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INHERENT INFECTION IN POLISH AS INPUT TO MORPHOLOGICAL DERIVATION

The present paper examines the phenomenon of inflection feeding derivation in modern Polish. Although markers of contextual inflection in Polish do not appear word-internally, markers of inherent inflection can be followed by derivational suffixes, especially by highly productive ones. Only a small section of lexemes containing word-internal inflectional morphemes in Polish can be analyzed as derived from lexicalized (irregular) word forms. Inflectional morphemes occurring „inside” derivational morphemes in Polish include stem-forming inflectional morphemes found in comparative or superlative degree forms of adjectives, in past participles, present (active) participles and passive participles. Polish participles are also shown to undergo conversion into adjectives and adverbs.

1. Inflectional categories in Polish

Recent coursebooks for students of Polish morphology (e.g. Laskowski 1984, Strutyński 1996) list the following morphological categories as being inflectional in Polish: case, number, gender, tense, person, mood, voice, aspect¹ and degree. A distinction is drawn between inflectional endings (markers of agreement) and stem-forming inflectional morphemes. The latter are employed to build extended (secondary, derived) stems of lexemes, such as for instance the comparative and superlative degree stems of adjectives. Conjugal paradigms of verbs include, apart from the basic verb stem, four extended stems, namely the imperative verb stem, the past tense stem and two participial stems. Stem-forming inflectional morphemes in Polish can be regarded as markers of inherent inflection (in the sense of the term proposed in Booij 1996). As will be illustrated below, inherent inflection can feed derivation in modern Polish.

2. Markers of comparative and superlative degree occurring word-internally

Derivatives considered in this section exhibit formal and semantic affinity to comparative or superlative forms of adjectives. The morpheme -sz/-ejsz- is the regular comparative marker while the prefix naj- marks the superlative degree of adjectives. The data in (1-2) demonstrate that irregular inflectional forms (which exhibit stem al-

¹ The status of the category of aspect is controversial. In contrast to Laskowski (1984), Grzegorczykowa (1997) regards aspect as a lexical category. Consequently, I shall refrain from discussing lexemes which are derived from secondary (derived) imperfectives.
lomphy or suppletion) can function as input to derivation since they are entered in the lexicon\(^2\).

(1) dejectival prefixed verbs
   a. podwyzszyc ‘to heighten’ (cf. wyzszy ‘higher’ from wysoki ‘high, tall’)
   b. pogorszyc ‘to worsen’ (cf. gorszy ‘worse’ from zly ‘bad’)
   c. przewyzszyc ‘to surpass’ (cf. wyzsz ‘higher’ from wysoki )
   d. ulepszyc ‘to better, to improve’ (cf. lepszy ‘better’ from dobry ‘good’)
   e. zmniejszyc ‘to lessen’ (cf. mniejszy ‘smaller’ from maly ‘small, little’)
   f. zwiekszyc ‘to increase’ (cf. wiekszy ‘bigger, larger’ from wielki ‘big, large’)

(2) -osc nouns (names of qualities - Nomina Essendi)
   a. blizszosc ‘the quality of being closer in time or space’ (cf. blizzy ‘closer’ from bliski ‘close’)
   b. lepszosc ‘the quality of being better’ (cf. lepszy ‘better’ from dobry ‘good’)
   c. mniejszosc ‘minority’ (cf. mniejszy ‘smaller, minor’ in 1e)
   d. najlepszosc ‘the quality of being the best’ (cf. najlepszy ‘best’ from lepszy ‘better’)
   e. najwyzszosc ‘the quality of being the highest in rank or size’ (cf. najwyszzy ‘highest’ from wyzsz ‘higher’ in 1c)
   f. nizszosc ‘the quality of being lower’ (cf. nizzy ‘lower’ from niski ‘low’)
   g. wiekszosc ‘majority’ (cf. wiekszy ‘larger, major’ in 1f)
   h. wyzszosc ‘superiority’ (cf. wyzsy ‘higher, superior’ in 1c)

The word-form starszy ‘older, elderly, senior’ (the comparative degree of stary ‘old’), which gives rise to the derivatives given in (3), should also be regarded as lexicalized because it exhibits a semantic shift.

(3) miscellaneous nouns and adjectives derived from starszy ‘older, senior’
   a. starszaw ‘elderly’
   b. starszak ‘older child in kindergarten’
   c. starszenstwo ‘seniority’
   d. starszosc ‘the quality of being older’
   e. starszyna ‘the seniors, the officers of high rank’

The data in (4) show that highly productive derivational suffixes, e.g. -osc, can attach to regular comparative forms and produce names of qualities (NE).

\(^2\) All the examples from Polish given below occur in a slightly simplified spelling since Polish diacritic marks indicating palatalization of consonants and nasalization of vowels are not available in the international version of the word processor employed here. In accordance with standard Polish orthography, I use the digraph ‘ch’ to represent a velar fricative. The digraphs ‘cz’, ‘dz’ stand for post-alveolar affricates while ‘sz’ is a post-alveolar fricative.
(4) -osc Nomina Essendi (NE)
   a. bielszosc ‘the quality of being whiter’ (cf. bielszy ‘whiter’)
   b. jasniejszosc ‘the quality of being fairer or clearer’ (cf. jasnieszy ‘fairer, clearer’)
   c. mloszosc ‘the quality of being younger’ (cf. mloszy ‘younger’)
   d. piekniejszosc ‘the quality of being more beautiful’ (cf. piekniejszy ‘more beautiful’)
   e. wczeniejszosc ‘the quality of being earlier’ (cf. wczeniejszy ‘earlier’)
   f. weselszosc ‘the quality of being more cheerful’ (cf. weselszy ‘more cheerful’)
   g. wrazliwszosc ‘the quality of being more sensitive’ (cf. wrazliwszy ‘more sensitive’)
   h. zywszosc ‘the quality of being more agile’ (cf. zywszy ‘more agile’)

Some of the names of qualities in (4) are felt to be non-institutionalized3 (e.g. 4e) and the list of NE can be easily extended with novel formations.

3. Derivatives from past tense forms (or past tense stems)
   The lexemes discussed in this section appear to contain the past tense marker -l-. The nouns in (5) belong to the realm of expressive morphology. Creation of nonce-formations exemplifying the patterns in (5) is highly probable, especially when such nouns denote people.

(5) -ak, -uch, -ek, -ec nouns
   a. opuchlak ‘swelling’ (opuchl ‘(he/it) became swollen’ and opuchly ‘swollen’)
   b. spróchnialc ‘one that has grown rotten or carious’ (cf. spróchnial ‘(it) decayed, grew carious’ and spróchnialy ‘rotten, carious’)
   c. umarlak (colloq.) ‘dead fellow’ (cf. umarl ‘(he) died’ and umarly ‘dead’)
   d. zdechlak (colloq.) ‘weakling’ (cf. zdechl ‘(it) died’ and zdechly ‘(of animals) dead’)
   e. zmarzlak (colloq.) ‘chilly fellow’ (cf. zmarzl ‘(he) felt chilly’ and zmarzly ‘chilly’)
   f. zmarzluch (colloq.) ‘chilly person’ (cf. 5a above)
   g. zgnilak (colloq.) ‘rascal’ (cf. zgnil ‘(he/it) decayed, went rotten, putrid’ and zgnily ‘rotten, decayed, putrid’)
   h. zgnilak ‘(of bees) foul brood’
   i. zgnilki (pl.) ‘rotten fruit’
   j. zgorknialec ‘sour person’ (cf. zgorkniał ‘(he/it) went sour’ and zgorknilty ‘sour, bitter’)
   k. zniewiescialec ‘one that has grown effeminate’ (cf. zniewiesciał ‘(he) grew effeminate’ and zniewiesciały ‘effeminate’)

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3 I follow Bauer (1983) in distinguishing between nonce-formations, non-institutionalized lexemes and lexicalized formations.
The nouns in (6) below are best analyzed as lexicalized (as there are few derivatives exemplifying such patterns and some of them are obsolete). The formations in (7), in contrast, represent productive patterns of derivation and many of them may be felt to be nonce-formations.

(6) -izna, -ina nouns
   a. odumarlina (obsolete) ‘possessions of a man who died leaving no successors’ (cf. odumarl (rare) ‘(he) died and left someone behind’ and odumarly (rare) ‘left behind at someone’s death’)
   b. opuchlizna, opuchlina ‘swelling’ (cf. opuchl in 5a)
   c. padlina ‘carcass, the body of a dead animal’ (cf. padl ‘(he/it) fell, died’ and padlj ‘fallen, dead’)
   d. stechlizna ‘fustiness, mustiness’ (cf. stechl ‘(it) grew fusty or musty’ and stechly ‘fusty, musty, frowstey’)
   e. zgnilizna ‘rot, putridity’ (cf. zgnil in 5g)
   f. zmarzlina ‘frozen layer of earth in the Far North that unfreezes during a short summer’ (cf. zmarzl in 5e)

(7) -osc derivatives (Nomina Essendi) and -awy attenuative adjectives
   a. dojrzałosc ‘ripeness, maturity’ (cf. dojrzał ‘(he/it) grew ripe or mature’ and dojrzyał ‘ripe, mature’)
   b. sfłaczałosc, sfłaczenie ‘flabbiness, limpness’ (cf. sfłaczał ‘(he/it) became flabby or limp’ and sfłaczał ‘flabby, limp, flaccid’)
   c. sprochnialosc ‘rot, decay’ (cf. sprochnial in 5b)
   d. stezalosc ‘(of solutions) solidification, concentration’ (cf. stezal ‘(it) concentrated, coagulated’ and stezal ‘concentrated, solidified’)
   e. zdziczalosc ‘savageness’ (cf. zdziczal ‘(he) grew wild, savage’ and zdziczal ‘savage’)
   f. zgnilosć ‘rot, putridness’ (cf. zgnil in 5g)
   g. zgorzknialosc ‘bitterness, acrimony’ (cf. zgorzknial in 5j)
   h. zmurszołosc ‘mustiness’ (cf. zmurszoł ‘(it) moulder and zmurszoł ‘mouldly, musty’)
   i. zniewiesciłosc ‘effeminacy’ (cf. zniewiescił in 5k)
   j. zwiedloś ‘fadedness, withered state’ (cf. zwiedł ‘(it) withered ’and zwiedł ‘faded, withered’)
   k. sprochnialaw ‘somewhat rotten, decayed’ (cf. sprochnial in 5b)
   l. stechlawy ‘somewhat fusty’ (cf. stechl in 6d)
   m. zgnilawy ‘somewhat rotten’ (cf. zgnil in 5g)

The formations listed in (5-7) above cannot be derived directly from past tense verb forms since the suffixes -ak, -uch, -ek, -ec, -osc, -izna, -ina and -awy are subcategorized to attach to adjectival, not to verbal, bases. Consequently, it is the adjectives terminating in the sequence -ly which must serve as the immediate input to the suffixation processes in question. However, I shall argue below that the data in (5-7) instantiate the
phenomenon of inflection feeding derivation since the resultative -l - adjectives in question are derived from past tense stems through conversion (adjectivization).

An argument supporting such an analysis is the formal identity of past tense stems and corresponding resultative adjectives. When past tense forms are morphologically irregular, resultative adjectives exhibit the same kind of allomorphy. This happens in the case of the verb opuchnać ‘to swell, inf.’ - opuchnie ‘(it) swell-FUTURE’ - opuchl ‘(it) swelled’ - opuchly ‘swollen’ (note the lack of the thematic suffix -na- in past tense forms and in the resultative adjective) or the verb umrzeć ‘to die, inf.’ - umiera ‘(it) dies’ - umarl ‘(he/it) died’ - umarły ‘dead’ (observe that the quality of the root vowel is the same in the past tense form and the resultative adjective).

It can be argued, moreover, that resultative -ly adjectives show semantic affinity to past tense forms and exhibit the internal syntax of finite verb forms.

Firstly, they convey the idea of the past, which is emphasized by the presence of time expressions such as wczeraj ‘yesterday’, przed chwilą ‘a moment ago’ or jesienią ‘in autumn’ in the phrases rozkwitłe wczeraj kwiaty ‘the flowers that opened yesterday’, przybyły przed chwilą człowiek ‘the man that arrived a moment ago’, and opadłe jesień liście ‘leaves that fell down in autumn’. This is not possible with other deverbal adjectives, as shown in *interesująca wczeraj wykład ‘interesting yesterday lecture’ or *ozyczcze przed chwilą powiedzisz ‘refreshing a moment ago (breath of) air’.

Secondly, resultative adjectives resemble finite verb forms in allowing modifiers denoting reason (cause), e.g. opuchłe z głodu nogi ‘legs swollen from hunger’, pożółkłe ze starości listy ‘letters turned yellow with age’.

Thirdly, the negative particle nie- does not attach to -ly adjectives (as happens in the case of other adjectives, e.g. niemily ‘not nice’ or nieuprzejmy ‘impolite’) but is spelled as a separate word, e.g. nie sprochniał ‘not rotten’ and nie rozkwitły ‘that has not blossomed yet’. Consequently, the rules of Polish orthography interpret -ly adjectives as verb forms. Tokarski (1951) analyzes such adjectives as representing the category of ‘participium staticum’.

Finally, there is some cross-linguistic evidence suggesting that Polish resultative adjectives derive from past tense stems (which are analyzed as past participles in Tokarski 1951). It is only unaccusative (ergative) verbs in Polish which have related resultative -ly adjectives. Hoekstra (1984) postulates the participle-ergative conversion as one of the tests employed to distinguish ergative and unergative verbs. Ergative verbs in Dutch allow their past participles to be used as adjectives. The same phenomenon can be observed in English, where the past participles fallen and withered (but not come or swum) can modify nouns. Markantonatou (1995) demonstrates that also in Modern Greek past participles of ergative verbs convert to adjectives.

4. Suffixal derivatives from passive participles

This section of the paper deals with derivatives of passive participles in Polish, i.e. with forms containing word-internally the inflectional affix -an- or its phonologically conditioned allomorphs -on- and -l-.

The nouns listed in (8-9) exhibit vivid semantic (and formal) affinity to passive participles since they denote personal Patients and, less commonly, inanimate affected ob-
jects. Their semantic interpretation contains an element of passivity. The participial formations in (8-9) terminate in productive nominalizing affixes, although novel formations of this type cannot be formed as freely as Nomina Essendi in -osc.

(8)-ec, -nik, -ek, -ka names of Patients
a. obrzezaniec ‘circumcised man’ (from obrzezany ‘circumcised’)
b. opetaniec ‘one possessed of evil’ (from opetany ‘possessed of evil’)
c. pomazaniec ‘anointed man’ (from pomazany ‘anointed, smeared’)
d. przesiedleniec ‘emigrant, displaced person’ (from przesiedlony ‘displaced, rehoused’)
e. skazaniec ‘man condemned to death’ (from skazany ‘condemned’)
f. wybraniec ‘the privileged man’ (from wybrany ‘chosen’)
g. wybranka ‘the girl of one’s choice’ (from wybrany ‘chosen’)
h. wygnaniec ‘exile, outcast’ (from wygnany ‘expelled, banished’)
i. wyzwolenieć ‘freedman’ (from wyzwolony ‘freed, liberated’)
j. wychowanek ‘alumnus’, wychownanka (fem.) (from wychowany ‘brought up’)

(9) -ec, -ek, -ka object nouns
a. nabytiek ‘acquisition’ (from nabity ‘acquired’)
b. odbitka (phot.) ‘proof’ (from odbity ‘reflected’)
c. roztrzepaniec ‘sour milk that has been beaten up’ (from roztrzepany ‘beaten up’)
d. wyjatek ‘exception, excerpt’ (from wyjety ‘extracted, removed’)
e. wziętka (colloq.) ‘trick (in cards)’ (from wzięty ‘taken’)

Formations listed in (10) below exemplify a very productive pattern of coining names of objects, typical of specialized vocabulary.

(10) -ka derivatives
a. bitka ‘cutlet’ (cf. bity ‘beaten, crushed’)
b. dłużanka ‘canoe’ (cf. dłuży ‘holloed out’)
c. kiszanka ‘silage’ (cf. kiszonki ‘fermented, pickled’)
d. krajanka ‘a kind of cake, pasta or cheese (sold sliced or cut into portions)’ (cf. krajany ‘cut, sliced’)
e. kraszanka ‘(dial.) Easter egg’ (cf. krzaszany (dial.) ‘painted’)
f. lepianka ‘mud-built cabin’ (cf. lepiony ‘moulded, built out of sth’)
g. mieszanka ‘mixture’ (cf. mieszany ‘mixed’)
h. malownanka ‘painted figure, folkloric ornament’ (cf. malowany ‘painted’)
i. mrozonka ‘chilled fruit, vegetables or other food products (cf. mrozony ‘frozen, chilled’)
j. palonka ‘(in ceramics) grog’ (cf. palony ‘burnt’)
k. prażonka ‘roasted ore’ (cf. prażony ‘roasted’)
l. warzonka ‘table salt’ (cf. warzywo ‘vaporized (in order to get rid of dross)’)
m. wedzona ‘smoked bacon’ (cf. wedzony ‘smoked’)

171
n. wycinanka 'decorative paper cut-out adorning walls of peasant cottages' (cf. wycinany 'cut out')  
o. zapiekanka 'dish baked in oven' (cf. zapiekany 'baked')

There is a notable difference between the nouns in (8-9) and those in (10). The formations in (8) are formally and semantically related to passivative participles derived from perfective (prefixed) verbs. The nouns in (10), although exhibiting a resultative (telic) interpretation, are formally related to passives of imperfective verbs. I would like to suggest that the names of objects in (10) are derived from adjectival passives. Adjectival passives are, in turn, derived though conversion from verbal passives⁴. Departicipial passive any/-eny/-ty adjectives given in (10) in brackets can be characterized as static, resultative and perfective, no matter whether they are derived from imperfective or from perfective verb forms.

5. Conversion of participles into nouns or adverbs

Both passive participles and present (active) participles in Polish can undergo conversion into nouns (i.e. substantivization), as shown in (11-12) below. Active (present) participles can be formed from imperfective verb stems only and they contain the inflectional morpheme -ac-. The formations given in (11) are semantically lexicalized.

(11)  a. chowany ‘hide and seek’ (cf. chowany ‘hidden-impf.’)  
b. dane (pl.) ‘data’ (cf. dany ‘given-pf.’)  
c. oskarżony ‘accused’ (cf. oskarżony ‘accused-pf.’)  
d. przewodniczący ‘chairman’ (cf. przewodniczący ‘presiding (over sth)’)  
e. służący ‘servant’ (cf. służący ‘serving’)  
f. smażony ‘fried food’ (cf. smażony ‘fried - impf.’)  
g. wygrana ‘winnings’ (cf. wygrany ‘won-pf.’)

Substantivized passive and active (present) participles in (12) can be formed in a fairly productive manner and they have exclusively human reference. They preserve the internal syntax of verbs and can occur with complements and adjuncts characteristic of finite verb form and verbal participles.

(12)  a. postrzynęony przez los ‘one who suffered a bad fate’ (cf. postrzynęony ‘wronged’)  
b. powracający z zagranicy ‘one who is returning (or has returned) from abroad’ (cf. powracający ‘returning’)  
c. uczący języka angielskiego ‘one who teaches English’ (cf. uczący ‘teaching’)  
d. umierający z głodu i pragnienia ‘one who is dying out of starvation and thirst’ (cf. umierający ‘dying’)

⁴I advance this hypothesis also in Pasternak-Cetnarowska (1986). When discussing English verbal passive participles, Strauss (1987) makes a similar assumption that they undergo conversion into adjectives.
e. zasypany przez lawine ‘one who has been buried by the avalanche’ (cf. zasypany ‘covered up’)

The data in (13) appear to indicate that verbal present participles undergo conversion into adverbs. However, while verbal active -acy participles denote a process in progress, e.g. rozjasniajaca teraz mrok pokoju lampa ‘a lamp which is now lightening the darkness of the room’, the forms terminating in -acy which give rise to the adverbs in (13) denote a property of an object, e.g. proszek wybielajacy ‘the whitening powder’, as is characteristic of adjectives.

(13) a. chlodzaco ‘with the cooling effect’ (cf. chlodzcy ‘cooling’)
    b. kruszaco ‘(about explosives) breaking up the rocks’ (cf. kruszacy ‘breaking up rocks’)
    c. łagodzaco ‘soothingly’ (cf. łagodzacy ‘palliative, soothing’)
    d. odurzajaco ‘dizzingly’ (cf. odurzajacy ‘dizzying, stupefying’)
    e. rozgrzewajaco ‘with the warming up effect’ (cf. rozgrzewajacy ‘warming up’)
    f. rozjasniajaco ‘with the brightening effect’ (cf. rozjasniajacy ‘brightening, bleaching’)
    g. wybielajaco ‘producing the bleaching effect’ (cf. wybielajacy ‘bleaching’)
    h. wzmacniajaco ‘with the strengthening effect’ (cf. wzmacniajacy ‘strengthening’)

It seems justified to assume that the adverbs in (13) are related to departicipial -acy adjectives. Such adjectives are derived from verbal present participles through conversion (adjectivization) and therefore show closer semantic/syntactic relatedness to verbal participles than deverbal -acy adjectives do (such as znaczy ‘telling’ cognate to the verb znaczy ‘to mean, to mark’).

6. Conversion as syntactic word-class exchange or as semantic extension

There is no agreement within the linguistic literature as to the proper treatment of conversion. The phenomenon in question can be treated as purely syntactic word-class exchange or as a derivational process. This is partly due to the variety of processes subsumed under the label of conversion. Marchand (1968), for instance, treats noun-to-verb or verb-to-noun conversion in English as an instance of morphological derivation (i.e. zero-derivation) while the cases of partial conversion, such as the occurrence of the noun phrases the wealthy and the poor, are analyzed as involving functional transposition of words (i.e. a temporary change of their syntactic function).5 Within the framework of Cognitive Linguistics, Twardzisz (1996) analyzes zero-derivation in English as

5 In a similar vein, Strauss (1987) regards the English noun phrases the oldest and the very poor as instantiating syntactic conversion of adjectives into nouns while the nouns the untoucheds and sexists are examples of morphological conversion. A critical overview of theoretical approaches to conversion is offered in, among others, Cetnarowska (1993), Don (1993), and Twardzisz (1997).
a process of semantic extension and hence being of of essentially the same nature as metonymy and metaphor.

Various types of conversion have been proposed in this paper to occur in Polish.

Derivation of resultative adjectives (such as zwiedły ‘faded, withered’ discussed in section 3 above) from past tense stems can be regarded as a non-affixal morphological process, involving a change of inflectional paradigm, syntactic word-class and semantic properties of the derivational base.

Conversion of Polish verbal passive participles into departicipial adjectives (proposed in section 4) constitutes a special case of semantic extension. It results in a modification of the meaning of participles but does not seriously affect their syntactic properties and involves no change in their inflectional paradigm. Both adjectival resultative participles and verbal passives agree in case, number and gender with their heads. They cannot be inflected for degree, they form no Nomina Essendi and cannot take the negative prefix nie-. Moreover, departicipial resultative adjectives and verbal passives can occur with agentic adjuncts, complements and adverbials of manner, as in the sentence Przez cale lato pola były całkowicie zalane woda ‘All the summer the fields were flooded with water completely’, Przywiozłem ogórki kiszone w zeszłym roku przez moją mame ‘I’ve brought cucumbers pickled by my mother last year.’ Adjectival passives which function as derivational bases for the nouns in (10) differ from corresponding verbal passives in their inability to follow the copula verb zostać ‘to become’ and ability to take the copular verb być ‘to be’.

Similarly, present (active) -acy participles and departicipial adjectives share their inflectional paradigms and the choice of complements but differ mainly in their semantic interpretation.

Formation of adverbs terminating in -aco (listed in 13 above) involves mainly a change of syntactic category and inflectional paradigm and can be treated as functional shift. I assume, however, that just as the remaining types of conversion mentioned earlier, adverbialization is a morphological process.

Substantivization of present and passive participles illustrated in (12) in section 5 instantiates a temporary use of verbal participles in the function of nouns (or noun phrases). It exhibits similarity to partial conversion in English and can be regarded as a syntactic (not a morphological) process.

7. Inflection/derivation continuum. Class-changing inflection

It is notable that none of the derivatives discussed in the present paper contain inflectional endings (i.e. markers of agreement) embedded word-externally and preceding derivational affixes. In other words, contextual inflection cannot feed morphological derivation in Polish while some types of inherent inflection can.

In view of Dressler’s (1989) criteria for distinguishing prototypical from non-prototypical inflection, most types of inherent inflection in Polish do not constitute prototypical instances of inflection. This is the reason why the inflectional status of passive participles or comparative degree forms is still a controversial issue among Polish morphologists.

The idea that inflectional processes cannot be separated from derivational processes in a non-arbitrary fashion was expressed by Adam Heinz, who shared Jerzy Kury-
lowicz's belief in essentially homogenous nature of all morphological operations. Heinz (1961) regards semantic regularity, predictability of existence ("categorial-ness") and the capability of forming a closed set of items (a paradigm) as indices of grammaticality of morphological categories. Inflectional and derivational categories differ in their degree of grammaticality, hence there is a gradual transition between them. According to Heinz (1961), comparative and superlative degree markers and passive participles belong to the transitional zone between inflection proper and derivation proper.

There is an interesting overlap between the ideas expressed in Heinz (1961) and the more recent proposals of Hasek (1996). Hasek (1996) points out that the inflection/derivation distinction allows for gradience and fuzzy borders. He says (p. 47): "formations are inflectional to the extent that they are regular, general and productive; formations are derivational to the extent that they are irregular, defective and unproductive". Consequently, he treats German adjectival participles and Lezgian mascards (i.e. verbal nouns) as inflectional forms due to their productivity and regularity. These are instances of word-class-changing inflection. He also mentions, among others, the possibility of treating English -ly adverbs as inflectional forms of adjectives and Upper-Sorbian possessive adjectives as inflectional forms of nouns, i.e. as cases of transpositional (class-changing) inflection.

Within the Polish tradition of morphology, the recognition of word-class-changing inflection has been proposed in Tokarski (1973), where action nouns in -nie/-cie are included into the verb paradigms as gerunds while adverbs are regarded as inflectional forms of corresponding adjectives. It is suggested in Tokarski (1973) that deadjectival -osc nouns, such as pieknośc ‘beauty’, taniosć ‘cheapness’, are to be regarded as nominal forms of adjectives, i.e. as additional cases in declensional paradigms of adjectives. Tokarski’s inclination toward expanding the domain of inflection is driven mainly by his desire to facilitate the task of the lexicographer. Tokarski assumes that derived words should appear in the lexicon as independent entries while the burden of predicting the occurrence of inflectional forms should rest entirely with the grammar.

It is worth noting that the majority of suffixes appearing "outside" markers of inherent inflection in Polish lexemes (such as -osc, -awy, -ak, -ka) can be incorporated into the "transitional zone" between prototypical inflection and prototypical derivation since they exhibit relatively high productivity. These affixes can also be reanalyzed as inflectional morphemes, if one allows for the occurrence of word-class changing inflection.

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A potential problem with the postulation of word-class changing inflection is that it results in blurring the distinction between properties of word-forms and of derived lexemes. Firstly, derivatives undergo semantic drift when institutionalized (e.g. -osc abstract nouns develop concrete senses) while word-forms are not expected to do so. Secondly, while instances of parallel word-forms are rare (e.g. the alternative forms dyrektorzy, dyrektorowie ‘directors, nom.pl’), examples of parallel derivation are numerous in Polish, as shown in the analysis of Polish diminutives in Malicka-Kleparska (1985).
8. Conclusion
The Polish data analyzed in this paper indicate that inherent and non-prototypical (i.e. stem-forming) inflection can feed non-prototypical (i.e. highly productive) suffixal derivation. Moreover, stem-forming verbal inflection can constitute an input to non-affixal (hence also non-prototypical) morphological processes, namely adjectivization and adverbialization of verbal participles.

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