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## **Polish *pieszny* and English *foot*: An analysis of a pair of cognates**

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### **Abstract**

The research concentrates on investigating the etymological relationship between the Polish term *pieszny* ‘pedestrian, on foot’, and the English word *foot*, both tracing their origins back to a common Proto-Indo-European root *\*ped-*. The objective of this study is to recognize and document the various morphological, phonological, and semantic changes that this shared ancestral word has experienced throughout its evolution. The study intends to prove that the Polish word *pieszny* and the English word *foot* represent cognates by demonstrating their shared elements and explaining changes that affected them.

### **Keywords**

Polish-English cognates, etymology, Proto-Indo-European, contrastive analysis

## **Polski wyraz *pieszy* a angielski *foot*: Analiza pary wyrazów pokrewnych**

### **Abstrakt**

Artykuł ten koncentruje się na badaniu związku etymologicznego między polskim wyrazem *pieszy* i angielskim wyrazem *foot* 'stopa'. Oba te słowa wywodzą się od wspólnego praindoeuropejskiego rdzenia \**ped-*. Celem badania jest rozpoznanie i udokumentowanie szeregu zmian morfologicznych, fonologicznych i semantycznych jakim uległ wspólny obu wyrazom etymon na przestrzeni wieków. Badanie ma na celu udowodnienie, że polskie słowo *pieszy* i angielskie słowo *foot* są wyrazami pokrewnymi, poprzez wykazanie ich wspólnych elementów oraz wyjaśnienie zmian, które na nie wpłynęły.

### **Słowa kluczowe**

polsko-angielskie wyrazy pokrewne, etymologia, praindoeuropejski, analiza kontrastywna

### **1. Introduction**

The paper focuses on exploring the etymological connection between the Polish word *pieszy* 'pedestrian, on foot', and the English word *foot*, which both originate from the same Proto-Indo-European word. The study aims to identify and list morphological, phonological, and semantic changes that this ancestral word has undergone over centuries. The paper's structure consists of seven stages, namely, (1) introduction, (2) methodology, (3) attestation, (4) morphological connection, (5) phonological connection, (6) semantic connection, and (7) conclusions. Section 1 introduces the topic. In section 2, the methodology of the research is presented. Section 3 focuses on the assessment of the time and scope of attestation. Section 4, section 5, and section 6 aim to explore word forms as well as changes in sounds

and meaning, respectively. In section 7, the findings are summarized.

## 2. Methodology

The research adopts the methodology of collecting Polish-English cognates proposed in Rychło (2019) and illustrated in several studies (Rychło 2012, 2013, 2016, 2018, 2021, Rychło and Witczak 2021). It consists of the following research stages: attestation, phonological connection, morphological connection, and semantic connection.

The first stage of the research involves assessing the time of attestation of the possible cognates under analysis as well as collecting and comparing cognates in languages that are closely related to each other in order to discover if the words at issue originate from the common ancestral language. The second and third stages of the research include comparing morphological and phonological structures between the words and explaining the differences that resulted from changes that have occurred over the centuries. The last stage involves analyzing the semantic connection between the cognates at issue. All these procedures aim to identify and analyze Polish-English cognates, while concentrating on the inherited elements (for more detail see Rychło 2019).

## 3. Attestation

### 3.1. Time

In his *Dictionary of Old Polish*, Urbańczyk (1988–1993: 118) includes the word *pieszny*, which has been attested since 1228. He mentions two senses of the word ‘the one that goes on foot’ and ‘associated with walking on foot’. Regarding English, the word *foot* is recorded in *The Oxford Dictionary of English Etymology* (Onions 1966: 368) and the Oxford English Dictionary, and both sources provide information that it has been attested since Old English with the original meaning of ‘[t]he terminal part of the

leg, on which a person stands and walks’ (the OED). Therefore, both words have been attested since the earliest periods of the languages, and their connection with modern forms is evident.

### 3.2. Scope

According to Piwowarczyk (2022: 232), the Proto-Indo-European root *\*ped-* ‘to step, to fall’ can be found in all 12 Indo-European branches of languages:

Indo-Aryan: Vedic *pāt* m. ‘foot’, *pādaḥ* m. ‘foot’, also ‘foot or leg of inanimate object’; *pādúḥ* m. ‘foot, or shoe’, *pādā*, *pādau* m. nom.-acc. du. ‘two feet’, *padóḥ* gen.-loc. du., *padbhyām* instr.-dat.-abl. du.: Pali *pāda-* m. ‘foot’, Prakrit *pāda-*, *pāya-*, *pāa-* m. ‘foot’; Sindhi *pāo* ‘foot of a table’, Bengali *pā* ‘foot’ (Mayrhofer 1963: 249, 254, Mayrhofer 1992: 77–78, 120); Vedic *padām* n. ‘footstep, track, place’, Pali *pada-* n. ‘footstep, place, foot’, Prakrit *paya-* m. n. ‘footstep, foot’, Shina *pō* m. ‘footstep, step’, Bengali *payā* ‘leg or foot of a chair’, Gujarāti *payū*, *paiyū* n. ‘foot-track, especially the track over which bullocks move when drawing water’, Sinhalese *piya* ‘footmark’ and so on (Turner 1966: 437–438, 454–456).

Iranian: Avestan *pāδ-* ‘foot, leg’, *pāδa-* ‘footstep, step’, Old Persian *pāda-* m. ‘foot’; Khotanese *pai* ‘foot’, *pā* ‘feet’, Sogdian *p’δ* [*pāδ<sup>a</sup>*] ‘foot’; New Persian *pā*, *pāy* ‘id.’; Balochi *pād* ‘id.’; Yidgha *palo* ‘foot’; Wakhi *pūid* ‘foot’; Shughni *pōδ* ‘foot’, *pōδēv* ‘at the foot, below’; Bartangi and Oroshori *pēδ* ‘foot’, Khufi *pūδ* ‘id.’; Roshani *pūδ* ‘foot’, *pūδīv* ‘at the foot, below’; Sarikoli *ped* ‘foot’, *padef* ‘at the foot, below’; Sanglechi *pūδ*, Ishkashimi *pud*, Yazghulami *pēδ*, Munjani *pāla*, Yaghnobi *pōda*, Ossetic *fad* ‘foot, leg’, *fæd* ‘trace’ etc. (Abaev 1958: 414, 427; Bailey 1979: 227–228; Morgenstierne 1974: 54).

Slavic: Russian *pěšij* adj. ‘pedestrian, on foot’, Czech *pěší* adj. ‘pedestrian, on foot’, Slovak *peší* adj. ‘pedestrian, on foot’, Serbian/Croatian *pjěše*, *pjěškē* adv. ‘on foot’, Slovene *pěšji*, *pěški*

adj. ‘pedestrian, on foot’, Bulgarian *peš*, *pešá* adv. ‘on foot’ < PSl. \**pěšь* (Derksen 2008: 398).

Baltic: Lithuanian *pėdà* f. ‘foot, footstep, footprint, sheaf; length measure equalling 12 inches’, *pėduoti* vb. ‘to leave footmarks, walk slowly’, Latvian *pēda* f., *pēds* m. ‘footstep, footprint, trap; foot as a measure of length’, *pēduot* vb. ‘to leave footmarks’, Old Prussian *pedan* n. ‘ploughshare’ (Derksen 2015: 347, 353; Smoczyński 2018: 934–5).

Armenian: Old Armenian *otn* ‘foot’, pl. *otk* ‘feet’ (*n*-stem in singular, *i*-stem in plural), *het* (*o*-stem) ‘foot; footstep, footprint, track’, *heti* adv. ‘on foot’ (Martirosyan 2010: 405, 534–35).

Albanian: *poshtë* adv. ‘down, below’, prep. ‘under’ (Orel 1998: 340)

Tocharian: Tocharian A *pe* m. ‘foot’ (Carling and Pinault 2023: 293), *peṃ* m. du. ‘two feet’, Tocharian B *paine* m. du. ‘two feet’, *painesa* gen. du. ‘of two feet’ (Adams 2013: 432).

Anatolian: Hittite *pat(a)*- ‘foot, leg; footing, base’, Luwian *pāta/i*- ‘foot’, Hieroglyphic Luwian *pada/i*- ‘foot’, Lycian *pededi* abl.-instr. ‘by the feet’ (Kloekhorst 2008: 653–54; Puhvel 2011: 196).

Hellenic: Greek (Attic & Ionic) *ποῦς*, gen. sg. *ποδός* m. ‘foot’; Doric *πῶς*, Laconian *πόρ* m. ‘id.’ (Beekes 2010: 1227); for the dual forms, see Mycenaean Greek *ti-ri-po-de* [tripode] m. du. ‘two tripods’ (Aura Jorro 1993: 352).

Italic: Latin *pēs*, *pedis* m. ‘foot’ (de Vaan 2008: 462); Umbrian *peři*, *persi* abl. sg. ‘pede’, *peřum* acc. sg. ‘Erdboden, Boden; Stelle, Platz (am Boden)’; Oscan *pedú* acc. pl. ‘foot (as a measure of length)’ (Untermann 2000: 522–524).

Celtic: Proto-Celtic \**fódes* m. ‘foot’ in Galatian *ádes* pl. ‘feet’, PC \**fissu*- prep. ‘under’ (< PIE. \**pēdsú*), PC \**fedon* ‘foot as a mea-

sure of area' in Lat. *candetum* (*cantedum*) n. 'measure of a field, used by the Gauls, which was one hundred feet' < Gaulish *\*cantedon* '100 feet' (Matasović 2009: 131, 136).

Germanic: Gothic *fotus* n. m. 'foot', Old Norse *fótr* n. m. 'foot, leg', Faroese *fótur* n. m. 'foot', Elfdalian *fuot* n. m. 'foot, leg', Old English, Old Frisian *fōt* 'foot', Dutch *voet* 'foot', Old High German *fuoz* 'foot', German *Fuß* 'foot' < Proto-Germanic *\*fōt-* (Kroonen 2013: 152).

The linguistic evidence presented in this stage seems to ensure that the words found in all branches of IE languages come from the same reconstructed Proto-Indo-European word. Ringe (2006: 47) provides a paradigm of the masculine noun *\*póds* 'foot' (presented in Table 1) from which later Polish *pieszy* and English *foot* developed.

**Table 1**

Noun paradigm of PIE *\*póds* 'foot'

case	Singular	Dual	Plural
nominative	*póds	*pódeh <sub>1</sub> / *pódeh <sub>1</sub> u	*pódes
vocative	*pód	*pódeh <sub>1</sub> / *pódeh <sub>1</sub> u	*pódes
accusative	*pódṃ	*pódeh <sub>1</sub> / *pódeh <sub>1</sub> u	*pódṃs
instrumental	*pedéh <sub>1</sub>	*pedb <sup>h</sup> éh <sub>1</sub> m	*pedb <sup>h</sup> í
dative	*pedéy	*pedb <sup>h</sup> éh <sub>1</sub> m	*pedmós
ablative	*pedés	*pedb <sup>h</sup> éh <sub>1</sub> m	*pedmós
genitive	*pedés	*pedóus	*pedóHom
locative	*péd(i)	*pedóus	*pedsú

(Ringe 2006: 47 with modifications by the author, regarding the dual<sup>1</sup>)

<sup>1</sup> The dual inflection of the Proto-Indo-European noun for 'foot' is generally reconstructed on the basis of Vedic data, cf. nominative – vocative – accusative

## 4. Morphological connection

### 4.1. Case and ablaut

Regarding Table 1, it is evident that the noun shows \**ō* in the root-syllable in the nominative, vocative, and accusative, whereas \**e* is present in the remaining cases. This change of vowels refers to ablaut, the alternation of different phonemes (\**ē*, \**e*, *∅*, \**o*, \**ō*, \**ā*, \**a*) within the same morpheme, which is morphologically conditioned (Długosz-Kurczabowa and Dubisz 2006: 94, Ringe 2006: 10). It seems that the cognates at issue could not evolve from the same case. It can be noticed in the vowels of OE *fōt* and PSl. \**pěšb* which point to different ablaut grades – *ō* and *e*, respectively. According to Kroonen (2013: 152), English *foot* developed from the singular nominative Proto-Indo-European form \**pōds*. According to Boryś (2005: 432), Polish *pieszny* developed from the plural locative dialectal form \**ped-si*. On the other hand, Ringe (2006: 47) provides a different form, namely, \**pedsú*. As it can be observed, the forms of Proto-Indo-European words may vary depending on the source since different linguists reconstruct them differently. In this article, the Ringe's reconstruction will be adopted.

### 4.2. Grammatical category

The comparanda under study also differs in the part of speech. Both words developed from the Proto-Indo-European masculine noun. However, while English *foot* is still a noun, Polish *pieszny* is a nominal adjective, that is, an adjective that is used as a noun. Other examples of this phenomenon can be illustrated with the following examples: *głuchy* 'deaf', *niewidomy* 'blind', *oskarżony* 'accused', *święty* 'saint', *poszukiwany* 'wanted', *obląka-*

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du. (RV 1.24.8c; 2.39.5d; 6.29.3a; 6.47.15c; 10.73.3a; 10.90.11d; 10.106.9b, Malzahn 1999: 41), instrumental – dative – ablative du. (RV 10.90.12d+; Malzahn 1999: 64), genitive – locative du. (RV 10.116.2c, Malzahn 1999: 61).

*ny* ‘insane’ to name but a few. Townsend and Janda (1996: 177) suggest that Slavic adjectives emerged from nouns as a separate category. The change significant to the cognates at issue occurred by the “attachment of forms of the LCS pronominal 3<sup>rd</sup> sg demonstrative pronoun *jъ* to the appropriate nominal forms of both direct (N, A) and oblique (G, D, I, L) cases” (Townsend and Janda 1996: 178). The examples provided in Table 2 illustrate this morphological operation.

**Table 2**  
Emergence of adjectives

Late Church Slavonic	Polish
новъ + <i>jъ</i>	nowy ‘new’
dobrъ + <i>jъ</i>	dobry ‘good’
starъ + <i>jъ</i>	stary ‘old’
glupъ + <i>jъ</i>	głupi ‘stupid’
tanъ + <i>jъ</i>	tani ‘cheap’

(Townsend and Janda 1996: 177–78, Długosz-Kurczabowa and Dubisz 2006: 98, Strutyński 2002: 42)

Hence, it seems that PSl. \**pěšъ* developed into P *pieszy*.

### 4.3. Inflectional class

Regarding noun inflection, the Proto-Indo-European word denoting ‘foot’ was classified as an athematic root-consonant stem. This categorization implied that it did not end in a thematic vowel; instead, its inflectional endings were attached directly to the root itself (Ringe 2006: 41, Algeo 2010: 95). Interestingly, while English appears to have retained the Proto-Indo-European form (Kroonen 2013: 152), the Polish word *pieszy* points towards the *jo*-stems (Długosz-Kurczabowa and Dubisz 2006: 184, 240, Strutyński 1998: 126–127). This shift in morphology is not an isolated occurrence and can be further observed in such pairs as English *mouse* and Polish *mysz* ‘mouse’, English *goose* and Polish *gęś* ‘goose’, as well as English *night*



and Polish *noc* ‘night’ in which English words point to the root nouns and Polish to the *i*-stem. What is more, it seems that the transferal from one inflectional class to another is not limited to any particular stem (Rychło 2019: 74–80). Therefore, it may be reasonably assumed that the Polish word underwent a morphological transformation initially to the *i*-stems and subsequently to the *jo*-stems.

#### 4.4. Dual number

In Proto-Indo-European, nominals, that is, nouns, pronouns, adjectives, determiners, and most quantifiers were inflected for number. It was differentiated into singular, dual, and plural, where the dual represented the concept of ‘two’ or ‘a pair of’ (Ringe 2006: 22). The foot, similarly to other parts of the body, occurs as a natural pair and thus it was often used in the dual form (Malzahn 1999: 64, 66). In Modern Polish, there are some remnants of the dual number, which was still present in Old Polish, which exhibit irregular plural influenced by the dual number (Długosz-Kurczabowa and Dubisz 2006: 222), see *P oczy* n. pl. ‘eyes’ (originally Proto-Slavic \**oči* n. du. ‘two eyes’) vs. *oka* pl. ‘drops of fat in the soup’ and *P uszy* pl. ‘ears’ (originally Proto-Slavic \**uši* n. du. ‘two ears’) vs. *ucha* pl. ‘handles (of a cup)’.

Regarding English, the dual number was already on the verge of extinction in Proto-Germanic. However, traces of fossilized duals can be found in some nominal forms. Fritz (2011: 115) suggests that OE *æt fōtum* ‘on both feet’ indicates a possible indication of the dual number in the form of the *u*-stem. Additionally, the *u*-stem can be found in more Germanic words for ‘foot’, for example, Gothic *fotus* and Proto-Germanic \**fōtuz* (Kroonen 2013: 152, Orel 2003: 110) suggesting that the dual form has left its remnants in the Germanic noun paradigms.

## 5. Phonological connection

### 5.1. The Germanic Line – sound changes that occurred from Proto-Indo-European to Modern English

#### 5.1.1. Grimm’s Law: $*p > *f$ and $*d > *t$

Grimm’s Law is one of the earliest and most characteristic Germanic sound changes which differentiates the Germanic branch from other Indo-European languages (Kroonen 2013: xxvii). According to Grimm’s Law, the Indo-European voiceless plosives ( $*p$ ,  $*t$ ,  $*k$ ,  $*k^w$ ) underwent spiratization and became voiceless fricatives ( $*f$ ,  $*þ$ ,  $*h$ ,  $*h^w$ ), respectively. Unaspirated voiced plosives ( $*b$ ,  $*d$ ,  $*g$ ,  $*g^w$ ) were devoiced to voiceless plosives ( $*p$ ,  $*t$ ,  $*k$ ,  $*k^w$ ) and voiced plosives ( $*b^h$ ,  $*d^h$ ,  $*g^h$ ,  $*g^wh$ ) became voiced fricatives ( $*β$ ,  $*ð$ ,  $*ɣ$ ,  $*ɣ^w$ ) or unaspirated voiced plosives ( $*b$ ,  $*d$ ,  $*g$ ,  $*g^w$ ) depending on the phonological environment (Rychło 2014a: 452–454, Rychło 2014b: 202, Ringe 2006: 93–94). The instances of changes from  $*p > *f$  and  $*d > *t$  provided by Ringe (2006: 94–96) are illustrated below:

- (1) PIE  $*p_l h_1 n_ó s$  ‘full’ > PGmc  $*fullaz$  > OE *full*  
 PIE  $*p_én k^w e$  ‘five’ > PGmc  $*fimf$  > OE *fiif*  
 PIE  $*h_1 d_ó nt-$  ~  $*h_1 d_ñ t-$  ‘tooth’ > PGmc  $*tanþ-$  ~  $*tund-$  < OE *tōþ*  
 PIE  $*ád$  ‘at’ > PGmc  $*at$  > OE *æt*  
 Therefore, it appears the PIE word  $*p_ó ds$  developed into the PGmc  $*f_ót-$  and OE *fōt* accordingly with Grimm’s Law ( $*p > *f$  and  $*t > *d$ ).

#### 5.1.2. The Great Vowel Shift: [o:] > [u:]

The Great Vowel Shift is yet another salient phonological change that occurred in the development of English history. In early Modern English, the quality of all Middle English long vowels was altered. This change can be illustrated as presented in Table 3.

**Table 3**  
The Great Vowel Shift

1400	1500	1600	Modern English
i:	eɪ	ɛɪ	aɪ
e:	i:	i:	i:
ɛ:	ɛ:	e:	i:
a:	a:	ɛ:	eɪ
u:	ou	ɔʊ	aʊ
o:	u:	u:	u:
ɔ:	ɔ:	o:	əʊ

(Lass 1999: 72)

The high vowels [i:] and [u:] underwent diphthongization and were lowered to [aɪ] and [aʊ]. The mid vowels [e:] and [ɛ:] merged into one high vowel [i:], [o:] was raised to [u:], and [ɔ:] was diphthongized to [əʊ]. The low vowel [a:] was fronted, raised, and diphthongized to [eɪ] (Lass 1999: 11, 72, Algeo 144–147). Rychło (2019: 57) provides examples of words in which the change from [o:] to [u:] occurred: *food*, *loose*, *noon*, *tooth*, and *soon* to name but a few. Considering the above-mentioned shifts in vowels it seems that the long vowel [o:] in the OE word *fōt*<sup>2</sup> has changed its quality and become [u:] in the early Modern English period.

### 5.1.3. Laxing of [u:] > [ʊ]

During the Late New English period, long [u:] was shortened to [ʊ] if the vowel preceded the following consonants: a voiceless velar plosive [k], bilabial nasal [m], and alveolar plosives [t] and

<sup>2</sup> Slightly diverging from the discussion at issue, it seems worthwhile to highlight the major changes of the root vowel during the evolution of the Proto-Germanic plural form *\*fōtiz* to Modern English *feet* /fi:t/. The front vowel *\*i* in the second syllable triggered *i*-umlaut, resulting in the fronting of the back vowel in the preceding syllable (*\*ō* > *\*ē*) (Ringe and Taylor 2014: 222–227). Subsequently, as the result of the Great Vowel Shift, Middle English [e:] was raised and fronted to [i:] (Lass 1999: 11, 72). The changes could be illustrated in the following way: Proto-Germanic *\*fōtiz* ‘feet’ > Old English *fēt* > Early Modern English *feet* /fi:t/.

[d] (Welna 1978: 233). Welna provides examples of words in which the change occurred: *book*, *cook*, *broom*, *room*, *good*, *hood*, and *soot*. Therefore, it can be assumed that the change also affected the word *foot*.

## **5.2. The Slavic Line – sound changes that occurred from Proto-Indo-European to Modern Polish**

### **5.2.1. Winter's Law**

According to Winter, Balto-Slavic short vowels underwent lengthening and became long acute vowels under the following conditions. If a short vowel was placed in an acute syllable, and it preceded a voiced, but not aspirated, plosive, the process occurred; otherwise, the vowel remained short. That is why Slavic and Baltic reflexes of PIE *\*wēdh-* 'lead' reveal a long vowel (Lithuanian *vèsti*), whereas other IE languages exhibit a short vowel (Sanskrit *v̄dhūh*, Irish *fedim*) (Collinge 1985: 225, Piwowarczyk 2022: 244). Thus, it seems that short *\*e* in PIE *\*ped-su-* was lengthened accordingly with Winter's Law, which resulted in long *\*ě* in Proto-Slavic.

### **5.2.2. Loss of plosives before fricatives**

In the pre-Slavic era (around 1–5th century), clusters of a plosive (*\*p*, *\*b*, *\*t*, *\*d*, *\*k*, *\*g*) and a fricative (*\*s*, *\*z*, *\*x*) were subjects to another change. However, since there is a shortage of reliable examples which would include *\*z* and *\*x*, the change was reformulated to plosive and *\*s*. Firstly, due to obligatory regressive assimilation in voicing, voiced plosives were devoiced, and then voiceless plosives were dropped (Shevelov 1964: 188). This phenomenon is clearly visible when comparing words that come from the same Balto-Slavic lexical unit – *\*kanʔd-*. Unlike Polish *kęs* 'piece, bit, morsel', Slovene *kōs* 'piece', Czech *kus* 'piece', or Slovak *kus* 'piece', Lithuanian *kqsti* 'to bite', *kānda* 'to bite, 3 pres.' retained traces of the Balto-Slavic *\*d* (Shevelov 1964:

188, Derksen 2008: 243, Derksen 2015: 231). Consequently, \**d* in Balto-Slavic \**pēdsu* was devoiced and lost under the influence of \**s* resulting in \**pēsū*.

### 5.2.3. Rise of jers and analogy

In the early 9th century, Slavic \**ū* and \**i* evolved into new vowels – a back jer \**ь* and a front jer \**ѣ*, respectively. These vowels were pronounced with less tension regarding lips and the tongue. The front jer palatalized preceding consonants and the back jer did not (Shevelov 1964: 433–434, Strutyński 2002: 36). Therefore, \**pēsū* developed into \**pēsь*. It might be suggested that later this form was replaced by \**pěxь*, which was created by analogy to many other locative plurals ending in *-ěxь* (< PIE \**-oisu*), \**-ьxь* (< PIE \**-isu*), \**-ьxь* (< PIE \**-usu*)<sup>3</sup> (Lehr-Splawiński and Bartula 1959: 46). The form \**pěxь*, with the analogical ending \**-xь*, has been preserved in many Polish derivatives, such as *piechota* ‘infantry’, *piechotnik* ‘the one who walks on foot, infantryman’, *piechur* ‘infantryman’ or vernacular *piechta*, *piechty* ‘on foot’.

### 5.2.4. Iotation and loss of jers

In the Proto-Slavic language, two distinct types of palatalization occurred – the palatalization of velars due to the influence of front vowels, and the palatalization triggered by \**j*, called iotation. The latter is essential to the study since, among many others, the cluster of \**xj* underwent palatalization to \**š* (Długosz-Kurczabowa and Dubisz 2006: 141). Firstly, the palatal articulation of \**j* influenced the pronunciation of the preceding consonants,<sup>4</sup> in this case \**x*, and later, the approximant was lost (Shevelov 1964: 207), as in, for example, \**syxjō* ‘I carry’ > *styšę*

<sup>3</sup> The change from Proto-Indo-European \**s* to Proto-Slavic \**x* could be explained by the Ruki rule. As implied by the name, it occurred when \**x* was preceded by \**r*, \**u*, \**k*, and \**i* (cf. P *mech* < PSl. \**mьxь* < PIE \**mūs-o-m*) (Rychło 2019: 72–73).

<sup>4</sup> Consonants which underwent the change comprise: \**p*, \**b*, \**m*, \**ν*, \**n*, \**r*, \**l*, \**t*, \**d*, \**s*, \**z*, \**k*, \**g*, \**x* (Strutyński 1998: 65–66).

(Długosz-Kurczabowa and Dubisz 2006: 141). Similarly, it appears that *\*pexjo*<sup>5</sup> evolved into *\*pešo*, and later, into *\*pešb*.

As mentioned before in the section connected to morphology, in Late Church Slavonic, the suffix *\*-jb* was attached to the form *\*pěšb* resulting in *\*pěšbjb* (Townsend and Janda 1996: 178). However, already in the second half of the 10th century, the jers were dropped (Shevelov 1964: 634). The final cluster *\*-bjb* was changed into *-i*, for instance, *\*tanbjb* developed into *tani* ‘cheap’ (Długosz-Kurczabowa and Dubisz 2006: 98). Consequently, it appears that *\*pěšbjb* evolved into *\*pěši*.

### 5.2.5. Palatalization of [p]

The process of palatalization affected consonants which were followed by any Proto-Slavic front vowels. Under the influence of front vowels, consonants acquired additional pronunciation, that is, the tongue was raised to the hard palate. Moreover, when labial consonants are palatalized, they are articulated in two different ways – labial and palatal. When these articulations are completed simultaneously, they result in synchronous palatalization. However, if the tongue movement is delayed in comparison with the lip movement, the palatalization is called asynchronous, and it involves epenthesis – an addition of a sound, in this case [j]. This change is evident in the following examples: PSl. *\*pъnb* > P *pień* ‘trunk’, PSl. *\*vъsb* > P *wieś* ‘village’, PSl. *\*pęstb* > P *pieść* ‘fist’ (Długosz-Kurczabowa and Dubisz 2006: 139, 144–148, Rychło 2012: 29). Hence, it seems reasonable to assume that [p] before the front vowel [e] was affected by an asynchronous palatalization and became *\*pieši*.

### 5.2.6. Hardening of historically soft consonants

In the 15th and 16th centuries, originally palatal consonants inherited from Proto-Slavic were hardened due to an excess of

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<sup>5</sup> The emergence of *\*jo* is strictly connected to morphology; as noted earlier, it seems that *\*pěsb* underwent a morphological shift from a root-consonant stem to the *jo*-stem.

palatal phonemes and disruption of the phonological balance. This group of consonants, which is also called historically soft, includes – s, z, ś, ź, ć, ż, c, ʒ. This process of depalatalization is strictly connected with the replacement of *-i* to *-y*, which occurred after originally palatal consonants (Rospond 1979: 91, 112–113). To illustrate this change, one can consider the following examples provided by Rospond:

- (3) PSl. \*šija > P *szyja* ‘neck’  
 PSl. \*žito > P *żyto* ‘rye’  
 PSl. \*vl’ci > P *wilcy* ‘wolves’

Consequently, Slavic \*š developed into Polish [ʃ], and hence the change from *-i* to *-y* also occurred.

## 6. Semantic connection

It is clear that the English word *foot* retains the original meaning of PIE \*pód-s. However, the meaning of Polish *pieszny* is slightly different. This difference in meaning may be the result of the fact that they have derived from different cases of the same lexical unit – *foot* from nominative singular and *pieszny* from locative plural. Boryś (2005: 432) already translates PIE \*ped-si- as ‘on foot’, which already closely resembles the modern meaning of ‘the one that walks on foot.’

## 7. Conclusions

The Polish word *pieszny* derived from the Proto-Indo-European locative plural noun \*ped-sú, which reflects *e*-grade. According to Winter’s Law, the vowel \*e was lengthened. Subsequently, the sound \*d was lost under the influence of the following fricative \*s. The rise of jers resulted in the change of the vowel \*u to the back jer. Subsequently, \*pěsъ was replaced by \*pěxъ, which emerged through analogy to other locative plurals. The morphological transferal to the *jo*-stems followed. Under the influence of \*j, \*x was palatalized to \*š. The pronoun \*-jъ was attached to

the Proto-Slavic \**pěšь*. Thereafter, the jer was lost, and the palatalization of [p] before a front vowel occurred. Lastly, the originally soft consonant \*š was depalatalized, which led to the change from -*y* to -*i*.

Regarding the English word, it developed from the Proto-Indo-European nominative singular noun \**póds* ‘foot’ whose root vowel exhibited *ō*-grade. The change of \**p* > \**f* and \**d* > \**t* can be explained by Grimm’s Law which, among other changes, includes the transition of voiceless plosives into voiceless fricatives and voiced plosives into voiceless plosives. The vowel was firstly altered from [o:] > [u:] during the Great Vowel Shift, and later, laxed from [u:] > [ʊ].

Based on the changes described in this article, it seems evident that Polish *pieszy* and English *foot* originate from the same Proto-Indo-European word and are therefore cognates. Although the words differ regarding morphological and phonological form as well as semantics, the changes that affected them are shown proving their relation. Table 4 presents and summarises the development of the pair of cognates at issue.

**Table 4**  
Summary

The Germanic line (from PIE to Modern English)		The Slavic line (from PIE to Modern Polish)	
PIE * <i>póds</i> > E <i>foot</i> / <i>fot</i> /		PIE * <i>ped-sú</i> - > P <i>pieszy</i>	
PIE * <i>póds</i>	<i>ō</i> -grade (only in the nominative singular)	PIE dial. * <i>ped-sú</i>	<i>e</i> -grade (locative plural)
PIE * <i>póds</i> , acc. * <i>pódṃ</i> , gen. * <i>pedés</i>	Root noun with the static and apophonic inflection	* <i>pēdsu</i>	Winter’s Law



* <i>póds</i> , pl. * <i>pódes</i> , gen. sg. * <i>pōdés</i> etc.	Generalization of the long apophonic grade in the paradigm (in some North-West Indo-European languages)	* <i>pēsu</i>	Loss of * <i>d</i> in the cluster of a plosive and fricative
PGmc * <i>fōt-</i>	Grimm's Law (* <i>p</i> > * <i>f</i> , * <i>d</i> > * <i>t</i> )	PSl. * <i>pěšb</i>	Rise of jers
PGmc dial. * <i>fōtuz</i>	Emergence of the secondary <i>u</i> -stem in some Germanic languages (cf. Goth. <i>fotus</i> , OE <i>fōtum</i> ) presumably based on certain declensional forms of the dual number	PSl. * <i>pěxb</i>	Analogy to locative plurals ending in <i>-ěxb</i> (< PIE * <i>-oisu</i> ), * <i>-xb</i> (< PIE * <i>-isu</i> ), * <i>-xb</i> (< PIE * <i>-usu</i> )
OE <i>fōt</i> <i>foot</i> /fo:t/		PSl. * <i>pěšb</i>	Morphological shift to <i>jo</i> -stems Iotation
<i>foot</i> /fu:t/	Great Vowel Shift	PSl. * <i>pěšbjb</i>	Addition of a pronoun * <i>-jb</i>
E <i>foot</i> /fʊt/	Laxing of [u:] > [ʊ]	* <i>pěši</i>	Loss of jers
		OP * <i>pieši</i>	Palatalization of [p]
		P <i>pieszy</i>	Hardening of historically soft consonants Retraction and lowering of <i>-i</i> to <i>-y</i>

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