This four-part study introduces the reader to the methods and procedures used in descriptive linguistics and their application to the sound systems of English and Russian. A condensed phonology of English includes discussion of consonants, vowels, stress, phrasing, and pitch. The section on Russian phonemes examines: (1) consonant and vowel phonemes; (2) palatalization, voicing, and classification of consonants; (3) vowels; and (4) other phonemes. A comparison of Russian and English sounds in nine areas concludes the paper. Numerous examples of words transcribed in phonetic symbols illustrate linguistic principles. For a comparison document see FL 001797. (Hard copy not available due to marginal legibility of original document.) (RL)
THE SCOUTS OF ENGLISH AND RUSSIAN

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The System of Sounds of English and Russian

1. Introduction

The attempt made here is to consider language in terms of descriptive linguistics. This is a method of studying a language which grew up primarily within the discipline of anthropology. It consists, in essence, of examining a language the way a naturalist examines the world around him. Descriptive linguistics is concerned, as its name implies, with describing languages as they are. It is concerned with finding out how languages work and identifying the relevant units in terms of which the utterances of the language may be analyzed. The descriptive linguist is interested in the structure of a language, i.e., the way the units at various levels, (e.g. sounds, words) are employed and the complex relations among them.

In proceeding to discover the structural system underlying the use of a given language, linguistics makes a key use of the principle of contrast. When two utterances constitute different messages they are said to be in contrast. If the two contrasting utterances are alike except for one part in each, then these two parts are in contrast. By repeated substitution of different parts and comparison of the resulting utterances the linguist determines the relevant units. All utterances can then be described in terms of these units and the kinds of arrangements in which they occur. The interchangeability of units at various points in an utterance which the linguist discovers by the procedures of substitution.
is called commutation.

Descriptive linguists apply this principle of contrast separately to the sounds and to the grammar of a language, and on each of these two separately considered strata they postulate as fundamental the minimum commutable units which can be found. In the sound system of a language these minimal units are called phonemes; in the grammatical system the minimal units are called morphemes.

In the investigation of speech sounds, the directly relevant fields of linguistics are known as phonetics and phonemics.

Phonetics concerns the details of pronunciation. A phonetic description is usually presented in terms of what goes on in the mouth and throat to produce a certain sound. The various component features that can be isolated as contributing to the total impression of the sound are mentioned. That is, the way the lips are held is one thing that would be noted—whether they are close together or far apart, whether they are protruded or drawn back. The position of the tongue would figure in the description—whether flat in the mouth or bunched up, whether some part of it is close to or touching the roof of the mouth. The condition of the throat also enters in—whether constricted or open—as does the activity of the larynx, which can be closed or can be opened to allow air to pass through, giving various types of sound production. Also the way all these circumstances change as the sounds are being produced is important to the description. Based on such information, some account is given of the audible effects or qualities associated with the different articulatory features. In the ideal case a phonetic analysis is pursued to the point where a trained reader can have a substantially
adequate idea of the original sound.

Phonemics deals with the question of which sound differences in a given language are the ones that really matter. Sufficiently careful listening reveals a tremendous range of possible sounds in any language, but linguistic investigation establishes only a limited number of units which sufficiently account for the use of sounds as a signalling system for speakers of that particular language. Anything a speaker may say in some language, any given utterance, can be made distinct in pronunciation from other utterances only by virtue of certain contrastive differences. These can be seen in their most basic form as differences which are made between different words. For instance, in English,

from sum

sun is distinguishable from each of the following: from sin
from fun;

each of these contrastive, meaningful differences—sun versus sum, sun versus sin, sun versus fun—establishes a phonemic distinction in English. In determining what message a speaker is imparting, the ordinary listening behavior of the native user of a language does not take account of phonetic differences which do not correspond to phonemic distinctions. Other differences between sounds which may be just as noticeable from the point of view of physical measurement, still do not prevent the sounds in question from being regarded as equivalent by users of a given language.

A pair of sounds that differ in a given way phonetically may be phonemically distinct in one language but not in another.

To illustrate this, consider the phonetic quality of voicing. Voicing is the humming sound produced by the vibration of the vocal cords
The difference between a voiced sound and a voiceless one can be important in English, as may be seen from such pairs as:

```
razor  lazy  dozing  rival   avid  leaving
racer  lacey  dosing  rifle  aphid  leafing
```

The first row have voiced sounds \( [z] \) and \( [v] \), and the second row have voiceless sounds \( [s] \) and \( [f] \), in the middle of the words. Otherwise, each word in the lower row is the closest possible match in sound to the word above it, so that the two form what linguists often refer to as a minimal pair. The difference between the voiced and voiceless sounds in the middle of the words is the only significant distinction in pronunciation between the two different English words in each pair. On the basis of such data we say that there are distinct phonemes \( /z/ \) and \( /s/ \), and likewise \( /v/ \) and \( /f/ \), in English. When representing phonemes in writing, using a single phonemic symbol for each, the most usual convention is to write these between slant lines, while symbols for sounds being considered purely phonetically are put within square brackets.

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In like way as was done for English, the existence of a phonemic distinction between \( /z/ \) and \( /s/ \) and between \( /v/ \) and \( /f/ \) can be demonstrated for Russian.

```
паза  of a time (gen. sing.)  коза  goat  зуб  tooth
песч  race  коса  scythe  суп  soup
грива  mane  сова  owl  вент  shrouds
гриф  giffin  сфера  sofa  фент  forfeits
```

By prolonging the sounds (dozzzzzzzzzzzzzz; leavvvvvvvvvvying) while holding one's fingers against the Adam's apple, it is possible to feel the vibrations in the larynx for \( [z] \) and \( [v] \) and to note their absence for \( [s] \) and \( [f] \).
In Spanish, also, we can find instances of \( \text{[z]} \) and \( \text{[s]} \):

\[
\begin{array}{ll}
\text{[z]} \text{ in} & \text{[s]} \text{ in} \\
\text{mismo} & \text{sus} \\
\text{fresno} & \text{denso} \\
\text{eslavo} & \text{falso} \\
\text{esbozo} & \text{esposo} \\
\text{desde} & \text{esta} \\
\text{rasgo} & \text{rasco} \\
\text{deshielo} & \text{desjunto} \\
\text{deshueso} & \text{asfalto}
\end{array}
\]

same his, her, their (plural)
ash tree dense
Slav false
a sketch spouse
since that
I tear I scratch
a thaw I disjoint
I debone asphalt

and generally in casa house

The difference between Spanish \( \text{[z]} \) and \( \text{[s]} \) is not a contrastive difference. It is impossible to produce two distinguishable utterances in Spanish for which an opposition between \( \text{[z]} \) and \( \text{[s]} \) has to be considered as the basis for discrimination. No word has \( \text{[z]} \) in just the circumstances where a different word might have \( \text{[s]} \), or vice versa.

In a case like this, where the phonetic difference is not independently significant for signalling what has been said, the distinction is called allophonic. Thus, for Spanish, \( \text{[z]} \) and \( \text{[s]} \) are said to be allophones of a single phoneme \( /s/ \).

The feature of voicing is, then, not something that matters in the system of the language as far as Spanish \( \text{[z]} \) and \( \text{[s]} \) are concerned. It does, however, serve to make a phonemic distinction between \( /d/ \) and \( /t/ \).

\[
\begin{array}{ll}
\text{día} & \text{day} \\
\text{tía} & \text{aunt} \\
\text{dúo} & \text{I shall give} \\
\text{tío} & \text{there}
\end{array}
\]

just as with Russian undyed

or English untied
There are languages, though, for which no phonemic distinctions depend upon voicing. In Cree, for instance, there are words which have a [d̪] sound and words which have a [t̪] sound.

[d̪] in n'tehi my heart  
[t̪] in kit̪hi your heart

But there can be no words which differ only by the one having [t̪] where the other has [d̪]; this is not a distinction which is ever independently significant, and both the above words have the Cree phoneme /t/.

Examples have been given of English (and Russian) word-distinguishing phoneme pairs which differ essentially in that one is voiced and the other voiceless: /z/ versus /s/, /v/ versus /f/, /d/ versus /t/. On the other hand, there are instances in English and Russian where sounds occur which differ as to voicing, but where the difference is not distinctive. For example, in normally rapid pronunciation, /l/ is

voiced in glue Bligh  
voiceless in clue ply.

This is only a phonetic difference among sounds assigned to the same phoneme /l/. We never come across different English utterances conveying different messages and having as their sole essential distinction the occurrence of a voiceless /l/-type sound in one where a voiced /l/ occurs in the other. Russian, too, may have both voiced and voiceless /l/.

voiced жеэл med  игл of needles (gen. pl.)  
voiceless синкл sense цикл cycle

Again, this is without phonemic consequences, since both types count as instances of the same fundamental sound.

These statements apply to the Ft. Albany, Ont., dialect of Cree, as represented in materials obtained by Rev. Dr. C. Douglas Ellis.
In Welsh there can be words which differ in that one has a voiced ɬ where the other has a corresponding voiceless sound (written ll in Welsh spelling), making this a phonemic distinction.

potel     bottle     sill     spawn (noun)
castell   castle     sill     syllable

Speakers of any language have developed ingrained habits of identifying as the same sound the phonetically different allophones which do not contrast in their language but count as members of the same phoneme. At first in listening to a new language people react largely in terms of their native-language identifications. Therefore, in comparing the pronunciation of two languages, it is useful to consider not only the differences in phonetic details but also the way in which the sounds of each are organized as a system of signalling units. It is in this latter regard that the techniques and categories of descriptive linguistics are particularly helpful, through the explication of what phonemes and what system of phonemic contrasts each language has and in pointing out how the two ways of organizing sounds mesh and how they clash.
In the text which follows, the sound system of English is presented first, together with some technical linguistic notions about how the sounds of a language are organized (chap. 2). Chapter 3 deals similarly and a bit more summarily with Russian, including mention of certain of the problems in determining exactly what is the organization of sounds found there. Then, as the core of this book, the sounds of the two languages are set over against each other in chapter 4.

In contrasting the two languages, it is important to realize that we are not comparing two exactly fixed and unvarying sets of speech habits. American English, the kind with which we are mainly concerned, shows extensive regional and social variation—let alone the different sorts of prevalent pronunciation found on other continents. There is also a considerable variety of types of standard Russian, although not as wide a range as for English. In the discussion, then, there will be occasions for referring to different dialects of the two languages. That term is used here in the sense it has in linguistics, to cover the speech of any group that speaks sufficiently uniform to be described together as a single system. In this sense of the word, it follows automatically that everyone who speaks speaks some dialect of some language. The dialects of interest in this work are all acceptable and standard varieties either of English or of Russian.

END--Chapter 1
2. A CONDENSED DESCRIPTION OF
ENGLISH PHONOLOGY

2.1 Consonants

In English, twenty-four phonemically distinct consonant sounds are used to distinguish words. Examples of each are given below, after the phonemic symbol which will be used to represent it in this study.

/p/ pie Poe pop wrapper Phillip
/b/ buy beau Bob jabber hubbub
/m/ my mow mom hammer summum
/t/ tie toe tot hatter Whittet
/d/ dye dough dud adder wedded
/n/ nigh know nun manner cannon
/k/ k (chi) coo kick lacquer psychic
/g/ guy go gig dagger Gehrig
/q/ young hanger ringing
/f/ fie foe fife gaffer tariff
/v/ vie vow verve cadaver olive
/θ/ thigh thaw wrath author Edith
/ð/ thy though wreathe lather
There are several ways in which the consonants in English can be grouped naturally into sets exhibiting certain relationships.

There are sixteen consonants which can be grouped in pairs, of which one is voiceless—produced without vibration of the vocal cords—while the other is regularly voiced, accompanied by vocal-cord vibration.

These pairs—with the voiceless member of each pair given first—are as follows:

/p/ - /b/
/t/ - /d/
/k/ - /g/
/f/ - /v/
/o/ - /ɹ/
For the other eight consonant phonemes no difference between voiceless and voiced sounds ever functions to make a distinction between words. Of the eight, /h/ can be considered as normally voiceless, the others (/m/, /n/, /ŋ/, /l/, /r/, /w/, /y/), normally voiced. (Actually some of these may at times be voiceless, e.g. /l/, /r/, /w/ in click /klik/, crick /krik/, quick /kwik/, but this condition is induced automatically by the preceding consonant and does not by itself serve to distinguish words.)

For each of the first three voiceless-voiced pairs there is a third related phoneme for which the position of lips and tongue is the same, but the nasal passage is open.

\[
\begin{align*}
/p/, /b/ & \quad /m/ \\
/t/, /d/ & \quad /n/ \\
/k/, /g/ & \quad /ŋ/
\end{align*}
\]

Some of the consonants involve a complete locking, for a moment, of the air passages, and so are sounds which cannot be indefinitely prolonged. These are referred to as stops.

\[
\begin{align*}
/p/, /b/ & \quad /k/, /g/ \\
/t/, /d/ & \quad /ç/, /ʝ/
\end{align*}
\]
Sounds which are not stops are called **continuants**. Some of these involve the rough passage of the air at some point of the mouth, creating a noisy effect. These are called **fricatives** (involving friction).  

\[
\text{\text{f/}, \text{v/}} \quad \text{\text{s/}, \text{z/}} \\
\text{\text{θ/}, \text{ð/}} \quad \text{\text{ʃ/}, \text{ʒ/}}
\]

The two English phonemes \text{\text{c/}} and \text{\text{j/}}, which begin as stops and end as fricatives, are sometimes called **affricates**.

The continuants without appreciable frictional disturbance of the breath stream are called **resonants**:

\[
\text{\text{m/}, \text{n/}, \text{ŋ/}, \text{l/}, \text{r/}, \text{w/}, \text{y/}}
\]

The ones said so that air can pass through the nose--\text{\text{m/}, \text{n/}, \text{ŋ/}}--are called **nasals**.

Vowels, to be treated in section 2.2, are also resonants.

The English phoneme \text{\text{h/}} is special in that, while it involves friction, this is not friction localized at some point in the mouth but a generalized roughness of a sort known as "cavity friction."

(The terms which have been applied here to English sounds are terms used in linguistics for describing the sounds of any language.)
Further useful groupings of sounds are possible based on similarities in the formation of the sounds in the mouth.

Involvement of lips:

/p/, /b/, /m/ - /f/, /v/ - /w/0

Tip of tongue near or against teeth:

/t/, /d/, /n/ - /s/, /z/ - /θ/, /ð/ - /l/

Tongue against or close to hard palate:

/ɔ/, /ʃ/ - /s/, /z/ - /y/ - /r/

Back part of tongue involved:

/k/, /g/, /ŋ/.

There are technical terms to describe the various mouth-part positions for all these sounds, as:

/p/, /b/, /m/: bilabial (both lips together).

/f/, /v/: labio-dental (lower lip and upper teeth)

/θ/, /ð/: inter-dental (tongue between teeth)

/t/, /d/, /n/, /s/, /z/: alveolar (tip of tongue against or approaching the gum ridge (alveoli)).

/ɛ/, /ʃ/, /s/, /z/, /y/: palatal (tongue against or approaching the roof of the mouth (palate)).

/k/, /g/, /ŋ/: velar (tongue touching—it could be merely near—the soft palate (velum), the back part of the roof of the mouth).

And more specialized terms:

/ɬ/: lateral - the tongue may touch the roof of the mouth but the sides (latera) are left open.

/ʈ/: retroflex - the upper surface of the tongue made partly concave by the bending up (or bending back, hence retroflexion) of the tongue tip.

/ɯ/: is usually said to be labial rather than bilabial, as the lips are pursed rather than brought toward each other.
2.2 Vowels

Vowel phonemes of English, as they will be represented in this study, are illustrated by the examples following:

/\, -miss- bit -fill-
/e, -mess- bet -fell-
/o, -mass- baat -Hal-
/a, -muss- but -hull-
/a, -mosque- bot-fly -doll-
/o, -sauce- bought -fall-
/u, -puss- foot -full-

Those vowel sounds which usually involve appreciable change in the position of the tongue or lips are regarded as diphthongs, combinations of a vowel phoneme with a following glide. The glide phonemes of English are /y/ and /w/; the glides are produced by movement of the tongue and lips from the position they have for some vowel toward the position they would have for /y/ at the beginning of a word. We will use the term nucleus to refer either to one of the simple vowels ("monophthongs") illustrated above or to a diphthong. (The term has been chosen since a vowel or diphthong forms the nucleus, or indispensible central core of a syllable.)
The diphthongs generally present in American English are:

- /iy/  
  - geese
  - beet
  - feel

- /oy/  
  - mace
  - bait
  - fail

- /ay/  
  - mice
  - bite
  - file

- /oy/  
  - moist
  - quoit
  - foil

- /aw/  
  - mouse
  - bout
  - fowl

- /ow/  
  - most
  - boat
  - foal

- /uw/  
  - moose
  - boot
  - fool

The vowels which can occur before /r/ in English present many special problems for a linguistic description, and further discussion will be given to them in a later section. One obvious factor involved is that many kinds of English speech do not have an /r/ sound except when a vowel follows (this is often called "r-less" English). In this study the other type of speech ("r-ful" English) will generally be discussed. The ordinary combinations of nuclei and following /r/ when the /r/ is not in turn followed by another vowel will be represented as follows:

- /ir/  
  - shear

- /er/  
  - share

- /ur/  
  - sure

- /ar/  
  - sherr

- /yr/  
  - shire

- /or/  
  - shord

- /or/  
  - shore
While the consonant phonemes show a remarkable degree of stability throughout the English-speaking world, different dialects vary tremendously as to vowel nuclei. Dialects differ as to what nucleus occurs in a given word, as for example: whether creek is /kriyk/ or /krik/; whether dog is /dog/ or /dag/; whether root is /ruwt/, /sut/, or /st/. They differ also as to total number of vowel nuclei used to distinguish words, especially by having diphthongs other than those listed above. The extra diphthongs may appear in quite different sets of words. For example, a diphthong we would represent by /w/ may be found both in the dialects of certain speakers from Toronto, and of certain speakers from Philadelphia; but for the Torontan it replaces /aw/ in mouse, while for the Philadelphian it replaces /ow/ in coke.

Most fundamentally, dialects differ as to how many sets of words are kept distinct by phonemic differences between vowel nuclei. For example, speakers of American English from certain areas do not make the contrast—represented in this study, however—between /o/ and /a/ before a consonant (not including

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1This is not to say that differences regarding consonants are absent. We have already mentioned the difference between "r-full" and "r-less" English. Another well-known difference is the identity of whale, whether, which with weel, weather, witch, in some dialects but not in others.
Various contrasts are made by large groups of speakers of English, but not represented in this study. This omission is based on the feeling that these contrasts are not sufficiently widespread to merit inclusion on a par with the generally prevalent system of vowel contrasts which we are endeavoring to represent here. Some of the more important cases of such additional distinctions will be mentioned in a later section. ²

There are also cases where two different dialects, even having the same phonemes, may differ in that a certain contrast is maintained in one dialect in environments of adjacent sounds where the other dialect makes no contrast. The customary distinction in English between /i/ and /e/, as in hid, /hid/ and head /hed/

²Certain examples are interesting not for their prevalence, but only to show the extent to which dialects differ in the phonemic contrasts maintained among vowel nuclei. For instance, pairs like beat and beat, meet and meat, et cetera, which have identical pronunciations for the vast majority of speakers of English, still are phonemically distinct in certain dialects of Scotland. There are even speakers of English who have different vowel nuclei in poll and pole.
obtains also in most dialects before /n/; however many southern midland dialects of American English do not distinguish those phonemes before /n/, so that tin=ten, Lind=lend, mint=meant, since=sense, and clinch=clench.

There is one quite widespread type of distinction in vowels which is not represented in the usual transcription of this study. This seems to be mainly a matter of length.

Examples of such length contrasts (not necessarily to be heard from the same speakers) are given below. The length, elsewhere in this study disregarded, is here written /ː/. The members of the pairs given below, which may be distinguished by length, may also be kept distinct by other speakers in other ways.

Do it when you can. /kæ:n/ (i.e., whenever possible)
Do it when you can. /kæː:n/ (sc. fruit)

am /æm/ bomb /bæm/ notch /naːt/
ham /haːm/ balm /baːm/ watch /waːtʃ/
gloss /glos/ logger /ˈlɔɡər/
sauce /soːs/ auger /ˈɔɡər/

In some dialects of English contrastive length exists where other dialects have a postvocalic /r/.

cod /kɒd/ cud /kʌd/

card /kaːd/ curd /kɜːrd/

Length contrasts also occur involving other simple vowels; for more details the reader should consult James Sledd, *A Short Introduction to English Grammar* (Chicago: Scott Foresman & Co., 1959), pp. 45-54.
Length contrasts are often specially prevalent before /r/ followed by a vowel. A common pattern of contrasts involves pairs such as the following:

- nearer /ni:ri:/
- mirror /miri:/
- fairish /fe:ri:/
- cherish /čeri:/
- furry /fʌri:/
- hurry /hʌri:/

The picture is still further complicated by other dialect differences involving nuclei before intervocalic /r/. Thus different American speakers of English may have distinct vowels in the first syllables of all three words, or two pronounced all the same, or three the same in the sets:

Mary merry marry / forum forest laurel

The transcription used in the rest of the present study represents only some of the possible distinctions; this is done in the belief that what is represented is a particularly widespread pattern.

- /iər/ shear beard nearer mirror
- /eər/ share Baird fairish Mary merry
- /ɔər/ marry
- /ɒər/ shirr bird furry hurry
- /ɑr/ jar bard starry sorry
- /ɔr/ war short warring laurel warren
- /ɔr/ shore board sorest forum
- /ʊr/ sure Lourdes mooring during
In addition it is necessary to mention another vowel which constitutes an additional phoneme in some dialects. Even in such dialects, however, it is not found in a large number of words. A person learning to speak English could manage very well without ever using this vowel; its importance for the present study lies in its comparability with certain sounds in Russian.

One of the words most likely to contain this vowel is the adverb just. Many speakers of English pronounce this word so that it is not the same as the adjective just (as in a just man), nor is it the same as gist, or jest. (The tongue is nearer the roof of the mouth than for just, also further back in the mouth than for gist.)

This vowel will be represented in the transcription by /ə/. It is fairly often found in such (in such a case not rhyming with much, itch, etch, or Butch) and in pretty. Some speakers use it in a variety of other words.

One particular set of words likely to contain the phoneme /ə/ are pronunciations, often facetious, of abbreviations not containing a vowel letter, such as Wm. /wəm/, Ph.D. /fæd/.
The classification of vowels according to their formation in the mouth is usually made principally according to two criteria. The first of these is the nearness of the tongue to the roof of the mouth. Vowels are divided by this criterion into high, mid, and low. The high vowels are those with the tongue closest to the roof of the mouth. Of the simple vowel phonemes of English: /ɪ/, /ɜː/, /u/ are high vowels; /æ/ and /ʌ/ are mid vowels, /ə/ and /a/ are low vowels (/o/ varies from low to mid).

By the second criterion, vowels are classified according to where in the mouth the tongue is closest to the palate. They are called front, central, or back. For most American English: /ɪ/, /e/, /æ/ are front vowels; /ɜː/, /ʌ/, /a/ are central vowels; /ʊ/, /o/ are back vowels.

The back vowels of English are also labial or rounded (have the lips pursed). Rounding is an independent criterion for the classification of vowels since other languages have rounded vowels which are not back vowels (such as the German ü) or back vowels which are not rounded (such as the Turkish i or Vietnamese ỹ).
Beside the vowel nuclei already dealt with, other vowel sounds are found in utterances of more than one syllable, for instance in the second syllables of these words:

- Phillip
- mallet
talent
colic
villa
pillow

- Caleb
- pallid
island
Ilig
valley
valve

- aleph
Alice
balance
relish
valor

- olive
cellist
calleth
village
hostile

- alum
pollen
shilling

or in the first syllables of these:

- enough
- erase
- mistake
- endorse
- about
- promote

- belong
- arrive
- escape
- impose
- suppose
- unite

While some speakers make contrasts between different vowel qualities before the same consonant in certain weak syllables, it is also common not to have any such contrasts. The transcription used here will represent the latter type of speech. In all the weak syllables we will write the phoneme /ɪ/. This symbol represents either a vowel of a generally high-central quality (usually closest to /ɛ/ of the other vowel phonemes), or it may represent no vowel segment at all, but only the syllabic nature of what are sometimes called syllabic consonants (as in the second syllables of such words as prism, prison, drizzle, blizzard -- transcribed /prɪzm/, /prɪzn/, /drɪzl/, /blɪzd/).

The fundamental characteristic of the phoneme /ɪ/ is the "weak" "reduced" or "obscure" quality of the syllables containing it.
In contrast to /i/, the vowel phonemes treated previously will be referred to as full vowels.

The words in the list are transcribed in the present system as follows:

<table>
<thead>
<tr>
<th>Word</th>
<th>Transcription</th>
</tr>
</thead>
<tbody>
<tr>
<td>filip</td>
<td>2'x4it tw4nt kalik vili pil4w</td>
</tr>
<tr>
<td>keylid</td>
<td>y'klid ey4lind ili&amp; wyli&amp; walyi&amp;</td>
</tr>
<tr>
<td>mlis</td>
<td>y'x4lis balins relis w4I4r i&amp;i&amp;</td>
</tr>
<tr>
<td>smlis</td>
<td>c'x4list kolis vili&amp; hastil</td>
</tr>
<tr>
<td>smla</td>
<td>palin x'li&amp;</td>
</tr>
<tr>
<td>xnal</td>
<td>xrayv misteyk indors primowt</td>
</tr>
<tr>
<td>xlyog</td>
<td>xrayv iskeyp impowz yinayt</td>
</tr>
</tbody>
</table>

The transcription represents one obscure vowel, the phoneme /i/, and two obscure-vowel /iy/ and /iv/.

At this point an important theoretical consideration needs to be introduced. The techniques of linguistics are best suited to dealing with language material that is uniform --- perhaps perfectly suited only to one person speaking in a single style. What we are trying to represent in this study is a general pattern, which will be an approximately valid description for as great a range of types of English as possible. It is quite certain that representation of the reduced syllables by a single obscure-vowel phoneme, as illustrated above, is invalid for many types of English.
Some dialects have a large number of different vowel nuclei in weak syllables, up to at least half as many as are found in syllables with full vowels. If such dialects were the focus of our attention, we would strive to identify the nuclei of reduced syllables with those of the syllables containing full vowels. We would, in fact, say that the weak syllables contained the same full-vowel phonemes with an additional feature of obscurity or reduction. (This feature would be an additional stress phoneme, another member of the set of phonemes delineated in section 2.3 below.)

It has been the more common approach in descriptions of English sounds to employ this alternative treatment. In the present study the analysis involving the inherently obscure vowel /ᵻ/ represents occur as /ᵻkɑɹ/ and sucker as /sᵻkɑɹ/. According to the other approach, the distinction (apart from the initial consonant) is considered a matter of different stress patterns: Weak-strong (') for occur; strong-weak ("') for sucker. The vowel sequences are regarded as identical:

\[
\begin{align*}
\text{Occur} & : \text{A}K\text{A}r \\
\text{Sucker} & : S\text{A}K\text{A}r
\end{align*}
\]

Similarly, where we write immix /ɪmɪkə/, mimics /mɪmɪks/, distinct /dɪstɪŋkt/, twisting /twɪstɪŋ/, the alternative approach identifies the vowels:

\[
\begin{align*}
\text{Imikə} & \quad \text{Mimikə} \\
\text{Dɪstɪŋkt} & \quad \text{Twɪstɪŋ}
\end{align*}
\]

and we will write a difference in vowel nuclei rather than in stress to distinguish s. h pairs as

\[
\begin{align*}
\text{Louïse} & \quad \text{Louïs}s \\
/luɪs/ & \quad /luɪz/
\end{align*}
\]
Some further comment is required about the phonetic quality of /ɛ/ under various conditions. As was mentioned above, the quality of the obscure vowel usually bears a closer resemblance to /æ/ than to any other of the full vowels. The exceptions to this generalization are of two types. The first, already alluded to, covers many instances when /ɛ/ precedes /l/, /n/, or /m/. What is actually pronounced then is a syllabic consonant, and there is no period of vowel sound which is directly comparable to any other vowel phoneme.

muddle sudden fathom
/mʌdʌl/ /sʌdən/ /feɪm/ On the other hand, the obscure-vowel diphthongs, and /ɛ/ itself under certain conditions, come fairly close to some of the other, more frequently occurring vowel nuclei.

/ɛ/ is close to /ɪ/ before /n/ shilling /ˈʃɪlɪŋ/

at end of word

villager /ˈvɪlɪŋ/ /ˈrɛliŋ/

start of word

allow /ˈlɔl/ /ˈrɔl/ /ˈvɔl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/ /ˈvæl/

(When English is treated as having an additional stress phoneme, the words in question are considered as including the vowel nucleus whose quality the weak syllable approximates, together with the obscurity-producing phoneme of weak stress.)
2.3  Point of Clear Division

The difference between clear and ambiguous syllable division is a significant distinction in the sound of English utterances. In some cases, the division is clearly marked. This is the case, for example, in grey day or below decks --- where the /d/ clearly goes with what follows --- and likewise in grade A or road cige -- where the /d/ clearly belongs to the syllable which precedes. In the ordinary pronunciation of many words,
however, there may be consonants which do not belong clearly to either the following or the preceding syllable. This is likely to be true of /d/ in the pronunciation of gradation or codex.

Where there is a clear division or a syllable boundary, this will be represented by leaving a space between letters in the phonemic transcription.

grey day /grey dey/, gradation /greydayshin/, grade A /greyd ey/
below decks /biflow sheks/, codex /kowdeks/, road edge /rowd ey/

The presence or absence of a point of clear syllable division presents certain difficulties for description, in that one way of striving for greater clarity of pronunciation is the introduction of extra points of clear syllable division. Thus /grey dey shin/ is commonly heard instead of /greydeyshin/, when the word is receiving particular attention. Also, there is considerable diversity among speakers as to whether certain items are normally said with clear or ambiguous syllable division. In the examples of the lists below, the ones in the middle column are written without space, since they have the ambiguous type of syllable division in the English speech of many people. There will be speakers, however, who have a clear syllable division in some of these words -- this is perhaps possible for any of the words in the middle column. A given person reading these lists may have to discard some of the examples as not illustrating the point, they are supposed to, but generally some of the rows will give valid examples.
of the same consonant in an ambiguous position as well as belonging clearly with what follows or with what precedes.

<table>
<thead>
<tr>
<th>Word</th>
<th>Pronunciation</th>
<th>Word</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>see-saw</td>
<td>/siy so/</td>
<td>Esau</td>
<td>/iyso/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>peace offer</td>
<td>/plēs of'ar/</td>
</tr>
<tr>
<td>showcase</td>
<td>/sow keys/</td>
<td>locate</td>
<td>/lōw keyt/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pack ice</td>
<td>/pak əys/</td>
</tr>
<tr>
<td>tie racks</td>
<td>/tay racks/</td>
<td>Pyrex</td>
<td>/pərəks/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fire ax</td>
<td>/fər əks/</td>
</tr>
<tr>
<td>pay line</td>
<td>/pey layn/</td>
<td>saline</td>
<td>/seyl eɪ/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sail edge</td>
<td></td>
</tr>
<tr>
<td>mess kit</td>
<td>/mes kit/</td>
<td>Musgat</td>
<td>/məs ək/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>musk ox</td>
<td>/mask əks/</td>
</tr>
<tr>
<td>door mat</td>
<td>/dor meet/</td>
<td>torment</td>
<td>/tərənt/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>warm-up</td>
<td>/wɔrm ʌp/</td>
</tr>
<tr>
<td>back track</td>
<td>/bæk track/</td>
<td>electron</td>
<td>/ɪlektən/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tract rack</td>
<td>/trækt ræk/</td>
</tr>
</tbody>
</table>

1. The point of clear syllable division is also often referred to as "open transition", "open juncture", or "plus juncture". It is, in the present study, considered a phoneme of English, and when it alone is being cited between slant lines, it will be represented as /₁/. The examples which have been given would suggest, as is in fact the case, that /₁/ usually occurs between words or between important parts of a word. There are many exceptions to this, however. Some speakers of English have /₁/ within undecomposable words like Plato, which instead of /pleytəw/ is often pronounced /pleytəw/ (just as though one were talking of a "play toe"). Conversely, many speakers rhyme these pairs of words, which for others contrast by presence and absence of /₁/.
(There are, of course, other ways in which the words can fail to rhyme, besides differing as to occurrence of /\ ./.)

The effect of a clear demarcation point in the stream of speech produced by the phoneme /\ ./ arises from several factors; the most important of these are extra length in the sounds which precede /\ ./ and extra effort in the sounds which follow it.

Whatever comes before /\ ./ is lengthened in comparison with the duration it would have when no /\ ./ follows it. This is most noticeable when the preceding phoneme is a resonant; the vowel /0/ or /a/; a diphthong containing /w/ or /y/; or one of the consonants /r/, /l/, /m/, or /n/. With any of these coming before /\ ./, a dragging effect extends over the vowel of the preceding syllable and the consonant phonemes, if any, between the vowel and the /\ ./. With other sounds before it, the point of clear division produces a less marked effect. The least influence is that on preceding /p/, /t/, or /k/.

These stops are held slightly longer in this situation than elsewhere.
It is possible to have the same voiceless stop on either side of /_./. Phonetically, three different lengths of stop are heard in the following sets:

- night /naytreyt/  rate /nayt reyt/  freight train /freyt treyn/
- cyclone /sayklown/  load /v lowd/  clothes /v klowdz/
- Alpine /spayn/  scalp itch /skaelp iT/  kelp patch /kelp pæt/

With regard to the phoneme that follows it, the effects of /_/_ may be succinctly summarized as involving greater force in sound production, compared to the case of the same phoneme not preceded by /_/_.

Here it is /p/, /t/, and /k/ that are most clearly marked, as they are followed by /r/, /l/, or /v/. Also, if one of them is followed by any of /r/, /l/, or /v/, this latter sound will in turn be voiceless. Note the following pairs:

- Jacron /deykrən/  tea cream /tið kriːm/
- duplex /duwploks/  two-place /tuw pleɪs/

Other important phenomena are also associated with the greater effort marking the sound following /_/. Vowels may be preceded by a glottal closure (this is the sound that almost inevitably occurs in the middle of "uh-uh" and "oh-oh").
After /l/, /l/ does not have the velarized or "dark" quality of other medial /l/’s. Similarly, /r/ is said with the tongue closer to the roof of the mouth than is the case with other medial /l/’s.

<table>
<thead>
<tr>
<th>phoneme</th>
<th>allophone</th>
</tr>
</thead>
<tbody>
<tr>
<td>ion</td>
<td>/ayan/</td>
</tr>
<tr>
<td>tie-in</td>
<td>/tay in/</td>
</tr>
<tr>
<td>pylon</td>
<td>/paylan/</td>
</tr>
<tr>
<td>tie line</td>
<td>/tay layn/</td>
</tr>
<tr>
<td>Pyrex</td>
<td>/payreks/</td>
</tr>
<tr>
<td>tie racks</td>
<td>/tay raaks/</td>
</tr>
<tr>
<td>orlon</td>
<td>/orlan/</td>
</tr>
<tr>
<td>warlock</td>
<td>/wor lak/</td>
</tr>
</tbody>
</table>

Other consonants show other effects connected with the sharp onset of the following syllable; these will not be discussed here.

Another way of stating the influence of /AAA/ on adjacent sounds is to say that sounds following /AAA/ are like those at the beginnings of whole utterances, while sounds preceding /AAA/ are like those at the ends of whole utterances. This is a helpful point of view in cases like long bow /log bow/ or phase shift /feyz shif/ where the corresponding sequence (/gb/ or /st/) without /_/ is either rare or impossible. This alternative formulation of the effects of /_/ is likewise of use in cases where a division can be made at more than one point, as in comparing /k str/ in back strap, /ks tr/ in fox trot /faks trat/, and /kst r/ in text reading /tekst readin/, with /kstr/ in extra dextrose /ekstr/ /dekstrows/.

It is also worth noting that many immediately adjacent combinations of sounds (without intervening /AAA/) involve anticipation in the first sound of the position for saying the second, or likeness of the second to that of the first to a degree not at all characteristic of the same sequence of sounds separated by /AAA/.

\[2\text{i.e., with the back of the tongue somewhat raised toward the velum (soft palate).}\]
2.4 Stress

The differences between full-vowel nuclei and reduced-vowel nuclei (\( ^\wedge \) ) create marked differences in the prominence of syllables in English. There are also other differences in prominence. Words of two syllables with full vowels in each syllable may differ as to which syllable is the more prominent. Thus the following words usually carry maximum prominence on the first syllable when they are nouns, but on the second when they are verbs.

\[
\begin{align*}
\text{torment} & /\text{torment}/ \\
\text{augment} & /\text{gment}/ \\
\text{insult} & /\text{insult}/ \\
\text{incent} & /\text{cents}/ \\
\end{align*}
\]

A phoneme of stress or accent distinguishes these pairs of words. We will write this as a acute accent (\( ' \) ) over the vowel in the more prominent syllable:

\[
/\text{torment}/ \text{ (noun): } /\text{torment}/ \text{ (verb)}
\]

When, apart from any word in which it occurs, this phoneme is to be mentioned by itself, it will be written \( /\wedge/ \).

Except for related nouns and verbs, it is difficult to find pairs of words with no differences except the position of the stress phoneme. There are some pairs with only slight further differences such as:

\[
/\text{Harmes}\; /\text{Barmes}/ \; /\text{Harmye}\; /\text{Barmye}/ \; \text{[or] /Barmys/ }
\]

In this work, whenever a stress phoneme is cited, it is, for convenience, written over a \( /\wedge/ \). This also permits distinguishing absence of a stress phoneme — also called weak stress — as \( /q/ \) with no mark over the \( q \).
Differences as to which full vowel in a word occurs with the stress phoneme /æ/ are also found in words with more syllables:

<table>
<thead>
<tr>
<th>Ancestor</th>
<th>ancestral</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ænsestrəl/</td>
<td>/ænsɛstrɪl/</td>
</tr>
<tr>
<td>Hecate</td>
<td>legatee</td>
</tr>
<tr>
<td>/hekətiə/</td>
<td>/legətiə/</td>
</tr>
<tr>
<td>regulator</td>
<td>regulation</td>
</tr>
<tr>
<td>/rɛɡɪlɛətər/</td>
<td>/rɛɡɪlɛəʃən/</td>
</tr>
</tbody>
</table>

When a word with only a single full vowel is cited by itself, the full vowel is considered as occurring with /æ/.

<table>
<thead>
<tr>
<th>bend</th>
<th>append</th>
</tr>
</thead>
<tbody>
<tr>
<td>/bɛnd/</td>
<td>/ˈæpɛnd/</td>
</tr>
<tr>
<td>mission</td>
<td>addition</td>
</tr>
<tr>
<td>/miʃən/</td>
<td>/ˈiːdɪʃən/</td>
</tr>
<tr>
<td>regular</td>
<td>particular</td>
</tr>
<tr>
<td>/rɛɡɪlər/</td>
<td>/ˈpærtɪkələr/</td>
</tr>
<tr>
<td>enviable</td>
<td>irrevocability</td>
</tr>
<tr>
<td>/ɛnvɪˈɛbəl/</td>
<td>/ɪrˌɛvəˈbɑləti/</td>
</tr>
</tbody>
</table>

Consideration has been given so far only to the stress in single words which were not divided by an occurrence of /\/. In examining larger groupings which do include /\/,
additional stress differences can be observed. Notice the differences as to which word is most prominent in these sets.

  course materials Christmas present
  coarse materials Christmas Present

(Dickens' Ghost of Christmas Present)

Short connected groups of words can be found with the principal emphasis in any position; e.g. on the first, middle, or last word in a group of three.
wait there then meeting people lately
late spring time German Spanish teacher
wait three days Mary Agnes Johnson

In such cases as those above, the word which is most prominent will be marked as containing another stress phoneme /0/, the phrase emphasis. Any word cited by itself carries this phrase emphasis. In closely connected groups of words, only one word has the phrase emphasis, the others usually carry the stress phoneme /a/.

late spring time /lāyt ɔsprīt ˈtām/  
sand content /ˈsand kæntənt/  
articulate pedagogy /ˌɑrtɪkylət ˈpɛdəgəˈjɪ/  
dictionary pronunciation /ˌdɪkʃənəri ˈprənənˌsəriˈɑn/  

Groupings including / / may exhibit contrasts between having and not having /a/ on parts not carrying /0/.

Notice the following sets, in which a difference in stress is found in the speech of many.

<table>
<thead>
<tr>
<th>cold plate</th>
<th>eye word</th>
</tr>
</thead>
<tbody>
<tr>
<td>hot plate</td>
<td>oby-word</td>
</tr>
<tr>
<td>cat call (by or to cats)</td>
<td>weigh station</td>
</tr>
<tr>
<td>cat call (jeeting)</td>
<td>way station</td>
</tr>
<tr>
<td>long island</td>
<td>short circuit (literal)</td>
</tr>
<tr>
<td>Long island</td>
<td>short circuit (electrical)</td>
</tr>
<tr>
<td>go obey it</td>
<td>bring up the squashes</td>
</tr>
<tr>
<td>go obey it</td>
<td>bring up the children</td>
</tr>
</tbody>
</table>

For many dialects this difference is quite important in distinguishing types of compound words.

The symbol (°) is written approximately at the onset of the most prominent syllable: Michigan /ˈmɪʃɪn/, Wisconsin /ˈwɪskɑːnˈsɪn/, Illinois /ɪlˈinoɪ/. In this treatment /0/ is considered as being added to /a/.
2.5 Phrasing

Fairly long stretches of speech are broken up into shorter groups in various ways. Sometimes the way this is done is important to the sense. For instance:

warmed-over / mush rooms
warmed / over charcoal

or the possible contrast between:

turned-on / lathes
turned / on lathes

Description of the sound system of a language must necessarily take account of grouping of words. In the phonemic transcription used here, this is done by writing a symbol at the ends of those coherent groups which are spoken as units. These groups are called phrases.

Most phrases contain a single phrase emphasis (/\)/.

A great many features of timing and rhythm contribute to the impression of coherence that a phrase produces.

Phrases may end in three distinctively different ways.

One of these involves a rapid fading away of the voice, often while the pitch level is drifting downward. (This ending is characteristic of normal declarative statements.) It will be written /\/.

I have to get home \("/\)
Another way of ending a phrase is by a rise in pitch during the last part of the final syllable. This will be written /\/. (It frequently occurs at the ends of questions, and also, reversing the generally falling pitch trend, at the end of statements which are made with strong qualification.)

Will I get home? /
You know I can’t stay. I have to get home. ↑

The third mode of phrase termination involves the rhythmic and dynamic features which indicate the end of a phrase, especially proression of the final syllable, but lacks the special features of either /\/ or /\/. (This is the way a phrase usually ends when something further is to follow immediately.) It will be written /\/.

I have to get home, it’s getting late. ↓
When the phrase emphasis occurs some distance ahead of /\/, it is noticeable that the pitch before the end of the phrase is sustained about level, in contrast to the pitch effects of /\/ and /\/.

I have to get home right away, it’s late. ↓
The three endings /\/, /\/, and /\/ are known as termin-
als.
2.6 Pitch

There is no general agreement among those who have studied the subject as to how a phonemic analysis of the pitch phenomena of English is to be made—there is not even universal agreement that an analysis is possible.

The approach to the analysis of the speech melody of English which has shown the most promise assumes that there are four distinct levels of pitch. The occurrence of one or another of these at certain points in any utterance is considered sufficient to explain the differences in tune between different sentences.

Phrases with essentially level pitch form the most plausible basis for assuming that a certain small number of pitch levels are the relevant units for describing English pitch phenomena.

Level phrases often occur as parenthetical remarks, and especially as indications of who the speaker of a quotation was, or who is the person addressed. The following examples are likely to be read in a way that shows level stretches at differing heights of pitch:
"Are you there?" he called back.
"I think so," she replied.
"Don't touch it!" he warned me.
You going, Evelyn?
Good morning, Mrs. Reynolds.
Stop squirming, Bobby McDougal!

An even higher level is likely to be found at the end of questions showing agitation:
Will that be all right, Bobby?
Are you sure you're all right, Bobby?

The pitch-level phonemes will be indicated by superscript numbers: low, \(1\); medium, \(2\); high, \(3\); very high, \(4\). The numbers are written before the syllable to which they apply, or before the terminal.

It is not necessary to specify the pitches on every syllable in an utterance. Only at certain points in a phrase can significantly different levels of pitch occur.

Two such points are found in every phrase: at the phrase emphasis and at the terminal. Whenever the phrase emphasis is not at the beginning of the phrase, the pitch at the beginning is also significant.

Contrast at the phrase emphasis

\(2\) Your lunch is ready.\(2\)
\(2\) Your lunch is ready.\(2\)
The first of these might be a reminder; the second could appear as one item in a list of reasons for not doing something.

Contrast at the terminal:

2 Let's hope so. 1↓

2 Let's hope so. 2↓

The second shows a certain amount of doubt about the outcome.

Contrast at the beginning of the phrase:

2 You work here. 1↓

3 You work here. 1↓

The first is an observation; the second is a direction.

It is also possible for the pitch to show a jump somewhere between the beginning and primary stress of a phrase; this introduces an extra point of significant pitch contrast.

2 We've waited 3 twenty 3 minutes. 1↓

This extra pitch-point can occur only at a syllable with stress /3'/.

Less common is the occurrence of significant pitch-points between the phrase emphasis and the terminal, such as are described by James Sledd in "Superfixes and Intonation Patterns," Litera III (1956).
The pitch phonemes which occur in a phrase, together with the terminal at the end of it, are called an intonation pattern. Thus, the usual way of citing statements in English has what we call the intonation pattern \( /231\downarrow (\text{whether or not } /2f\text{ is actually present})\):

\[ \text{He'll finish 3 later.} \]
\[ \text{He finish 3 later.} \]
\[ \text{He finish 3 later.} \]

Moderately insistent questions of the type answerable by "yes" or "no" have a pattern which we will write \( /233\uparrow /\).

\[ \text{Did you get my 3 letter?} \]
\[ \text{Did you got my 3 letter?} \]
\[ \text{Did you got my 3 letter?} \]

Similarly, intonation patterns with an extra pitch point are represented by four numerals and a terminal, as \( /232\downarrow /\) for

\[ \text{I want to go 2 home.} \]

spoken as somewhat of a pronouncement.

END--Chapter 2
### The Phonemes of Russian

#### 3.1 Consonant and Vowel Phonemes

There are thirty-five consonant sounds in Russian which clearly are phonemically distinct. Symbols representing these phonemes and examples for each are given below, together with three other sets of examples in parentheses; these others are to be explained subsequently, since their linguistic status is not quite as clear and requires further discussion.

<table>
<thead>
<tr>
<th>No</th>
<th>Consonant</th>
<th>Word</th>
<th>Pronunciation</th>
<th>Example (Russian)</th>
<th>Example (English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>/п/</td>
<td>/пуд/</td>
<td>/p/</td>
<td>whisker</td>
<td>36 lbs.</td>
</tr>
<tr>
<td>2</td>
<td>/б/</td>
<td>/бут/</td>
<td>/b/</td>
<td>rubble</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>/м/</td>
<td>/мут/</td>
<td>/m/</td>
<td>of the muses (gen.pl.)</td>
<td>um</td>
</tr>
<tr>
<td>4</td>
<td>/т/</td>
<td>/тут/</td>
<td>/t/</td>
<td>here</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>/д/</td>
<td>/дун/</td>
<td>/d/</td>
<td>of the arcs (gen.pl.)</td>
<td>lun</td>
</tr>
<tr>
<td>6</td>
<td>/н/</td>
<td>/нуд/</td>
<td>/n/</td>
<td>of the bores (gen.pl.)</td>
<td>lun</td>
</tr>
<tr>
<td>7</td>
<td>/к/</td>
<td>/куд/</td>
<td>/k/</td>
<td>morsel</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>/г/</td>
<td>/гуд/</td>
<td>/g/</td>
<td>of the lips (gen.pl.)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>/ф/</td>
<td>/фут/</td>
<td>/f/</td>
<td>12 inches</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>/в/</td>
<td>/вуз/</td>
<td>/v/</td>
<td>college (Высшее Учёное Заведение)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>/с/</td>
<td>/суд/</td>
<td>/s/</td>
<td>lawcourt</td>
<td>uc</td>
</tr>
<tr>
<td>12</td>
<td>/з/</td>
<td>/зуд/</td>
<td>/z/</td>
<td>itch</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>/х/</td>
<td>/худ/</td>
<td>/h/</td>
<td>thin (short form masc.)</td>
<td>suh</td>
</tr>
<tr>
<td>14</td>
<td>/посподи/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>/п/</td>
<td>/пут/</td>
<td>/p/</td>
<td>jester</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>/з/</td>
<td>/зук/</td>
<td>/z/</td>
<td>beetle</td>
<td></td>
</tr>
</tbody>
</table>

(Heavens!)

(puff)

(puff)

(dryness)
| /o/ | цуг | tandem | куц | curtailed (short form masc.) |
| /l/ | лук | onion | ступ | chair |
| /r/ | руд | of the ores (gen. pl.) | лур | of the foolish women (gen. pl.) |
| /у/ | кт | quarterdeck | суи | poke (imperfective imperative) |
| /p/ | диск | chirp | глубь | the deep |
| /b/ | бис | encore! | | |
| /m/ | мисс | Miss | семь | seven |
| /т/ | тис | yew | суть | essence |
| /д/ | диск | disc | | |
| /н/ | низ | bottom | сунь | take a poke (perfective imperative) |
| /к/ | кис | turned sour (past masc.) | | |

(Е) гид | guide | | |
<p>| /f/ | фиск | exchequer | Рупь | Ruth |
| /у/ | вис | hung (past masc.) | | |
| /з/ | оиз | dove grey (short form masc.) | дуёг | make narrow (perfective imperative) |
| /э/ | эйн | of the winters (gen. pl.) | | |
| (Е) хитро | sly (short form neut.) | | |</p>
<table>
<thead>
<tr>
<th>Sound</th>
<th>Word</th>
<th>Transcription</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɨ/</td>
<td>чит</td>
<td>shield</td>
<td>пуч</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>жжет</td>
<td>burns (3d sing. pres.)</td>
<td></td>
</tr>
<tr>
<td>/ɨ/</td>
<td>чист</td>
<td>clean (short form masc.)</td>
<td>мучь</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>дюс</td>
<td>of the foxes (gen. pl.)</td>
<td>нуль</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>дис</td>
<td>rice</td>
<td>дурь</td>
</tr>
</tbody>
</table>

Russian has five vowel phonemes, illustrated by the examples following:

<table>
<thead>
<tr>
<th>Sound</th>
<th>Word</th>
<th>Transcription</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɨ/</td>
<td>чин</td>
<td>member</td>
<td>ты</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>и</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>съ</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>чем</td>
<td>with what?</td>
<td>Т</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(instr.)</td>
<td>Тъ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>вс</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>чан</td>
<td>vat</td>
<td>та</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(nom. sing. fem.)</td>
<td>ах</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>вся</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>о чём</td>
<td>about what?</td>
<td>то</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(nom. sing. neut.)</td>
<td>ох</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>вс и</td>
</tr>
<tr>
<td>/ɨ/</td>
<td>чум</td>
<td>skin tent</td>
<td>ты</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(acc. sing. fem.)</td>
<td>ух</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>вс и</td>
</tr>
</tbody>
</table>

It is held by some linguists that the sound usually represented by ɮ in Russian is a distinct phoneme from that usually represented by ɬ. One argument for this is the greater phonetic difference between these sounds than can otherwise be found among variants of a Russian vowel phoneme. There are also peripheral contrasts, as between the names of the letters Ṽ and ɮ (when not called "ep6l") and the words "ні "кінне" "use of an [i]-sound" and "кінне" "use of an ɮ-sound". In the present study, such distinctions are regarded as being outside the actual functioning system of the Russian language. The position taken here is that there is a single phoneme /i/, and that ɮ represents the variety of that fundamental sound found after plain ("hard" or non-palatalized) consonants.
The most striking feature of the Russian consonants, as a system, is the existence of palatalized consonants -- those with the mark beneath the letter in the lists, as р b м t' etc. In contrast to these, those represented by the same letters without the mark are called plain. (The palatalized consonants have the tongue arch so as to bring the blade close to the palate, much the way a palatalization of English /j/ or else achieve a similar effect by having the tongue behind the upper teeth.)

There are thirteen pairs of consonant phonemes in Russian which differ in that one has the plain pronunciation and the other has the palatalized pronunciation, otherwise the two have substantially the same type of sound production and the same classification by positions of lips and tongue.

<table>
<thead>
<tr>
<th>Plain</th>
<th>Palatalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>глуп</td>
</tr>
<tr>
<td>/b/</td>
<td>грб</td>
</tr>
<tr>
<td>/m/</td>
<td>знакь</td>
</tr>
<tr>
<td>/t/</td>
<td>суд</td>
</tr>
<tr>
<td>/d/</td>
<td>надо</td>
</tr>
<tr>
<td>/n/</td>
<td>вон</td>
</tr>
<tr>
<td>/k/</td>
<td>кхорный</td>
</tr>
<tr>
<td>/l/</td>
<td>нов</td>
</tr>
</tbody>
</table>

Other common symbols to indicate palatalization are: (т) р т (д) р' т' (з) р п т' (д) р п т' (и) р п т' (р) р п т' (и) р п т'.

Consonants

Palatalization
Although from the linguistic point of view it is the difference between
plain consonants and palatalized consonants which serves to distinguish words
in Russian, it is to be kept in mind that, followed by a vowel, is mule
in Russian orthography by writing different vowel letters.

\[
\begin{array}{lll}
\text{Мука /mil/} & \text{мал /mal/} & \text{Мол /mol/} \\
\text{washed (past} & \text{small (short} & \text{breakwater} \\
\text{masc.)} & \text{form masc.)} & \text{mule} \\
\end{array}
\]

\[
\begin{array}{lll}
\text{Мил /mil/} & \text{Мал /mal/} & \text{Мол /mol/} \\
\text{nice (short} & \text{kneaded (past} & \text{International Youth Day} \\
\text{form masc.)} & \text{swept} & \text{past masc.)} \\
\end{array}
\]

Occasionally plain consonants before /э/ are distinguished by writing the
letter (э), as in Мэр /mer/ 'mayor' vs. Мер/мер/ 'of the measures' (gen. pl.);
usually, however, no difference is made in the spelling, as for instance between
ночель 'bed' with /т/ and НОУТ 'pastel' with /т/. Almost all words in
which a plain consonant, from the list of paired consonants given above, occurs
before /э/ are recent borrowings into Russian from foreign languages or are
abbreviation forms like НЭП /неп/ 'New Economic Policy' (Новьа Экономичеън Дольник).*/

*Special brackets * will be used to include comments at various points
about the relations between writing and pronunciation.
The situation in Russian is such that it is not entirely clear that /k/ , /g/ , and /x/ are distinct sounds on a par with the other palatalized consonant phonemes. In general [k], [g], and [x] occur before the vowel phonemes /i/ (I) and /e/ (ɐ), and not elsewhere; conversely, the plain sounds [k], [g], and [x] do not generally occur before /i/ and /e/ . In other cases involving a pair of consonants, one plain and one palatalized, such as /m/ and /m/, each will occur before any of the five vowel phonemes, and also final / before other consonants. As for example:

\[\text{мил нер мал мол мул всем to all (dative)}\]
\[\text{мил нер майл мшд семь seven}\]

\[\text{а a o u Final}\]

However, the prevailing pattern for [k] [g] [x] and [k] [g] [x] has only one of each pair occurring before a given vowel phoneme; in particular this includes different inflected forms of the same stem:

\[\text{k}\]
\[\text{отрок} \quad \text{отрокой} \quad \text{отроку} \quad \text{отрок ген. пл.}\]
\[\text{Кит} \quad \text{Кет} \quad \text{of the dog-salmon (gen. пл.)}\]

\[\text{g}\]
\[\text{слуга} \quad \text{слугой} \quad \text{слуги} \quad \text{gen. sing.}\]
\[\text{г ген. sing.}\]
In the case of [k] and [k] there are sufficient exceptions to the general pattern to indicate clearly that /k/ and /k/ are separate phonemes:

Also /ky/ occurs in the name 'Lucian', but /ky/ in k 'to the pits'. (Final /k/ does not occur.)

The deviations involving the other two pairs are of a much more marginal sort. For [x] and [x] no reliable examples can be cited of either in an exceptional position, and for [g] and [g] only some rather questionable instances.

In the prevalent pronunciation of Russian, [x] and [x] have limited possibilities of occurrence; each occurs only next to certain sounds and not next to others. This is a case of complementary distribution. If two similar

A further example of complementary distribution involves the variants of the phoneme /i/, as mentioned on p. 44 of this MS. The b variants occur only following plain consonants, otherwise the n variants are found. (The b variants are written with the letter n after ll and x in some cases.)
sounds are in complementary distribution; they constitute one phoneme; if not, they must belong to two different phonemes.

The two sounds \([g] \) and \([g}\) are generally also in complementary distribution, it would appear, even if they may not quite be so for some speakers.

The distribution of \([k] \) and \([k]\) is so nearly complementary that for most practical purposes the behavior of the three sets need not be distinguished.

In addition to the plain and palatalized consonants discussed previously, there are three other consonant phonemes with a pronunciation of the plain type and four with a palatal quality.

\[ /\acute{\epsilon}/ \text{мей} \] sew (imperfective \(/\acute{\epsilon}/, \text{мей} \) imperative) of the cabbage soup (gen. pl. tantum)

\[ /\acute{\epsilon}/ \text{шок} \] shock \[ /\acute{\epsilon}/ \text{шок} \] of the cheeks (gen. pl.)

\[ /\acute{\epsilon}/ \text{тикей} \] of the knives \[ /\acute{\epsilon}/ \text{тикей} \] of the rains (gen. pl.)

\[ /c/ \text{цель} \] goal \[ /c/ \text{цей} \] whose

\[ /c/ \text{чок} \] click! \[ /c/ \text{чёт} \] even number

\[ /u/ \text{эй} \] look here! \[ /u/ \text{ей} \] her

\[ /o/ \text{от} \] from \[ /o/ \text{от} \] (letter) J

Compared to \(/\acute{\epsilon}/\) and \(/\acute{\epsilon}/, /\acute{\epsilon}/\) and \(/\acute{\epsilon}/\) are long. (In place of the simple long sounds, some speakers pronounce \(/\acute{\epsilon}/, /\acute{\epsilon}/\) and \(/\acute{\epsilon}/, /\acute{\epsilon}/\). Some Russians do not have a phoneme \(/\acute{\epsilon}/, \) but rather a long sound without palatal quality, which is treated in this study as \(/\acute{\epsilon}/\) the plain sound \(/\acute{\epsilon}/\) doubled.

The mark \((,)\) is written to the right of the letters in the phonemic symbols \(/\acute{\epsilon}/\) and \(/\acute{\epsilon}/, \) both to suggest the length of these sounds and as a reminder that they do not bear as direct a relationship to the corresponding plain consonants as do the sounds represented by letters with the mark \((,)\) underneath.
The phonemes /з/, /ʃ/, /ʌ/, and /y/ will be called palatal but not palatalized consonants.

The choice of vowel letter following м, п, щ, с, щ is conventional, and differences in spelling such as the following do not affect the pronunciation:

- гаkать /ɡ̪aˈkæt/ to hush
- мов /mʌt/ beam
- жри /ˈʐɾi/ rebuke (imperfective imperative)
- цикл /ˈsɪkəl/ cycle
- шел /ˈʃəl/ went (past masc.)
- жри /ˈʐɾi/ umpire

There is no regular spelling for /з/; the most common are ээ (эээу, позээй) and жж (жжьт, држжы) жж is used only in the root meaning "rain" (дождливый). For /y/ at the beginning of words it is unusual, the regular way here and after a vowel being to use the letters э, о, ы, которы which after most consonant letters indicate the palatalization of the consonant. After a consonant, /y/ is indicated by the spellings би, бо, бы, бу.

Except in this circumstance, where it indicates /y/ before a vowel, the letter в following ж, ч, ш, щ has no significance for pronunciation (чч is virtually non-existent):

- рокь /ɾɔk/ rye
- дамь /dɔm/ you’ll give
- печь /ˈpɛt/ to bake
- вещь /ˈvɛtʃ/ thing

After other consonant letters, (b) indicates that the previous consonant is palatalized. When one palatalized consonant precedes another in certain
clusters, b may or may not appear after the first.

The palatalization of /l/, however, is always shown before another palatalized consonant.

3.3 Voicing of Consonants

Russian has twenty-two consonants which can be grouped in pairs of which one is voiceless and the other voiced:

- /p/ - /b/ пой sing (imperfective imperative)
  - /б/ бой struggle
- /p/ - /b/ пей drink (imperfective imperative)
  - /б/ бей hit (imperfective imperative)
- /t/ - /d/ там there
  - /д/ там I'll give
dень day
- /l/ - /d/ тень shadow
- /k/ - /g/ кот tomcat
  - /г/ год year
- /f/ - /v/ фон background
  - /в/ вон yonder
- /s/ - /v/ фей of the fays (gen. pl.)
  - /ж/ вей twist (imperfective imperative)
- /s/ - /z/ сад garden
  - /з/ зад rear
- /s/ - /z/ сядь sit down (perfective imperative)
  - /з/ зать son-in-law
Some speakers of Russian have another phoneme /γ/ which is voiced and
forms a pair with /χ/: /χ/ - /γ/ (i.e. the /γ/ differs from /χ/ only in
being voiced). There is some variation as to what words will be pronounced
with /γ/ even among those speakers who have this as a distinctive sound,
but it is likely to be found in:

- /κ/ - /γ/ кит 'whale'. гид 'guide' could equally well be
listed above. Since [k] and [g] are being treated here as variants of a single
phoneme /g/, this one phoneme is the voiced counterpart to both /k/ and /k/.

The voiced members of the pairs do not occur at the ends of
utterances in standard Russian, except in especially distinct pronunciation.
Ordinarily, then, in the following pairs of words the same final sound is used
in each member of the pair.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>оной</td>
<td>sheaf</td>
<td>оной</td>
<td>snob</td>
</tr>
<tr>
<td>/p/</td>
<td>смех</td>
<td>a rash</td>
<td>съём</td>
<td>sea swell</td>
</tr>
<tr>
<td>/t/</td>
<td>гот</td>
<td>Goth</td>
<td>год</td>
<td>year</td>
</tr>
<tr>
<td>/t/</td>
<td>пать</td>
<td>five</td>
<td>паль</td>
<td>strand</td>
</tr>
<tr>
<td>/k/</td>
<td>лук</td>
<td>onion</td>
<td>луг</td>
<td>meadow</td>
</tr>
<tr>
<td>/f/</td>
<td>пуф</td>
<td>puff</td>
<td>нов</td>
<td>new (short form masc.)</td>
</tr>
<tr>
<td>/f/</td>
<td>Рут</td>
<td>Ruth</td>
<td>кровь</td>
<td>blood</td>
</tr>
</tbody>
</table>

Some speakers of standard Russian have different consonant beginnings to
such words as счёт (счит) and мята (мятка) (long /э/). This means that
there are dialects in which only мята 'brash', and not счёт, contains
a voiceless sound corresponding to the voiced /э/ in мята. In the sound sy
of such speakers of Russian, words like счет with [ʃt̪] require a different
analysis in terms of the phonemes presented above presumably as /э, э/ but
such a contrast might perhaps necessitate setting up a slightly
different system of phonemes for such speakers.
At the ends of utterances, each of the sounds listed above has at least two possible spellings, depending on whether a voiceless or a voiced sound occurs in related forms before vowels, before the resonant consonants /v/, /w/, /r/, /l/ and /y/, or before /v/ and /y/."

The same situation prevails when any of twelve phonemes of the above list occurs before another voiceless sound. On the other hand, before the phonemes /b/, /v/, /d/, /g/, /z/, /z/, and /h/ only voiced sounds occur. (These may be spelled, however, with the letters usually used to spell voiceless sounds.)

The same rule about combinations of sounds holds regarding the end of one word and the beginning of the next, when they are pronounced as part of a
When immediately preceding one of the phonemes /b/, /d/, /g/, /z/, /s/, /ß/, /Z/, /s/, /z/, the phonemes /o/ and /ö/ are also voiced. For /c/ and /ç/, however, voicing is distinctive. This phenomenon usually occurs at the boundary between two words, but in a few instances the voiced variety of /o/ or /ö/ occurs inside a word.

The Russian phonemes /m/, /n/, /l/, /r/, /n/, /l/, /l/, /r/, are all usually voiced, but in certain circumstances the voicelessness of an accompanying sound will extend to one of these as well. The most notable instance of this is at the end of a word, following a voiceless consonant.

The presence of a voiceless /r/ in syllables ending in /rə/ is also usual:

**In abbreviation compounds there are sometimes exceptions regarding both voiced consonants before voiceless consonants and the reverse.**

**Обк** обком / сам ком / (областной комитет) (District Committee of the communist party)

**Госбан** госбан / (государственный банк) (State Bank)
3.4 Classification of Consonants:

The Russian consonants can be classified according to the way the sounds are made, as the consonants of English were in the chapter.

**Stops:**
- /p/ /b/ /f/ /v/  
- /t/ /d/ /s/ /z/  
- /k/ /g/ /x/ ([k])

**Affricates:**
- /ʧ/ /ʤ/  

**Fricatives:**
- /ʃ/ /ɹ/ /ʃ/ /ɹ/  
- /θ/ /ɹ/ /θ/ /ɹ/  
- /ʃ/ /ɹ/ /ʃ/ /ɹ/  
- /h/ (/γ/) ([x])

**Resonants:**
- /m/ /n/ /n/ /n/  
- /y/ /y/ /y/ /y/  

As in English, the nasals have the same position as certain of the stops.  
- /p/ /b/ - /m/  
- /t/ /d/ - /n/  
- /k/ /ɡ/ - /ŋ/  
- /ʧ/ /ʤ/ - /ŋ/  

The grouping of the Russian consonants according to the parts of the mouth involved in their formation is as follows:

**Lips**
- Bilabial: /p/ /b/ /m/ /f/ /v/  
- Labiodental: /ʃ/ /ɹ/ /ʃ/ /ɹ/  

**Tongue**
- Dental (touching teeth): /t/ /d/ /n/ /t/ /d/ /n/ /t/ /d/ /n/  
- Alveolar: /c/ /s/ /z/ /ʃ/ /ɹ/ /ʃ/ /ɹ/  
- Tongue near /θ/ /ɹ/ /θ/ /ɹ/ /θ/ /ɹ/  
- Palate  

**Back**
- Back Palatal: /k/ ([k]) ([x])  
- Velar: /ɡ/ /x/ (/γ/)  

(Lateral: /l/ /ɹ/  
Trilled: /ɾ/ /ɾ/)

/L/ /ʃ/ /ɹ/ /θ/ /ɹ/ /θ/ /ɹ/ are alveolar rather than dental for those speakers who make palatalized sounds, with the tip of the tongue behind the lower teeth.
The pronunciation of the vowel phonemes of Russian varies markedly according to whether the adjacent consonants are plain or palatalized. If the consonant next to a vowel is palatalized or palatal, the effect produced by the position of the tongue near the palate extends to the vowel. The vowel, especially between two palatalized consonants, has a more high and front pronunciation than when pronounced by itself.

Examples are given below of each of the vowel phonemes between consonants: (a) two plain, (b) a palatalized and a plain, (c) a plain and a palatalized, (d) two palatalized. In discussions to follow, the symbol C stands for any plain consonant and C stands for any palatalized or palatal consonant. The meaning of both symbols will also be extended slightly later in this section.

<table>
<thead>
<tr>
<th>C - C</th>
<th>C - C</th>
<th>C - C</th>
<th>C - C</th>
</tr>
</thead>
<tbody>
<tr>
<td>быт (state of life)</td>
<td>быт (is beaten)</td>
<td>быть (to be)</td>
<td>бить (to beat)</td>
</tr>
<tr>
<td>мать (mother)</td>
<td>мать (to rumple)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>мать (mother)</td>
<td>мать (to rumple)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>мать (mother)</td>
<td>мать (to rumple)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \text{Examples}\]
Not having any consonant at all after a vowel affects the pronunciation of the vowel in much the same way as the presence of a plain consonant would. Before vowels other than /i/, absence of a consonant similarly resembles presence of a plain consonant as far as affecting the pronunciation of the vowel, but before /i/ the effect of no consonant is similar to that of a palatal consonant.

The effect of a preceding consonant on the phoneme /i/ is greater than the effect of what follows. For the other vowel phonemes, the reverse is the case, the influence of the following consonant is more important. (This is in spite of the fact that the letters with which the vowels are spelled -- y and w, o and e, a and u [when written] and e---indicate the nature of the preceding consonant.)

The consonants with palatal quality which are not members of a plain/palatalized pair, viz. /c/, /g/, /y/, /v/ have a somewhat less pronounced effect on the adjacent vowel than the palatalized consonants do.

<table>
<thead>
<tr>
<th>C - C</th>
<th>C - C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Мы</td>
<td>И</td>
</tr>
<tr>
<td>Θ</td>
<td>Все</td>
</tr>
<tr>
<td>Α</td>
<td>Вол</td>
</tr>
<tr>
<td>Ω</td>
<td>Всъ</td>
</tr>
<tr>
<td>У</td>
<td>Воя</td>
</tr>
</tbody>
</table>

The consonants with palatal quality which are not members of a plain/palatalized pair, viz. /c/, /g/, /y/, /v/ have a somewhat less pronounced effect on the adjacent vowel than the palatalized consonants do.

<table>
<thead>
<tr>
<th>чи́ще</th>
<th>cleaner</th>
</tr>
</thead>
<tbody>
<tr>
<td>ей</td>
<td>her</td>
</tr>
<tr>
<td>етмик</td>
<td>box</td>
</tr>
<tr>
<td>чуй</td>
<td>feel</td>
</tr>
</tbody>
</table>

* (imperfective imperative)

<table>
<thead>
<tr>
<th>of cabbage soup (gen. pl. tantum)</th>
<th>of pike (adj.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The unopposed plain consonant /o/ (Ѵ) imparts less of the "dull" quality to the adjacent vowel than is characteristic of vowels next to plain consonants; in this its effect resembles that of having no adjacent consonant.

The vowels /u/ and /o/ are rounded; /i/, /e/, and /a/ are unrounded.

The position of the tongue in the mouth varies greatly in the front-and-back direction for the pronunciation of a given vowel phoneme, depending on the adjacent consonants. This makes the criterion of rounding of more fundamental importance for the classification of Russian vowels than the front-back criterion.

It is still, however, that relative to each other when adjacent to similar consonants the vowels can be classified as: front, /i/ and /e/; central, /a/; back, /u/ and /o/.

14. The articulatory details related to this quality are summarized at a later point on 4.3.
The vowels are shorter and are pronounced less distinctly than in the stressed syllable of a word. (In most cases this involves a pronunciation with the tongue closer to a mid-central position than for the corresponding stressed vowel.) The effects of this reduction, as it is called, are markedly less in the syllable of a word which immediately precedes the main stress than in other unaccented syllables.

The occurrence of /o/ in an unaccented syllable and of /e/ in an unaccented syllable after a plain consonant (or none), have a special status in Russian. They are found only in foreign words incompletely assimilated
to the Russian vocabulary. (In general the letters o and a are read with identical pronunciation in unaccented syllables, both as spellings for the phoneme /a/.)

In unaccented syllables following palatalized consonants, the situation is somewhat more complicated. For the most part, only the vowels /i/ and /u/ are found. (The spelling for /u/ is Ю, for /i/ it may be И, Е, or Я.) In certain situations additional phonemic distinctions are made, and there is considerable variation as to these among different speakers. There may even be vacillation between pronunciations on the part of a given individual.

/i/ блести shine! (imperfective imperative) плецевый humeral въклонит will knock out the wedge (pres. 3 sing. perfective)

/u/ блести to guard ключевой key (adj.) въклонет will peck out (pres. 3 sing. perfective)

Some speakers of standard Russian regularly distinguish /i/ (И) and /e/ (Е, Я) in unaccented syllables. Others do so only in the syllable preceding the main stress -- apart from the final syllable of words, which requires special consideration and will be mentioned separately below.

The distinction would seem to be mostly characteristic of meticulous speaking, or of speakers who follow an older standard of pronunciation.

/i/ в листе within the leaf блести shine! (imperfective imperative)

/e/ приду I'll arrive (pres. 1st sing. perfective) пряду I spin (pres. 1st sing. imperfective)

птух drunkard петух rooster
The possible occurrence of vowel phonemes after the plain consonants /唇/, /ө/, and /ө/ is not necessarily the same as after other plain consonants. Quite generally it differs at the ends of words, where unstressed /ө/ can occur regularly after these consonants.

<table>
<thead>
<tr>
<th>phoneme</th>
<th>word</th>
<th>case</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ə/</td>
<td>Уйщи</td>
<td>къже</td>
<td>улицы</td>
</tr>
<tr>
<td>/ө/</td>
<td>Мйше</td>
<td>къже</td>
<td>улице</td>
</tr>
<tr>
<td>/ө/</td>
<td>Мипа</td>
<td>къжа</td>
<td>skin</td>
</tr>
<tr>
<td>/ө/</td>
<td>Мишу</td>
<td>къжу</td>
<td>улицы</td>
</tr>
</tbody>
</table>
In other situations, speakers may either distinguish /i/, /a/, /u/, as after other plain consonants; they may have only a two-way distinction, merging /a/ with /i/; or they may have a four-way distinction /i/, /e/, /a/, /u/, as shown above for final syllables. One of the major factors involved here, and in many problems of Russian unstressed vowels, is the extent to which the spelling of a word influences its pronunciation for various speakers and at various times.

A particular problem of vowels in unstressed syllables involves the third person plural forms of verbs with the spellings пт and ат. Without stress (брёсят 'they will throw', служат 'they serve') many Russians say /ut/ rather than /at/.

Other Phonemes:

The usual pattern in Russian is for each word to have one main stress /4/. In addition to the stressed syllable, it may have quite a few unstressed syllables.

интеграционизация internationalization
внезапно ввекрающемуся what crystallizes out (nom. sing. neut. pres. act. participle, perfective, reflexive)

When a group of words are spoken together (in a single phrase), each regularly carries one stress. It is most frequent for the stressed syllable of the last word to be the most prominent in the whole phrase. Since it is possible, however, for a word other than the last to carry the greatest prominence, the symbol /9/ will be written to indicate the phrase emphasis with whatever /4/ is actually most prominent.

студент ответил The student was answering.
студент ответил It was the student who was answering.

The normal stress for some words within a phrase is weaker than the stress /4/ which is found on most nouns, verbs, and adjectives.

вместо со́бра into the meeting place
вместо со́бра instead of meeting
мой брата wash (your) brother! гаже бо́лота nastier than a swamp
мой брат my brother деже бо́лото even a swamp

This lesser stress, /я/, is also found on the first part of certain
compounds.

о-запад southwest сёдно-голубой pale blue

It also appears in the reading of abbreviations.

CCP /ěs ěs. ěr/ Soviet Socialist Republic
C. C. Эренбург /ěs 6g 6рнбуrк/

There are also a few other special instances of the occurrence of /�/.

tréxсót /трëx сóт/ of 300 (gen.)
кое-как /хоя кáк/ one way or another
нё с кем /нё скéм/ there is nobody with whom to

There are a few words in Russian, mostly conjunctions and interposed particles, which may occur without stress when used normally in a sentence. Some of these are almost always without stress; for others the unstressed form is one possible alternative. Examples of a few of these are given below:

Он, нёл, хотеть, чтоб он пришлый.
He wants you to come, they say.

Это ведь всем уже известно.
Why, everybody knows that already.

(The stresses on the words not underlined in the examples above show one particular, reasonably colorless, way of reading these sentences; they might, of course, be said with different stresses on some words if a different emphasis is in mind.)

By words without stress in the sense discussed here, it is not meant to include instances of nouns with the stress shifted to a preposition, (e.g., са город /зéгарat/ 'out of town' по полю / pópalu/ 'across the fields') or instances like нё было /нёбилá/ 'it wasn't'.
There are phenomena in the pronunciation of Russian comparable
to the division-point phoneme in English (/ \_ /). They have not as yet,
however, been extensively described by investigators. It is not known,
for instance, whether the possibility of locating word boundaries solely
on the basis of what is heard is as generally characteristic
of Russian as it is of English. The tendency is to have / \_ / intervening
some place between any two stressed vowels -- occurring with either /\i/ or
\A/ -- whether at word boundaries or between parts of a compound.

Certain effects on pronunciation are quite clearly associated with the
occurrence of / \_ /. Some of these will be considered.
If an open transition / \_ / is present somewhere between an unstressed
vowel and a stressed vowel in the following syllable, the unstressed vowel
exhibits greater reduction in pronunciation than the partial reduction
usually observed in the syllable before the main stress.

дóвбльno /da\v\o\l\a\na/ sufficiently
da bóльно /da vól\a\na/ indeed willingly
сtál ópáть /stál \^\o\p\á\t/ he started again
стáло пáть /stála \^\o\p\á\t/ there got to be five

Some prepositions may occur either with a stress /\i/ on the preposition,
separated by / \_ / from the following word, or without stress and joined to
the following word. This produces pairs like:

передо мной
\{ /piridam\o\y/ \}
in front of me
If a stressed syllable is the last one before an open transition, the vowel in it is noticeably shorter than otherwise.

- **týti tám** /túti ʰtám/ the mulberries are there
- **týt i tám** /túti i ʰtám/ here and there
- **tó xe** /tó xi/ also
- **tó xé** /tó xi/ the same

A vowel separated from a palatal consonant by /_/ is pronounced with the type of variant which would occur if no consonant stood next to it.

- **C - C** těńi tám /tóni ʰtám/ the shadows are there
- **C - C** té ne tám /tě ni ʰtám/ those aren't there
- **C - C** xotät /xatät/ they want
- **C - C** xotb ḗd /xat át/ Hell, even

In syllables not immediately preceding the main stress, an unstressed /a/ is pronounced more as a low vowel (with less reduction) when it follows /_/ than otherwise.

- **иду к Александру** /idú kalik ʰsándřu/ although it is more reduced before /_/ than after /_/.
- **друг Александра** /drúk alik ʰsándra/

- **договорил** /dagavaril/ he finished speaking
- **да говорил** /da gavaril/ he was talking, right enough

The phoneme /i/ after a plain consonant followed by /_/ is pronounced much as after plain consonants generally.
The effects of open transition at other points cannot be simply stated. In impressionistic terms, they suggest description as a checking in the stream of speech before going on to the next sound. Thus there can be clear differences in transition as the only feature distinguishing certain pronunciations of the following pair of items, although this does not fall under any of the types yet mentioned.

там áрка /tam ˈarka/ there's an arch there ...
та мárка /ˈtaː márka/ that stamp

Until more studies of the problem are available, the details as to just where /ː/ can occur and how it affects adjacent sounds in each case must be left unclear.

The breaking up of long stretches into phrases is operative in Russian.

The ends of phrases terminate in different ways, which can be assumed to contrast much as do /i/, /ɪ/ and /ʌ/ in English.

About Russian pitch phenomena, no systematic statements can at present be made with much assurance. An analysis representing Russian pitch with four significant levels, similar to those required for English, has been suggested. Such a system will be employed where convenient in this study.

END--Chapter 3
This chapter considers the relations to be found between English sounds and Russian sounds, both as parts of two different systems and as independent items of pronunciation.

The comparison of the English and Russian sound systems in this work makes a basic division between problems of individual sounds and problems of sound combinations, and likewise in general endeavors to treat separately vowels, consonants, and other types of phonemes. Such divisions can only be approximate, as there is overlapping influence among the various compartments.

In this final chapter, the notation \( R / \) is used for phonemes of Russian and \( E / \) for phonemes of English.

Certain points about the relations between the vowels of Russian and English can be brought out by comparing charts of the two systems.

<table>
<thead>
<tr>
<th>Russian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>i, e, i, u</td>
</tr>
<tr>
<td>u</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>e, a, o</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

The most evident difference is that Russian has fewer elements in its system even considering only the individual vowel phonemes and not the diphthongs.
Associated with the smaller number of phonemic distinctions between vowels in Russian, each Russian vowel phoneme has a wide range of pronunciation. The variants of the same vowel phoneme in different circumstances will be found to resemble the sounds of at least two different vowel nuclei of English.

Russian does have sequences of a vowel followed by /iy/. There is little reason within the patterns of Russian for regarding these as inherently different from any other sequences of a vowel followed by a consonant. They are, however, obviously somewhat comparable to the English diphthongs ending in /ey/.

<table>
<thead>
<tr>
<th>Russian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>iy</td>
<td>iy</td>
</tr>
<tr>
<td>ey</td>
<td>ey</td>
</tr>
<tr>
<td>ay</td>
<td>ay</td>
</tr>
<tr>
<td>убойтвк</td>
<td>буйкий</td>
</tr>
<tr>
<td>murder</td>
<td>violent</td>
</tr>
<tr>
<td>бей</td>
<td>бей</td>
</tr>
<tr>
<td>beat (imper)</td>
<td>struggle (effective imperative)</td>
</tr>
<tr>
<td>Мая</td>
<td>my</td>
</tr>
<tr>
<td>Мая</td>
<td>my</td>
</tr>
</tbody>
</table>

Confusion for the English hearer arises from the fact that in Russian the [y]-position of a following palatal or palatalized consonant is anticipated during the preceding vowel. This is most noticeable in the situation C — C when the preceding consonant is plain, rather than palatalized; the shift, during the vowel, of the basic articulatory position in a palatal direction makes more pronounced the impression of a glide before the consonant.
Russian vowels in the environment C__C need to be distinguished from sequences of a vowel followed by R/y/. Each of these two types bears a similarity to English complex nuclei containing E/y/.

Та́йн

of the secrets
(gen. pl.)

стá́нб

stand up
(perfective imperative)

вóйн

of wars
(gen. pl.)

ко́нь

steed

пóйло

swill

бо́йла

Boyle's

boiler

none

field

Most dialects of English have no diphthong /uy/, though some speakers do, for instance pronounce buoy as one syllable not homophonous with bov. For other speakers, the closest analogue of R /uy/ is E/uwy/.

дúйся
be sulky
(imperfective imperative)

Дэ́вей's

гу́сн

goose's (gen.)

Russian R/u/ is a higher, backer, more rounded vowel than E/u/.

English E/uv/ is a diphthong which becomes increasingly higher, backer, and more rounded during the course of the E/w/ glide, something which Russian R/u/ does not do. The beginning of E/uv/ may be quite a centralized vowel, so that phonetically the nucleus is approximately [uw]. The end of E/uv/ has approximately the right quality for Russian R/u/ in the environment C__C. In
the positions \( \text{C} \_ \text{C} \) it is further forward, and in \( \text{C} \_ \text{C} \) it reaches an approximately central position. With the fronting, \( \text{R} / \text{u} / \) also becomes progressively a bit higher and more rounded.

\[ u \quad \text{C} \_ \text{C} \quad \text{C} \_ \text{C} \quad \text{C} \_ \text{C} \quad \text{uw} \]

foot \( \text{fu} \_ \text{t} \quad \text{люд} \quad \text{ключ} \quad \text{лOOT} \)

12 in. \( \quad \text{folk} \quad \text{key} \)


For Russian \( \text{R} / \text{o} / \) the situation is parallel. It is a higher, backer, more rounded vowel than \( \text{E} / \text{O} / \) and lacks the diphthongal glide of \( \text{E} / \text{ow} / \). It is closest to \( \text{E} / \text{o} / \) in \( \text{C} \_ \text{C} \). In \( \text{C} \_ \text{C} \) it is considerably fronted and approaches the height and rounding characteristic of the end of \( \text{E} / \text{ow} / \).

\[ o \quad \text{C} \_ \text{C} \quad \text{C} \_ \text{C} \quad \text{C} \_ \text{C} \quad \text{ow} \]

taught \( \text{ТОТ} \quad \text{ТёТка} \quad \text{ТёТя} \quad \text{tote} \)

this \( \quad \text{aunt} \quad \text{aunt} \quad \text{aunt} \)

For Russian \( \text{R} / \text{a} / \) in this environment \( \text{C} \_ \text{C} \) may be fairly close to \( \text{E} / \text{a} / \). Just how close depends on the dialect of English, since \( \text{R} / \text{a} / \) in this situation is central, but English \( \text{E} / \text{a} / \) may be more back than central for many speakers. (Conversely, some Americans have a pronunciation of \( \text{E} / \text{a} / \), especially before \( \text{E} / \text{t} \_ \text{d} \_ \text{C} / \), which is fronter than \( \text{R} / \text{a} / \).) In \( \text{C} \_ \text{C} \) \( \text{R} / \text{a} / \) ranges towards \( \text{E} / \text{a} / \); in \( \text{C} \_ \text{C} \) it is intermediate.

\[ a \quad \text{C} \_ \text{C} \quad \text{C} \_ \text{C} \quad \text{C} \_ \text{C} \quad \text{a} \]

Nott \( \text{МАТ} \quad \text{МАТ} \quad \text{МАТЬ} \quad \text{mat} \)

checkmate is rumpled to rumple

(short form \( \text{Masc. past participle} \) )
Russian /e/ in the environment C__C is close to /ε/; in C__C it ranges towards /æ/; in C__C it approaches /ey/.

For this reason, the English speaker may easily confuse /e/ in C__C with /ey/, although /e/ in this environment has very little [y]-glide.

<table>
<thead>
<tr>
<th>ae</th>
<th>C__C</th>
<th>e</th>
<th>C__C</th>
<th>C__C</th>
<th>ey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sal</td>
<td>цел</td>
<td>sell</td>
<td>цел</td>
<td>сельдь</td>
<td>sail</td>
</tr>
<tr>
<td>whole</td>
<td>sat down</td>
<td>herring</td>
<td>(short form masc.)</td>
<td>(past masc. perfective)</td>
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In those dialects in which /e/ can be found as a stressed vowel phoneme, it serves as a fairly good approximation to Russian /i/ in C__C (bl). The Russian vowel in this position is normally a bit further back than /e/. Russian /i/ in C__C is higher and fronter than /e/ and lacks the glide of /iy/. In C__C, /i/ is an extremely close high-front vowel.

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<thead>
<tr>
<th>C__C</th>
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<th>i</th>
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<th>iy</th>
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</tr>
</thead>
<tbody>
<tr>
<td>сын</td>
<td>сын (such)</td>
<td>sin</td>
<td>апельсин</td>
<td>seen</td>
<td>синь</td>
</tr>
<tr>
<td>son</td>
<td>orange</td>
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</tbody>
</table>
The relations between the stressed vowel systems of Russian and English show a considerable overlapping in ranges of pronunciation. Diagrams can be made to indicate which nuclei in the two languages are the source of interference. Considering vowels as found with a stress accent /i/ or /u/ in Russian and the full vowels of English, these diagrams represent the situation.

Making certain simplifications, a summarizing diagram can be constructed to indicate the basic similarity in pattern of all the diagrams above. Here V stands for any vowel, V₁ for another vowel or complex nucleus.

The meaning of this shorthand diagram is that it may be said in general that any Russian vowel phoneme has relevant relations to
three English vowel nuclei; one of these involves a [y]; this one
is in turn related to a Russian sequence of vowel plus [y].

The order of the symbols in the summary diagram is correct for
\[\text{U O A}\] but \(V\) and \(V'\) would be interchanged for \(\text{I}\) and \(\text{E}\). The other
simplification lies in the lack of a nucleus /uy/ in most dialects
of English, so that /uwiy/ fills this spot in the \[\text{U}\] diagram. Note
also that /u/ is found both in the \[\text{E}\] diagram and the \[\text{A}\] diagram.

The only English stressed vowel nucleus not yet mentioned, of those
regularly occurring in most dialects, is /aw/ (hound). The closest
analogy to it in Russian is /au/ as in пауэ 'fauna'. The Russian
sequence, however, divides between two syllables, while the English
diphthong is the nucleus of a single syllable.

\text{отпвц}
\text{Strauss}
\text{ostrich}
\text{пауэ}
\text{lousy}
\text{pauses (pl.)}

The most serious difficulty with Russian vowels for an American comes in
learning to make the proper accommodations to the adjacent sounds.

(For the Russian learner of English,
the problem is to incorporate phonemic distinctions which are strange
to his system.)

4.2 Unstressed Vowels

Unstressed Russian /u/, especially after C, in the syllable
immediately before a stressed syllable is to be compared with /u/.
The other English nucleus relevant for comparison is the type of
\(\text{E}/\text{aw}/\) found after \(\text{E}/\text{y} \, \text{c}\, \text{6}/\). (Even unstressed, Russian /u/ is usually
higher, backer, and more rounded than /u/, and it does not have the
diphthongal glide normally found in /tw/.

<table>
<thead>
<tr>
<th>Cyrillic</th>
<th>English</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>султан</td>
<td>sultan</td>
<td>/fulfil/</td>
</tr>
<tr>
<td>юноша</td>
<td>young man</td>
<td>/unique/</td>
</tr>
</tbody>
</table>

Russian /a/ in the syllable immediately before a stressed syllable is a higher vowel than stressed /a/ and approaches English /ʌ/. Whether the English vowel to which pre-stress /a/ bears the closest resemblance is /ʌ/ or /ə/ depends on the dialect of English.

```
R
<table>
<thead>
<tr>
<th></th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>ʌ</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>R/a/</td>
<td>E/ʌ/</td>
</tr>
</tbody>
</table>
```

<table>
<thead>
<tr>
<th>Russian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>постро́йка</td>
<td>building construction</td>
</tr>
<tr>
<td>вмбрóзия</td>
<td>ambrosia</td>
</tr>
<tr>
<td>атлá́йского</td>
<td>Altaic (gen. sing. masc. or neut.)</td>
</tr>
<tr>
<td>волкéни</td>
<td>by the wolves (instr. pl.)</td>
</tr>
<tr>
<td>Антаркти́ка</td>
<td>Antarctica</td>
</tr>
<tr>
<td>Аксё́нья́</td>
<td>(woman's name)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cyrillic</th>
<th>English</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>постро́йка</td>
<td>building construction</td>
<td>/fræstréyʃən/</td>
</tr>
<tr>
<td>вмбрóзия</td>
<td>ambrosia</td>
<td>/æmbréli/</td>
</tr>
<tr>
<td>атлá́йского</td>
<td>Altaic (gen. sing. masc. or neut.)</td>
<td>/ʌltiəriər/</td>
</tr>
<tr>
<td>волкéни</td>
<td>by the wolves (instr. pl.)</td>
<td>/vəlkéntɪv/ (can have /ʌ/)</td>
</tr>
<tr>
<td>Антаркти́ка</td>
<td>Antarctica</td>
<td>/æntələtɪk/</td>
</tr>
<tr>
<td>Аксё́нья́</td>
<td>(woman's name)</td>
<td>/æksənˈjɛn/</td>
</tr>
</tbody>
</table>
Other variants of unstressed /ə/ with a phonetic quality similar to /ɛ/ are found after /r/ and next to certain vowel phonemes.

unambitious /ənəmˈbɪtɪs/  

(Vowel phonemes do not ordinarily occur immediately next to one another in English. Thus, /ɛ/ cannot be found in surroundings which make it directly comparable with unaccented /ə/ adjacent to another vowel.)

correlation

In final syllables, /ə/ before /l/, unaccented /ə/ is much like /ɛ/ before /l/.

Anna /ænə/  

Judah /jʊdə/  

Anna /ænə/  

Judah /jʊdə/
In environments other than those already discussed, unstressed /ᵻ/ and /ᵻ/ after a plain consonant (C) fall within the range of English /ɪ/. On the average, /ᵻ/ will be a lower vowel than /ɪ/ and /ᵻ/ will be a higher and backer vowel; English /ɪ/, however, is subject to considerable variation depending on the neighboring sounds and also according to the dialect of the speaker.

<table>
<thead>
<tr>
<th>xóbot</th>
<th>habit</th>
<th>добът</th>
</tr>
</thead>
<tbody>
<tr>
<td>elephant's trunk</td>
<td></td>
<td>achieved (short form masc. past participle)</td>
</tr>
<tr>
<td>в́ижил</td>
<td>vigil</td>
<td>в́ижил</td>
</tr>
<tr>
<td>he squeezed out</td>
<td></td>
<td>he survived</td>
</tr>
<tr>
<td>(past masc.)</td>
<td></td>
<td>(past masc.)</td>
</tr>
<tr>
<td>си́зои</td>
<td>schism</td>
<td>си́зои</td>
</tr>
<tr>
<td>dove grey</td>
<td></td>
<td>dove grey</td>
</tr>
<tr>
<td>(prepositional sing.)</td>
<td></td>
<td>(instrumental sing.)</td>
</tr>
<tr>
<td>пальце́вый</td>
<td>epilogistic</td>
<td>пальце́вый</td>
</tr>
<tr>
<td>digital</td>
<td></td>
<td>pollinic</td>
</tr>
<tr>
<td>воло́вый</td>
<td>equidistantial</td>
<td>воло́вый</td>
</tr>
<tr>
<td>put in place</td>
<td></td>
<td>turn out</td>
</tr>
<tr>
<td>соразме́рный</td>
<td>supererogatory</td>
<td>соразме́рный</td>
</tr>
<tr>
<td>proportional</td>
<td></td>
<td>raw</td>
</tr>
<tr>
<td>сорокова́я</td>
<td>surrealistic</td>
<td>сорокова́я</td>
</tr>
<tr>
<td>40th</td>
<td></td>
<td>cheese-making</td>
</tr>
</tbody>
</table>
Russian ʲɪ/ after a plain consonant in the syllable before a stress is only roughly comparable to ʲɪ/.

Machine [less like машина machine]

Дамасcus [less like домок little house]

Дымок puff of smoke

Полнить to raise dust

Unstressed ʲɪ/ after a palatalized or palatal (or no) consonant, while less high and front than a vowel than stressed ʲɪ/, is still higher and front than English ʲɪ/. Also, it lacks the [y]-glide which is characteristic of ʲɪ/ in at least for large numbers of speakers.

Фильтрация /filtreyawns/ ˌfɪləˈtraʃən/ ˌfyiltroʊˈʃen/ ˌfɪləˈtrəʃən dection /dɪˈtrækʃən/ identity

Affix /əfiks/ ˌəfɪks/ тавлек /tæfiks/ identity

Before ʲɪ/-, Russian unstressed ʲɪ/ and ʲɪ/ both bear considerable resemblance to ʲɪ/.

Радиум ˈradıəm/ ˌrædiəm/ for the sake of готов ready /ˈrɛdɪə/ готов ready /ˈrɛdɪə/ are glad

(It is to be noted that in certain styles of speech Russians may fail to distinguish final ʲɪ and ʲɪ/. The adjective ending spelled ˌmɪ, and ˌmɪ after ʲɪ/) ʲɪ/ is pronounced as either ʲɪ/ or ʲɪ/ speakers who use the latter pronunciation have only rare instances of unstressed ʲɪ/, for instance ʲɪ/ ˌvɒˈslɪ/ ˌvɒˈslɪ/ ˌvɒˈslɪ/ just a

Strict /strɪgɪ/ or /strɪɡay/ ˌstrɪgɪ/ Yoga

Kind /kɪnd/ or /kɪnd/ mealy
As mentioned before, final unstressed /R\(\text{a}../\), rather than /R\(\text{i}../\), is comparable to /E\(\text{i}../\).

\begin{align*}
\text{Анна} & \quad \text{Annie} \\
\text{Anna} & \quad \text{Anna} \\
\text{Анна} & \quad \text{Anna}
\end{align*}

\begin{align*}
\text{Коды} & \quad \text{Cody} \\
coda & \quad \text{coda} \\
\text{Коды} & \quad \text{Cody}
\end{align*}

In most cases, the vowels in Russian unaccented syllables which come immediately before a stressed syllable are to be compared with English full-vowel nuclei, while those in other unaccented syllables are to be compared with English reduced-vowel nuclei /E\(\text{i}../\), /E\(\text{i}../\), /E\(\text{aw}../\).

The most characteristic association in the pre-stress position would be:

\begin{align*}
/R\(\text{i}../\) & - /E\(\text{i}../\) \\
/R\(\text{a}../\) & - /E\(\text{aw}../\) \\
/R\(\text{u}../\) & - /E\(\text{aw}../\) \\
\text{(also } & /E\(\text{aw}../\) \text{)} \quad \text{(or } & /E\(\text{aw}../\) \text{)}
\end{align*}

In other unaccented syllables, there are in general three Russian vowel phonemes involved, /R\(\text{i}../\), /R\(\text{a}../\), /R\(\text{u}../\), and three English vowel nuclei /E\(\text{i}../\), /E\(\text{aw}../\), and /E\(\text{aw}../\), but the two sets cannot be matched up in a simple way.

\begin{align*}
/R\(\text{i}../\) & - /E\(\text{i}../\) \\
\text{ray} & - \text{ay} \\
\text{i} & \quad \text{iy} \\
\text{i} & \quad \text{i} \\
\text{u} & \quad \text{aw}
\end{align*}

\[4.3\] **Consonants**

Comparison of charts of the Russian and English consonants is useful for a rough indication of the relation of the two systems.

(See attached diagram).
<table>
<thead>
<tr>
<th>Non-Local</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>VELUM</td>
<td>x</td>
</tr>
<tr>
<td>PALATE</td>
<td>y</td>
</tr>
<tr>
<td>Dental/Alveolar</td>
<td></td>
</tr>
<tr>
<td>Interdental</td>
<td></td>
</tr>
<tr>
<td>Labio-Dental</td>
<td>n</td>
</tr>
<tr>
<td>Lips</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Local</td>
</tr>
<tr>
<td>VELUM</td>
</tr>
<tr>
<td>Palate</td>
</tr>
<tr>
<td>Dental/Alveolar</td>
</tr>
<tr>
<td>Interdental</td>
</tr>
<tr>
<td>Labio-Dental</td>
</tr>
<tr>
<td>Lips</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop (Affricate)</td>
</tr>
<tr>
<td>Fricative (Voiceless)</td>
</tr>
<tr>
<td>Nasal</td>
</tr>
<tr>
<td>Lateral</td>
</tr>
<tr>
<td>Other Resonants</td>
</tr>
<tr>
<td>Trill</td>
</tr>
</tbody>
</table>
It is evident that certain elements in each system are not directly relatable to anything in the other. That is, we can say that the consonant phonemes essentially most foreign to the other language are in English /w θ s j r ȝ h/ and in Russian /k/ c r z y/.

In certain cases a phoneme in one system may be compared to a sequence of phonemes which exists in the other. Thus, we need to consider the relation of /j/ to /dʒ/ (ж, тж) and of /c/ to /ts/. In some circumstances the English consonant phoneme /u/ must be considered comparable to the Russian vowel phoneme /u/, as for instance in the previous discussion of the relation between /au/ and /au/.

The most basic difference between the consonant systems of English and Russian is the contrast between plain and palatalized consonants which pervades the Russian consonant pattern.

To a first approximation, Russian plain consonants are comparable to English consonants before the back-vowel phonemes /u/ and /o/. Russian palatalized consonants are like English consonants before /i/, /iy/, and /y/.

Consonants followed by /y/ in English are generally to be found only before /uw/, /ur/ and /i/. From the point of view of comparison with Russian, the interesting possibilities are those represented by:

- /speu/ (tune)
- /mute /
- /few /
- /view /
- /skew /
- /erudite/ (Zeus)

- /imbue/ (duke)
- /tenure/ (news)
- /value/ (lute)
The words in parentheses above have ü/y in fewer types of American English. In stressed syllables ü/ly/ and ü/ry/ (lute, rude) are not common. (Some dialects, which use /iw/ in place of ü/yuw/ after consonants in stressed syllables, have consonants followed by /y/ regularly only before /i/:

impudent nebula tremulo
inoculate angular nephew Savior

Approximate equivalence may be said to exist between Russian and English sounds at the beginnings of these words:

б бут boot
рубля rubble
ё бюст beauty beast
бюст encore!

The situation is further complicated, however, by the existence of clusters of palatalized consonant followed by ü/y/, which are also roughly comparable to English ü/by/, etc.

ў

Льют
they pour
Льют
ferocious (short form masc.)
Льёт
pours
Лёд
ice
Рьян
fervent (short form masc.)
Ряд
row
Пьеса
stage play
Песня
song
Семьи
family's (gen. sing.)
Семьи
of seven (gen. sing.)
There are also, at least for many speakers of Russian, clusters of plain consonant followed by R/y.

<table>
<thead>
<tr>
<th>С</th>
<th>Съ</th>
<th>Су</th>
</tr>
</thead>
<tbody>
<tr>
<td>о́бъ́ртка</td>
<td>о́бъ́ем</td>
<td>о́бъ́ем</td>
</tr>
<tr>
<td>cover</td>
<td>we beat</td>
<td>girth</td>
</tr>
<tr>
<td>бя́в</td>
<td>бя́въ</td>
<td>бя́въ</td>
</tr>
<tr>
<td>elm</td>
<td>жни́вь</td>
<td>в́я́вь</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subject, then, to the limitations on the occurrences of sequences of C in English, the following diagram schematizes the relations of elements in the two languages relevant to the plain VS, palatalized distinction in Russian. Since E/Cy/ is virtually limited to occurrence before E/uw/, E/ur/, E/iw/ and E/ir/, the closest sounding sequence in English to R/Cy/ before vowels other than R/u/ is often E/Ciy/.

<table>
<thead>
<tr>
<th>Пь́ный</th>
<th>Piano</th>
</tr>
</thead>
<tbody>
<tr>
<td>drunk</td>
<td>/pʲyɛ̆nʌw/</td>
</tr>
<tr>
<td>о́бъ́ем</td>
<td>Beyond</td>
</tr>
<tr>
<td>we beat</td>
<td>/bʲyʌnd/</td>
</tr>
</tbody>
</table>

Obviously, this presents another possible type of interference of English habits in the learning of Russian pronunciation.

In English, furthermore, many words vary between a hurried pronunciation with E/Cy/ and a careful pronunciation with E/Ciy/.

<table>
<thead>
<tr>
<th>Серь́</th>
<th>Serious</th>
</tr>
</thead>
<tbody>
<tr>
<td>E/sirye/ or E/sirye/</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Мень́ш</th>
<th>Menial</th>
</tr>
</thead>
<tbody>
<tr>
<td>E/mênjye/ or E/mênjye/</td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{align*}
\text{R} \quad & \quad \text{E} \\
\text{C} \quad & \quad \text{C} \\
\text{Съ} \quad & \quad \text{Су} \\
\text{Су} \quad & \quad (\text{Су})
\end{align*}
\]
Both the plain and the palatalized consonants of Russian involve types of sound formation which are strange to English speakers. In the case of the palatalized sounds, part of this is quite apparent; simultaneously with the other aspects of pronunciation, the blade of the tongue is held near the palate, as it is when [y] is pronounced. As has been noted in discussing vowels, the effect of the [y]-pronunciation simultaneous with the consonant is often extended so that it markedly affects an adjacent vowel.

For plain consonants, the basis for the special features of the sound are less obvious. Plain and palatalized consonants in Russian differ not only as to position of the tongue in the mouth but also as to the aperture of the throat cavity. The passage through the throat is more open for palatalized sounds and tighter for plain sounds. Russian plain consonants are accompanied by more constriction than are their English counterparts; as a result, they strike speakers of English as sounding "dull" or "muffled". In addition, Russian plain consonants are pronounced with a certain amount of lip tension, even when not adjacent to one of the rounded vowel phonemes [u] or [o].

A speaker of English who wishes to acquire an acceptable pronunciation of Russian has to learn new habits for making the plain sounds as well as for the palatalized ones.

One important difference found in comparing the consonants of Russian and English is the way in which the corresponding stop phonemes -- represented by the same letters in the phonemic transcriptions of the two languages -- do not match closely as to phonetic quality of pronunciation. Diagrammatically, the situation can be represented thus:

\[
\begin{array}{ccc}
R & E & R \\
p & p & p \\
\text{b} & \text{b} & \text{d} \\
\text{d} & \text{d} & \text{g} \\
\text{g} & \text{g} & \text{g}
\end{array}
\]
The differences are most pronounced when the consonant begins a stressed syllable. In this circumstance, /p/, /t/, and /k/ are aspirated, i.e., the stop closure is followed by a short period during which there is a fairly audible escape of breath before the voicing for the vowel of the syllable begins. /p/, /t/, /k/ are unaspirated; the voicing of a following vowel or other voiced sound /r y l m n y v y/ begins immediately after the closure for the stop is opened.

The difference between /b/, /d/, /g/ and /p/, /t/, /k/ in this circumstance consists principally in the fact that the period of voicing while the stop closure exists is much shorter in the case of the English sounds.

These differences in the timing of the starting of vocal cord vibrations result in the possibility of confusion between /p/ and /b/, /t/ and /d/, /k/ and /g./
<table>
<thead>
<tr>
<th>English</th>
<th>Russian</th>
<th>English</th>
<th>Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td>pool</td>
<td>пуд</td>
<td>boot</td>
<td>бут</td>
</tr>
<tr>
<td>36 pounds</td>
<td></td>
<td>rubble</td>
<td></td>
</tr>
<tr>
<td>two</td>
<td>ты</td>
<td>do</td>
<td>дух</td>
</tr>
<tr>
<td>that (acc. sing. fem.)</td>
<td></td>
<td>spirit</td>
<td></td>
</tr>
<tr>
<td>cool</td>
<td>кус</td>
<td>goose</td>
<td>густ</td>
</tr>
<tr>
<td>morsel</td>
<td></td>
<td>dense (short form masc.)</td>
<td></td>
</tr>
<tr>
<td>plot</td>
<td>плац</td>
<td>blot</td>
<td>блат</td>
</tr>
<tr>
<td>parade ground</td>
<td></td>
<td>thieves' cant</td>
<td></td>
</tr>
<tr>
<td>clean</td>
<td>клик</td>
<td>glean</td>
<td>глин</td>
</tr>
<tr>
<td>wedge</td>
<td></td>
<td>of clays (gen. pl.)</td>
<td></td>
</tr>
<tr>
<td>tress</td>
<td>треск</td>
<td>dress</td>
<td>дреббко</td>
</tr>
<tr>
<td>crash</td>
<td></td>
<td>flagpole</td>
<td></td>
</tr>
<tr>
<td>quash</td>
<td>квас:</td>
<td>guava</td>
<td>гвоздь</td>
</tr>
<tr>
<td></td>
<td>kwas:</td>
<td></td>
<td>nail</td>
</tr>
<tr>
<td>twice</td>
<td>тварь</td>
<td>Dwyer</td>
<td>два</td>
</tr>
<tr>
<td>creature</td>
<td></td>
<td></td>
<td>two</td>
</tr>
</tbody>
</table>

After ʌ/s/, ʌ/p t k/ are unaspirated and in this circumstance they come closer to the pronunciation of ɾ/p t k/.

spool            пуд
stool            ты
school           кус

After ʌ/f s ʃ/ the onset of voicing is not markedly delayed, and in this respect there is no important difference from Russian sounds.

Initial ɾ/v y z ʒ/ are voiced from the very beginning of the fricative sounds, while in initial ʌ/v/ and ʌ/z/ the start of voicing is considerably delayed so that we have in effect [f v] and [s z]. (Initial ʌ/z/ is rare—some speakers use it in partially anglicized French words such as genre—so it does not
It is also true that final voiced stops and fricatives in English are only voiced part way through the sound (robe [b³], road [dr⁴], rogue [gr⁴], rove [vr⁴], rose [z⁴]). Since, however, Russian normally has only voiceless final stops and fricatives, this is of only slight interest in contrasting the two languages.

In this section consonant phonemes will be treated in groups which exhibit similar interlanguage relationships. The discussion will also treat other differences in pronunciation less basic than those of the preceding sections, in that they are less structurally relevant for comparison between the two languages.

The first group is one for which the important relations are only those already discussed involving palatalization and voicing, and for which the English consonants being considered frequently occur before ²[y].

<table>
<thead>
<tr>
<th>R</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>p</td>
<td>py</td>
</tr>
<tr>
<td>py</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>b</td>
</tr>
<tr>
<td>b</td>
<td>by</td>
</tr>
<tr>
<td>by</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>m</td>
<td>my</td>
</tr>
<tr>
<td>my</td>
<td></td>
</tr>
</tbody>
</table>
From the point of view of English the relations in this group are much the same as in the previous one. The major difference lies in the great rarity of Russian [ky] [gy] and the limitations as to where /k/ and /k/, [g] and [gy] occur.

<table>
<thead>
<tr>
<th>Rus</th>
<th>Eng</th>
</tr>
</thead>
<tbody>
<tr>
<td>куб</td>
<td>keep</td>
</tr>
<tr>
<td>cube</td>
<td>stacks</td>
</tr>
<tr>
<td>гурт</td>
<td>gourd</td>
</tr>
<tr>
<td>herd</td>
<td>clock weights</td>
</tr>
<tr>
<td>куб</td>
<td>keep</td>
</tr>
</tbody>
</table>

Russian ̄/I/ and ̄/V/ are pronounced with the lower lip pushed further forward than for English ̄/I/ and ̄/V/.

For ̄/V/ there are some additional factors involved. Russian ̄/V/ is relatable to ̄/V/ while in turn is in certain environments comparable to Russian unstressed ̄/u/.

Otherwise, the relationships involved in this group are much like those for ̄/p/ and ̄/b/.
The sequence /fy/ is rare in Russian.

<table>
<thead>
<tr>
<th>Cyrillic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>футбол</td>
<td>foot</td>
</tr>
<tr>
<td>friend</td>
<td>Finn</td>
</tr>
<tr>
<td>граф (gerund)</td>
<td>graphing</td>
</tr>
<tr>
<td>фу</td>
<td>foot</td>
</tr>
<tr>
<td>вол</td>
<td>vote</td>
</tr>
<tr>
<td>гуано</td>
<td>guano</td>
</tr>
<tr>
<td>туфля</td>
<td>twilight</td>
</tr>
</tbody>
</table>

Even though Russian unstressed /u/ before a stressed vowel often sounds more like /w/ than does /v/, Russians generally substitute /v/ for /w/. This is probably influenced by the fact that unstressed /u/ before a vowel represents an unusual pattern in Russian.

As was pointed out before, Russian /au/ is comparable to English /aw/. There are also examples in Russian of /eu/. These,
however, are too rare to have much importance for comparison with

English ɛ/ow/.

stráye Strauss

show show anóyç chose

Russian ɾ/n/ and ɾ/ny/ are dental, with the tip of the tongue
touching the back of the upper front teeth while ɛ/n/ is alveolar,

well, now!

For initial ɛ/n/ and ɛ/ny/ the relation to Russian depends upon

the dialect of English.

The principal difference between the next and the previous groups is the

limitation of English ɛ/sy/, ɛ/zy/ to certain dialects. Certain

speakers who otherwise lack ɛ/sy/ ɛ/zy/ have these clusters in a few

words, particularly in what are often considered more elegant

pronunciations.

issue /iˈsyuː/ visual /ˈvɪʒuəl/

visual /ˈvɪʒyəl/
(For various reasons, including these pronunciations and also such relations as

\[
\text{tenant} \quad \text{s fissile} \quad \text{z seize}
\]

\[
\text{ny tenure} \quad \text{y fissure} \quad \text{y seizure}
\]

there is some tendency for the speaker of English to regard [sy] and [zy] and [z] as equivalent.

\[
\begin{array}{l}
\text{s} \quad \text{s} \\
\text{z} \quad \text{z} \\
\text{sy} \quad \text{zy}
\end{array}
\]

\[
\begin{array}{ll}
\text{C} & \text{G} \\
\text{суп} & \text{soup} \\
\text{сипл} & \text{seep}
\end{array}
\]

\[
\begin{array}{ll}
\text{ю} & \text{ую}
\end{array}
\]

\[
\begin{array}{ll}
\text{hoarse} & \text{issue} \\
\text{(short form masc.)} & \text{(dat. sing.)}
\end{array}
\]

\[
\begin{array}{ll}
\text{elk} & \text{axle} \\
\text{(instr. sing.)}
\end{array}
\]

\[
\begin{array}{ll}
\text{зуб} & \text{suit} \\
\text{tooth} & \text{C/syuwe/}
\end{array}
\]

\[
\begin{array}{ll}
\text{zoo} & \text{all (acc. sing. fem.)}
\end{array}
\]

\[
\begin{array}{ll}
\text{зел} & \text{suit} \\
\text{zeal} & \text{C/syuwe/}
\end{array}
\]

\[
\begin{array}{ll}
\text{зим} & \text{suit} \\
\text{of winters} & \text{C/syuwe/}
\end{array}
\]

\[
\begin{array}{ll}
\text{путь} & \text{suit} \\
\text{pathway} & \text{C/syuwe/}
\end{array}
\]

Like /n/, Russian /t/ and /d/ are dental rather than alveolar. In certain environments, especially at the end of a syllable (mother, witch) Russian /j/ and /d/ may sound to English speakers like /j/ and /d/. The absence of /ty/ /dy/ in many dialects makes /j/ the most generally comparable sounds to /ty/ and /dy/.

(As with the previous group, there are tendencies toward equating /ty/ and /j/ /dy/ supported among other
things by variant pronunciations.

<table>
<thead>
<tr>
<th>Nature</th>
<th>Sedulous</th>
</tr>
</thead>
<tbody>
<tr>
<td>/nétyur/</td>
<td>/sedylus/</td>
</tr>
<tr>
<td>/néyèir/</td>
<td>/seyèir/</td>
</tr>
<tr>
<td>/seylus/</td>
<td>/seyluts/</td>
</tr>
</tbody>
</table>

and by relation to other combinations:

<table>
<thead>
<tr>
<th>N tenant</th>
<th>d verdant</th>
<th>t vested</th>
</tr>
</thead>
<tbody>
<tr>
<td>ny tenure</td>
<td>j verdure</td>
<td>y y vertex</td>
</tr>
</tbody>
</table>

The relation between /šʃ/ and /ʃ/ involves the voiced type of /ʃ/ occurring before other voiced sounds.

<table>
<thead>
<tr>
<th>Проць</th>
<th>Дочь Давида</th>
</tr>
</thead>
<tbody>
<tr>
<td>greed</td>
<td>daughter of David</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cyrillic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>алюба</td>
<td>greed</td>
</tr>
<tr>
<td>прочь</td>
<td>scram</td>
</tr>
<tr>
<td>же</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>Џ</th>
<th>Џу</th>
<th>Џ</th>
</tr>
</thead>
<tbody>
<tr>
<td>tур</td>
<td>took</td>
<td>teak</td>
<td>Tight</td>
</tr>
<tr>
<td>tight</td>
<td>(short form)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(masc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dин</th>
<th>Дъякон</th>
</tr>
</thead>
<tbody>
<tr>
<td>dumb</td>
<td>deacon</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Метедевдпроцедуре</th>
</tr>
</thead>
<tbody>
<tr>
<td>bear</td>
<td>copper</td>
</tr>
<tr>
<td>(dat.)</td>
<td>(dat. sing.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Кати</th>
<th>Statue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathy</td>
<td>dress</td>
</tr>
<tr>
<td>(acc.)</td>
<td>(dat. sing.)</td>
</tr>
</tbody>
</table>
The relationship of these consonants is much simpler. The phonetic quality of English /\theta/ is closer to that of the palatal /\j/ than the plain /r/. The length (or complexity) of /\j/ however, sets it apart from English /\theta/, so in this respect plain /\j/ seems the closer, largely produced by the protrusion of the lips, especially the lower lip; this is more important in distinguishing them from the corresponding English sounds than the fact that the most raised part of the tongue is further back in the mouth for the Russian sounds.

Although we generally consider /\j/ and /r/ as being equivalent elements in the two languages, Russian /\j/ is not at all like the typical American English /\j/, as say in roar /\j/ or /\j/.

Russian /\j/ is a trill in which the tip of the tongue vibrates against the alveolar ridge, usually touching it at least twice. The English /\j/ is typically a retroflex resonant with the tongue near the palate and accompanied by protrusion of the lips. The /\j/ phoneme has an extremely wide range of variants in different phonetic environments; furthermore there are important differences between British and American pronunciation.

Some Americans do use a trilled type of /\j/ after /\j/ as in through /\j/ruw/ - this is the type of r-sound which telephone operators are instructed to use in three.
The special type of voiced t-sound which many Americans use before unstressed vowels (after another vowel) in words such as city, bottom, senator is very much like one tap of the Russian trilled ř/ɛ/.

Palatalized ř/ɛ/ presents a peculiarly difficult problem for Americans in that it is structurally different from English sounds both in the basic manner of producing the sound and in the feature of palatalization. A variety of English ř/ɛ/ which bears some resemblance to Russian palatalized ř/ɛ/ is found in stream ř/ɛ/strǐm/.

While the same type of pattern of interference as for most other consonants extends to ř/ɛ/ and ř/r/, the situation is further complicated by the fact that the English hearer may very easily equate both ř/ɛ/ and ř/r/
with ɛ/y/:  

\[
\begin{align*}
R & \quad E & \quad E & \quad R \\
\text{r} & \quad \xi & \quad \xi & \quad \xi \\
\end{align*}
\]

спорь  
argue  
(imperfective imperative)  
зёрёв  
of glows  
(known pl.)  
дворён  
of the noblemen  
(known pl.)  
bole  
pain  
combat  
бой  
boy  
зельё  
[coal] bed  
hare  
zion  
полён  
of clearings  
accordion  
бойн  
Dianne  

The Russian velar fricative ʁ/x/ is sometimes considered comparable to English ʃ/h/; but only because neither of these sounds has a really close match in the other language.

The pronunciation of ɛ/ɪ/ used by many speakers in huge ɛ/ɪw/,Hugh ɛ/ɪw/,human ɛ/ɪwain/ and the voiceless variety of ɛ/y/ following the aspirated stop in cube ɛ/ɪw/; pure ɛ/ɪw/ are similar in phonetic quality to the palatalized variety [x] of Russian ʁ/x/ as heard in ʁɪtɐ̯ˈːy̞ 'sly'. The usefulness of this comparability is limited by the fact that [x] occurs before ʁ/i/ and ʁ/e/ while the voiceless type of ɛ/y/ is found mainly before ɛ/u/.
Russian /c/, as was mentioned before, needs to be compared with the English sequence /ts/. Russian also has sequences of /ts/.

Many places where the spelling might suggest /ts/ the prevalent pronunciation is actually /c/.

Шведский	Советский	Like немецкий
Swedish	Soviet	German
Петрозаводск	Иркутск	Like Луцк

Pronunciation of the sequence spelled TSA and ТСЯ in verb forms seems to be subject to considerable variation. The currently preferred standard appears to be /ts/ phonetically /c/ which has a lengthened stop portion at the beginning. Other pronunciations which are used by some people are /tr/ and simple /c/.

English /ts/ only exceptionally for some speakers found at the beginning of words (e.g. tsetse) so that Russian initial /c/ is quite foreign to the patterns of English.

/ч/

Kiss
Pizzicato
To dry up
Precedent
Pretzel
President
Space (between)

(In rapid speech /ts/ may in fact be replaced by /c/.)

Besides /ч/, Russian has occasionally the sequences /tr/ and /ts/. The first of these is actually the closest equivalent in Russian to the English sequence /tr/.

\[
\begin{array}{ccc}
R & E \\
\hat{c} & \hat{c} \\
\hat{t}\hat{s} & \hat{t}\hat{t} \\
\end{array}
\]
Other Phonemes

The effects produced by $\theta -$ and $R -$ are in some respects diametrically opposed. In Russian the syllable before $R -$ is rather abruptly terminated; in English when the preceding syllable ends in a resonant it is prolonged.

Another noticeable difference is that the glottal closure often occurs before vowels which follow $\theta -$ in English is not found in Russian.
In the comparison of stress phonemes, these are approximately equivalent:

\[
\begin{array}{cc}
R & E \\
\text{o} & \text{o} \\
R/\acute{a}/ & E/\acute{a}/ \\
R/\acute{a}/ & E/\acute{e}/ & \text{unstressed full vowel} \\
\end{array}
\]

unstressed vowel \( R/\acute{a}/ \)

ГРИЗ ОКОСТЬ  
\( \text{gnawed a bone} \)

\( \text{гнёзд окось} \)  
\( \text{greased cars} \)

АНГЛОСАКСОН  
\( \text{/Anglo-Saxon} \)

МЫ ДОЛИ  
\( \text{my dolly} \)

ХОТЯ ЧАС  
\( \text{for only an hour} \)

\( \text{at church} \)

The greatest difference in pattern of occurrences is that, in Russian, \( R/\acute{a}/ \) is as a rule separated from \( R/\acute{a}/ \) by an occurrence of \( \acute{e}/ \) somewhere between; in English, on the other hand, an unstressed full vowel may or may not have \( \acute{e}/ \) between it and \( \acute{e}/ \).

Pay line  
\( /\acute{p}\acute{e}y\ \acute{l}\acute{a}yn/ \)

Saline  
\( /\acute{s}\acute{b}\acute{y}\acute{l}\acute{a}yn/ \)

Warlock  
\( /\acute{w}\acute{o}\acute{r}\ \acute{l}\acute{\acute{a}}k/ \)

Orion  
\( /\acute{o}\acute{r}\acute{i}\acute{\acute{a}}n/ \)

There is a degree of comparability between Russian unstressed vowels in the syllable before the stress (either \( R/\acute{a}/ \) or \( R/\acute{a}/ \)) and an English unstressed full vowel when it occurs in a like position. This is the case in English words like electrician \( /\acute{e}\acute{l}\acute{e}\acute{k}\acute{t}\acute{ri}\acute{s}\acute{i}\acute{n}/ \) (cf. электрический) but this is not a common pattern for English
It is believed that the intonation in both languages is reasonably well analyzed in terms of four pitch-level phonemes:

<table>
<thead>
<tr>
<th>Russian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1</td>
<td>E1</td>
</tr>
<tr>
<td>K2</td>
<td>E2</td>
</tr>
<tr>
<td>K3</td>
<td>E3</td>
</tr>
<tr>
<td>K4</td>
<td>E4</td>
</tr>
</tbody>
</table>

The pitches written similarly are then in each case comparable for each level from 1 (lowest) to 4 (highest).

Similarly comparable to the English terminals /1/, /2/ and /3/ would be the Russian terminals, K1, K2, K3 (and quite possibly K4).

The most striking differences between the intonation of Russian and the intonation of English are not in the sound of the possible tunes for groups of words, which are roughly speaking the same in the two languages. The discrepancies lie rather in the meanings conveyed by the intonational patterns. The intonational pattern proper in one language in a given situation is often quite inappropriate if used for that situation in the other language.

When a Russian word affected by a single pitch-level phoneme receives a phrase emphasis (K0), there is a marked impression of the pitch of the voice rising on the stressed syllable. For the corresponding situation in English, the pitch of the stressed syllable remains comparatively level.

¿Можно открыть окно? (May I open the window?)

¿Why did he want to get out?
4.5 Conflicting Patterns

Of the sounds which occur in English but not in Russian, there are a few for which the patterns of their use in English can interfere with the learning of Russian by English speakers.

\( \mathcal{E}/\eta/ \)

In Russian, the sequences \( \mathcal{R}/nk/ \) [nk] and \( \mathcal{R}/ng/ \) [ng] occur. Since in English the only nasal sound usually found before \( \mathcal{E}/k/ \) and \( \mathcal{E}/g/ \) is \( \mathcal{E}/\eta/ \), there is a tendency to substitute [gk] and [ng] in pronouncing Russian words. As with all instances of this sort, this is most pronounced when the words are associated through similarity in both sound and meaning with English words.

\[
\begin{array}{ll}
\mathcal{E}/\eta/ & \mathcal{R}/\eta/ \\
bank & банк \\
English & английский
\end{array}
\]

\( \mathcal{E}/w/ \)

In words where \( \mathcal{R}/v/ \) occurs after a consonant, [w] may get substituted for [v] on the basis of the fact that \( \mathcal{E}/w/- \) rather than \( \mathcal{E}/v/- \) frequently follows consonants.

\[
\begin{array}{ll}
\mathcal{E}/w/ & \mathcal{R}/v/ \\
equivalent & эквивалент
\end{array}
\]

\( \mathcal{E}/\iota/ \)

There is a strong tendency for speakers of English to replace any unstressed vowel in Russian by some variety of the English obscure vowel \( \mathcal{E}/\iota/ \). Sometimes such a substitution will be sufficiently close to the Russian vowel but often it will result in an unacceptable pronunciation. The relations involved were in part discussed in the
under unstressed vowels. (The exact details involved are too complicated for consideration here, as they involve dialectal and stylistic variation in both languages and possible alternate pronunciations in Russian.)

4.6. Consonant Clusters

There are important differences between the two languages in the types of limitations found on the occurrence of consonants in clusters. In general more varied combinations are possible in Russian than in English. Both languages have greater variety in medial than in initial or final clusters.

The most important class of restrictions in English affects the position in clusters of certain types of consonants, in particular resonants; these tend to occur adjacent to the vowel nucleus. Omitting further more special limitations, the following diagram summarizes the pattern.

### Initial Clusters

<table>
<thead>
<tr>
<th>(s)p, b</th>
<th>(s)t, d</th>
<th>(s)k, g</th>
<th>f, θ</th>
<th>s, ʃ</th>
<th>y</th>
<th>w</th>
<th>r</th>
<th>l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vowel</td>
<td>Nucleus</td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Final Clusters

<table>
<thead>
<tr>
<th>(s)p, b</th>
<th>(s)t, d</th>
<th>(s)k, g</th>
<th>f, θ</th>
<th>s, ʃ</th>
<th>r</th>
<th>i</th>
<th>m</th>
<th>n</th>
<th>j</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vowel</td>
<td>Nucleus</td>
<td>Consonants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Some additional initial consonant clusters are found starting with /s/ (or /ʃ/).

smile  snail  sphere  svelte  (shmoo  schnapps)
Final clusters /sp/, /st/, /sk/ also occur; these provide the only cases among English non-medial clusters of the same phonemes appearing in alternate arrangements.

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Word 1</th>
<th>Word 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>/sp/</td>
<td>asp</td>
<td>apse</td>
</tr>
<tr>
<td>/st/</td>
<td>past</td>
<td>pats</td>
</tr>
<tr>
<td>/sk/</td>
<td>ask</td>
<td>ax</td>
</tr>
</tbody>
</table>

Russian does not have similar limitations on relative positions of types of consonants except for /y/ which occurs only adjacent to
vowels. Many pairs of phonemes can occur in either order.

Initial:

\( R/\text{tr}/ \) труд labor \( R/\text{tr}/ \) ртуть quicksilver

\( R/\text{gl}/ \) глаз eye \( R/\text{gl}/ \) плачь to tell lies

\( R/\text{vl}/ \) влчать to attract \( R/\text{vl}/ \) льва of the lion (gen.)

\( R/\text{cm}/ \) чмокнуть to smack \( R/\text{mc}/ \) мчить to whisk away

Final:

\( R/\text{tr}/ \) спорт sport \( R/\text{tr}/ \) смотр inspection

\( R/\text{rk}/ \) миръ миъе \( R/\text{kr}/ \) мокр of letters (gen. pl.)

\( R/\text{ek}/ \) главк central board \( R/\text{ek}/ \) букв of soles (gen. pl.)

\( R/\text{eb}/ \) ковш dipper \( R/\text{sf}/ \) подошв of the lion (gen.)

\( R/\text{mm}/ \) гимн hymn \( R/\text{nm}/ \) соны assemblage

In both languages most of the long final clusters are due to a limited number of affixes.

In English all four-phoneme final clusters, and many three-phoneme ones, result from the suffixes spelled s, sh and ed.

\( E/\text{mpls}/ \) tempts \( E/\text{mpst}/ \) glimpsed

\( E/\text{gkts}/ \) instincts \( E/\text{gkst}/ \) jinxed

\( E/\text{rsts}/ \) thirsts \( E/\text{rpts}/ \) excerpts

\( E/\text{rlds}/ \) worlds \( E/\text{kts}/ \) texts

In Russian a fair number of nouns with the suffix $-\text{ctvo}$ may be used in the plural; the genitive plurals of these account for many of the longer final clusters in Russian (all gen. p. "of the ...s")!
quantities
means
comforts
district assemblies
sacraments
fleeings
atrocities
government
murders
publishing houses

(Though cf. also monster.)

Place names with the suffix -ск furnish one of the most common sources of final three-member clusters.

Би́тебск
Томск
Минск
Свердло́вск
Курск
Новороссийск
Арха́нгельск
Assorted other three-consonant final clusters do occur, although none of them are very common, e.g.:

- тондран (Александр)
- венгр (венгр)
- спектр (спектр)
- центр (центр)
- Днестр (Днестер, river)
- верст (ген. pl. of верста, 'verst' (1.065 km.))
- горсть (hollow of the hand)
- волхв (magus, wizard)
- затхл (musty (short form masc.).)

The maximum length of initial clusters in Russian is apparently four consonants. Such clusters result from the prefix spelled вэ- or вс-:

- вбрцать (взбрзгивать, to sprinkle)
- взгл (взгляд, gaze)
- вздывать (вздаваться, to form fours)
- вспляк (всплеск, splash)
- встреч (встреча, meeting)
- всхлпивать (всхлипывать, to sob)

Limitations respecting voicing apply to all Russian clusters, initial, medial, or final. For this purpose, Russian consonants are to be
divided into sets:

"Voiceless" : p p t t k k f s s x š š s z z c č

"Voiced" : b b d d g z z đ đ

"Indifferent" : m n n l l r r y

Omitting a few special complications, it may be said that within any cluster: if the last consonant is "Voiceless" it is not preceded by "Voiced"; if the last is "Voiced" it is not preceded by a "Voiceless".

The phonemes /v/ and /y/ are "Indifferent" as far as what may precede them, but they do not precede "Voiceless." The last consonant of any final cluster must be "Voiceless" or "Indifferent".

In English there is a strong tendency for consonants that cluster together to be the same as to voicing, but for many speakers there is no such absolute limitation as in Russian:

\[E^\circ/ds/\] Hudson \[E^\circ/dsl/\] midst \[E^\circ/ak/\] vodka

\[E^\circ/bs/\] Absalom \[E^\circ/d\theta/\] width \[E/\theta/\] Whitty

In Russian clusters there are limitations as to where plain consonants may occur in combination with palatalized consonants, and as to where palatalized consonants may occur in relation both to plain and to other palatalized consonants. In general, the only consonants before which either member of a related pair of plain and palatalized consonants can be found are. To this /l/ and /l/ present an exception in that either one can be found in many other surroundings.

\[R /lt/\] bolt \[R /\ell/\] volt

\[R /ln/\] full (short form fem.) \[R /\ell/\] sick (short form fem.)

\[R /\ell/\] remaining silent \[R /\ell/\] boy
The full details of restrictions respecting palatalization are complicated and in some instances show variations among different speakers. Long consonants, interpreted as clusters involving repetition of the same consonant (geminate clusters) are found in Russian. In most varieties of English, repetition of the same consonant is possible only after an intervening division point ḵ.

Оттуда /attudə/ from there at two /tʊ tw/ нет турка /nət turkə/ there isn't a Turk

беззубый /bizubəi/ or - biy/ toothless is Zuni /iz zûnəi/ чере в зубья /tərəz zûbyə/ through the teeth

бессилие /bissiləi/ weakness mis-sent /mɪs sənt/ близ силоса /blis sɪloسا/ near the silo

Compare also:

бб аbbат abbot
dд поддённик saucer to put under a flower pot
нн Анна
ss рассо́й brine ʦ dʒulte ʦе! ʦе!
ээ изжога heartburn ʒə патьдєсъt 50
ээ низший inferior

<In many cases, however, spellings in Russian which might indicate double consonants are in fact pronounced as single consonants>.
Certain consonants in Russian may even be geminate at the beginning of a word:

- **vv** ВВОЗ importation **VV** ВВЕК never at all
- **zz** САДИ from behind **ZZ** с зерном with a grain
- **ss** СЫЛКА exile **SS** СЕК hind shank
- **ъъ** СХЕР burned down (past masc. transitive) **ъъ** СИЛ sewed together (past masc.)

 Geminate clusters do not as a rule occur finally in Russian.

### 4.7 Vowel Combinations

In English, vowels do not frequently occur one after the other without being separated by /ə/ or /ɒ/. The principal type of exception to this is found when /ə/ is the first vowel, as for instance in gnawing /ˈnɔːɪŋ/, rawer /ˈrɔːr/. (An exception following /e/ is found in some speakers' pronunciation of Hawai'i /həˈwai i/ or of Laos /ləˈwəɪs/.)

(In most combinations spelled with a sequence of two vowel letters, the first nucleus is, in the speech of most Americans, a diphthong containing /eɪ/ or /ɒ/, e.g. Leah /ˈliːə/, chartie /ˈkærtiː/, Ohio /ˈəʊhɪəʊ/, create /ˈkreɪət/; poet /ˈpəʊt/, duo /ˈdjuː/, Louise /ˈluːə/.)

Some Russians say /R/ as for them it is more frequent.
In Russian a wide variety of vowel combinations can be found, although some of the possible ones are not very common. Some examples are:

- **ру́йна** /ruína/ ruins
- **пое́т** /poët/ poet
- **оба́зис** /oásis/ oasis
- **би́ограф** /biográf/ biographer
- **па́ук** /paúk/ spider
- **наобу́м** /naabum/ at random

(It is to be noted that after vowels, /i/ and /y/ are in contrast for some speakers but not for others. In any case they are spelled the same (у) as for example in)

- **сто́ит** /stóyít/ is worth
- **пой́ть** /payít/ give to drink

4.8 **Typical Vowel and Consonant Alternation.**

In both English and Russian there are many cases where different words having the same basic stem (or the same affix) are found to show differences in the form of that stem (or affix). Some of the more important and more regular of these will be mentioned here.
In both languages there are changes of vowels when the stress is at a different place in a word. In English these involve mostly the substitutions of one of the obscure-vowel nuclei for a full-vowel nucleus.

- **define** /dɪˈfɪnɪt/  
- **definite** /dɪˈfɪnɪt/  
- **patriot** /ˈpeɪtrɪɔt/  
- **patriotic** /ˈpeɪtrɪətɪk/  
- **aroma** /əˈrɒmə/  
- **aromatic** /əˈrɒmətɪk/  
- **brigade** /ˈbrɪɡəd/  
- **brigadier** /ˈbrɪɡədɪər/  
- **record (verb)** /rɪˈkɔrd/  
- **record (noun)** /rɪˈkɔrd/  
- **attribute (verb)** /əˈtrɪbjuːt/  
- **attribute (noun)** /əˈtrɪbjuːt/  
- **arithmetic (noun)** /əˈrɪθmətɪk/  
- **arithmetic (adj.)** /əˈrɪθmətɪk/  

(Full vowels occur in stressed syllables, and elsewhere most frequently in the second syllable preceding the stress, but many other patterns also occur.)

In Russian a more systematic pattern prevails: by and large after plain consonants /rv/ and /rʲ/ are both replaced by unstressed /r/; after palatal consonants stressed /rv/ /rʲ/ /rʲ/ /rʲ/ are all replaced by unstressed /rʲ/; after /rʲ/ /rʲ/ /rʲ/ /rʲ/ in most cases /rʲ/ /rʲ/ /rʲ/ are replaced by /rʲ/; though for some speakers /rv/ is also.)

(See also pp. 59-62 of this MS.)
threshing flour
so
meat
turf
white
leaf, sheet
chewed (short form masc. past participle)
six
alive (short form masc.)
heat

and most affixes - have the same spelling, as a rule, whether the vowels in them are stressed or unstressed.)

The consonants in Russian which belong to pairs--one voiceless and the other voiced (cf. (pp. 51-52 of typescript) and xpp. 104-5 of typed)--will be found replacing each other, in accordance to the sequences in which only one sor can appear.

Only the voiced ones can occur before /b/, /b/, /d/, /g/, /g/, /z/, /z/, /z/, whether or not separated by / / - as between adjacent words (this does not apply when the are in separate phrases.) Only voiceless occur before another voiceless consonant or at the end of a phrase or before / / except when / / is followed by one of the voiced consonants listed above.
Illustrative examples:

Unvoicing:

/b/ арăбы
Arabs /p/ арăбка
Arab woman
/v/ головă
head /ɛ/ голóвка
(diminutive)
/d/ швăднă
Swedes /ɛ/ швёдка
Swedish woman
/ɡ/ дăдă
uncle /ɛ/ дăдька
(diminutive)
/z/ слесă
tear /s/ слёэка
(diminutive)
/ʐ/ норвĕже
Norwegian man /ɕ/ норвĕжка
Norwegian woman

Voicing:

/p/ крĕпла
grew /b/ крĕп бы
would grow stronger
(stronger (past fem.)) (masc.)
/s/ росла
grew up /z/ рос бы
would grow up
(past fem.) (masc.)
/k/ пекла
baked /ɡ/ пĕк бы
would bake
(past fem.) (masc.)
/x/ сĕхла
dried up /χ/ соx бы
would dry up
(past. fem.) (masc.)
/ʂ/ лишь
as soon as /ʐ/ лишь бы
if only

(The spelling is not usually changed in such cases except for ـ and ـ in prefixes: ـ sinless ـ bloodless)

A regular alternation in English comparable to this is the difference in certain affixes depending on whether the sound which precedes is voiced or voiceless.

/ʼkæbz/ cubz
/kæps/ cupz
/ʼribd/ ribbed
/ʼript/ ripped
Plain and palatalized consonants also are found substituting for one another.

- жена /ʐɛnɛ/ (wife)
- носу /nɨsɨ/ (I carry)
- кровь /kroʊv/ (blood)
- дверь /dvr/ (door)

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Palatalized Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>жена</td>
<td>женэ</td>
</tr>
<tr>
<td>носу</td>
<td>носэ</td>
</tr>
<tr>
<td>кровь</td>
<td>кровэ</td>
</tr>
<tr>
<td>дверь</td>
<td>дверэ</td>
</tr>
</tbody>
</table>

This is not directly comparable to anything in English. There are sporadic alternations of /ɛ/ with /э/, but these depend largely on position of stress:

- circuit /sɜrkt/ circuitous /sɜrkɛwɪtʃ/ (Many pronounce /ny/ also in penurious.)
- solution /səljuʃən/ soluble /sʌljuəl/
In certain forms in Russian another type of alternation is found:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Russian</th>
<th>English</th>
<th>Russian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>k</td>
<td>плакать</td>
<td>to cry</td>
<td>плачу</td>
<td>I am crying</td>
</tr>
<tr>
<td>g</td>
<td>слуга</td>
<td>servant</td>
<td>слушу</td>
<td>I serve</td>
</tr>
<tr>
<td>x</td>
<td>пахать</td>
<td>to plough</td>
<td>пашу</td>
<td>I am ploughing</td>
</tr>
<tr>
<td>t(t)</td>
<td>платить</td>
<td>to pay</td>
<td>плату</td>
<td>I am paying</td>
</tr>
<tr>
<td>d(d)</td>
<td>ходить</td>
<td>to walk</td>
<td>хожу</td>
<td>I walk</td>
</tr>
<tr>
<td>z(z)</td>
<td>резать</td>
<td>to cut</td>
<td>резу</td>
<td>I am cutting</td>
</tr>
<tr>
<td>s(s)</td>
<td>плясать</td>
<td>to dance</td>
<td>пляшу</td>
<td>I am dancing</td>
</tr>
<tr>
<td>st,sk</td>
<td>пустить</td>
<td>to allow</td>
<td>пущу</td>
<td>I shall allow</td>
</tr>
<tr>
<td>c</td>
<td>кончать</td>
<td>to seek</td>
<td>ищу</td>
<td>I am seeking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>end</td>
<td>кончу</td>
<td>I am finishing</td>
</tr>
</tbody>
</table>

In similar circumstances after labial sounds /v/ is inserted:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Russian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>p(p)</td>
<td>трепать</td>
<td>to worry</td>
</tr>
<tr>
<td>b(b)</td>
<td>любить</td>
<td>to love</td>
</tr>
<tr>
<td>m(m)</td>
<td>дремать</td>
<td>to doze</td>
</tr>
<tr>
<td>f(f)</td>
<td>графить</td>
<td>to graph</td>
</tr>
<tr>
<td>v(v)</td>
<td>ловить</td>
<td>to catch</td>
</tr>
</tbody>
</table>

In English there is a somewhat similar type of alternation before certain suffixes:

<table>
<thead>
<tr>
<th>Letter</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>t</td>
<td>legislate, legislature, (legislation)</td>
</tr>
<tr>
<td>d</td>
<td>proceed, procedure, (invade, invasion)</td>
</tr>
<tr>
<td>s</td>
<td>press, pressure, impression</td>
</tr>
<tr>
<td>z</td>
<td>seize, seizure, revise, revision</td>
</tr>
</tbody>
</table>
Conflicts in the Stress Patterns of Loanwords

The principal cases in which the placement of stress in words causes interference between the two languages are in words which have been borrowed into each language, but with the stress on different syllables.

Russian often differs from English by having final stress or in feminine nouns ending in /ə/ (a or a) stress on the syllable before the last.

студент  student  автомобиль  automobile
магнит  magnet  диагональ  diagonal
аспири́н  aspirin  телескоп  telescope
нейтрон  neutron  мете́р  meteor
атмосфера  atmosphere  телеграфа  telegram
сistema  system  температура  temperature
бата́рёя  battery  целлюлоза  cellulose

(French, with automatic final stress, has exerted an influence on the stress of many learned borrowings. The feminine nouns often correspond to words which have a final "mute e" in French.)

The suffixes -ист and -изм are inherently stressed in Russian:

лингвист  linguist  атавизм  atavism
специалист  specialist  каннибализм  cannibalism

In Russian the stress is often on the middle syllable in a three-syllable word where the corresponding word in English has initial stress.

параграф  paragraph  характер  character
парламент  parliament  автобус  autobus
синоним  synonym

The stress in Russian is on /ə/ in words ending in -атор.

оратор  orator  ариатор  aviator
конспиратор  conspirator  индикатор  indicator
Pairs of words in which the Russian suffix -ия corresponds to the English suffix -y also suffer a stress dislocation:

история history энергия energy
демократия democracy биология biology

The learned borrowings common to the two languages of course involve many other lacks of parallelism beside differences in the location of stress. Often Russian spelling is much more reminiscent of an English word than is the pronunciation. Such partially similar words lend themselves easily to being pronounced by the English learner of Russian in a partly English manner, particularly as to the vowel sounds.

(There are also frequent correspondences in the forms of related words which somewhat hinder recognition of the common origin.

госпиталь hospital характер character
экватор equator автомат automat
Европа Europe нейтрон neutron
мифология mythology метан methane
цилиндр cylinder but сантиметр centimeter)

Russian and English habits differ in regard to the usual pattern of stress for reading abbreviations.

CCCP Ñ/es es ê 0/ U.S.S.R. Ê/yûw es es ê 0/

In English, the name of the first letter of an abbreviation is pronounced with greater prominence than the middle letters, which is not the case in Russian.

4.10 Phrase Emphasis.

As was pointed out in previous chapters, Russian has a phoneme of phrase emphasis Ñ/0/, comparable to English Ê/0/.
In Russian the occurrence of \( R/\epsilon / \) with some word before the last one in a phrase is one way of providing emphasis. The order of words is much freer in Russian than in English, and another way of providing emphasis is to put words in a less usual order. Different word order makes in many cases a less violent change in a sentence than does a shift in the position of the phrase emphasis.

In accordance with this, there is a difference in the patterns of occurrence of Russian \( R/\epsilon / \) and English \( E/\epsilon / \). In circumstances where word order is not fixed in Russian, it is different word order which by and large corresponds most closely in meaning to the shift of \( E/\epsilon / \) in English, while a different position of \( R/\epsilon / \) in Russian is more nearly equivalent to a recasting of the phrase in English.

Thus:

- Студент отвечал.  
  The student was answering.
- Отвечал студент.  
  The student was answering.
- Студент отвечал.  
  It was the student who was answering.
- Отвечал студент  
  was what the student was doing.

Shift in the position of the phrase emphasis is not so common in Russian as in English, where it may take place for no stronger reason than that the final element in a phrase is something rather to be expected, as in

- The telephone rang.