

# THE DISTRIBUTIONAL CHARACTERISTICS OF ENGLISH AND POLISH DIPHTHONGS

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## I. INTRODUCTION

1.1. The approach to diphthongs in the present paper will be phonemic. A diphthong is defined as "a sequence of a vowel and a semi-vowel". The possibilities of treating and transcribing a diphthong as one unit are left here without discussion. Diphthongs are divided into categories of falling and rising according to the order of the two glides. A diphthong is falling when the first element is more prominent (syllabic). A diphthong is rising when the order of the glides is reversed (the second glide is syllabic). The third type of diphthongs is called the centring diphthong which begins with a vowel and ends with /ə/ (a neutral half-open position). The schwa is non-syllabic.

1.2. Sequences: Semivowel+V+Semivowel, V+Semivowel+ /ə/ or V+Semivowel+V are not discussed in the present paper because most of them are treated as triphthongs, and, in part because the difficulties connected with establishing boundaries which either separate a preceding vowel from a rising diphthong or a vowel which follows a falling diphthong, e.g. /aja/ in Polish /maja/ can be divided as /maj-a/ or /ma-ja/. None of the possibilities seems to be more acceptable because /maj/ exists separately. The fact advocates the existence here of a falling diphthong. Nevertheless, the division into syllables /ma-ja/ is preferable.

1.3. Distribution covers the occurrence of diphthongs in three positions: initial, medial and final.

## II. THE DISTRIBUTION OF ENGLISH DIPHTHONGS

2.1. The analysis is based mainly on Standard British English. Sometimes references to American English will be made. All three types of diphthongs appear in English. There are two semivowels in English /j/ and /w/. Let us examine the possible combinations of the semivowels, and of the schwa with vowels.

## 2.2. Rising diphthongs /j+V/ and /w+V/.

## a) j+V

Table 1

Position	Initial	Medial	Final
/je/	/jel/yell, yet, yellow yelp, yesterday	_____ <sup>1</sup>	_____ <sup>1</sup>
/je/	/jepi/yappy, yak, yealmpton, Yarico, yashmack	_____	_____
/ja/	/ja/young, yum, youngster, Youge yucca	_____	_____
/ja/	/jad/yard, yah yarn, yardley, Yarmouth	churchyard <sup>2</sup> milliard	_____
/jo/	/jad/yod, yonder, Yorrick you're (in rapid speech)	/bi'jond/ <sup>3</sup> beyond	_____
/jo/	/jon/yawn, yore, yours, York, Yorker	_____ <sup>4</sup>	_____ <sup>4</sup>
/ju/	/jus/use, Utah, utility, <sup>5</sup> uvula, utensil	/stimjulejt/ stimulate, cute, duty, accuracy, valueless, postulate	/nevju/ <sup>6</sup> nephew, bedew
/jɜ/	/jɜn/yearn, year, yearling, Yerkes	_____	half year /hɛfjɜ/ <sup>7</sup>
/je/	/je'selvz/yourselves <sup>8</sup> /je'v/you have	/ejpjen/ apian, bilabial, alluvial, sentient, opinion, canadium, serbonian, etc.	/windje/windier, rimpia, India, Cynthia, schizophrenia, etc.

<sup>1</sup> In medial and final position /je/ is reduced to /jɛ/. The diphthongs may be in complementary distribution since /jɛ/ in the initial position is found only occasionally.

<sup>2</sup> Found only occasionally.

<sup>3</sup> Found only occasionally. The pronunciation /b'ænd/ is also frequent.

<sup>4</sup> Found in foreign words /fjɔd/ flord or in /kjoɪəs/ curious, /kjo/ cure. However, the pronunciations /kjuəriəs/ and /kjue/ are more frequent.

<sup>5</sup> The pronunciation /juvula/ or /juwə/ is more frequent in British English. /ju/ in the initial position is found in foreign words /'jusɔf/ Yussuf.

<sup>6</sup> Found only occasionally.

<sup>7</sup> The appearance is occasional.

<sup>8</sup> Found only occasionally.

## b) w+V

Table 2

Position	Initial	Medial	Final
/wi/	/wil/ will, wilful, widow, which, whig, women, etc.	/dwindl/ dwindle, quit, twin,	_____
/wo/	/wel/ well, whelp, wedding, welcome, welfare, Weller, etc.	/dwel/ dwell, question, twelve, quest	_____
/we/	/wɛg/ wag, wagon, wagfall, waggery, Wagnell, W.A.T., etc.	/twɛŋ/ twang, twangle, gang,	_____
/wa/	/wan/ one, won, wonderful, wondrous,	_____	_____
/wo/	/'wɔdi/ waddy, waffle, was, Wal, Waller, wan, wand, etc.	/'twɔdl/ twaddle, quadron, squat, quarrel, quadruple,	_____
/wo/	/wol/ wall, walnut, walrus, walk, warlike, warm, water, etc.	/'dwɔf/ dwarf, squash, quarter	_____ <sup>1</sup>
/wu/	/wud/ wood, wool, wolf, woman, Wodard, Wolsey,	/in'wud/ inwood, Elmwood, boyhood, Curwood, childhood	_____
/wɜ/	/wɜk/ work, worse, worship, world, weren't,	password, deepword, Edward	_____
/we/	_____ <sup>2</sup>	/'fowəd/ forward, toward, inward, backward,	/a'jowə/Iowa <sup>3</sup>

<sup>1</sup> Found occasionally in foreign words: /patwo/ patois, /skwo/ squaw.

<sup>2</sup> Found occasionally in foreign words: /wə'habi/ Wahabi.

<sup>3</sup> Found occasionally.

## 2.3. English falling diphthongs.

## a) V+j

Table 3

Position	Initial	Medial	Final
/ij/	/ijɪ/ eat, eel, eastward, Easter, e'n, etc.	/fiɪld/ field, mean, keen, fourteen, etc.	bee, pea, tree /triɪ/ be, see, sea, koy, etc.
/ej/	/ejk/ ache, A.B.C., ape, eight, ancient, amen corner, etc.	/feɪs/ face, late, make, date, state, veil, etc.	/deɪ/ day, May, say, O.K., play, etc.
/aj/	/aj'diəl/ ideal, idol, identity, ice, icon, etc.	/raɪd/ ride, bribe, side, mice, died, nice, etc.	/taɪ/ tie, sigh, die, lie, my, high, etc.
/ɔj/	/ɔjl/ oil, oink, oyster, Oostrakh, Oisin	/boɪl/ boil, soil, exploit, Lloyd	boy, coy, toy, joy



All above diphthongs can occur in all positions.

## b) V+w

Table 4

Position	Initial	Medial	Final
/aw/	/awns/ ounce, out, outrageous, outline outsider	/ə' bawt/ about, loud, down, mouse, found, house	/baw/ bow, how, cow, crow, thou
/uw/	—	/smuwθ/ smooth, food, move, root, tooth, droop	/duw/ do, true, who, clue, through
/ɜw/American /ow/	/ɜwk/ oak, own, over, only	/hɜwp/ hope, boat home, both, noble	/gɜw/ go, flow, too, follow, dough

/uw/ in the initial position is occasionally found in foreign words /'uwlənd/ Umland, /uwigriən/ Ugrian.

The appearance of English falling diphthongs is restricted according to their consonantal environment. The so-called "distribution B" is examined by Trnka and some others.

## 2.4. Centring diphthongs /-|V+|.

Table 5

Position	Initial	Medial	Final
/iə/	/iən/ Ian, ear, earphones	/im'piəriəl/ imperial, period, pierce, fierce, weird, beard	/biə/ beer, fear, dear, queer, hear, here, windier, etc.
/eə/	/e'əmeɪl/ air mail, aeroplane	/prɛəri/ prairie, prayer, book, scarce, wearing	prayer, bear /bɛə/, fair, fare, dare, square, etc.
/uə/	—	/puəli/ poorly, surely, curious, cured,	/puə/ poor, sure, mature, aperture, moor, sewer, etc.

There is also a centring diphthong /əə/, e.g. /səəd/ sword in medial position, /fləə/floor, /məə/more in final. However, the pronunciation /səd/, /mɒ/, /flɒ/ is more frequent.

## III. THE DISTRIBUTION OF POLISH DIPHTHONGS

3.1. The status of Polish diphthongs, both rising and falling, is not so clear as in the case of English diphthongs. A lot of phoneticians do not mention diphthongs at all. Koneczna (1965: 126) discusses diphthongs, diphthongoids and triphthongs, pointing out the fact: "Klasycznych albo właściwych dyftonów opadających związanych z bardzo silnym przyciskiem wyrazowym charakteryzujących na przykład język starofrancuski albo też liczną grupę języków germańskich w języku polskim nie ma... Polskie dyftongi powstawały raczej

jakby ubocznie w wyniku różnych tendencji artykulacyjnych". Dłuska /1950/ treats sequences of vowels with *i* as diphthongs; however combinations of vowels with *u* are not interpreted as diphthongs because *u* can stand alone in such words as *uba* or *mugū*. The so-called nasal vowels are described by Dłuska and Koneczna as diphthongs (in the case of Koneczna as diphthongoids). The following diphthongs with nasal glides can be distinguished: *eu*, *ou*, *qu*, *uj*, *ej*, *aj*, *oj*, *ij*.

3.2. According to the definition of the diphthong accepted in the present paper all combinations of vowels with /j/ and /w/ are treated as diphthongs because /j/ and /w/ in Polish are definitely semivowels. Diphthongs with /w/ glides are optional since consonantal pronunciation /t/ of /w/ is preserved by many speakers.

## 3.3. Polish rising diphthongs.

## a) j+V

Table 6

Position	Initial	Medial	Final
/je/	/jego/ jego, jeź, joniec, jemiola, jesień, jesion, etc.	/djeceza/ diecezja, dieta, hacjenda, traktornia	/depozycje/ delicje, racje, nacje, dalie
/ja/	/jar/ jar, jarosz, jarzmo, Jarocin, jagnię	diament, facjata, diabeł, diadem, diagnoza	akacja, gracia, emisja, dyskusja, drogeria, dyrekcja
/jo/	jodła, jota, jod /jod/, Jozafat	/vujovi/ wujowi, fantazjować, wariować, hipostazjować	/daljo/ dalio, akacja, pasjo, eksmisjo, drogerio, dyrekcjo
/ju/	/ju/ już, juk, jutrenka, junak, jutro, juści	—	—

## b) w+V

Table 7

Position	Initial	Medial	Final
/wy/	/wysy/ łysy, tyko, łyżka, łyżwa, łypać, etc.	/swynny/ słynny, młyn, słyszeć, płynny, błyszczeć, etc.	/zwy/ zły, mgły, pchły, poblady, widły, dorosły,
/we/	/web/ leb, Leba, lezka, lechtać,	/upadweś/ upadłość, zgadłeś, skradłeś, zbladziałem, zbladłem,	/mdwe/ mdłe, zle, zmokłe, zbladłe, zgasłe, upadłe
/wa/	/wax/ łach, łaska, łabędź, łagodny, łakomy,	/kwami/ kłami, kłamca, złamać, złażyć, odłamek	/pxwa/ pchła, mdła, karła, sadła, hasła, masła
/wo/	/wom/ łom, łopata, łotr, łopot, łono, łowca	/kwopot/ kłopot, złoto, ogłosić, odłożyć	/two/ tło, pchło, sadło, mydło, gardło
/wu/	/wuk/ łuk, łuna, łupić, huska, łów, łóżko	/dwuto/ dłucho, ogłupieć, długi sługa, chałupa	/zwu/ złu, hasłu, mydłu, gardłu

w+V sequences in Polish show no restrictions.



## 3.4. Polish falling diphthongs.

## a) V+j

Table 8

Position	Initial	Medial	Final
/ij/	—	/żmijka/ żmijka, harmonijka, pijmy Walijczyk, lesbijka	/kij/ kij, żmij, wij, pij, zwij
/yj/	—	/śyjka/ szyjka, kołomyjka, Aryjezyk, Syryjezyk, Iberyjezyk	/inyj/ myj, żyj, ryj, przykryj, chryj
/ej/	/ejże/ ejże <sup>1</sup>	/m'ejski/ miejski, wicjski, alejka, kolejka, lżejszy, tutejszy	/dobrej/ dobroj, bliżej, dalej, nalej, śmieć, małej
/aj/	— <sup>2</sup>	/fajka/ fajka, grajka, strajk, zajmować, bajka	/kraj/ kraj, maj, bodaj, daj
/oj/	/Oje'ec/ ojeiec <sup>3</sup> , ojezym, Ojeów	/vojsko/ wojsko, strojny, bojkot, wojny, bogobojny	ukoj, ahoj <sup>4</sup>
/uj/	/ujma/ ujma <sup>5</sup> , ujrzyć, ujście	/bujn'e/ bujnie, bujda, bójka, sójka, stójkowy	/sfuj/, swój, słój, słój, żuj, zbój, kuj

<sup>1</sup> Appears only occasionally in that position.

<sup>2</sup> Appears very rarely in foreign words: /ajnos/ for Ajnos.

<sup>3</sup> The appearance of /oj/ in that position is occasional.

<sup>4</sup> /oj/ in that position is occasional.

<sup>5</sup> /uj/ in that position appears only occasionally.

b) There is also a group of /V+j/ diphthongs with nasal glides<sup>1</sup>:

Table 9

Position	Initial	Medial	Final
/ij/	—	/świjski/ świński	/zviij/ zwiń, giń, świń
/yj/	—	/kydryjski/ Kydryński, młyński	/pwyj/ plyn, slyn
/ej/	—	/rejski/ reński, żeński, Leński	/durej/ dureń, jeleń, zieleń
/oj/	—	/kojski/ koński, płoński	/dwoj/ dłoń, słoń, skroń, koń
/aj/	—	/majka/ Mańka, Gdański, drański	/zostaj/ zostań, podaj, śniadaj
/uj/	—	/dujski/ duński, toruński	/pluj/ pluń, ruń, suń

<sup>1</sup> Polish diphthongs of the V+j type with nasal glides cannot appear in the initial position.

## c) V+w

Table 10

Position	Initial	Medial	Final
/iw/	—	/miwka/ Milka, pilka, zgrólki /colloquial/	/biw/ bił, pił, walił, złościł, okrwawił, osłabił
/yw/	—	/żywka/ żyłka, pounylka, pylka, bazyłka	/żyw/ żył, opatrzył, tył, był, szył
/ew/	/owk/ Elk, Europa <sup>1</sup> , euforia, eutanazja, Eufrat	/pewny/ pełny, belkot, pelzać, wehna, światopełk	/śf'atew/ światel, skrzydeł, wideł, mydeł, szydeł
/aw/	/awtaj/ Altaj, Austria, autograf, autorytet, aureola, auspicje	/pawka/ palka, wałkoń, chałka, Suwałki	/spaw/ spał, wylał, oddychał, popychał, unykał, cymbał
/ow/	*owtaż/ ottarz <sup>2</sup>	/kown'eż/ kolnierz, żołnierz, kolpak, stolka, kołtun	/os'ow/ osioł, grajdoł, dzieciol, matol, Mongol
/uw/	—	/kuwka/ kółka, szkółka, półka, grzegzółka	/kuw/ kuł, pluł, psuł, szkół, pszczół
/ęw/	/ęwbiologia/ embriologia <sup>3</sup> , empiryzm	/bęwdęw/ będę, wszędzie, ręka, zębowy, dębowy	/zebręw/ zebre <sup>4</sup> , febrę, biore <sup>4</sup> , toczę, usiadę
/ow/	/owdrasek/ Ondraszek, ontologia	/inowtwa/ mątwa, mąka, strąk, krąg, rąk	/trawow/ trawą, mątwa, gromadą, kupą, tratwą
/aw/	/awys/ ans. Ambroży, amfiteatr.	/trawaj/ tramwaj,	—

<sup>1</sup> Appears in native words very rarely.

<sup>2</sup> Found only occasionally.

<sup>3</sup> Found only in foreign words.

<sup>4</sup> In colloquial Modern Polish the pronouncing of /ew/ in final position is rather artificial.

<sup>5</sup> Appears only occasionally.

## IV. THE COMPARISON OF THE DISTRIBUTION OF POLISH AND ENGLISH DIPHTHONGS

4.1. There are three types of diphthongs in English and only two types in Polish. There is no schwa in Polish. Such Polish words as *aeroplan*, *licea*, *muzea* contain sequences of two vowels /a+e/ or /e+a/. Each of the vowels is syllabic. Falling and rising diphthongs show many similarities. Structures of diphthongs are the same: V+j, V+w, j+V and w+V. No other structures are present in either of the two languages as far as falling and rising diphthongs are concerned, except that Polish glides have nasal variants.

4.2. Let us examine the distribution of English and Polish diphthongs.

## 4.3. Rising diphthongs.

Table 11

Position	Initial	Medial	Final
English /jɛ/	+	-	-
English /jə/	+	-	-
English /jɔ/	+	+	+
English /je/	+	-	-
Polish /je/	+	+	+
English /ja/	+	-	-
English /ja/	+	+	-
Polish /ja/	+	+	+
English /jɔ/	+	-	-
English /jo/	+	-	-
Polish /jo/	+	+	+
English /ju/	+	+	+
Polish /ju/	+	-	-

Very often the articulation of glides is different in both languages. Nevertheless, it seems reasonable to find corresponding diphthongs in the two languages.

There are more English diphthongs of the type  $j+V$  because English has more vowels. Polish diphthongs can occur in medial and final positions more freely, and in final positions, except /ju/. Only one English diphthong can occur freely in the final position /jə/. /j/ is found in that position very rarely. Here may be included some advice for both Polish and English learners. Poles learning English have to be taught to reduce final vowels of  $j+V$  to /ə/, and Englishmen who learn Polish have to be taught to diversify and pronounce distinctively the final glide of  $j+V$  type.

All English and Polish diphthongs can occur in the initial positions.

Table 12

Position	Initial	Medial	Final
English /wi/	+	+	-
Polish /wy/	+	+	+
English /we/	-	+	+
English /wɛ/	+	+	-
English /we/	+	+	-
Polish /we/	+	+	+
English /wa/	+	-	-
Polish /wa/	+	+	+
English /wɔ/	+	+	-
English /wo/	+	+	-
Polish /wo/	+	+	+
English /wu/	+	+	-
Polish /wu/	+	+	+

The number of English diphthongs of the type  $w+V$  is greater than the number of Polish diphthongs of that structure. Almost all Polish and English can appear in the initial position (except English /wə/) and medial (except English /wa/). All Polish diphthongs of that type can occur freely in the final position. English diphthongs are found rarely in that position.

## 4.4. Falling diphthongs.

Table 12

Position	Initial	Medial	Final
English /ij/	+	+	+
Polish /ij/	-	+	+
Polish /yj/	-	+	+
English /ej/	+	+	+
Polish /ej/	+	+	+
English /aj/	+	+	+
Polish /aj/	-	+	+
English /oj/	+	+	+
Polish /oj/	+	+	+
Polish /uj/	+	+	+

The number of Polish diphthongs of that type is much greater when taking into consideration nasal varieties. All English diphthongs of the type  $(V+j)$  can occur in the initial position while the occurrences of Polish diphthongs of that type are occasional (see 3.4.). Possibly here is the source of the tendency of Polish learners of English to pronounce many English words having a diphthong in the initial position as single vowels.

Table 13

Position	Initial	Medial	Final
Polish /yw/	-	+	+
Polish /iw/	-	+	+
Polish /ow/	+	+	+
English /aw/	+	+	+
Polish /aw/	+	+	+
English /ɔw/	+	+	+
American /ow/	+	+	+
Polish /ow/	+	+	+
English /uw/	-	+	+
Polish /uw/	-	+	+

The number of Polish diphthongs of that type is greater than the number of English  $(V+w)$  diphthongs, especially when taking into consideration nasal varieties. (see 3.4.c) as with in the preceding type all English and Polish diph-

thongs can appear freely in medial positions. English (uw) does not appear in the initial position. The appearance of Polish diphthongs of that type in that position is occasional (may be except /aw/).

4.5. Centring diphthongs do not appear in Polish and they may constitute a considerable problem to Polish Learners.

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