Report on the 1989 Kiel Convention

INTERNATIONAL PHONETIC ASSOCIATION [1]

From 18 to 21 August 1989 approximately 120 members of the Association (and a few guests) met in Kiel, West Germany, to work on revisions of the International Phonetic Alphabet (IPA). There had been a great deal of preparation for this convention, involving the soliciting of opinion by mail on a wide range of topics, and considerable research on the present status of the IPA. A previous issue of this journal, *JIPA* 18(2), collected a number of these preparatory opinions. At the convention itself there were five major working groups which met almost continuously for the first two days. Three groups considered consonants, vowels and suprasegmentals; the other two considered computational aspects of the IPA, and the needs of speech pathologists and others for extensions of the IPA. In addition there were groups concerned with the principles on which the IPA should be based, the form of presentation of the IPA, past successes and failures, and methods of illustration of the IPA. The groups reported back to the whole at intervals, and on the last day the convention met in a series of plenary sessions to consider and vote on the final working reports. The following is a compilation of six of the group reports reflecting the results of the discussions and votes of the plenary sessions. The Association is very grateful to the co-ordinators and co-chairs of the groups. Most of the wording below is taken directly from their reports; in accordance with the traditions of the Association, this report is presented without attribution to particular authors.

The Principles on which the IPA is based

The group concerned with this issue took the 1949 edition of *The Principles of the International Phonetic Association* as a basis and made a number of additions and deletions. The most important changes were the addition of a statement concerning the nature of the symbols in paragraph 2, and the deletion of a number of references to the phoneme which led to the revised statement in paragraph 5. Paragraph 7 is also new; it has been slightly edited from the form discussed in plenary session to include a statement originally part of the report of the vowels group. With this exception (and minor editorial changes), the statement below is as amended and approved in the plenary session.

1. The International Phonetic Association has a standard alphabet which is usually referred to by the initials IPA, or, in a number of non-English-speaking countries, API. It is designed primarily to meet practical linguistic needs, such as putting on record the phonetic or phonological structure of languages, providing learners of foreign languages with phonetic transcriptions to assist them in acquiring the pronunciation, and working out roman orthographies for languages written in other systems or for languages previously unwritten. A large number of symbols and diacritics is also provided for representing fine distinctions of sound quality, making the IPA well suited for use in all disciplines in which the representation of speech sounds is required.

2. The IPA is intended to be a set of symbols for representing all the possible sounds of the world's languages. The representation of these sounds uses a set of phonetic categories which describe how each sound is made. These categories define a number of natural

classes of sounds that operate in phonological rules and historical sound changes. The symbols of the IPA are shorthand ways of indicating certain intersections of these categories. Thus [p] is a shorthand way of designating the intersection of the categories voiceless, bilabial, and plosive; [m] is the intersection of the categories voiced, bilabial, and nasal; and so on. The sounds that are represented by the symbols are primarily those that serve to distinguish one word from another in a language.

3. In the construction of the IPA attention has been paid not only to the appropriateness of each symbol from a phonetic point of view, but also to the suitability of symbols from the typographical point of view. The non-roman symbols of the IPA have, as far as possible, been made to harmonize with the roman letters. For instance, the Greek letters included in the IPA are roman adaptations; as the ordinary shape of the Greek letter β does not harmonize with roman type, in the IPA it has been given the form β. The Association does not favor the use of italic forms of symbols as models for the design of new symbols.

4. The construction and use of the IPA are guided by the following principles:
(a) When two sounds occurring in a given language are employed for distinguishing one word from another, they should whenever possible be represented by two distinct symbols without diacritics. Ordinary roman letters should be used as far as is practicable, but recourse must be had to other symbols when the roman alphabet is inadequate.
(b) When two sounds are very similar and are not known to be employed in any language for distinguishing meanings of utterances, they should, as a rule, be represented by the same symbol. Separate symbols or diacritics may, however, be used to distinguish such sounds when necessary.
(c) It is not possible to dispense entirely with diacritics. The International Phonetic Association recommends that their use be limited as far as possible to the following cases:
(i)   For denoting length, stress and pitch.
(ii)   For representing minute shades of sounds.
(iii) When the introduction of a single diacritic obviates the necessity for designing a
       number of new symbols (as, for instance, in the representation of nasalized vowels).

5. The use of symbols in representing the sounds of a particular language is usually guided by the principles of phonological contrast. All languages use a limited number of vowels and consonants that are able to distinguish word meanings: the contrast between English **m** and **n** is used to distinguish the word 'met' and 'net', and these two sounds therefore should be represented by different symbols. The three **k**-sounds of the English words 'keep, cart, cool' can be heard and felt to be different, but from the linguistic or phonological point of view the differences are not distinctive and all may be represented by the same [k] symbol. The same applies to the French **k**-sounds in 'qui, cas, cou', though these differ phonetically from the corresponding English ones.

6. The Association recommends that a phonetic transcription should be enclosed in square brackets [ ].   A transcription that notes only phonological contrasts may be enclosed in slanted lines or slashes / /.

7. A transcription always consists of a set of symbols and a set of conventions for their interpretation. Furthermore, the IPA consists of symbols and diacritics whose meaning cannot be learned entirely from written descriptions of the phonetic categories involved. The Association strongly recommends that anyone intending to use the symbols should

receive training in order to learn how to produce and recognize the corresponding sounds with a reasonable degree of accuracy.

Note: It was strongly recommended that translations of these Principles should select appropriate examples in the language of the translation to illustrate the points made in paragraph 5.

The form of presentation of the IPA

In a plenary session approval was voted for the publication of a revised edition of *The Principles of the International Phonetic Association* , as well as a one page chart. These would not be copyrighted. Not voted on in the plenary sessions, but discussed in a number of the section meetings was the idea that the new publication should be called *The IPA Handbook*. The actual Principles (as now) would be a part of this booklet. It would also contain explanations of the chart and illustrations of the use of the symbols in different languages, perhaps as described in a later section of this report. It would be available free to members, but it would be published by a regular publisher (perhaps one of the university presses) with royalties accruing to the International Phonetic Association. Following tradition, it should be anonymous. It should be an attractive brochure that other organisations could obtain easily and adopt as a standard.

The plenary session also decided that there should be a single table for consonants, as has been previously done. The order of place of articulation and manner of articulation should be as specified in the report from the consonant group. Voiced and voiceless consonants at the same place of articulation should be indicated vertically, rather than horizontally (side by side) as previously done. Some kind of shading or light cross hatching should fill the blank spaces which represent "impossible" places of articulation. Each symbol should have only one value. The symbols inside the boxes should be much larger than the labels for the columns. (Editorial comment: after having tried to arrange the new chart in this way, it turned out to be very difficult to place voiceless consonants above voiced consonants at the same time as making the symbols larger. Accordingly the new chart, which appears in the center pages of this issue, has reverted to the traditional notion of having voiced consonants to the right of voiceless ones.)

Although not specifically voted on, the general feeling was that the vowel diagram would not be placed under the palatal and velar columns of the consonants. The vowel diagram would appear as proposed by the vowel group, with horizontal lines, a central line, and rounded and unrounded vowels on the same diagram.

Members were encouraged to translate the terminology used on the chart into other languages. They would also be welcome to make large size posters for pedagogical purposes.

Consonants

1. The IPA chart should contain columns for the following places of articulation for consonants: **Bilabial Labiodental Dental Alveolar Postalveolar Retroflex**

Palatal Velar Uvular Pharyngeal Glottal. (Note that this differs from the present chart by separating dental, alveolar and postalveolar and deleting the palato-alveolar, labial-velar and labial-palatal columns.) The dental and postalveolar columns will not be divided by a gridline from the alveolar one except where distinct symbols are approved. The dental diacritic may be used to distinguish dental sounds, and post-alveolar ones may be distinguished by use of the diacritic for retraction. The palato-alveolar fricative symbols will be displayed under the postalveolar column. The symbol [w] and its voiceless counterpart [ʍ] as well as the lone labial-palatal symbol [ɥ] will appear outside the consonant grid together with **Other symbols**.

2. Only the following rows for manners of consonant articulation should be included in the main display of consonant symbols, in the order given: **Plosive Nasal Trill Tap or Flap Fricative Lateral fricative Approximant Lateral approximant Ejective stop Implosive**. (Note that this ordering reflects a progression from full occlusion to most open position for pulmonic consonants, with a subsidiary ordering principle that lateral follows nonlateral within a given class. The most common glottalic consonants are then included.) Clicks are to be presented in a separate chart on the same page. (Editorial comment: it proved to be more economical of space simply to list them under **Other symbols**.) The word **median** should be omitted from the rows for (nonlateral) fricatives and approximants.

3. Gridlines on the consonant table should be retained.

4. The chart should contain explanatory notes on symbolizing affricates and doubly-articulated segments. The note on affricates should read as follows:

Affricates can be written by combining the symbol for a plosive and a homorganic fricative, such as [ts] or [kx]. In a language where this is ambiguous for a consonant sequence the two symbols should be joined by a tie bar.

The note on doubly-articulated segments should read as follows:
[w] represents a voiced labial-velar approximant and [ʍ] its voiceless counterpart, [ɥ] represents a voiced labial-palatal approximant. Other segments with two simultaneous articulations should be written by combining the symbols for the two separate articulations, such as [kp, gb] or [mŋ]. In a language where this is ambiguous for a consonant sequence the two symbols should be joined by a tie bar. (Editorial comment: it was not possible to include these notes in full on the one page chart.)

5. Only one way of representing a given sound should be allowed on the chart.

6. A list of selected additional symbols and a set of diacritics should be included at the bottom of the chart (see below). The following recommendations for specific symbols and diacritics for consonants were approved.
Trills: [ʀ] should only be used for a voiced uvular trill. [ʙ] should be used for a voiced bilabial trill.
Tap or Flaps: where no independent symbol for a tap is provided, the breve diacritic should be used, e.g. [ř] or [n̆].
Fricatives: a new symbol for a voiced palatal fricative, [ʝ], is recommended.
Lateral fricatives: the symbol for a voiced alveolar lateral fricative should be [ɮ], more clearly resembling a combination of [l] and [ʒ].
Approximants: [j] should only be used for a voiced palatal approximant.

Lateral approximants: [ʟ] should be used for a voiced velar lateral approximant.

Implosives: add [ʄ] for a voiced palatal implosive and [ɠ] for a voiced uvular implosive. Add a series of new symbols for voiceless implosives, made by adding the implosive hook to the voiceless plosive symbols, i.e. [ɓ ƈ ƈ ƙ ʠ].

Clicks: the primary place and manner categories for clicks should be represented by the symbols in use among Khoisan and other scholars concerned with languages using clicks, i.e. [ʘ] bilabial, [ǀ] dental, [!] (post-)alveolar, [ǂ] palatoalveolar [ǁ] (alveolar) lateral: approval should be withdrawn from [ʇ ɕ ʖ].

Other symbols. Retain the current list except as noted below:

Add [ʡ] for voiced epiglottal plosive, [ʜ] for voiceless epiglottal fricative, and [ʢ] for voiced epiglottal fricative.

The symbols for palatalized [ʃ] and [ʒ] (i.e. [ʆ] and [ʓ]), and for a voiced alveolar fricative trill [ɼ] should be deleted from the list of "other symbols". (These sounds can be represented with accepted diacritics).

The example of a modified symbol, namely "ʃˢ = Variety of ʃ resembling s" should be deleted and reference to this method of modification should only appear in the general remarks on the use of symbols.

Diacritics. The following changes should be made to the list of diacritics:

Linguo-labial place of articulation should be represented with the diacritic [◌̼], a subscript shaped like a seagull, subscripted to alveolar symbols. e.g. [n̼] is a voiced linguo-labial nasal.

The diacritics [◌̺], an inverted dental diacritic, and [◌̻], a small subscript rectangle should be used to indicate apical and laminal articulations, respectively, e. g. [t̺]is a voiceless apical alveolar plosive; [d̻] is a voiced laminal alveolar plosive.

An example of a voiced aspirated plosive should be included in exemplifying the use of [ʰ], e.g.[dʰ].

The postposed diacritic [ʷ] should be used for all cases of labialization. The postposed diacritic [ʲ] should be used for all cases of palatalization. Approval should be withdrawn from the diacritics [ˌ] and [͜].

The postposed diacritic [ˤ] may be used for pharyngealization. The postposed diacritic [ˠ] may be used for velarization. The tilde through a symbol may be used as at present for either velarization or pharyngealization.

The "tiny T" diacritics for raising and lowering recommended by the vowel group should also be used with consonants to indicate similar modifications, e.g. the symbol for a voiced bilabial approximant should be [β̞]; the symbol for a voiced alveolar fricative should be [ɹ̝] , and the symbol for a voiced uvular approximant should be [ʁ̞].

Fronting should be indicated by a subscript plus sign, [◌̟]. Retraction should be indicated by a subscript minus sign, [◌̠].

Creaky voice should be represented by a subscript tilde, [◌̰].

Plosives without audible release should be represented with the postposed diacritic [˺].

Nasal and lateral release should be indicated by postposed [ⁿ] and [ˡ] respectively.

The "tie-mark" should not be listed among the diacritics as its use is exemplified in the notes on affricates and doubly articulated segments.

A number of proposals were rejected. It was decided that no recommendation should be made concerning superordinate (cover) terms for groups of places or manners of articulation, nor should there be separate rows for sibilant and nonsibilant fricatives, nor a

separate column for the epiglottal (lower pharyngeal) place of articulation. There should be no recommendation for a set of gestural symbols (cover symbols for, e.g. all bilabial gestures, or all laryngeal gestures) at this time.

The following specific symbols were rejected: [ẃ] for a voiced labial-velar fricative, [ɬ] for a voiceless velar lateral fricative, [ɭ] for a voiced velar lateral fricative, [ʎ̥] for a voiceless palatal lateral fricative, and [ŝ] and [ẑ] for the voiceless and voiced "hissing-hushing" fricatives of some Caucasian languages. It was also decided that no diacritics are needed for lenis/fortis, or for iteration; and no usage of subscript dot was recommended.

Vowels

1. The basic principles of vowel description, including the use of the three dimensions of height, frontness, and rounding, and the representation of vowels in a quadrilateral space, should remain as at present.

2. In any statement of the Principles of the International Phonetic Association it should be noted that "The relationship between vowels is described by plotting them on a quadrilateral, which represents an abstract, notional 'vowel space'. This vowel space has a correlation, though not an exact correspondence, with each of two aspects of the physical speech event of vowels: the position of the tongue; and the acoustic (and, relatedly, auditory) reflex of a vowel's production expressed as a plotting of its resonant frequencies". (Editorial comment: This statement will be incorporated not directly in the actual Principles, but in the new proposed *The IPA Handbook*.)

3. The main presentation of the vowels should consist of a single display with each rounded vowel paired immediately to the right of its unrounded counterpart.

4. Three principal named degrees of frontness, and four principal named degrees of height, should be recognized.

5. The three principal degrees of frontness should be labeled back, central, and front, and the four principal degrees of height should be labeled open, open-mid, close-mid, and close. (For open and close the equivalent terms low and high are recognized as being used by many phoneticians). The label mid should be given subsidiary status for vowels, half-way between open and close. Vowels half-way between close-mid and close may be referred to as near-close, and vowels half-way between open-mid and open may be referred to as near-open.

6. The vowel symbols should be presented on a quadrilateral with right angles at the top right and bottom right, divided by open-mid and close-mid lines parallel to top and bottom, and by a central line joining the midway point of the top and of the bottom.

7. The proportions of the quadrilateral should be such that its base is within 0.5 to 0.6 of the length of its top, and its back within 0.7 to 0.9 of the length of its top. A base:back:top ratio of 2:3:4 is often found to be the most convenient proportion to achieve this.

8. The symbol for Cardinal 15, baby gamma, should have its shape modified to make it more distinct from gamma. A letter like a "ram's horn" with a more looped shape and wider "arms" should be used, i.e [ɤ].

9. Only [ɪ ʊ] should be approved, and not [ɪ ω].

10. Eighteen peripheral reference vowels should be symbolized. Their precise reference quality should be indicated, as on Figure 1, by a dot, but it is recognized that each would have a domain of application whose extent is determined by practical needs.

11. Seven further peripheral and non-peripheral vowel symbols should be recognized as shown on Figure 1, and their domain of application indicated by the placement of the symbols.

12. Reversed epsilon [ɜ] should not be placed on the quadrilateral display, but a note should draw attention to the fact that it may be used as a symbol additional to schwa when, for phonological or other reasons, a second symbol for an unrounded vowel in the mid-central region is required.

Figure 1.
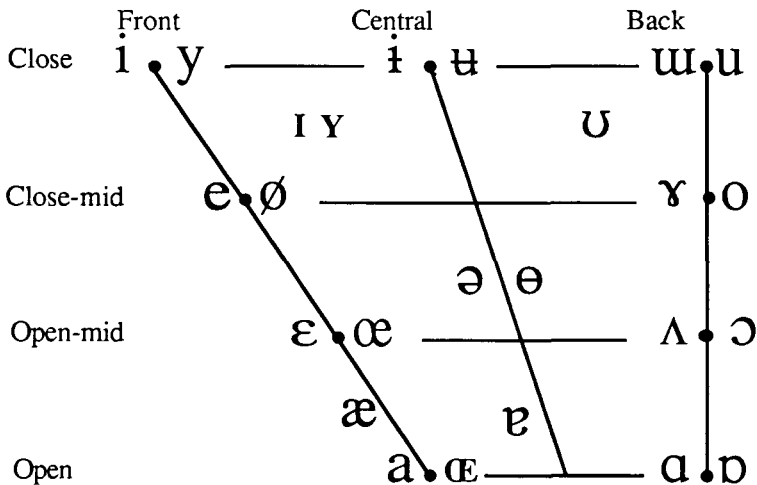
13. To indicate modifications of a vowel on the height dimension the existing "tiny-T" diacritic should normally be used, thus [e̞] for lowered and [e̝] for raised. For modifications on the front-back dimension a subscript plus sign to indicate advanced (fronted) and a subscript minus sign for retracted (backed) should be used, thus [a̟] for advanced and [a̠] for retracted.

14. Centralization should be understood to mean modification towards central on the front-back dimension, and may be indicated, as at present, by dieresis (umlaut).

15. Modification towards schwa should be termed mid-centralization, and may be indicated by a superscript diacritic x (multiplication sign) above the vowel symbol, e.g. [ṳ].

16. Vowels with contrasts in tongue root advancement (or equivalently pharynx expansion) may be indicated by marking the Advanced Tongue Root vowels with the "tiny T" diacritic rotated 90 degrees clockwise to indicate advanced tongue root (+ ATR) vowels, and/or by marking the retracted tongue root (- ATR) vowels with the same diacritic rotated 90 degrees anti-clockwise.   Thus [o̟] for a +ATR vowel and [o̠] for a - ATR vowel.

17. Rhoticity in a vowel should be symbolized by a diacritic right hook placed on the right-hand side of the symbol, e.g. [ɛ˞ o˞ ɔ˞ ə˞].

18. Left or right superscript [ʲ], [ˤ], and [ˠ] should be given no special status other than that derived from general principles relating to superscript symbols, and thus should not be listed in any separate fashion.

19. An extra-short vowel may be indicated by a superscript breve, e.g. [ŭ].

20. The definition and application of the existing over-rounding and under-rounding diacritics should be clarified so that it is clear that they can be used to cover any case where the expected lip position implied by the vowel symbol chosen is not as expected, e.g. a close back vowel with noticeable lip-spreading may be symbolized by [u] with the "under-rounding" diacritic added [u̜].

21. A non-syllabic vowel may be indicated by a subscript arc [u̯].

 Several proposals concerning vowels were rejected. It was decided that:

1. No means of symbolizing a central fully-open unrounded vowel with a special symbol should be provided. Specifically, small capital A [ᴀ] should not be recognized for this purpose. Print A [a], script A [ɑ], and ash [æ] should retain their present meaning.

2.   No symbolization for the dimension tense-lax should be recognized.

3. No symbolization for sulcalization of a vowel separate from that for rhoticity should be recognized.

4. No diacritic for a neutral lip position should be recognized.

5. No special symbol should be recognized for a vowel resulting from the phonological vocalization of a lateral.

Suprasegmentals

Stress and Prominence Relations. It was re-affirmed that : ['] placed before the relevant syllable indicates primary stress in a given domain; [,] indicates secondary stress in that domain; and the absence of any such symbol indicates lack of stress.

It was decided that ["] may be used to indicate extra strong stress, with additional stress marks available for further degrees, e.g. ['"]; but no approval was given to iterated [,] marks, e.g.[„], to indicate weaker (but non-zero) degrees of stress than the secondary stress. No symbolization was recommended for specifically emphatic stress.

Timing. Length: The following length marks were approved: [aː] long; [aˑ] half-long; [ă] extra-short; [a] short. The length mark may be iterated for further degrees: [aˑ], [aːː], etc.

Length may also be indicated by iteration of segment symbols.

Boundaries. The following were approved: [.] syllable break, e.g. in American English 'react' [ɹi.ækˀt]; [|] minor group, e.g. foot; [‖] major group, e.g. intonation phrase. If necessary, the foot boundary mark should be thickened so as to be distinct from the newly adopted click symbols; but it was noted that opportunities for confusion will rarely arise. Slash was explicitly rejected on the grounds of being the well-established phonemic/phonological bracket.

Disambiguation of tauto- versus hetero-syllabicity of repeated segment symbols may be achieved by the insertion of the syllable break symbol (see above) between them.

Blank space should be available for the representation of boundaries of other types (e.g. traditional word boundaries) at the convenience of the user.

[x͜x] may be used as an explicit linking mark to represent the absence of a break or pause between segmental material that has been separated in order to show word boundaries.

Pitch. It was decided to approve two pitch notation systems:

(1) **Diacritical tone marks** (used e.g. by Africanists): these pitch marks are to be placed above the segmental material, to illustrate lexical tone or intonation or, in combination with the approved stress marks, to indicate word accents.

(2) "**Tone letters**" (following Chao 1933): these marks are to be placed before or after the segmental material. The report of the suprasegmentals group also suggested that the Chao tone marks may be optionally attached to a vertical reference line, in which case narrow phonetic marks should precede the line and broad/phonological marks follow the reference line. Provided that the relevant tone marks are placed before (or after), and not above the segment, there would be no confusion with the diacritical system of representing tones.

Figure 2.

Pitch pattern		Diacritical tone marks		Tone letters		
high	extra high		X̎			˥
	vs.	X́	X́	꜓		˦
	high					
mid		X̄		꜔		
		X̀	X̀	꜕		˧
low	vs.					˨
	extra low		X̬			˩
rise		X̌		╱		
fall		X̂		╲		
high rise vs. low rise		X̗		˦ ˩		
high fall vs. low fall		X̖		˥ ˩		
rise fall		X̎		︿		
fall rise		X̰		⋎		
rise fall rise etc.		X̰		⋀		

(Editorial comment: although this part of the report was accepted without discussion, it does seem that it might lead to some confusion. If the reference line were omitted, a Chao high rising tone would look exactly like the acute accent used for high tone in the other system; and a high falling tone in the modified Chao system would be a low tone in the other system, with the only difference being the position of the tone mark with reference to the symbol. It would also mean that the Chao tone symbols could be used in six different

ways: before or after, with or without reference line, and with the mark to the right or to the left of the reference line.)

Both systems are capable of representing five pitch levels, and are inter-translatable, as shown in Figure 2. Symbols in both systems may be extended analogously to describe still more complex patterns.

Additional pitch symbols. The following symbols may be placed before other pitch symbols, both for the phonologized phenomena found in tone languages and for stepped patterns in intonation systems: [↓] downstep; [↑] upstep; both these arrows should be superscript. [↗] and [↘] may be attached to the major group boundary at the beginning of the phrase to refer to the global direction of pitch.

Further Suprasegmentals

It was decided that methods of representing pause duration, loudness, speech tempo, etc. should be part of the consideration of further extensions of the IPA.

Illustrations of the IPA

1. It was agreed that a tape of the new IPA chart, similar to that of the Wells-Ramsaran tape of the 1979 chart be made. A digital recording would be made as a master. John Wells agreed to undertake this task.

2. The IPA should be illustrated by transcriptions in a range of languages. For each language there should be a word list, with English glosses, illustrating all the major surface phonetic contrasts that occur in the language, and a connected text. The story of the North Wind and the Sun may continue to be used for the text, because this means that space can be saved in that no translation of the passage is required.

3. Both the word list and the passage should also be given in orthography. There should also be conventions for the interpretation of the transcription (that is, statements of allophonic rules as well as statements of the phonetic realization of the default allophone where this is not clear from the symbol involved). This transcription should be approximately as broad as the transcriptions of English in the current *Principles*. Lexically relevant suprasegmental properties (including in particular tone and unpredictable stress) should be indicated in the transcriptions. Other suprasegmental information should not normally be included. The use of word-spaces as in normal use is approved.

4. A recording of all this material should be available. The printed version should be a representation of what is actually recorded on the tape rather than an idealization of what might have been uttered.

5. Examples of this type of illustration of the IPA will be provided for English (editorial comment: see below, for the draft of the first part of a possible *Illustrations* section) and a small number of other languages. Phoneticians will be invited to submit transcriptions of other languages (or varieties) to the *Journal*. Volunteers to work on the original small sample of languages should contact Peter Ladefoged, who will co-ordinate first efforts.

6. Several styles of transcription should be illustrated, and the point should be made that these are all valid IPA transcriptions.

7. It was decided that at this stage there was no need to include video recordings or any other technically more demanding instrumental recordings.

Draft "Illustrations" section

This set of illustrations of the use of IPA symbols starts with a presentation of the sounds of English, and then continues with other languages in alphabetical order. There are two reasons for arranging this section in this way. Firstly, English is the language that is known by the largest number of potential users of the International Phonetic Alphabet. Secondly, there are already available a number of transcriptions of different regional varieties of English, made for different purposes.

All of the following transcriptions are in accord with the principles of the IPA. It should be emphasized that the Association supports the use of a certain set of symbols, but does not hold that there is only one way to transcribe a given language.

American English

The style of speech illustrated is that typical of many educated Americans in the Mid-Western and Far Western parts of the country. The actual speech on the accompanying recording is that of a 30-year-old speaker who has lived most of his life in California. Four different forms of transcription of the vowels are given in the list of key words. In (1), which is the form of transcription used in the illustrative passage that follows, the differences in quality are explicit, the other differences among vowels being regarded as a matter of the conventions required for interpreting these particular symbols; in (2) the length differences are made explicit, the other aspects being regarded as a matter of interpretation conventions; in (3) both length and quality differences are shown; and in (4) diphthongs are treated as consisting of a nucleus and a consonantal offglide. If only a single style of transcription had been given it would have been necessary to make all these aspects of vowel quality clear by means of additional conventions for interpreting the symbols, similar to those that now follow the list of symbols. Note also that the vowel symbols in (1) are similar to those used in the 1949 *Principles*, the differences being that the 1949 version used [a] in 'bad' and [ɹ] in 'bird'.

Consonants

Plosives

p	'pie'	t	'tie'	k	'kite'
b	'buy'	d	'die'	g	'guy'

Nasals

m	'my'	n	'nigh'	ŋ	'hang'

Fricatives

f	'fie'	θ	'thigh'	s	'sigh'	ʃ	'shy'	h	'high'
v	'vie'	ð	'thy'	z	'zoo'	ʒ	'azure'		

Approximants

w	'why'	ɹ	'rye'	j	'you'

Lateral approximant

l	'lie'

Vowels

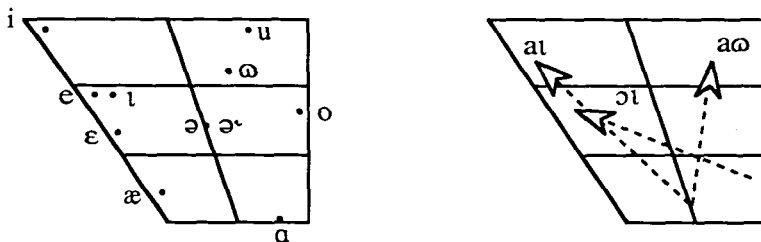| (1)	(2)	(3)	(4)		
i	iː	iː	ij	as in	'bead'
ɪ	i	ɪ	ɪ		'bid'
e	eː	eː	ej		'bayed'
ɛ	e	ɛ	ɛ		'bed'
æ	æ	æ	æ		'bad'
ɑ	ɑ	ɑ	ɑ		'pod'
o	oː	oː	ow		'bode'
ʊ	u	ʊ	ʊə		'good'
u	uː	uː	uw		'booed'
ə	ə	ə	ə		'bud'
ɚ	ɚː	ɚː	ɚ		'bird'
aɪ	aɪ	aɪ	aj		'buy'
aʊ	aʊ	aʊ	aw		'bough'
ɔɪ	ɔɪ	ɔɪ	ɔj		'boy'

Stress

'	(primary stress)
ˌ	(secondary stress)

as in [ˌfoʊnəˈtɪʃən] 'phonetician'

Conventions

[p,t,k] are aspirated in word initial position, and elsewhere when stressed. [b,d,g] have a very short voice onset time, except when between voiced sounds. [t] is a voiced flap, resembling [ɾ], when between a stressed and an unstressed vowel.

[d,n] are also flaps in similar circumstances. [l] is velarized except before [j]. The vowel symbols in column (1) have the qualities shown in the following charts when pronounced in the key words. [e] and [o] are usually diphthongs, but they are monophthongs before

ðə 'noɹθ 'wɪnd ənd ðə 'sʌn wɚ dɪs'pjutɪŋ 'wɪtʃ wəz ðə 'stɹɑŋgɚ, wɛn ə 'tɹævələ
kem ə'lɑŋ 'ɹæpt ɪn ə 'woɹm 'klok. ðe ə'gɹid ðət ðə 'wʌn hu 'fɚst sək'sidəd ɪn 'mekɪŋ ðə
'tɹævələ 'tek ɪz 'klok ,əf ʃʊd bi kən'sɪdəɹd 'stɹɑŋgɚ ðən ðə 'əðɚ. ,ðɛn ðə 'noɹθ 'wɪnd 'blu əz
'haɹd əz i 'kʊd, bət ðə 'moɹ i 'blu ðə 'moɹ 'klosli dɪd ðə 'tɹævələ 'fold ɪz 'klok ə'ɹaʊnd ɪm;
ənd ət 'læst ðə 'noɹθ 'wɪnd 'gev 'əp ðə ə'tɛmpt. 'ðɛn ðə 'sʌn 'ʃon 'aʊt 'woɹmli, ənd ɪ'midiətli
ðə 'tɹævələ 'tʊk ,əf hɪz 'klok. ənd 'so ðə 'noɹθ 'wɪnd wəz ə'blaɪdʒd tə kən'fɛs ðət ðə 'sʌn
wəz ðə 'stɹɑŋgɚ əv ðə 'tu.

The North Wind and the Sun were disputing which was the stronger, when a
traveler came along wrapped in a warm cloak. They agreed that the one who first
succeeded in making the traveler take his cloak off should be considered stronger than the
other. Then the North Wind blew as hard as he could, but the more he blew the more
closely did the traveler fold his cloak around him; and at last the North Wind gave up the
attempt. Then the Sun shone out warmly, and immediately the traveler took off his cloak.
And so the North Wind was obliged to confess that the Sun was the stronger of the two.

Note

In keeping with the tradition of the Association, this report is being published
anonymously. It should be cited as:

References

CHAO, YUEN-REN (1933) A system of tone letters. *Maître Phonétique.* **30**, 24-27.

Report on Council Decision

The IPA chart revised to 1989 has been approved by the Council of the International
Phonetic Association (20 in favor, 3 against).

P.J. Roach, *Secretary.*