International Phonetic Association

Writing a phonemic transcription

What is phonemic transcription?

Phonemic or broad transcription of a passage of English is always the first question on The IPA Certificate examination paper and constitutes a rather general representation which excludes any kind of minute phonetic detail and utilizes symbols typical of those associated with the transcriptions found in pronouncing dictionaries such as WELLS 2008 (hereafter LPD) or JONES 2011 (hereafter EPD).

Examiners are looking for evidence of your ability to transcribe English, prompted by a written stimulus, showing your awareness of the characteristics of informal connected speech. So, prompted by a short written text and using an established system of transcription (see **Choice of symbols** below) you will need to include evidence of typical connected speech processes such as elision, assimilation and liaison. Your transcription will also make systematic use of weak forms, as appropriate. Appropriate instances of t-glottalling may also be included. You will chunk the text into intonational phrases, marking the sentence or rhythmic stress of each phrase. You are **not** required to include intonation.

Not everyone who enters for the Certificate examination is equally experienced in transcribing English. This page offers suggestions which we hope will help you to write a good transcription in response to Question 1.

Statement of accent

The question asks you:

Using a standard set of symbols for Received Pronunciation (or, if you prefer, of some other accent that you specify), make a phonemic transcription of the following passage, in an informal colloquial style. Indicate rhythmically stressed syllables, but **not** intonation.

Most candidates, including all those who are not themselves native speakers of English, will choose to represent a so-called regionless variety of British English such as Modern Received Pronunciation (hereafter MRP).

Candidates from the United States will transcribe using General American (GAm, for which LPD is also an appropriate reference dictionary), those from Australia, General Australian (GAus, for which a phoneme list is available at http://clas.mq.edu.au/speech/phonetics/transcription/phonemic transcription/phonemic transcription.html), etc. Speakers of these established major varieties should simply state the variety at the top of their transcription.

Other candidates, however, may be used to transcribing a different regional variety such as Scottish or Irish English, a variety of Welsh English, London English or Northern English, etc. In such cases, the name of the accent is required together with a brief summary of symbols which differ from those used for MRP in LPD, together with keywords in which the sounds are heard. For example, a candidate transcribing Scottish English might provide the following key points of information for the examiners:

Statement of accent – Scottish English

Rhotic

No simple vowel length contrast \rightarrow FOOT = GOOSE /u/, TRAP = PALM /a/, etc.

No /eɪ, əʊ/ dipththongs → FACE, GOAT /e, o/

No centring diphthongs → NEAR, SQUARE, CURE /ir, er, ur/

/ε/ DRESS

 $/\Lambda$ COMMA (but LETTER /ər/)

This does not take long to write, but to save time in the examination, you are recommended to take a prepared statement of accent with you (modelled on the above example – long essays will not be acceptable) and hand it to the examiner before taking your seat in the examination room. Ensure your name is clearly marked at the top of the page. A less well-documented or less well-known accent might require more information. If your accent falls into this category, you are again recommended to take a prepared phoneme list (corresponding to the lists in LPD and EPD) to the examination and hand this to the examiner before taking up your seat in the examination room. Again make sure your name is clearly marked at the top of the page. In both cases, the examiner will attach what you have submitted to your paper when it goes to be assessed. It is not enough to state simply "Bristol accent" or "Midlands accent" and expect the examiners to research all the possibilities.

For some candidates, their accents are what we often refer to as 'modified MRP' and may contain random inconsistencies. In such cases, brief statements at the top of your transcription alerting the examiner to any inconsistencies they might find will normally be enough. For example, a speaker who fluctuates between rhotic and non-rhotic pronunciations might write "Variable rhoticity", or a northerner who now lives in the south and speaks largely MRP might still have residual instances of the TRAP/BATH merger and might write "Inconsistent use of TRAP ~ BATH vowel contrasts".

Failure to supply the examiners with an adequate statement of accent could result in loss of marks. We would like to avoid this as far as possible. However, if the examiners do not have adequate information and it is unclear exactly what a candidate intends, the examiners have no choice but to assess the transcription against MRP. Of course, many candidates with a non-MRP accent transcribe MRP anyway – if that is what you have trained to do, that is not a problem and you will simply follow your normal practice.

Choice of symbols

Whatever you choose, you need to make consistent and systematic use of just one set of phonemic symbols. Do not mix and match between sets. For example, if you are transcribing using a system which does not overtly mark length for the longer

simple vowels, you must never apply the length mark – so, use **either** /iː ɑː ɔː ɜː uː/ **or** /i ɑ ɔ ɜ u/. Likewise, if you opt for a set of symbols that transcribes the DRESS vowel using /e/, always transcribe it this way – the occasional /ɛ/ has no place here and will constitute a mistake!

We strongly recommend the use of a widely accessible symbol set such as those of LPD or EPD. Preferences change over time, of course, and the most recent edition of Gimson's Pronunciation of English (CRUTTENDEN 2014, hereafter GPE), Cruttenden has replaced the dictionaries' use of the IPA æ vowel symbol with simple a, giving for example 'catamaran' /ˈkatəməˈran/ instead of the more traditional /ˈkætəməˈræn/. Of course, you may also choose to do this, but if you do make the switch, then this must be completely systematic. The same applies to the simplification of the /eə/ diphthong to /ɛ:/ - select one form only and use it consistently.

In this transcription, which should be enclosed in a pair of slant brackets, you will not use diacritics (aspiration, nasalization, velarization, etc). A broad (short for 'broad phonetic') or a phonemic transcription does not include allophonic detail. The vast majority of broad transcriptions also use printed /r/ written the right way up. (One exception to this is the GAus system referenced earlier which uses / $\mathfrak{1}$ / — examiners are aware of this and will not penalize this application of the phonetic representation). Detail of this kind is, however, required in narrow phonetic transcriptions which are usually enclosed in square brackets to indicate that they include more than just basic phonemic units.

Examples

Passages, usually in the region of 110-120 words in length, vary as to how many opportunities they will offer for the inclusion of processes. What follow are essentially fair-copies of two past examination texts, each followed by a commentary which will point out relevant features of the transcription that you could be expected to include.

The examination paper from May 2012 included the following text:

Text

Seems we've had the wettest April since Met Office records began, back in 1910. The really curious thing though, is that so much of the country is still in drought. The hose-pipe ban's a disaster for us. We were hoping to fix the bald bits in the lawn, but I'm not walking to and fro to the end of the garden every night with watering cans for the new turf. No way. I'd sooner plant cacti! Course, if it keeps raining at this rate, there wouldn't be a problem. But you can't bank on that. Mind you, I can't say I didn't enjoy having temperatures in the 20s for a few days, back in March!

A fair copy

All transcriptions given here use the set of phoneme symbols that can be found in LPD (see above for full reference).

/'si:mz wiv hæd ðə 'wetist 'eiprəl | sints 'met pfis 'rekɔ:dz bi'gæn |
bæk in 'nainti:n 'ten || ðə 'riəli 'kjɔ:riəs 'θiŋ ðəʊ | iz ðə? 'mʌtʃ əv ðə
'kʌntri[z 'stil in 'draʊt || ðə 'həʊzpaip 'bænz ə di'zɑ:stə 'frʌs || wi wə
'həʊpiŋ tə fiks ðə 'bɔ:l bits in ðə 'lɔ:n || bət aim 'nɒ? wɔ:kiŋ
'bækwədz ən 'fɔ:wədz tə ði 'end əv ðə 'gɑ:dn evri 'nai? [wið 'wɔ:trɪŋ 'kænz | fə ðə 'nju: 'tɜ:f || 'nəʊ 'wei || aid 'su:nə plɑ:ŋk 'kæktai ||
'kɔ:s | if i? 'ki:ps reiniŋ ə? 'ðis reit | ðə 'wobm bi ə 'prɒbləm || bətʃu 'kɑ:mp 'bæŋk ɒn 'ðæt || maind 'ju: | ai 'kɑ:n? sei ai 'didnt in'dʒɔi hævɪŋ 'tempritʃəz in ðə 'twentiz frə fju: 'deiz | bæk im 'mɑ:tʃ || /

Tutorial commentary

NOTE: You do not write a commentary yourself. Commentaries are simply provided here to assist your private study and practice. The commentaries offer explanations relating to choices made in the transcriptions.

Transcribed text

/ 'si:mz wiv hæd ðə 'wetīst 'eɪprəl | sīnts 'met pfīs 'rekɔ:dz bi'gæn | bæk in 'nainti:n 'ten ||

Commentary

The transcription begins with a forward slanting (phonemic) bracket.

Stress is indicated as a small raised line immediately before the whole stressed syllable (and this may not always be at the beginning of the word, e.g. bi'gæn). It is worth mentioning at this point that there is a lot of tolerance regarding stress patterns – in this case, for example, you may choose to begin with an unstressed syllable (simz wiv hæd ðə 'wetist 'eiprəl|) and that would be equally acceptable. Only stresses that are absolutely wrong will be penalized when marking transcriptions.

we've had – in this verb phrase, the structure is pronoun + auxiliary verb + main verb, so the two instances of have are two different verbs and strictly only the first, the auxiliary, is realized using a weak form, so: wiv hæd.

since – the pronunciation chosen here includes the epenthetic (inserted) plosive t. It's also acceptable to pronounce the word without this, sins. Both are therefore correct.

began – note that the latest practice is to use schwi (i) in the open unstressed syllable at the beginning of words like began, before, behind, etc.

(IPs) here are marked by a minor boundaries (single vertical lines) because they are non-final... there is still more to come. The first major boundary (double vertical lines) occurs here, at the end of the third IP.

The end of the first two intonational phrases

Stress shift occurs in the pronunciation of this date. In its citation form 'nam'tim is a double stress word. Position of the main stress in speech depends on its grammatical function: as a modifier, the first is kept (as here), but as the head of a noun phrase, e.g. *I caught the 10:19*, the second one is retained and the first lost, ... ðə 'ten nam'tim ||.

An overtie is used across a minor boundary here to indicate the absence of a pause which enables the contraction of *country* and *is*. (Emphatic stress on *still* is essential here for the intonation.)

Simultaneous application of elision and liaison creates a new phonetic word from *for us* which retains the strong vowel and is therefore able to carry the necessary rhythmic stress. (These processes happen again in the last line of the fair copy, yielding **fra** from *for a*, although this time with a weak form.)

d-elision here in the phrase bald bits

Overtie again indicating the absence of a pause – this time it enables the word-final use of t-glottalling before the immediately following consonant.

Schwa-elision in *watering* (citation form 'wɔ:tərɪŋ) reduces the number of syllables to two.

Velar assimilation of the final alveolar cluster of *plant* to the initial velar of *cacti*. Remember: in alveolar clusters and sequences, if one assimilates, they all assimilate. The same thing happens again with the bilabial assimilation of the final sequence in *wouldn't* after t-elision removes the final t-sound. Also here, note the weak form of *there* which is homophonous with the pre-consonantal weak form of *the*.

ðə 'k
nntri $\lceil z$ 'stıl ın 'dra
ot $\mid \mid$

'fras ||

... 'bɔːl bɪts ...

evri 'naı? Twið 'wɔ:trɪŋ 'kænz |

plɑːŋk ˈkæktaɪ ||

ðə 'wubm bi ...

bət∫u ˈkɑːmp ˈbæŋk

Again, bilabial assimilation of an alveolar cluster in *can't bank* – another option would be use of t-glottalling and retention of the alveolar n-sound: 'ka:n? 'bæŋk.

maınd 'ju: |

Before that, there is an example of coalescence in which the -t j- sequence in the middle of the citation forms of but you, merge into the single related sound tj. The same coalescence could occur between the end of mind and the start of you in mind you, giving main dau:

... ım 'ma:tʃ || /

Bilabial assimilation at the end of *in*. Note that the transcription terminates with a major IP boundary, showing the end of the final IP, and a single slant, phonemic bracket, telling the reader that this is the end of the text.

A rather shorter text which offers a little less opportunity for providing evidence of your awareness of processes is the following, from the June 2003 paper. Even here, however, there are opportunities to be found and you would be expected to pick up at least a couple of these:

Text

- What on earth are you doing?
- I'm trying to assemble this gorilla Alan gave me for my birthday.
- You're trying to do what?
- It's a toy. Look. If you fit it together properly and then turn this handle, he beats his chest.
- How extraordinary! I've never seen anything quite like that. Is this how you usually spend your spare time?
- No, of course not!
- Well I'm relieved to hear it.
- Have I shown you my collection of beer bottle tops?

A fair copy

/wɒt ən 'ɜ:θ ə ju 'du:ɪŋ || aɪm 'traɪŋ tu ə'sembļ ðīs gə'rīlər æləŋ 'geɪv mi | fə maɪ 'bɜ:θdeɪ || jɔː 'traɪŋ tə du: 'wɒt || ɪts ə 'tɔɪ || 'luk || ɪf ju 'fɪt ɪʔ tə'geðə 'prɒpli | ən ðen 'tɜ:n ðīs 'hændļ Îi 'bi:ts ɪz 'tʃest || hau ɪk'strɔ:dnri || aɪv 'nevə si:n 'eniθɪŋ | 'kwaɪʔ laɪk 'ðæt || ɪz 'ðɪs hau ju 'ju:ʒli spendʒə 'speə 'taɪm || nəu əf 'kɔ:s nɒt || wel aɪm ri'li:v tə 'hɪər ɪt || həv aɪ 'ʃəun ju maɪ kə'lekʃn əv 'bɪə bɒtl

'tpps || /

<u>Tutorial commentary</u>:

Transcribed text

/wpt ən '3:0 ə ju 'du:1ŋ ||

aım 'traııŋ tu ə'sembl ðis gə'rilər æləŋ 'qeıv mi |

Commentary

The transcription begins with a forward slanting (phonemic) bracket.

Stress is indicated as a small raised line immediately before the whole stressed syllable (and this may not always be at the beginning of the word – see below). It is worth mentioning at this point that there is a lot of tolerance regarding stress patterns – in this case, for example, you may choose to begin with a stressed syllable ('wot ən '3:0 ə ju 'du:n) and that would be equally acceptable. Only stresses that are absolutely wrong will be penalized when marking transcriptions.

on – this preposition does not normally have a weak form, but in this colloquial expression, on will often be pronounced ∂n .

you – the preferred weak form for this word is \mathbf{ju} (**not** \mathbf{je} - see *your* below).

The end of the intonational phrase (IP) is marked by a major boundary (double vertical lines). This marks the end of a grammatically complete question.

This starts with a very long IP (they are usually just 5-7 words). The minor boundary at the end of the first phrase (|) shows that more is to come; the second is then closed with a major boundary (||) showing that the speaker has finished what they want to say.

-ing – always **in** (even following an **i**-sound such as at the end of the vowel in *try*: train).

to – the weak form tu is selected here because assemble begins with a vowel.
r-liaison is used to link gorilla and Alan.

Velar assimilation can take place at the end

jɔ: 'traɪɪŋ tə du: 'wɒt || ɪts ə 'tɔɪ || 'lʊk || ɪf ju 'fɪt ɪ? təˈɡeðə 'prɒpli | ən ðen 'tɜ:n ðɪs 'hændļ ब ˈbiːts ɪz 'tʃest || of *Alan*, triggered by the g at the beginning of *gave*.

You can see here that IP boundaries often co-occur with punctuation marks and they always mark the end of a grammatical unit of some kind. There are several major boundaries here – points where you could stop speaking if you wanted to; the single bar line is a minor boundary – you still have more to say.

Additionally, this section illustrates the fact that even if the IP contains just a single, one-syllable word, it must still have a stress.

 it – t-glottalling will be use by many speakers today in this position: word final tsound immediately followed by another consonant.

properly – elision of the medial schwa here (citation form 'propəli) produces the more casual MRP variant, two syllable 'propli.

and – weak form selected here includes **d**-elision; **d**-elision is always possible with the weak form of and.

he, his – weak forms selected here include h-elision; this is only possible when the words are unstressed and used in an unbroken flow of speech (hence the tie-bar which shows that there is no pause between handle and he even though there is an IP boundary).

Another opportunity for t-glottalling here at the end of *quite* before the initial consonant of *like*.

Coalescence between final \mathbf{d} in *spend* and initial \mathbf{j} in *your*: $\mathbf{d} + \mathbf{j} \rightarrow \mathbf{d}_3$.

your – usual weak form jə. (Compare this with the usual weak form of you ju.)

An alternative here would be to use two IPs: 'nəʊ || əf 'kɔ:s nɒt || – note that this also involves adding stress on *no* (because every

'kwai? laik 'ðæt ||

ız 'ðıs hau ju 'ju:ʒli spendʒə 'speə 'taım ||

nəu əf 'kɔ:s nɒt ||

IP must have at least one stress).

of course – an exceptional voicing assimilation may occur in this phrase: the final \mathbf{v} of of changes to voiceless \mathbf{f} because of the voiceless \mathbf{k} -sound at the beginning of course.

One further possible variant would be ədeletion in the phrase of course, giving f 'kɔ:s with syllabic-f. This could happen in either instance – one IP or two. Indeed, if the speech was rapid enough, complete loss of the syllable could happen, producing a sequence such as nəof 'kɔ:s nɒt ||. It's worth noting here that examiners will always permit variants for which a serious possibility exists, although my advice is not to be too extreme, just in case you inadvertently introduce a genuine mistake.

wel aım ri'li:v tə 'hıər ıt ||

relieved to – use of **d**-elision.

hear it – use of \mathbf{r} -liaison.

həv ar 'ʃəun ju mar kəˈlekʃn əv 'brə bɒtl̩ 'tɒps || /

The transcription is terminated by another forward-slanting bracket.

How are transcriptions evaluated?

The IPA employs negative marking, deducting marks from a pool of 60 (for native speakers of English) and 65 for non-native speakers (who are given an additional 5 error allowance). The rule of thumb is to deduct one point for a full segmental error. Such errors may involve:

- o omission of an essential segment such as the final **m** of *l'm* represented as *aɪ rather than aɪm
- insertion of an additional and incorrect segment, such as a in *relieved*, giving *ri'li:vad rather than ri'li:vd note that the omission of the final d segment in the transcription above is an appropriate elision in that context and would not be penalized
- o using the wrong symbol to represent a particular sound such as *jo:n for shown joun or *topz for tops tops, etc.

Other errors, such as stress errors result in deduction of half a point, for example:

- o misplaced stresses such as *'kəlekʃn for collection kə'lekʃn, *'bigæn for began bi'gæn or *naɪn'ti:n 'ten || for 1910 'naɪnti:n 'ten
- Omission of essential stresses, such as *bæk in 'nainti:n ten || for back in 1910 bæk in 'nainti:n 'ten ||
- o Insertion of inappropriate stresses such as *bæk 'm 'naınti:n 'ten || for back in 1910 bæk ın 'naınti:n 'ten ||

In cases of genuine variants, where there is no categorical right or wrong, the candidate's variant is always accepted, for example a variant with an additional stress on back in the last example above: bæk in 'nainti:n 'ten ||

For question 1 on the written paper of the IPA Certificate examination, after calculation of the total number of errors, scores are then weighted out 20.

Most errors are random errors of this kind and occur just once or twice in a given transcription. Sometimes, however, transcriptions contain what are called "repeated errors". This means that every instance of a particular sound is transcribed, systematically, using the symbol appropriate to another sound. Provided this is consistent throughout, only 2 points will be deducted regardless of whether there are ten tokens of the affected sound or just two or three of them. For example, when transcribing the following text, candidates may or may not make mistakes when representing instances of the provided this kind and occur just one of the provided this is consistent throughout, only 2 points will be deducted regardless of whether there are ten tokens of the affected sound or just two or three of them. For example, when

Goods arrive all day from the four corners of the globe. It's your job to sort them, store them and record the stock levels. When things run out, we need to reorder.

The first transcription below would be deemed correct and no points would be deducted.

Transcription 1

/ 'godz ə'raɪv 'ɔːl 'deɪ | frəm ðə 'fɔː 'kɔːnəz əv ðə 'gləʊb || ɪts 'jɔː 'dʒɒb | tə 'sɔːt ðəm | 'stɔː ðəm | ən ri'kɔːd ðə 'stɒk levlz || wen 'θιŋz rʌn 'aʊt | wi 'niːd tə riː'ɔːdə ðəm || /

At the opposite extreme, highlighting shows that in Transcription 2 every instance of **5:** has been mistakenly transcribed as **30** - eight instances in all. However, because this is consistent throughout it counts as a "repeated error" and the candidate would only lose 2 points.

Transcription 2

/ 'gudz əˈraɪv ˈəʊl ˈdeɪ | frəm ðə ˈfəʊ ˈkəʊnəz əv ðə ˈgləʊb || ɪts ˈjəʊ ˈdʒɒb | tə ˈsəʊt ðəm | ˈstəʊ ðəm | ən riˈkəʊd ðə ˈstɒk levlz || wen ˈθɪŋz rʌn ˈaʊt | wi ˈniːd tə riːˈəʊdə ðəm || /

In Transcription 3, the words corners, your, sort and store all show the correct use of the **ɔ:** vowel. This version indicates a confusion on the part of the candidate regarding not the identity of the **ɔ:** vowel itself, but the use of that vowel. For this

reason, each mis-transcription is considered to be an error and is penalized. 4 points would be deducted.

Transcription 3

/ 'gudz ə'raɪv 'əul 'deɪ | frəm ðə 'fəu 'kɔ:nəz əv ðə 'gləub || ɪts 'jɔ: 'dʒɒb | tə 'sɔ:t ðəm | 'stɔ: ðəm | ən ri'kəud ðə 'stɒk levlz || wen 'θɪŋz rʌn 'aut | wi 'ni:d tə ri:'əudə ðəm || /

Finally, in Transcription 4, just one **5:~90** confusion is made and only 1 point would be deducted.

Transcription 4

/ 'gudz ə'raɪv əul 'deɪ | frəm ðə 'fɔː 'kɔːnəz əv ðə 'gləub || ɪts 'jɔː 'dʒɒb | tə 'sɔːt ðəm | 'stɔː ðəm | ən ri'kɔːd ðə 'stɒk levlz || wen 'θιŋz rʌn 'aut | wi 'niːd tə riː'ɔːdə ðəm || /

Good practice also has a part to play in transcription. We conventionally chunk texts into intonational phrases (IPs), using minor (|) and major (||) boundaries to reflect the non-terminal or terminal nature of the intonation tune. These boundary markers are preferable to the insertion of orthographic punctuation marks, transferred from the written prompt, not least because some intonational boundaries are not reflected by punctuation and inserting a boundary symbol in the transcription not only helps the reader but also reflects your awareness of the spoken melody. However, because the IPA does not require you to include intonation in these transcriptions, you are not penalized when the boundaries go wrong. One further point worth making here is that IP boundaries are vertical bar lines (like those seen on a musical stave), they must not slant over. The forward slant, /, is a phonemic bracket – one of these should appear at the beginning of the transcription and one at the end, as in the examples above.

Another aspect of good practice concerns representation of connected speech processes. Weak forms of grammatical items are considered to be particularly important and you should use them routinely, just as we do in speech. Failure to make routine use of weak forms is not typical of normal speech and could incur an overall 2 point penalty when your transcription is evaluated.

Similarly, a complete absence of all processes of connected speech (assimilation, elision, liaison, coalescence) could also incur an overall 2 point penalty if the examiner considers that this makes the transcription sound particularly unnatural.

In evaluating transcriptions, examiners rely on their experience and knowledge. Transcriptions are evaluated by two examiners independently who later meet to discuss their decisions and agree an appropriate mark.

Further reading and practice

There are a number of publications on the market that teach people how to transcribe. They may not always use the same symbols or agree in how they express things or how they prioritize different aspects of this skill, but if you are

working alone and you are sufficiently confident, they all offer further opportunities for practicing this skill. Such books include:

- CASAS, R.M. [2011] Systems for the Phonemic Transcription of English: Theory and Texts. Peter Lang: Frankfurt.
- LECUMBERRI, M.L.G. and MAIDMENT, J.A. [2000] *English Transcription Course*. Hodder Education: London.
- SCHMITT, H. [2014] *Phonetic Transcription: From first steps to ear transcription.* Erich Schmidt Verlag: Berlin.
- TENCH, Paul [2011] *Transcribing the Sound of English: A Phonetics Workbook for Words and Discourse*. Cambridge University Press: Cambridge.

A final caveat here concerns the use of pronouncing dictionaries. Both LPD and EPD (referenced on page 2 above) employ typographic conventions to enable the maximum amount of information to be compressed into the smallest possible space (italicized symbols, superscripts, under-ties, etc.). Before you 'copy' the pronunciation of a word from such a dictionary into your transcription of a text, you will need to learn how to read and interpret the dictionary entry — many entries include multiple variants... but nobody can say two or more things at the same time, so you need to interpret the entry and choose the variant you prefer — do not simply copy the typographic conventions.

References

CRUTTENDEN, A. (Ed.) 2014, 8th edition. *Gimson's Pronunciation of English*. Routledge: London.

JONES, Daniel. 2011, 18th edition. *Cambridge English Pronouncing Dictionary with CD-ROM.* Edited by Peter Roach, Jane Setter, and John Esling. Cambridge University Press: Cambridge,

WELLS, J.C. 2008, 3rd edition. *Longman Pronunciation Dictionary*. Longman: London.

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