Polish is a West Slavonic language with about 41 million speakers in Poland and approximately 10 million in diasporas. It can be described as a ‘consonantal’ language, in two respects: (a) it has a rich system of consonant phonemes, as shown in the table, and (b) it allows heavy consonant clusters, especially word-initially. A phonological word may begin with a five-consonant cluster: /spstrɔjem/ ‘with (the) trout’, and a 4C lexeme-initial cluster is not unusual: /wzglɔnt/ ‘respect (n.)’. Even a geminate affricate can occur in this position: /dɔʑistɔ/ ‘rainy’. The initial C-clusters are not simplified in fluent, spontaneous speech.

The segmental IPA transcription used here in the sample is ‘broad’ in three respects: (a) it is (taxonomic-)phonemic, (b) it minimizes the use of diacritics, and (c) it uses the simplest characters (cf. the table and the vowel quadrilateral below).

A representative contemporary work on Polish phonetics is Dukiewicz (1995). Polish spelling is morpho-phonological, and the grapheme–phoneme relations are quite complex, but regular, allowing highly predictive rules (Steffen-Batogowa 1975). Several computer programs are available implementing these rules.

The text of the North Wind and the Sun was read by a 58-year-old professional female speaker. The style is that of an easy narrative.1

### Consonants

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Labiodental</th>
<th>(Post)dental</th>
<th>Alveolar</th>
<th>Alveolo-palatal</th>
<th>Palatal</th>
<th>Velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>p b</td>
<td>t d</td>
<td></td>
<td></td>
<td>c j</td>
<td>k g</td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f v</td>
<td>s z</td>
<td>ŋ ʒ</td>
<td>c z</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricate</td>
<td>ts ɗz</td>
<td>ʧ ɗʃ</td>
<td>tc ɗz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nnasal</td>
<td>m</td>
<td>n</td>
<td>ɲ</td>
<td>η</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Flap/Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>j (ʃ)</td>
<td></td>
<td>w (w̃)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 The interested reader may obtain the recording in a WAV format on contacting the author by e-mail.
The voiced/voiceless opposition in the obstruents is fully one of glottal activity. The voiceless stops are not aspirated, and differences in voice onset time are distinctive.

/ŋ/ is primarily alveolo-palatal [ŋ] but [ɲ] before fricatives. /ŋ/ is [ŋ] before [k ɡ] and non-syllabic [ʊ] or [ɪ] elsewhere. But there are also reasons for treating the nasalized non-syllabic vocoids as separate phonemes, transcribed /ɨ̃/. These, as well as their oral counterparts are classified as ‘approximants’ in the table.

/ʂ ʐ ɭ ɭ/ are distinct from /ts dz tʃ tɕ dz tʃ/ (a minimal pair is, for example, /vjeţi/ ‘vetchy’ ‘eternal’ : /vjeţi/ ‘windy’; cf. also /dʒem/ ‘marmalade’ : /dʒev/ ‘tree’, /pʃeecake / przechik ‘leak(n.)’ : /pʃeckjufe/cio/przedsiebiście ‘enterprise’).

/ʃ ʒ/ are laminal alveolar.

b : p  
bal ‘ball (dance)’  
bal ‘a post’

t : d  
tom ‘volume’  
Dom ‘house’

c : j  
cew ‘fang’  
jewda ‘stock exchange’

k : ɡ  
kura ‘hen’  
gura ‘mountain’

f : v  
fur ‘carts (gen. pl.)’  
vur wör ‘a sack’

s : z  
s ‘l’  
sina ‘livid (fem.)’  
žima ‘winter’

f : ʒ  
fal ‘muffler’  
žal ‘regret (n.)’

c : k  
celna ‘a trowel’  
keler keler ‘waiter’

j : ɡ  
’droje drogie ‘way (acc. sing.)’  
’droge(ɨ̃) drogę ‘dear (nom. pl.)’

s : f : cz  
s ‘s’  
’ska ‘cash register’  
’ska ‘kaca Kasia ‘Cate’

z : ʒ : ɭ  
z ‘s’  
žet ‘letter ż’

k : ɭ  
kula ‘sphere’  
kol ‘(he) revels’

sta : tʃ : tʃ  
katse ‘hangovers’  
katse ‘of ducks’ (adj.pl.)

r : ɭ  
ridze ‘agerics’  
riede ‘games of bridge’

n : j  
irena ‘irene (dim.)’  
maľenka ‘wee (fem.)’

p : j  
p ‘p’  
p ‘hand’

b : l  
ból ‘pain’  
bór ‘forest’

m : j  
maja ‘May (gen.)’  
mawa ‘a sack’

k : ɭ  
kůsci koński ‘horse’s’  
kůsci ‘small (fem.)’
Figure 1 The first two formant frequencies in log(Hz) of a Polish male speaker (heavy line) and a female speaker (light line).
The first, standard figure shows the principal allophones of the Polish vowels in the IPA quadrilateral. The second figure represents them in a (logF1, logF2) acoustic plane as produced by two typical speakers, one male (PW) and the other female (AD). The values of the two variables are means based on measurements of the vowel ‘targets’ in a list of 100 one- and two-syllable words. There is little contextual allophony, but /e/ is half-close between palatals, as in [pjećcu] pieśń ‘song’ and /a/ is Cardinal 4 in this position, e.g. [dziać] dzisiaj ‘today’.

The following commutation series illustrates the six vowels (a 2 x 3 system) functioning distinctively:

\[
\begin{array}{ccc}
  i & : & u \\
  e & : & o \\
\end{array}
\]

biti bity ‘beaten’    biti byty ‘entities’    buti buty ‘shoes’

beti bety ‘bedding (coll.)’    bati baty ‘whips’    boti boty ‘women’s high-boots (augm.)’

**Prosody**

Lexical stress (potential for phrasal accent) usually falls on the penultimate syllable, but there are various exceptions with antepenultimate stress, such as some lexemes derived from the Classical languages or some fully ‘Polonized’ foreign proper names: /fonetika / fonetyka ‘phonetics’ or ‘phonetician (gen. sing.)’, /prezident/ prezident ‘president’, /vajfjktion/ Waszyngton, /jerożolima/ Jeruzolima. Allolexes of such lexemes with an added syllable in the ending are, however, ‘regular’; e.g. fonetykami, fonetikami ‘phoneticians (instr. pl)’. There are also scattered native exceptions: /zejpospolita/ rzeczpospolita ‘republic’, /okolitsa/ okolica ‘neighbourhood’, etc. Secondary lexical stress falls on the initial syllable in lexemes of four or more syllables, and often also in phonological words that include a proclitic: /entsiklopedja/ encyclopaedia ‘encyclopedia’, /naobraże/ na obrazie ‘in the picture’. This secondary stress becomes primary for emphasis, but there is a growing tendency, in certain styles of speech, to use initial stress even when no emphasis is implied. Primary (nuclear) and secondary (prenuclear) phrasal accents are intonational (Jassem 1961).

Intonation can be indicated with tone-accent marks that are similar to those used for English in the British tradition. On the assumption of five phonological levels: extra High, High, Mid, Low and extra Low, the tone-accent marks, being iconic, are self-explanatory. ['] denotes a level nuclear tone and ["] stands for durational (tertiary) accent. The last pitch accent before tone-unit boundary indicates the primary accent, i.e. the nuclear tone.

The transcription of the text uses spaces to indicate rhythm units rather than coinciding with the spaces used in ordinary writing. Polish conventional spacing is not very consistent.

**Transcript**

pevnego .razu || puw·notsni .vjatr i.swojtse || spfe>talice || `ktoznix jest cil.nejfi || `vwacne pfe>xdziw `drogoj jacię >tjwoyjek || ovi·penti `ftcepwj .pwa>tj || `umu vilice `vjents || `zetenzix `kturj `pjerj zmuci pfxedzontseg || abi·zdjow ·kritc || `będzde ·uva·zani ·zacilnej .jego || puw·notsni .vjatr ·zatjow ·od ·razu ·dońtc ·s·tsawe ·ciwi || aleim·motsnej ·dow || ·tim·cilnej ·po·drunj o·tulawe .fpwa>tj || ·vrequj ·puw·notsni .vjatr ·daw·spokuj || ·fedi ·swojtse ·za·tjewo ·pfi.g3evac || ·af·xfile ·pužnej ·podrunj ·zdjow .pwa>tj || ·f·ten ··sposup || puw·notsni .vjatr ·mucaw ·pfiznac || 3e·swojtse jestcil·nejfe od ·nega
Orthographic version

References