel. These changes in shape are produced in three basic ways:

a. By opening or closing the jaws
b. By changing the shape of the lips
c. By changing the position and shape of the tongue.

For example, the sound of Spanish *a* is made with the jaws fairly wide open, the tongue lying flat in the mouth, and the corners of the lips pulled back to a spread mouth opening. In contrast, the sound of *l* is made with the tip of the tongue touching the gum ridge above the upper front teeth, with the sides lowered to let the air escape without friction, and the back arched toward the position used to produce the vowel sound of *i.*

The Classes of Sounds

In the material presented above the sounds of Spanish were divided into classes determined by the ways the sounds of each class are produced (voicing, point of articulation, etc.) This system of classification puts heavy emphasis on differences. However, to understand how sounds are actually used in message sending it is necessary to reclassify them so that equal emphasis is placed on their similarities. When this is done, it becomes apparent that the difference between the voiced bilabial stop *b* and the voiced velar stop *g* is greater than the difference between either the stop or fricative *b* or the stop or fricative *g.* Similarly, the difference between the voiceless bilabial stop *p* and the voiceless dental stop *t* is greater than the difference between the voiceless stop *t* and the voiced stop *d,* both of which are dental sounds. In other words, sounds which are made at the same place in the mouth (the same point of articulation) are more alike than those made at quite different places.

In message sending, any difference in sound may, theoretically, be set in contrast with any other difference to mark differences in meaning. There are, however, so many possible differences that no culture ever uses them all, and every language, apparently by sheer accident, uses more than it needs. This results in a curious paradox which requires the speakers of every language to learn to observe some differences and to ignore others. Consequently, the native Spanish child must learn to attach significance or meaning to the difference between voiceless *t* and voiced *d* in *tos* and *dos* and, at the same time, learn to ignore the difference between the voiced and voiceless *s* in *dos dedos* and *dos temas.* In Spanish, *tos* and *dos* are different because *t* is voiceless and *d* is voiced, but *dos* with a voiceless *s* and *dos* with a voiced *s* are the same. It may be said, consequently, that *t* and *d,* which are similar dentals, belong to different function classes because the difference in voicing serves to mark a difference in meaning, while voiced and voiceless *s,* which are similar but equally different, belong to the same function class because the difference in voicing does not mark a difference in meaning.

Sounds that mark **a** difference in meaning are called **phonemes** (literally "meaningful sounds"). Sounds that are similar but whose phonetic differences do not mark a difference in meaning are said to be **allophones** (literally "other sounds") of the same phoneme. So the sounds of *t* and *d* are phonemes, but the two sounds of *s* are allophones of one phoneme.

For purposes of clear exposition linguists write the symbol for an allophone between square brackets [ ] and the symbol for a phoneme between slanted bars / /. This makes it possible to write that the Spanish phoneme /s/ is composed of two allophones, [s] and [z].

The reclassification of phonetically different sounds into phonemic groupings or categories is of paramount importance in teaching Spanish or any foreign language. It is important, first, because Spanish and English do not use the same differences in marking meaningful contrasts. The English speaking student, as a consequence, has to learn to attach meaning to sounds he has learned to ignore and, simultaneously, be trained to ignore sounds he has always associated with differences in meaning. He must learn, for example, that the stop sound [d] and the fricative sound [ð], which are phonemically different in *dough* and *though,* are simply allophones of the Spanish phoneme /d/, and that *desnudo,* consequently, is the same word in *un dèsnudo* and *lo desnudo.* He must learn that [b] and [β] do not parallel the functions of English [b] and [v], that the [s] of *fuss* and the [z] of *fuzz* mark no contrasts in Spanish and, in addition, are both written *s.*

Spelling

The relationship between sound and spelling has already been given considerable attention in a previous section. There are, howver, several points which can now be further clarified.

It is frequently said that Spanish is a "phonetic" language because it is spelled the way it is spoken. This is an erroneous notion, a kind of legend which confuses both teachers and students. The letters of the Spanish alphabet, the graphemes, are not phonetic symbols. They do not stand for allophones. They are, rather, phonemic symbols that stand for all the possible phonetic variations which all the different dialects happen to class together as allophones of the various phonemes.

Thus the letter *b* stands for the two allophones [b] and [β]. The letter *n* may represent two phonemes, the /n/ of *pan* or the /m/ of *enviar,* and *r* has a similar potential: /rr/ in *rico* but /r/ in *pero.* Similarly a letter may stand for different phonemes in different dialects: *c* for /θ/ in Castilian *cocer* but *c* for /s/ in the Latin-American pronunciation of *cocer.* Finally, one letter may stand for two phonemes. The *x* of *sexo* stands for /k/ plus /s/.

The relationship between sound and spelling is more complex than tradition suggests. A single phoneme may be represented by two or more graphemes: *b* and *v* for /b/, *c* and *qu* for /c/, *c, z, s, x,* or *ps* for Latin-American /s/, etc. A single grapheme may stand for two phonemes: *u* for a vowel /u/ and a consonant /w/, *r* for /rr/ or /r/, etc., and one letter, as already indicated, may simultaneously represent two phonemes. These complexities are compounded by the fact, already pointed out, that letters stand for the phoneme, not for its allophones. Since the phoneme is a category which, as such, is never spoken, the letters by themselves do not actually represent the particular sound found in any given sequence. The cue to the allophone, the spoken sound, is the letter plus its environment. All of this means that teaching a student to read (to become literate), teaching him to read aloud, and teaching spelling are quite different pedagogical operations.

Teaching for literacy requires little more than getting the learner to make a general identification of a sound sequence with a graphemic sequence and getting him to observe closely enough to differentiate minimal pairs. Teaching a student to read aloud, as already discussed, is much more difficult and complicated. The student must learn (1) that letters stand for phonemes, (2) which phonemes have more than one allophone, (3) that each phoneme and especially each allophone normally appears only in specified sequences which (4) must be recognized and identified as the cue that signals the choice of the appropriate sound for the dialect being used. This is a rather formidable array of facts. Nevertheless, no student can become a competent oral reader, and rarely a fluent speaker, without being aware of all the details involved. The student who does not thoroughly control this information can only guess at the proper pronunciation of new words, and being without guiding principles for Spanish he can hardly escape substituting his English experiences for unlearned Spanish patterns. He will, inevitably, project English patterns in place of Spanish sequences.

The fact that letters represent phonemes rather than allophones means that the problem of teaching spelling needs to be formulated in terms of two alternate points of departure, that is, what is heard and

what is seen. To spell what is heard requires a procedure which, in a large part, is the reverse of learning to read aloud. The student hears only allophones. He now has two choices. He may equate each allophone with a grapheme and in the process pretend that letters are phonetic symbols. This will be in conflict with what he has to learn in order to read aloud. He can, on the other hand, identify each allophone with its phoneme and, then, select the letter which stands for the phoneme. This agrees with what he does in reading aloud. The student cannot make this selection, obviously, unless he has already memorized all the different graphemes which can be used to represent each phoneme and the sequences in which each grapheme may be used. It is possible and necessary for the student to memorize all the letters used to represent each phoneme, but the preservation of archaic spelling conventions and changes in the phonetic system have so altered the correspondence between what is heard and what is written that there is no possible way of deciding, from what is heard, which alternate letter is to be used for most of the phonemes. There is nothing in speech, aside from general context and intonation, which tells the Latin-American how to spell *baso-vaso, aré-haré, coser-cocer, olla-hoya, seta-zeta, gira-jira, tan bien-también,* etc. In all these examples (and in many thousands more) differences in meaning are defined by differences in what is seen but not by what is heard. All of this means, to be brief, that writing is a visual system of communication governed by conventions that are different from those of speech and have to be learned separately. Spelling, as a result, involves more than a literal transcription of what is heard. In actuality the student must learn to translate from one system to another and this, obviously, is impossible until he has seen the writing system. Learning to spell, then, is an ambivalent operation in which clues must be drawn from what is heard and what is seen. However, since what is seen cannot be consistently derived from what is heard, while what is said can regularly be repeated from what is seen, the teaching of spelling can be more efficient if it is associated primarily with reading rather than speaking. Spelling is not a step toward reading nor a bridge between speaking and writing. It is something that is practical only after the student has learned to read.

This section has dealt in generalities with three basic systems: (1) the phonetic system, which is composed of allophones; (2) the phonemic system, which consists of classes of allophones; and (3) the orthographic system; which is composed of letters or graphemes, usually, but not always, the visual representations of phonemes. From a pedagogical point of view the most important principles discussed

have been related to taxonomy, the science of description and classification.

Special emphasis should now be placed on the fact that all classifications are relative and arbitrary. The phonetic system is defined in terms of production processes, the points of articulation, the difference between voiced and voiceless, stop and fricative, etc. The phonemic system is defined in terms of the phonetic system *and* the function of sounds in message sending. Sounds not used to mark differences in meaning are classified by phonetic criteria as allophones of the same phoneme. Finally, when the orthographic system is set in relation to the phonetic and the phonemic system, it becomes apparent, first, that spelling is phonemic, not phonetic, and, second, that the writing system is so far removed from speech that it needs to be treated as a separate (visual) means of communication.

It should now be apparent that neither the preparation of materials nor actual teaching can be effective unless each is based on a thorough understanding of the interrelationships of the three systems which deal with sounds. The following section is an outline of the relationships between the phonetic, phonemic, and graphemic systems.

REVIEW

1. Is it easier to learn how to make the sounds of a second language than the first? Why?
2. Can you draw a rough cross-section of the head and (a) label the parts, and (b) name the points of articulation? In non-technical language?
3. What are the three ways sounds are made?
4. How are variations of the same sound usually classified?
5. What is the difference between a voiced and voiceless sound?
6. What letters always stand (a) for voiced consonants, and (b) for voiceless consonants?
7. Which letters stand for either voiced or voiceless consonants?
8. What tells the oral reader when to voice a consonant?
9. How does a fricative differ from a stop?
10. In what four ways may the air be stopped?
11. Can you give the points of articulation for all fricatives?
12. What letters always stand for (a) stops, and (b) fricatives?
13. Which letters may stand for either a stop or a fricative?
14. When a letter can stand for either a stop or a fricative, what cues the oral reader to the proper choice?
15. How is the affricate in *chico* made?
16. In precisely what way do vowels differ from consonants?
17. In what three ways are differences in vowels made?

18. How are differences and similarities used in classifying sounds?
19. Can you define *phoneme* and *allophone?* In non-technical terms?
20. How are brackets and slanted bars used in linguistic exposition?
21. Is Spanish a "phonetic" language? Explain.
22. What do the letters of the alphabet stand for?
23. Can a phoneme be spoken?
24. What must the student know (a) to read silently for meaning, and (b) to be able to read aloud?
25. What two factors determine the spelling of most words?
26. Which is most important in learning to spell: what is heard, or what is seen?
27. Should spelling be associated with speaking or reading?

4

CORRELATION OF THE PHONETIC, PHONEMIC, AND GRAPHEMIC SYSTEMS

There are four dialects of Spanish which have sufficient social and international prestige to be acceptable in public school teaching. They are exemplified by the educated speech of the River Plate region of Argentina, Cuba, or Andalucia, upland Mexico or Colombia, and north central Spain.

These four dialects have a grand total of twenty-five phonemes which are represented by twenty-seven single letters and nine two-letter combinations or digraphs. All of the graphemes are used in all the dialects, but only Castilian uses all twenty-five phonemes. The other three dialects use only twenty-three. This difference in the number of phonemes used results from the fact that the Castilian sound of *c* and *z* (*cita, zeta*) and the sound of *ll* (*lleno*) have fused with /s/ and /y/ respectively in all the non-Castilian dialects.

For the practical purposes of description, the outline that follows embraces the super-system, that is, Spanish. It is most important, however, to keep constantly in mind that there is no such thing as a Spanish phonemic system. A phonemic system is a valid concept only when applied to a single dialect. Each teacher, as a consequence, must abstract from the outline only what is relative to the dialect being taught. The student, as already pointed out, learns to speak just one dialect. Most will eventually want to learn to understand them all. It is important, consequently, to be able to state the differences in a systematic fashion.

There are three major differences between the four standard dialects. First, they do not have the same number of phonemes. Second, some phonemes have different allophones in the various dialects. For example, in Argentine Spanish the sound of *y* in *yo* is like the *j* of English *Joe*, an allophone that is not heard in Castilian. Third, the intonation patterns vary considerably from dialect to dialect. These intonational differences are so complex and so difficult to describe in writing that they are not dealt with in this text.

The number of graphemes, as indicated above, far exceeds the number of phonemes, and the alphabet, as a result, does not provide a satisfactory means of classifying the phonemes. The following material, consequently, is arranged according to phonetic and phonemic criteria.

The phonemes are divided into four major categories: consonants, semiconsonants, semivowels, and vowels. The consonants (and semiconsonants) have three possible attributes that may serve to classify them: the points of articulation (bilabial, labiodental, dental, alveolar, palatal, and velar), the manner of articulation (stop, fricative, affricate, nasal, lateral, and flap), and the difference between voiced and voiceless. All three of these factors serve to establish differences between both phonemes and allophones. For example, the difference between the two phonemes /t/ and /d/ is marked by the contrast between voiceless and voiced, whereas the difference between the two allophones of /d/ is marked by the contrast between stop and fricative. Similarly, the difference between the two phonemes /k/ and /x/, spelled *j*, is marked by the contrast between stop and fricative, but the same contrast merely gives two allophones of /g/. There is, as a result, no neat way of arranging the phonemes in a series. However, since the manner of articulation is a major source of difficulty for speakers of English, emphasis is placed on this factor by using it as the prime criterion for serial arrangement.

The following outline covers the major features of the four dialects and notes their similarities and differences. Each section deals with four sources of pedagogical problems: (1) the way the allophones of each phoneme are made, (2) the distribution of each allophone, that is, the environments in which it is heard, (3) the predictable kinds of English interference, and (4) the problems of spelling. The heading for each section gives the phoneme between slant bars, the allophones in square brackets, and the letters used to represent the phoneme.

THE SPANISH CONSONANTS

Stops

There are just three stop phonemes which have one allophone each. They are /p/, /t/, and /k/.

/p/: [p]; *p*

[p]—Voiceless unaspirated bilabial stop in all dialects. The lips are brought lightly together and are opened abruptly before enough air pressure is built up to produce a following puff: *palo, golpe, papel, especial.*

DISTRIBUTION. All positions and all combinations.

INTERFERENCE. The sound of *p* in *spill* or *special*, which is unaspirated (has no after-puff), is equivalent to Spanish /p/. Spanish, however, has no such sequence within a single cluster. Spanish /p/ is very frequently syllable initial and the English /p/ in this position is always accompanied by a sharp puff of air. This can be demonstrated to a class by holding a narrow strip of paper about one inch from the lips while saying *paper* or *pull*. The puff will make the strip of paper jump. The Spanish [p] is made by opening the lips before enough air pressure is built up to make the puff. Students should practice saying a word like *palo* or *papa* until the slip of paper does not jump. The puff can easily be felt by holding the back of the hand close to the lips.

SPELLING. Always *p*.

/t/: [t]; *t*

[t]—Voiceless unaspirated dental stop in all dialects. The tongue touches the back of the upper front teeth and blocks the air passage but is withdrawn abruptly before enough air pressure is built up to produce aspiration, the after-puff: *tanto, alto, tres.*

DISTRIBUTION. All positions and all combinations.

INTERFERENCE. English /t/ differs from Spanish in three ways. (1) It is alveolar, not dental. (2) It is aspirated (accompanied by a puff of air), while Spanish [t] is made by withdrawing the tongue from the teeth before enough pressure is built up to make a puff. (3) In words like *mitten, written,* or *Latin* the burst of air which characterizes the stop is not made by withdrawing the tongue from the gum ridge but by closing and opening the vocal cords. Spanish has no such glottal stop [t], and special drills are needed to inhibit the transfer of the English habit. Contrast *kitten* and *quiten.*

SPELLING. Always *t*.

/k/: [k]; *c, qu, k, x*

[k]—Voiceless unaspirated velar stop in all dialects. The back of the tongue is arched up against the back of the roof of the mouth, that is, the soft palate or velum, to block the air passage: *cara, kilo, queso, tecla, quiso.* An aspirated variant is sometimes heard.

DISTRIBUTION. All positions and all combinations.

INTERFERENCE. English /k/ is aspirated; Spanish frequently is not. It is preferable to teach the unaspirated variant which differs from English. The back of the tongue is pulled away from the soft palate before enough air pressure is built up to produce a puff, the aspiration. The difference is not sufficient to justify prolonged drills.

SPELLING. *c* always before *a, o,* or *u: caso, cosa, cuyo. qu* always before *e* and *i: queso, quiso. qu* never as syllable or word final, only *c: rector, crac, zinc. k* only in the terms of the metric system and in foreign words: *kilo* (also *quilo*), *kilogramo, kilolitro, Alaska, kan, kimono.* The letter *x* sometimes stands for two phonemes, /k/ plus /s/: *examen, sexo.*

A change in a word suffix requires *c* before *a* or *o* to be replaced by *qu* before *e* or *i: saca, sacó > saque, saqué; rico > riquísimo.*

Fricatives

There are three fricative phonemes which have one allophone each, /f/, /θ/, and /x/, and one which has two allophones, /s/. The contrast between the two allophones of /s/ is marked by the difference in voicing.

/f/: [f]; *f*

[f]—Voiceless labiodental fricative in all dialects. The lower lip barely touches the upper front teeth, allowing air to escape along the sides thus causing friction: *falso, jefe, cofre, rosbif.* In a foreign word like *afgano* there may be a voiced allophone of /f/. This phenomenon, however, is so rare that it may be disregarded pedagogically.

DISTRIBUTION. All positions.

INTERFERENCE. The substitution of English /f/ produces no observable accent.

SPELLING. Always *f*. Students must learn to replace *ph* with *f* in cognate words: *philosophy > filosofía.*

/θ/: [θ]; *c, z*

[θ]—Voiceless interdental fricative in Castilian only. The tongue is between the teeth forming a thin slit between it and the upper front teeth through which the air escapes causing friction: *cinta, celo, zumbar, zanco, zorra, paz, lápiz.* This phoneme has been fused with /s/ in all the other dialects.

Some natives make this sound by constricting the air passage between the tip of the tongue and the back of the front teeth, a postdental fricative.

DISTRIBUTION. Before any vowel or syllable final after a vowel.

INTERFERENCE. The sound is that of *th* in *thin* or *pith*. English has the same sound in the same positions. Complete substitution produces no distinguishable accent. Interference comes largely from spelling.

SPELLING. *z* always before *a, o,* and *u: zapato, zozobra, zumbar. c* and *z* are alternates only before *e* and *i: zeta, cetro, cinta, zinc;* but *z* is rare before either. *c* never as word or syllable final, only *z: paz, pez, rebuzno.*

Words ending in *z* in the singular change *z* to *c* before the plural suffix /es/: *pez > peces.*

A change in a word suffix causes *z* before *a* or *o* to shift to *c* before *e: cazo, caza > cace, cacé.*

Spelling is visual; the student writes what he sees, not what he hears.

/s/: [s], [z], [h]; *s, z, c, x, ps.*

Major differences in the dialects make it linguistically unsound to treat /s/ as a single Spanish phoneme. From the point of view of the super-system there are three basic sounds: (1) a voiceless alveolar fricative, [s], which appears in all dialects; (2) a voiced alveolar fricative, [z], which is heard in two dialects; and (3) a voiceless aspirate, [h], which commonly but not consistently replaces both [s] and [z] in two dialects and in special sequences replaces [s] in the third. These variations are by no means stable, and, unless there are special reasons, unnecessary complications can be avoided by selecting the two sounds [s] and [z] which can be projected from English. However, for the benefit of anyone who wishes to teach a given dialect, the variations will be noted below.

Advanced students should be given practice in hearing the voiceless aspirate [h]. Without this practice they will have great difficulties in understanding many speakers from the Caribbean.

Special attention needs to be given to the problem of spelling. Since Castilian treats /s/ and /θ/ as separate phonemes, /s/ is represented only by *s, x,* and *ps* in this dialect. The fusion of these two phonemes in the other dialects adds *c* and *z* as alternate graphs.

[s]—Voiceless alveolar fricative in all dialects: *sano, cosa, curso.* The Castilian [s] is made with just the tip of the tongue constricting the air passage and has a decided lisp; the [s] in the other dialects is made with the top of the tongue tip constricting the air passage and has no lisp quality.

DISTRIBUTION. In all dialects syllable initial before vowels. In Castilian, upland South America, and Mexico, in all positions except

before a voiced consonant. In lowland South America, the Caribbean, and Andalucía, the [s] is replaced by [h] before any consonant or at the end of a word. In rapid speech and immediately before [rr], the [s] may be assimilated or be replaced by [h] in all dialects.

INTERFERENCE. English has no lisped /s/ similar to Castilian nor an aspirate exactly like /h/. The [s] of *sent*, however, is an adequate substitute for Castilian. The /h/ of *bah* (pronounced emphatically) approximates the [h] variant. Because English *s* stands for two phonemes, /s/ and /z/, students tend to project English [z] onto Spanish [s] when this sound is intervocalic. This is especially so in cognate words (*presente, presidente*, etc.). Special drills are needed to break this habit.

SPELLING. In Castilian, *s* consistently before vowels and as word final. *s* and *x* are free variants only before unvoiced consonants, mostly *p* and *t: explorar, especial. x* only before *t: extra. s* and *ps* are free variants only as word initial in a few technical terms: *sicosis* ~ *psicosis, seudo* ~ *pseudo*, etc. Recently created, very erudite, or newly borrowed words tend to retain the initial *ps: psitacosis.*

The spelling patterns of the other dialects are quite different. *s* and *z* are variants before *a, o*, and *u* and as word final: *sapo, zapato, sonar, zona, sumo, zumbar, más, paz. s, z*, and *c* are variants before *e* and *i: sentir, zeta, cetro; sino, zinc, cinta.* and *x, s* and *ps* are variants as in Castilian. *ps, x*, and *c* are never word or syllable final.

In spite of much free variation, spelling habits still reflect Castilian patterns. Words ending in *z* in the singular change *z* to *c* before the plural suffix /es/: *pez* > *peces.* A change in a word suffix requires *z* before *a* or *o* to shift to *c* before *e: cazo, caza* > *cacé.*

The spelling of most words has to be memorized. Note that the student has to learn to spell what he sees, not what he hears.

[z]—Voiced alveolar fricative: *mismo, isla, riesgo.* [z] is sometimes apical (tongue tip) in Castilian. It is commonly frontal (top of the tongue tip) in Castilian and regularly so in the other dialects. There is a marked tendency toward free variation between [s] and [z], especially in phrase patterns.

DISTRIBUTION. In Castilian, upland South America, and Mexico, before any voiced consonant either within a word or phrase group. In slow and deliberate speech [s] replaces [z] in the phrase and sometimes even within a word. In lowland South America, the Caribbean, and Andalucía, the [z] is replaced by [h].

INTERFERENCE. The sound is essentially the same as English [z] but the distribution is different and the Spanish sound is less tense and shorter than the English. Since [s] and [z] must be cued to voiceless and voiced consonants, the student must be taught to identify and react to these. Contrary to popular belief, the problem does not solve itself. A following voiced consonant does not automatically cause anticipated voicing of the preceding /s/. This is an acquired habit which appears to be in a state of flux. It should be taught for word internal but may be optional at word boundaries where the voiceless [s] does not produce an accent for a great many natives.

SPELLING. In Castilian only *s*. In all the other dialects only *s* and *z*. The [h] variant is represented by *s, z*, and *x* plus another consonant. The *x* between vowels represents [*ks*] or [*gs*]. In this combination the [s] is voiceless in all dialects.

/x/: [x]; *j, g, x*

[x]—Voiceless velar fricative in all dialects. The back of the tongue arches up toward the velum (soft palate) and sharply constricts the passageway causing harsh friction as the air escapes: *joven, jefe, gira, general, México.*

DISTRIBUTION. Syllable initial before any vowel and word final. The [x] is word final in about a dozen words. It is usually dropped in the singular but is frequently (commonly) restored in the plural form: [*relój*] > [*relojes*].

INTERFERENCE. English speakers substitute [h] of *hockey* which is too weak and may even be missed in some contexts. The Spanish sound is generally more harsh and raspy (more friction). Greater friction is created by reducing the passageway and by expelling the air more forcefully. Students can readily learn to make the sound when they realize that /x/ is simply the fricative variant of /k/. Thus *ca* becomes *ja* simply by converting a stop to a fricative, that is, by lowering the back of the tongue just enough to permit the air to escape with harsh friction.

SPELLING. *j* always before *a, o*, or *u: jamás, jota, jubilar. g* and *j* alternate only before *e* and *i: gente, jefe, jinete, gitano.* Special drills are needed to train the student to write the final *j* which does not normally stand for a sound as word final. Students write what they see, not what they hear. *g* never as word final. *x* is archaic and is preserved primarily in proper names: *Xavier, México.*

A change in a word suffix requires *g* before *e* to shift to *j* before *o* or *a: coger* > *cojo, coja.*

Stops and Fricatives

There are three phonemes having two allophones whose difference is marked by the contrast between stop and fricative. They are /b/, /d/, and /g/.

/b/: [b], [ƀ]; *b, v*

[b]—Voiced bilabial stop in all dialects. The lips are brought firmly together, air pressure is built up behind them, and then they are

abruptly parted, so that the escaping air produces a slight explosive sound: *vaca, vaso, baso, burro, ambos, invierno.*

DISTRIBUTION. This allophone is heard at the very beginning of speech (the first sound in a new sentence or utterance), hence, utterance initial; after a pause within a phrase, and after /m/, which may be spelled *n* (*enviar*) or *m* (*también*).

INTERFERENCE. Spanish [b] is almost identical with the English sound of *b* in *boy.* The English explosion tends to be somewhat more forceful but total substitution produces no distinguishable accent.

SPELLING. Contrary to legend, *b* and *v* represent precisely the same sound in all environments. There are no normal phonetic cues which signal the proper choice. Students must memorize each word by learning to write what they see, not what they hear. Spelling hints: *v* does not appear immediately before another consonant or as syllable or word final. Cognates tend to be spelled as in English (*baso, vaso, voz, bomba, blanco*, etc.). The name for *b* is *b grande*, that of *v* is *b chica.* The two letters are also commonly defined as *v de vaca* and *b de burro*, or as *b larga* and *v corta.* Note that this is meaningless until the students have seen *vaca* and *burro.*

[ƀ]—Voiced bilabial fricative in all dialects. The lips form a thin slit and the air escapes causing a friction sound: *lobo, roba, lava, hablar, desventaja, albino.*

DISTRIBUTION. Word or phrase internal except after /m/. (Note that many standard texts erroneously state that this allophone appears only in intervocalic position.)

INTERFERENCE. There are two sources. First, some natives, through hypercorrection, attempt to distinguish *v* from *b.* This spelling pronunciation is the product either of ignorance or snobism. Some adults, of course, have learned it from their parents and the habit appears to be spreading. It is not yet generally acceptable and should not be imitated. It is improper to use this distinction to make spelling easier for the students. Second, English has no [ƀ] while Spanish has no equivalent of English [v], which is labiodental. A close approximation can be gotten by holding the lips apart and saying English [b]. It is preferable for the student to say [b], which is a standard Spanish allophone, than [v], which is almost totally foreign.

SPELLING. Either *b* or *v* as described above.

/d/: [d], [đ]; *d*

[d]—Voiced dental stop in all dialects. The tongue tips touches the back of the upper front teeth blocking the air passage: *dar, dimos, donde, mal día, don Donato.*

DISTRIBUTION. Utterance initial, after a pause between phrases, and after /n/ or /l/.

INTERFERENCE. English /d/ is alveolar: the tongue touches the gum ridge above the upper front teeth. Special drills are needed to get the habit of making the dental [d]. Contrast Spanish *den, dan* with English *den, don*, etc.

SPELLING. Always *d.*

[đ]—Voiced interdental or postdental fricative in all dialects. The tongue is either between the teeth or behind the upper front teeth forming a thin slit through which the air escapes causing friction: *todo, tarde, poder, desde, la dama, mi doctor.*

DISTRIBUTION. Word or phrase internal except after /n/ or /l/.

INTERFERENCE. English [đ] and [d] belong to different phonemes as shown by the contrast in meaning between *then* and *den.* Students must learn to ignore this difference. They frequently replace [đ] either with the Spanish or the English stop variant, which is then misinterpreted by many natives as Spanish [r]. Thus *todo* sounds like *toro*, and *cada* like *cara.* Some students substitute [r] for [đ] as a result of this same confusion.

SPELLING. Always *d.* Students hear [đ] as [th] and frequently write *th* instead of *d.* There is no such graphemic sequence in Spanish. Intervocalic and word final [đ] is very frequently suppressed in speech. Normal orthography requires the graphic *d* in the singular whenever the [đ] is regularly restored in the plural. Compare [usté] > *usted, ustedes* or [verdá] > *verdad, verdades.* Students must learn to spell what they see, not what they hear.

/g/: [g], [g]; *g, gu*

[g]—Voiced velar stop in all dialects. This is the voiced equivalent of the unvoiced /k/. The back of the tongue is arched up against the velum to block the air passage: *gato, golpe, guindo, guedeja, ganga, langosta.*

DISTRIBUTION. Utterance initial, after a pause internally, and after /n/.

INTERFERENCE. Spanish [g] and English [g] are virtually identical. Total substitution produces no noticeable accent.

SPELLING. *g* before *a, o*, or *u; gu* before *e* and *i.* English exhibits the same alternatives, *gas, go, gulp, guess, guilt*, but no contrast when the *u* is omitted: *guilt* ~ *gilt, guelder* ~ *gelder.* Students have to be taught new spelling habits; they write what they see, not what they hear.

[ɣ]—Voiced velar fricative in all dialects. The back of the tongue arches up toward the velum and narrows the passageway enough to make the escaping air cause friction: *agua, algodón, desgracia, regar.*

DISTRIBUTION. Word or phrase internal, except after /n/, and as a variant of [k] in *examen, éxito*, etc.