

# Polish deadjectival nouns as nominalized adverbs\*

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**Abstract:** The traditional description of Polish abstract nouns such as *lekkość* ‘lightness’ or *jasność* ‘brightness’ holds that they are formed with an adjectival root and the nominalizing suffix *-ość*. The paper considers an alternative analysis where *-o-ść* is a complex marker and such nominals go through an adverbial stage in their formation, rendering them [[[ A ] Adv ] N ] structures, a possibility suggested by the fact that the *-o* itself is an adverbial marker.

## 1. Introduction

Polish abstract deadjectival nouns such as *lekkość* ‘lightness’ or *jasność* ‘brightness’ (*nomina essendi*) are typically described as formed by the addition of the suffix *-ość* to the stem of a qualitative adjective, e.g. *lekk* ‘light’ or *jasn* ‘bright’ (e.g. Grzegorzczkova and Puzynina 1999: 416–421; Szymanek 2015: 40–41).<sup>1</sup> This paper explores the idea that this class of deadjectival nominals goes through an adverbial stage in their formation, a possibility suggested by the fact that *-o* itself is the adverbial formative, as in *lekk-o* ‘light’ or *jasn-o* ‘brightly’. If splitting *-ość* into separate suffixes *-o* and *-ść* is the right morphological analysis and not a facetious coincidence, the result is that forms like *lekkość* should be represented as (1).

(1) [N [Adv [A *lekk*] o] *ść*]

In what follows, this hypothesis is put to test by taking a closer look at the morphology and grammatical ingredients of adjectives that form the *-ość* nominals. The paper also identifies and discusses what appear to be two challenges to (1), namely (i) the missing forms of the *-ość* nominals with certain adjectives and adverbs and (ii) the existence of the other adverbial marker *-e*, as in *źl-e* ‘bad, adv.’, which is absent in the associated noun, like *źl-ość*.

The paper is organized as follows. Section 2 introduces the basic properties of *-ość* nominals. Section 3 discusses *-ość* nominals formed from the adjectives in the positive and the comparative degree (like *większość* ‘majority’). Section 4 introduces the split *-o-ść*

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<sup>1</sup> The *-ość* nominals usually cannot be formed from relational adjectives such as *leśny* ‘of forest, arboreal’, *miejski* ‘urban’, *naftowy* ‘of petroleum’ (cf. Grzegorzczkova 1979: 35).

hypothesis, shows how grammatical features associated with *-o* and *-ść* are lexicalized with phrasal spellout, and discusses adverbs for which there are corresponding adjectives but there are no corresponding *-ość* nominals. Section 5 discusses how the existence of the adverbs formed with *-e* can be accommodated in the the split *-o-ść* analysis. Section 6 is the conclusion.

## 2. Basic properties of *-ość* nominals

The common property of all *-ość* nominals is that they are feminine, which is reflected by the NP-internal concord (with a demonstrative, a possessive pronoun, or an adjective) and the subject–verb agreement, as in (2a,b).

- (2) a. *T-a*            *niezwykt-a*            *lekkość*            *okazał-a*            *się*  
 DEM-FEM.SG unusual-FEM.SG lightness.FEM.SG turned.out-FEM.3SG REFL  
*być*    *tylko*    *złudzeniem.*  
 be.INF only illusion  
 ‘That unusual lightness turned out to be only an illusion.’
- b. *T-a*            *twoj-a*            *zbyt częst-a*            *uległość*  
 DEM-FEM.SG your-FEM.SG too frequent-FEM.SG submissiveness.FEM.SG  
*doprowadził-a* *wszystkich do szalu.*  
 drove-FEM.3SG everybody to madness  
 ‘Your way too frequent submissiveness drove everybody mad.’

The *-ość* nominals are fairly productively formed from adjectives in the positive degree (e.g. *lekk-i – lekk-ość*) and a few nouns, listed in (3)–(4), are formed from the adjectives in both the positive and the comparative degree.

- (3) a. *mał-y* ‘small-MSG’ – *mał-ość* ‘littleness’  
 b. *wysok-i* ‘tall-MSG’ – *wysok-ość* ‘height’  
 c. *wielk-i* ‘large-MSG’ – *wielk-ość* ‘size’  
 d. *lekk-i* ‘light’ – *lekk-ość* ‘lightness’
- (4) a. *mniej-sz-y* ‘smaller-MSG’ – *mniej-sz-ość* ‘minority’  
 b. *wyż-sz-y* ‘taller-MSG’ – *wyż-sz-ość* ‘superiority’  
 c. *więk-sz-y* ‘larger-MSG’ – *więk-sz-ość* ‘majority’  
 d. *lżej-sz-y* ‘lighter’ – *lżej-sz-ość* ‘lightness’

While the meaning of the *-ość* nouns is predominantly consistent with the meaning of the associated adjectival root, the meaning of some nouns is to a certain extent idiosyncratic. For instance, the noun *małość* from (3a) applies to a small size as well as moral pettiness, while the adjective *mały* does not refer to the lack of morals. In turn, as seen in (4), the forms based on the comparative adjectives that denote physical properties are all nouns of abstract properties.

The *-ość* nominals can also be formed with adjectives derived from verbs, adverbs, and nouns, in which case the adjective-forming affix is preserved in the nominal. This is seen for instance in Table 1 in nouns based on the deverbal adjectives formed with *-liw* (e.g. *koch-liw-ość* ‘amorousness’) and *-ł* (e.g. *dba-ł-ość* ‘attention’), in nouns based on deadverbial adjectives formed with *-ow* (e.g. *natychmiast-ow-ość* ‘immediacy’), or in nouns based on the adnominal adjectives formed with *-sk* (e.g. *amator-sk-ość* ‘amateurship’, *car-sk-ość* ‘tsarism’).

Table 1. Adjectivizing affixes in *-ość* nominals

base	A	N
koch-a-ć ‘love, v.’	koch-liw-y ‘amorous’	koch-liw-ość ‘amorousness’
dbać ‘take care, v.’	dba-ł-y ‘attentive’	dba-ł-ość ‘attention’
natychmiast ‘immediately, adv.’	natychmiast-ow-y ‘immediate’	natychmiast-ow-ość ‘immediacy’
amator ‘amateur, n.’	amator-sk-i ‘amateurish’	amator-sk-ość ‘amateurship’
car ‘tsar, n.’	car-sk-i ‘tsarist’	car-sk-ość ‘tsarism’

The denominal adjectives with the *-sk* affix that can easily form *-ość* nominals include also place names, like the ones in Table 2.

Table 2. Adjectivizing *-sk* affix in *-ość* nominals

base N (place)	A	N
Warszawa ‘Warsaw’	warszaw-sk-i ‘Warsaw’	warszaw-sk-ość ‘Warsawness’
Anglia ‘England’	angiel-sk-i ‘English’	angiel-sk-ość ‘Englishness’
Poznań	poznań-sk-i ‘Poznanian’	poznań-sk-ość ‘Poznańness’

While the roots of *-sk* adjectives can show mild allomorphy in front of *-sk* as in (5) or can be followed by an inner derivational suffix as in (6) we do not observe allomorphy of the morpheme directly followed by *-ość*, as e.g. in *rosyj-sk-ość* ‘Russianness’, *ameryka-ń-sk-ość* ‘Americanness’, or *europ-ej-sk-ość* ‘Europeanness’.

- (5) a. *Rosja* ‘Russia’ – *rosyj-sk-i* ‘Russian’  
 b. *Francja* ‘France’ – *francu-sk-i* ‘French’  
 c. *Włochy* ‘Italy’ – *wło-sk-i* ‘Italian’

- (6) a. *Ameryka* ‘America’ – *ameryka-ń-sk-ość* ‘Americanness’  
 b. *Europa* ‘Europe’ – *europ-ej-sk-i* ‘European’

Likewise, the addition of the *-ość* to simplex stems (bare roots), as in *biał-y* ‘white’ – *biał-ość* ‘whiteness’ or in (3)–(4), does not trigger root allomorphy either.<sup>2</sup>

The overall picture is that the addition of the *-ość* affix to the adjectival stem does not result in the change of its morphological shape like morpheme reduction or allomorphy, no matter if the adjectival stem includes an adjectival root or is derived from a verb, adverb, or a noun. This observation applies both to the *-ość* nouns based on positive degree as well as the few nouns based on the comparative degree, which is discussed in the following section.

### 3. Nouns formed from adjectives in the positive and comparative degree

Morphologically, Polish adjectives consist of a stem that is followed by a portmanteau gender, number, and case agreement marker. The agreement marker is irrelevant to the purposes of this paper and the adjective forms used in what follows are all marked with the masculine singular nominative suffix *-i/y*.<sup>3</sup> What is relevant is the shape of the stem since the adjectives in the positive degree fall into three classes.

The first two classes have complex stems, which comprise a root that is followed either by *-n* or *-k*. The examples of the *-n* class include the following:

- (7) *jas-n-y* ‘bright’, *mar-n-y* ‘miserable’, *świet-n-y* ‘superb’, *intym-n-y* ‘intimate’,  
*przyjem-n-y* ‘pleasant’, *popular-n-y* ‘popular’, *intrat-n-y* ‘lucrative’, *wzajem-n-y*  
‘reciprocal’, *pazer-n-y* ‘greedy’, *okrop-n-y* ‘horrible’

The *-n* affix can be added to nominal roots — or to be precise, to roots that are either syncretic with nominal roots or are allomorphs — as in *barw-a* ‘color-FEM.NOM’ – *barw-n-y* ‘colorful’ or *głos* ‘voice’ – *głos-n-y* ‘loud’. For this reason *-n* is sometimes described as an affix that forms denominal adjectives along more typical adjectivizing affixes that attach to nominal roots like *-sk*, *-yst* (e.g. *gó-r-a* ‘mountain-FEM.NOM, n.’ – *gó-r-sk-i* ‘mountain, adj.’, *gó-rz-yst-y* ‘mountainous’) or *-ow* (e.g. *pogr-zeb* ‘funeral, n.’ – *pogr-zeb-ow-y* ‘funeral, adj.’).<sup>4</sup> However, it cannot be treated as an exclusively adjectivizing marker for nominal roots since it also gets added to canonical adjectival roots like *mar-n-y* ‘miserable’ or *jas-n-y*.<sup>5</sup>

<sup>2</sup> An anonymous reviewer of a conference abstract of this paper points out that Polish differs with this respect from Czech, where instances of root allomorphy before the *-ost* nominalizer are sometimes attested. For example, the root of *běl-ost* ‘whiteness’ is different than the root of the adjective *bíl-ý* ‘white’. I have not managed to find similar cases of root (or affix) allomorphy in Polish in front of *-ość*.

<sup>3</sup> The MSC.SG.NOM marker *-i* comes after soft (palatalized) consonants (*ń* [ɲ], *ś* [ɕ]) as well as after *l*, *k*, *g* (e.g. *ta*[ɲ]-*i* ‘cheap’, *ge*[ɕ]-*i* ‘goose, adj.’, *bawol-i* ‘buffalo, adj.’, *lekk-i* ‘light’, *drog-i* ‘expensive’); *-y* comes after hard as well as certain soft consonants like *c* [ts] (e.g. *boż-y* ‘divine’, *dobr-y* ‘good’, *gorąc-y* ‘hot’).

<sup>4</sup> For a list and discussion of affixes that form denominal and deverbal adjectives see Post (1986) and Szymanek (1985, 1996, 2015).

<sup>5</sup> This also shows up in a neologism involving an adjectival root *smart-n-y* ‘smart, clever’, a recently adapted loanword from English, which co-exists with the nominal *smart-n-ość* ‘smartness’, as for instance in the

The *-k* class is illustrated with the following examples:

- (8) *lek-k-i* ‘light’, *cięż-k-i* ‘heavy’, *wąs-k-i* ‘narrow’, *szero-k-i* ‘wide’, *wys-ok-i* ‘tall’,  
*nis-k-i* ‘short’, *mięk-k-i* ‘soft’, *giętk-k-i* ‘flexible’, *gład-k-i* ‘smooth’, *szyb-k-i* ‘fast’

The stems of the third class, shown in (9), have a root without a suffix.<sup>6</sup>

- (9) *mał-y* ‘small’, *młod-y* ‘young’, *star-y* ‘old’, *duż-y* ‘large’, *dobr-y* ‘good’, *zł-y* ‘bad’,  
*blad-y* ‘pale’, *grub-y* ‘fat’, *chud-y* ‘slim’, *czyst-y* ‘clean’, *drog-i* ‘expensive’

In turn, in the comparative degree, Polish has two morphological classes: the *-ej-sz* class and the *-sz* class, and both classes can show suppletive allomorphy of the root, as illustrated with the following:

- (10) a. *jas-n-y* ‘bright’ – *jaś-ni-ej-sz-y* ‘brighter’  
b. *mał-y* ‘small’ – *mni-ej-sz-y* ‘smaller’  
c. *lek-k-i* ‘light’ – *lż-ej-sz-y* ‘lighter’

- (11) a. *młod-y* ‘young’ – *młod-sz-y* ‘younger’  
b. *gład-k-i* ‘smooth’ – *gład-sz-y* ‘smoother’  
c. *wys-ok-i* ‘tall’ – *wyż-sz-y* ‘taller’  
d. *wiel-k-i* ‘large’ – *więk-sz-y* ‘larger’

As seen in the examples in (4), the entire stem of the comparative adjective is preserved in front of the nominalizing *-ość* suffix, just like in the case of the adjectives in the positive degree. The symmetry between how the abstract nouns are formed with positive and comparative stems will be relevant to our discussion of the features that are realized by the *-ość* affix.

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excerpt retrieved from the Internet: “(...) *do smartności obywatelskiej dołączyła smartność technologiczna*” ‘technological smartness has joined the civic smartness’ (<https://wspolnota.org.pl/news/milowy-krok-w-lwowku-slaskim>, accessed: 19 VIII 2021). The fact that *-n* attaches to more than one type of roots is well known and shows up also within the denominal class: it is easily found in a subset of qualitative as well as relational adjectives (a distinction proposed for Polish in Gawełko 1976 and Szymanek 1985; for a detailed discussion see especially Szymanek 2015: 79–100). The first show the properties of canonical adjectives and are gradable, e.g. *głos* ‘voice’ – *głoś-n-y* ‘loud’, the second keep the property reading of the nominal base and are non-gradable, e.g. *las* ‘forest’ – *leś-n-y* ‘of forest’.

<sup>6</sup> All three classes can also take negative prefixes, e.g. *nie-real-n-y* ‘unreal’, *bez-won-n-y* ‘odorless’, *bez-czel-n-y* ‘shameless’, *nie-wys-ok-i* ‘short’, *nie-brzyd-k-i* ‘prettyish’, *nie-zł-y* ‘quite nice’, *nie-drog-i* ‘inexpensive’. The presence of the prefix limits but doesn’t exclude the possibility to form the *-ość* nominal, e.g. *zł-ość* ‘anger’ – *\*nie-zł-ość* but *czyst-ość* ‘cleanliness’ – *nie-czyst-ość* ‘impurity’, *czel-n-ość* ‘arrogance’ – *bez-czel-n-ość* ‘insolence’, *wrażliwość* ‘sensitivity’ – *nad-wrażliwość* ‘hypersensitivity’. This suggests that the prefix in principle doesn’t morphologically block the formation of the *-ość* nominal and the unattested forms are paradigm gaps. These are also found with unprefixed forms of adjectives, e.g. *duż-y* ‘large’ – *\*duż-ość*, *brunat-n-y* ‘brown’ – *\*brunat-n-ość*, *ład-n-y* ‘pretty’ – *\*ład-n-ość* (where the asterisk indicates unattestedness rather than ill-formedness).

What is relevant for our purpose is the fact that all three classes of the positive adjective can form adverbs with the suffix *-o* while preserving the shape of the stem, as can be illustrated with e.g. *jas-n-o* ‘brightly’, *lek-k-o* ‘lightly’, *wys-ok-o* ‘highly’, *mał-o* ‘a little’, *młod-o* ‘young’. The fact that the adverbs are formed with *-o* opens up the possibility to analyze the traditional nominalizer *-ość* as consisting of the *-o* and a separate consonantal marker *-ść*.

Before we explore the idea that *-o* is an affix let us consider an immediate alternative, namely that it is an epenthetic vowel inserted between *-ść* and a consonantal stem in order to avoid a three consonant cluster. Such an option, however, is unlikely for four reasons. One, Polish does not have a rule of *o*-insertion that is attested in other contexts. Two, Polish is well known for allowing clusters with more than two consonants across a stem–suffix boundary, e.g. in *pośmiert-n-y* ‘post-mortem’, *częst-sz-y* ‘more frequent’, *warszaw-sk-i* ‘Warsaw, adj.’, *wejś-ć* ‘enter’.<sup>7</sup> Three, Polish tolerates consonant sequences with *ść* both stem-internally as in *sierść* [ɕɛrɕtɕ] ‘animal hair’, *mści-ć* [mɕtɕitɕ] ‘revenge, v.’, *kiepści-utko* [kɕɛpɕtɕiutkɔ] ‘badly, dim.’, as well as at a prefix–stem boundary as in *ob-ściskiwac* [ɔpɕtɕiskɕivatɕ] ‘embrace’, *pod-ściela-ć* [pɔtɕtɕelatɕ] ‘make the bed’. Four, *o* does not get inserted before *ść* within a syllable, as in the complex onset in *mścimy* [ˈmɕtɕi.mi] ‘revenge.1PL.PRS’, or at a boundary with a syllable with a consonant in the coda as in *obściskać* [ɔp.ˈɕtɕisk.atɕ] ‘embrace.INF’, altogether making the epenthetic analysis of *-o* dubious.

#### 4. Splitting *-ość*

The split hypothesis of *-o-ść* consists of two statements. One is that grammatical features associated with an “unsplit” *-ość*, that is the nominalizer (N), number (#), feminine gender, and nominative case, are lexicalized by two morphemes: *-o* and *-ść*. Assuming recent work on the nominal functional sequence where masculine is contained in the feminine (cf. Taraldsen 2009) and number comes below case (cf. Caha 2021), these ingredients come in the following order:

(12) Nom > # > Fem > Msc > N

Representing gender without a neuter feature in the sequence is in agreement with the analysis of neuter in three-gender languages like Polish as a lack of masculine and feminine features (e.g. Kramer 2015). The other statement submits that, in the *nomina essendi* class, the sequence in (12) is projected on top of an adverb that is in between the adjectival base

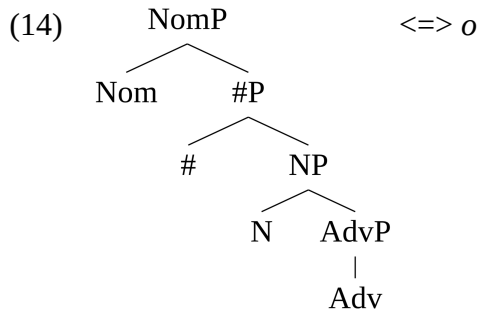
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<sup>7</sup> Not to mention remarkable consonant sequences found word-internally (e.g. *źdźbło* [zd͡zɓwɔ] ‘blade of grass’), at boundaries with clitics (e.g. *czym-ś-my* [t͡ɕimɕmi] ‘what.INST’ followed by an assertive indefinite clitic marker *-ś* ‘something’ and 1pl.msc clitic *-my*), or across word boundaries, as in Orzechowska’s (2019) example of a phrase *przestępstw z wstrząsającym skutkiem* ‘crimes with a shocking outcome’, which contains the cluster [mpstfzfstɕ] with ten consonants.

(A) and the nominalizer (N), as in:<sup>8</sup>

(13) Nom > # > Fem > Msc > N > Adv > A

Under the split hypothesis, the lexical entry for *-o* is going to have the shape like in (14), with a foot in the adverb-forming feature Adv and the nominal class feature N, number and nominative case feature above — the scenario made possible under the assumption of phrasal spellout.<sup>9</sup>



In the case of the adverb, *-o* will lexicalize only the AdvP, the subset structure of (14). This follows from the major tenet of Nanosyntax, namely that lexically stored items are overspecified with respect to the syntactic structure they lexicalize, the idea formalized as the Superset Principle.

(15) Overspecification (Superset Principle, Starke 2009)

A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node.

In other words, on the strength of the Superset Principle, (14) submits that *-o* is a syncretic marker for adverbs and a class of nominals.<sup>10</sup> Where we can see the superset spellout of *-o*

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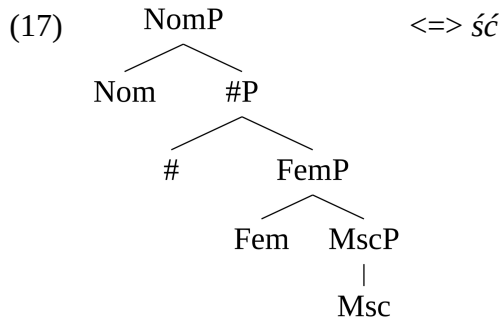
<sup>8</sup> The label Adv is used here pre-theoretically, as a stand-in for the relevant feature or features that form what is descriptively known as an adverb, a poorly understood and understudied category (though see Baker 2003 for a proposal that adverbs include a nominal ingredient added to the adjective stem, the idea further explored for Polish in Rozwadowska 2011, and Caha and Medová 2008 for a proposal to analyze Czech adverbs as adjectives with case features). Likewise, the nominal class feature N is a stand-in for a more contentful functor that is responsible for the formation of this class of abstract nominals. In this sense, both labels Adv and N are used here more descriptively than theoretically.

<sup>9</sup> The idea that spellout targets phrases rather than their terminal nodes can be traced back to McCawley (1968) and has more recently been applied in the analyses of a range of empirical domains and, in fact, analytical frameworks, including the work on pronouns in Weerman and Evers-Vermeul (2002) and Neeleman and Szendrői (2007) and, notably, the work on Nanosyntax (Starke 2009). For overviews of the spellout mechanism in Nanosyntax see Baunaz and Lander (2018b: 16–29), Wiland (2019: 8–23), De Clercq (2020: 15–25), or Caha (2020).

<sup>10</sup> Syncretism has been argued to surface as a consequence of the Superset Principle in a number of empirical domains including case (Caha 2009), class markers in Bantu (Taraldsen 2010; Taraldsen et al. 2018), spatial adpositions (Pantcheva 2011; Tolskaya 2018), aspectual prefixes (Wiland 2012), participles (Starke 2006; Taraldsen Medová and Wiland 2018; Caha and Taraldsen Medová 2020), complementizers (Baunaz and







Thus, in the *-o-ść* nominals, *-o* will lexicalize the AdvP subset in adverbs and its superstructure in the nominals, which consist of the extra nominalizer followed by gender, number and case, as represented in the lexicalization table:

(18) Spellouts of *-o* and *-ść*

A (POS)	ADV	N	MSC	FEM	#	NOM	
<i>jas-n</i>	<i>o</i>		ść				‘brightness’
<i>lek-k</i>	<i>o</i>		ść				‘lightness’
<i>wys-ok</i>	<i>o</i>		ść				‘height’
<i>mał</i>	<i>o</i>		ść				‘littleness’
<i>młod</i>	<i>o</i>		ść				‘youth’

Let us note that while the lexical entries in (14) and in (17) overlap with respect to # and Nom, *-o* and *-ść* do not compete for insertion since neither lexical entry is a subconstituent of the other. Such a specification, however, captures the fact that *-o* will only be able to lexicalize # and Nom when MscP and FemP are missing from the syntactic representation. In this context it is worth to point out that *zł-o* ‘evil’ and *pięk-n-o* ‘beauty’ exist along “unremarkable” forms *zł-o-ść* ‘anger’ and *piek-n-o-ść* ‘a beauty’, which are feminine like all other *-ść* nouns. They can be represented jointly with structures with gapped masculine and feminine features in (19).

(19)

A (POS)	ADV	N	MSC	FEM	#	NOM	
<i>pięk-n</i>	<i>o</i>						‘beauty’
<i>pięk-n</i>	<i>o</i>		ść				‘a beauty’
<i>zł</i>	<i>o</i>						‘evil’
<i>zł</i>	<i>o</i>		ść				‘anger’

With the split *-o-ść*, let us return to the few nominals based on the comparative forms listed in (4). As shown in the lexicalization table in (20), once we add the same part of the

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been done will be rewarded”) but also *-i* on top of *ść* in *mniejsz-o-ść-i* ‘minorities’ are portmanteaus specified for the plural feature, which is absent in the lexical entries in (14) and (17).

functional sequence from (13) on top of the comparative stem of the adjective, we end up with the same result as in the case of the nominals formed with the positive degree.

(20)

A (CMPR)	ADV	N	MSC	FEM	#	NOM	
<i>mni-ej-sz</i>	<i>o</i>		ść				‘minority’
<i>wyż-sz</i>	<i>o</i>		ść				‘superiority’
<i>więk-sz</i>	<i>o</i>		ść				‘majority’
<i>lż-ej-sz</i>	<i>o</i>		ść				‘lightness’

While the facts above fit into the split *-o-ść* hypothesis, let us point out two potential challenges: (i) some *-o* adverbs do not have a corresponding *-ość* nominal and (ii) there is a class of adverbs formed with *-e* rather than *-o*, e.g. *źl-e* ‘badly’, *dobrz-e* ‘well’.

The first challenge can be illustrated with examples like *biał-o* ‘white, adv.’, *drog-o* ‘expensively’ or *duż-o* ‘a lot, adv.’, for which there are corresponding adjectives but there are no corresponding *-ość* nominals. In this group, some nouns are formed with a (mildly) suppletive root, like *biel* ‘whiteness’ in (21a), or with a root and a nominalizer other than *-ość*, e.g. *brzyd-ot-a* ‘ugliness’, *dobr-oć* ‘goodness’ in (21b); *droż-yzn-a* ‘dearness’ in (21c); or *smut-ek* ‘sadness’ in (21d).

- (21) a. *biał-y* ‘white’ – *biał-o* ‘white, adv.’ – *biel* ‘whiteness’  
 b. (i) *brzyd-k-i* ‘ugly’ – *brzyd-k-o* ‘ugly, adv.’ – *brzyd-ot-a* ‘ugliness’  
 (ii) *dobr-y* ‘good’ – *dobrz-e* ‘well’ – *dobr-oć* ‘goodness’  
 c. *drog-i* ‘expensive’ – *drog-o* ‘expensively’ – *droż-yzn-a* ‘dearness’  
 d. *smut-n-y* ‘sad’ – *smut-n-o* ‘sadly’ – *smut-ek* ‘sadness’

Even though these formatives are highly unproductive in modern Polish and show a considerable degree of idiosyncrasy, we can still observe certain distributional contrasts between them and the *-ość* affix, which suggests that their selection is not a matter of a free lexical choice. Thus, *biel* in (21a) is a bare nominal root (modulo the silent singular masculine nominative suffix often represented as an abstract yer vowel, cf. Rubach 1984, 2016; Szpyra 1992), the form that is also found in verbs, a transitive *biel-i-ć* ‘bleach, whitewash’ and an unaccusative *biel-e-ć* ‘whiten’.<sup>14</sup> In turn, *brzyd-ot-a*, *dobr-oć*, and *wilg-oć* in (21b) illustrate a distributional contrast with *-ość*, which attaches to entire adjectival stems (i.e. all three morphological classes of the positive degree listed in (7)-(9)), while *-ot/-oć* attaches directly to the root. This shows up with the *-k* class adjectives *brzyd-k-i* in (21b(i)), where *-ot* competes with the *-k* affix (cf. *\*brzyd-k-ot-a*). Unlike in the *-k* class, *-ot* behaves similarly to *-ość* in the *-n* class in the sense that it attaches to the complex stem (and hence does not compete with *-n*), as in:

<sup>14</sup> Let us here point out the obvious, namely that while the syncretism between (the root of) the noun *biel* and the roots of *biel-i-ć* and *biel-e-ć* suggests a close structural proximity, it does not necessarily indicate their structural identity.

- (22) a. *cias-n-y* ‘tight’ – *cias-n-o* ‘tightly’ – *cias-n-ot-a* ‘narrowness’  
 b. *par-n-y* ‘muggy’ – *par-n-o* ‘muggily’ – *par-n-ot-a* ‘sticky weather’

Unlike *-ość*, however, *-ot* can attach to verbal roots, e.g. *rob-i-ć* ‘do’ – *rob-ot-a* ‘job’. In turn, the *-yzn* nominalizer seen in (21c) attaches to adjectival roots of the comparative degree, as revealed by the comparative adjective *droż-sz-y* ‘more expensive’. Since the *-ość* nominalizer — as will be discussed in a greater detail shortly — attaches to entire stems either in the positive or the comparative degree rather than bare roots, as in *wyż-sz-ość* ‘superiority’ (seen in (4b)), its competition with *-yzn* is not entirely idiosyncratic. This distributional contrast shows up also with adjectival roots that can form nominals in more than one way, as is the case with a *-k* class adjective *cien-k-i* ‘thin’ or with the adjective *tęg-i* ‘corpulent’, which has different root allomorphs in the positive and the comparative:

- (23) a. *cien-k-i* ‘thin’ – *cien-k-o* ‘thinly’ – *cien-k-ość* ‘thinness’  
 b. *cień-sz-y* ‘thinner’ – *cieni-ej* ‘thinner, adv.’ – *cien-izn-a* ‘poor quality’

- (24) a. *tęg-i* ‘corpulent, substantial’ – *tęg-o* ‘substantially’ – *tęg-ość* ‘corpulence’  
 b. *tęż-sz-y* ‘more corpulent or substantial’ – *tęż-ej* ‘more substantially’ – *tęż-yzn-a* ‘thews’

In (23a,b) we see that while *-ość* attaches to the *k*-stem forming *cien-k-ość*, the *-izn* marker (the allomorph of *-yzn* in (21c)) attaches to the root forming a different nominal *cien-izn-a*. Similarly, whereas *tęg-ość* in (24a) instantiates the familiar pattern, *tęż-yzn-a* in (24b) includes the bare allomorphic root of the comparative degree, which further shows the distributional contrast between *-ość* and the other nominalizers.<sup>15</sup>

Finally, the adverb like *duż-o* ‘a lot’, based on the adjective *duż-y* ‘big’, does not have a lexically corresponding nominal at all (save for conceptually related nouns like e.g. *mnog-ość* ‘multitude’ which are based on other roots). Given a generally well-behaved pattern of the formation of *-ość* nominals, we can cautiously assume the lack of a nominal for *duż-o* in the Polish lexicon to be an instance of an accidental rather than systematic gap.

All in all, to the extent that we can control for the existence of the alternative formatives

<sup>15</sup> An interesting instantiation of this pattern is observed with denominal adjectives formed with *-sk*, as in:

- (i) a. *amator-sk-i* ‘amateurish’ – *amator(-)szcz-yzn-a* ‘amateurship’  
 b. *angiel-sk-i* ‘English’ – *angiel(-)szcz-yzn-a* ‘English language’  
 c. *włó-sk-i* ‘Italian’ – *włó(-)szcz-yzn-a* ‘mirepoix vegetables’

In this case *-yzn* does not simply attach to the adjectival *-sk* stem but to a form that always includes the *szcz* [ʃtʃ] cluster, which can be analyzed either as an allomorph of the root or of the *-sk* affix. Let us point out that the appearance of [ʃtʃ] in the place of [sk] cannot be explained by (an intricate case of) palatalization since the output of palatalizations are soft consonants. Instead, we are dealing here with a situation that mimics iotation, which replaces *s z t d* with hard consonants *ʃ z tʃ dz* and *st zd* with *ʃtʃ z dʃ*. Unlike palatalization, iotation in Polish is unpredictable from the phonological context and has been argued in Rubach and Booij (2001) to be best analyzed as allomorphy rather than an output of a phonological rule.

of *nomina essendi*, all largely proprietary to a small number of lexemes, we are not required to make adjustments to the split *-o-śc* analysis. But the existence of *-e* adverbs along the *-o* adverbs does require an adjustment.

## 5. Nominalized *-e* adverbs

The existence of adverbs formed with *-e* along those formed with *-o* is problematic for the split hypothesis since in the absence of another lexical entry for the adverb, the one in (14) submits that AdvP can only be realized as *-o* as a subset structure. In other words, with *-o* being the only lexical entry that can spell out AdvP, we cannot describe how *-e* and *-o* compete. Hence, the inevitable question is if there is a distributional contrast between *-o* and *-e* adverbs and, if yes, can it be defined in terms of lexical entries?

What can be immediately observed about *-o* and *-e* adverbs is that the contrast cannot be linked to an easily identifiable syn-sem class of adjectives. For instance, both types of adverbs can correspond to attributive adjectives, as in (25a, b), and both can correspond to stage and individual level predicates, as in (26)–(27).

- (25) a. *dobr-y / gęst-y jogurt*  
good-AGR thick-AGR yogurt  
b. *dobrz-e / gęst-o*  
good-ADV thick-ADV

- (26) *Zachował się { głupi-o / mądrz-e }* stage level  
acted.3SG REFL stupid smart  
'He acted stupid/smart.'

- (27) *Wygląda { grub-o / inteligentni-e }* individual level  
look.3SG fat intelligently  
'He looks fat/intelligent.'

Likewise, if we assume Roy's (2013) classification of predicates into situation-descriptive and characterizing, we will find *-o* and *-e* adverbs corresponding to both classes of predicative adjectives as well, as in (28b) and (29b).<sup>16</sup> Following Bondaruk (2015), we can distinguish between the two classes contextually:

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<sup>16</sup> Roy's (2013) typology rejects the classification of stage vs. individual level predicates. Instead, predicative adjectives fall into three types: (i) "defining", that is those whose salient property defines an individual as a class member; (ii) those that describe situations; and (iii) "characterizing", those that attribute a property to an individual. Bondaruk (2015) shows that we can distinguish only two types of predicative adjectives in Polish according to Roy's classification — situation-descriptive and characterizing — with descriptive predicates restricted to NPs, as in *Mieczysława jest influencerką* 'Mieczysława is an influencer.'

- (28) *Co jest z Markiem?* ‘What’s going on with Mark?’ situation-descriptive  
 a. *Jest goły/wściekły.* (\*wysoki, \*mądry)  
 ‘He is naked/enraged.’ (\*tall, \*smart)  
 b. *goł-o / wściekl-e*  
 naked enraged
- (29) *Jaki jest Marek?* ‘What is Mark?’ characterizing  
 a. *Jest wysoki/mądry.* (\*goły, \*wściekły)  
 ‘He is tall/smart.’ (\*naked, \*enraged)  
 b. *wysok-o / mądrz-e*  
 high smart

Instead of attributing the *-o* vs. *-e* contrast to a functional typology of adjectives, the choice of the adverbial marker is often presented in the literature as a competition influenced by morpho-phonology (e.g. Cyran 1967; Grzegorzczkova 1999; Wróbel 2001; Szymanek 2015). However, the morpho-phonological factors determining the selection appear to be tendencies with a varying degree of predictability.

Thus, adverbs derived from canonically adjectival roots will be predominantly formed with *-o* (e.g. *słab-o* ‘weakly’) unless the adjectival stem ends in *n*, *m*, *w*, *r*, *v* or *t*, in which case the adverb will likely end in *-e*.<sup>17</sup> Some examples of such adverbs are given in Table 3.

Table 3. Examples of *-e* adverbs based on adjectival stems ending in *n*, *m*, *w*, *r*, *v*, *t*

A	Adv
pysz-n-y ‘tasty’	pyszni-e ‘tastily’
uprzejm-y ‘kind’	uprzejmi-e ‘kindly’
pod[w]y ‘mean’	podl-e ‘in a mean way’
dobr-y ‘good’	dobrz-e ‘well’
parsz-y[v]-y ‘scabby’	parsz-y[v]-e ‘in a scabby way’
obfit-y ‘abundant’	obfici-e ‘abundantly’

However, it is not difficult to find counter-examples to this tendency as for instance in the examples listed in Table 4. Moreover, some adverbs can be felicitously formed with either ending, e.g. *nudn-o/nudni-e* ‘boringly’, *mroźn-o/mroźni-e* ‘freezing’, *wesoł-o/wesel-e* ‘cheerfully’.

<sup>17</sup> The adverbial *-e* is palatalizing and exists along a non-palatalizing *e* in Polish, the contrast sometimes described in terms of a different value of the backness feature in both segments (Gussmann 1992; Szpyra 1995) or in terms of an affix-specific diacritic (Dressler 1985; Gussmann 2007). The addition of the adverbial *-e* to the stem results in the change of the stem-final consonants *n m r v t w* into *n mʲ z vʲ tɕ l*, as for instance in *obfit-y – obfi[tɕ]-e* ‘abundant – ly’, *pysz-n-y – pysz[n]-e* ‘taste – ly’, or *weso[w]-y – wese[l]-e* ‘cheerful – ly’.

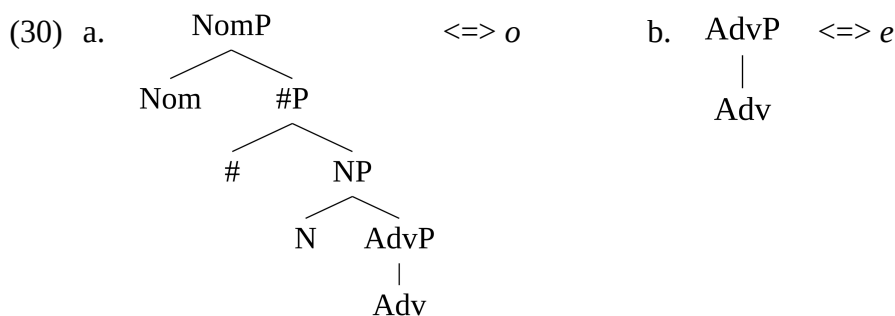
Table 4. Examples of *-o* adverbs based on adjectival stems ending in *n, m, w, r, v, t*

A	Adv
<i>głoś-n-y</i> ‘loud’	<i>głoś-n-o</i> ‘loudly’
<i>łakom-y</i> ‘gluttonous’	<i>łakom-o</i> ‘gluttonously’
<i>go[w]-y</i> ‘naked’	<i>go[w]-o</i> ‘nakedly’
<i>ostr-y</i> ‘sharp’	<i>ostr-o</i> ‘sharply’
<i>łza-[v]-y</i> ‘teary’	<i>łza-[v]-o</i> ‘tearily’
<i>bogat-y</i> ‘rich’	<i>bogat-o</i> ‘richly’

A factor that allows us to predict the use of *-e* more successfully is morphological complexity of the stem since *-e* is most frequently found with adverbs formed from denominal and deverbal adjectives. This intuition is confirmed in a corpus study of the distribution of both adverb markers in Stefańczyk (2010), which was based on the sample of ca. 5000 adverbs found in *Uniwersalny słownik języka polskiego* [the Universal dictionary of Polish] (Dubisz 2003). As reported in the study, all 250 examples of derived adjectives formed with *-iw, -liw, -ist, or -it* affixes (such as e.g.  *płacz-liw-y* ‘tearful’ –  *płacz-liwi-e* ‘tearfully’, based on the noun  *płacz* ‘cry’) had *-e*. However, as pointed out in Grzegorzczkova (1999: 528) and Szymanek (2015: 201), *-ist* is equally felicitous with *-o*, as e.g. in  *fal-ist-o/fal-iści-e* ‘wavily’.

While derivational complexity is a positive morphological condition on the use of *-e* also with suffixes like *-aln* or the participle-forming *-ł* (e.g.  *odczuw-aln-y* ‘perceptible’ –  *odczuwalni-e* ‘perceptibly’,  *okaza-ł-y* ‘spectacular’ –  *okaza-l-e* ‘spectacularly’), this statement does not extend to several others affixes. These include *-aw, -at, -owat, -ast* (e.g.  *gbur-owat-y* –  *gbur-owat-o* ‘surly’), the transgressive *-qc* (e.g.  *machaj-qc-y* ‘waving’ –  *machaj-qc-o* ‘wavingly’), the adnominal *-sk* (e.g.  *amator-sk-i* ‘amateurish’ –  *amator-sk-o* ‘amateurishly’), as well as a range of expressives (e.g.  *mal-ut-k-o, mal-usień-k-o, mal-uteń-k-o* ‘very little’) (cf. Szymanek 2015: 200–201). The conclusion is that instead of a stable rule that governs the distribution of adverbial *-o* and *-e*, we are dealing with a competition between both exponents whose result is determined by so far poorly understood interplay of more than one morpho-phonological factor. In what follows, I discuss a possible way of approaching this competition, which is in agreement with the split *-o-ść* analysis and treats *-o* and *-e* as allomorphs.

Let us suppose that there are two lexical entries in the Polish lexicon that include an adverb-forming layer, one in (30a)(repeated from (14)) and the other in (30b).

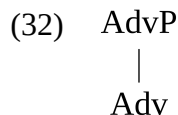


The adverbs, that is structures of the AdvP size, selecting (30a) will be lexicalized with *-o* as a subset structure, while the *-e* adverbs will be lexicalized with (30b). It must be emphasized that selection does not equal a competition for the lexical insertion of the exponent. If that was the case, the AdvP would be *always* lexicalized as *-e* in agreement with the Elsewhere Principle:

(31) Elsewhere Principle

Where several items meet the conditions for insertion, the item containing fewer features unspecified in the node must be chosen.

The principle — sometimes informally referred to as “minimize junk” in Nanosyntax — resolves a situation where multiple lexical items are in competition for insertion into a syntactic node. Thus, if a syntactic representation to be lexicalized looks like in (32) and both lexical items in (30a) and (30b) are equally accessible at the point of exponent selection, then there is no option but to lexicalize this tree as *-e*.



The situation is different when morpho-phonological factors influence the allomorph selection for the adverbial affix to the effect that *-o*, although a subset spellout of (30a) for AdvP, becomes preferred over *-e* and gets selected instead. The role of morpho-phonology on allomorph selection in Polish is known to be complex and involve an interplay of stem boundary, prosody, and melody (see e.g. Rubach and Booij 2001 for an illustration on the example of iotation) and, admittedly, such task has so far not been accomplished for the adverbial allomorph. However, a hint suggesting that this may be the case is that in Polish *o* alternates with *e* in morpho-phonologically conditioned allomorph selection, as in e.g. *nios-ę* – *niesi-esz* ‘I.carry – you.carry’, *bior-ę* – *bierz-e* ‘I.take – s/he.takes’, *anioł* – *aniel-e* ‘angel.Nom – angel.Voc’.

What is important for the split *-o-ść* hypothesis, is that both *-o* and *-e* adverbs always have *-o* in front of *-ść* (with *-eść* unattested in *nomina essendi*), as for instance in:

- (33) a. *mądr-y* ‘smart’ – *mądrz-e* ‘smartly’ – *mądr-o-ść* ‘smartness’  
 a. *uprzejm-y* ‘kind’ – *uprzejmi-e* ‘kindly’ – *uprzejm-o-ść* ‘kindness’  
 b. *podł-y* ‘mean’ – *podł-e* ‘meanly’ – *podł-o-ść* ‘meanness’

This is predicted by our lexical entries in (30a, b), which submit that the morpho-phonological competition for the allomorph selection between *-o* and *-e* can take place only for the AdvP and not for a notch bigger NP structure. This can be illustrated through a comparison of both allomorphs on the examples of *młod-o* ‘young, adv.’ – *młod-o-ść* ‘youth’ and *mądrz-e* ‘smart, adv.’ – *mądr-o-ść* ‘smartness’ in the lexicalization table:

(34)

A (POS)	ADV	N	MSC	FEM	#	NOM	
<i>młod</i>	<i>o</i>						‘young, adv.’
<i>mądrz</i>	<i>e</i>						‘smart, adv.’
<i>młod</i>	<i>o</i>		ść				‘youth’
<i>mądr</i>	<i>o</i>		ść				‘smartness’

Treating *-o* and *-e* markers as morpho-phonologically determined allomorphs that compete only for the lexicalization of the adverb, thus, allows us to keep the idea that *-o* spells out N in both adverb classes and maintain the split *-o-ść* hypothesis.

## 6. Conclusion

Splitting *-o-ść*, traditionally described as an adjectival nominalizer, into two affixes allows us to capture the observation that there is a partial syncretism between adverbs and *nomina essendi*. Employing phrasal spellout and mechanisms of exponence, we have arrived at a conclusion that analyzing a class of deadjectival nouns as nominalized adverbs is a tenable task. This result, however, leads to inevitable questions about the semantic content of the adverbial ingredient, its relation to abstract nouns, as well as the extent to which such an analysis can be extended to other languages. Suffice it to say, these are open questions at this point.

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