

EXCEPTIONS IN PHONOLOGICAL THEORY

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This paper discusses the so-called „exceptions" and their place within the phonological system of a language. It is shown that „exceptions" have their own typology and are divided into distinct formal categories. Each of them can be naturally explained within the model of Optimality Theory. As a result, „exceptions" are far less „exceptional" than they may seem.

Keywords: *exceptions, phonology, Optimality Theory, Polish, analogy,* allomorphy, loan-words.

1. INTRODUCTION

The cover-term „exceptions" is commonly referred to lexical items (words, stems or morphemes) which in one way or another disrespect the phonological system of a given language. In a rule-based approach, exceptions would be either exempted from undergoing a rule/rules or forced to undergo some special rule(s). A common belief seems to be that there is not much connection between the „regular" phonology of a given language and the „special" phonology affecting the exceptions: the two systems simply coexist one beside another although may partly overlap. This type of interaction involving two (or more) independent phonological systems (or, generally, more than one grammar) can be argued to exist elsewhere in the area of linguistics, for example, in bi- or multi-lingual settings. If a bilingual speaker can switch from one grammar to another, why should not a monolingual speaker switch from the „regular" grammar to the „exceptional" grammar? But although theoretically fine, this model has a major flaw on empirical grounds. It is just too powerful. I will show in this paper that exceptions are not subject to an independent grammar but in fact are integrated into the phonological systems of particular languages in a very coherent and predictable fashion. Consequently, a language has only one grammar although certain aspects of it may be seen only when some residual lexical items are looked upon.

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As a theoretical framework, I assume a one-level model of the Optimality Theory (OT, Prince and Smolensky 1993, Russell 1995, cf. also McCarthy and Prince 1995) in which a language grammar consists of a hierarchy of constraints, including phonological constraints (Phon) and morphemic constraints (Morph); the latter correspond to the traditional notion of the underlying forms of morphemes.

Phonological irregularities may be caused by a number of different factors; therefore, they may be quite different in nature. This paper concentrates on what can be labelled „exceptional segments". But first, I will briefly characterize other types of „exceptions" which have been already treated in the OT literature.

1.1. 'Exceptions' caused by analogy

A common type of phonological 'exceptions' is triggered by analogy. Various kinds of analogical behaviors have been successfully analyzed in the OT model as an interaction of phonological and 'identity' ('correspondence') constraints (see, among others, McCarthy and Prince 1994, 1995 for reduplication, Kraska-Szlenk 1995 for reduplication, paradigmatic leveling and 'cyclic' phenomena and Benua 1995 for truncation). The following two examples from Polish are summarized after Kraska-Szlenk (1995).

In Polish, diminutives are exceptional to the so-called 'Raising' rule which is responsible for the [ɔ]~[u] alternation in roots. In the regular pattern, illustrated in (1a), [ɔ] appears in an open syllable and [u] in a closed syllable. In diminutives, however, the root vowel is phonologically predicted only for the forms of nominative singular and is leveled throughout the inflectional paradigm, irrespectively from the syllable shape, as shown by the examples in (1b).

(1)

a/	d[u]ł (Nom sg)	d[ɔ]łu (Gen sg)	d[ɔ]ły (Nom pl.)	„ditch"
	kr[ɔ]wa (Nom sg)	kr[ɔ]wy (Gen sg)	kr[u]w (Gen pl.)	„cow"
b/	d[ɔ]łek (Nom sg)	d[ɔ]łka ((Gen sg)	d[ɔ]łki (Gen pl.)	„ditch, dim."
	kr[u]wka (Nom sg)	kr[u]wki (Gen sg)	kr[u]wek (Gen pl.)	"cow, dim."

An OT analysis of the data is based on the high ranking of the 'Identity' constraint which requires the consistency of the root in parallel forms. If ranked above 'Raising', it has a power of 'overriding' it. But notice that not all phonological processes are blocked by Identity in (1b). For example, progressive voicing assimilations ('Voicing') apply in diminutives, too, by which the identity of the root form is only partial, cf. [kruf-ka] (Nom sg) versus [kruv-ek] (Gen pl.), not *[kruf-ek]. This is predicted if 'Voicing' dominates Identity. Hence, a more complete constraint ranking appears as: Voicing >> Identity >> Raising which predicts which parts of the structure are affected by analogical behavior and which are affected only by phonological processes.

Another example of 'exceptions' triggered by analogy in Polish is the stress pattern of sequences containing proclitics. The 'regular' stress pattern, illustrated in (2a), involves maximally exhaustive parsing into trochaic feet. In longer odd syllable-numbered words, only one unfooted syllable will be found (the third syllable from the word end). This is due to a complex interaction of various foot structure constraints (cf. section 3). However, when a monosyllabic clitic is added to a seven syllable long word, there are two syllables left unparsed,

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as in (2b), instead of the phonologically predicted pattern in (2c). At the same time, the (2b) stress pattern is highly reminiscent of the stress pattern of the non-cliticized form, shown earlier in (1a). In Kraska-Szlenk's (1995) analysis, this apparent 'cyclic' phenomenon is accounted for by the dominance of the Identity constraint over respective foot structure constraints. Notice that, similarly to the previous case in (1), there is also a part of structure in (2b) which is different from the corresponding structure in (2a). That is the initial syllable of the clitic's host which is unstressed in (2b) but stressed in (2a). Hence, there must be also a constraint dominating Identity (the constraint enforcing an initial foot).

(2)

a/	(`σσ)(`σσ)σ(‘σσ)	e.g. wyalienowanego „alienated, Gen sg"
b/	(`σ=σ)σ(`σσ)σ(‘σσ)	e.g. do=wyalienowanego „to alienated, Gen sg"
c/	* (`σ=σ)(`σσ)(`σσ)(‘σσ)	
	(cf. (`σσ)(`σσ)(`σσ)(‘σσ)	e.g. wyspecjalizowanymi „specialized, Ins pl.")

As shown by the above examples, exceptions triggered by analogy are handled in the OT framework in a straightforward fashion. Especially attractive is the possibility of placing the Identity constraint between two blocks of phonological constraints which provides a principled explanation of not only why analogy takes place but also why it may be partial, as in the examples shown.

1.2. 'Exceptional' morphemes

A quite different kind of 'exceptions' are what may be called 'exceptional' morphemes. Loan-words are typical examples of morphemes which repeatedly ignore phonotactic restrictions imposed on the core native vocabulary (cf. Itô and Mester 1995). In Swahili, only loan-words may contain closed syllables, as in (3a), or syllable initial clusters, as in (3b).

(3)

a/	malkia (Ar.) „queen"	b/	stesheni (Eng.) „station"
	jinsi (Ar.) „kind (of)"		skuli (Eng.) „school"
	korti (Eng.) „court"		shtaki (Ar.) „accuse"
	Septemba (Eng.) „September"		bluu (Eng.) „blue"
	maktaba (Ar.) „library"		Kristo (Eng.) „Christ"

Polish prohibits sequences as **ke, *ge, *ti, *si* (among others) and a vocalic hiatus; but they are found in borrowed words, cf. (4a) and (4b), respectively

(4)

a/	kelner „waiter"	b/	oaza „oasis"
	gen „gene"		kakao „cocoa"
	tik „tic"		boa „boa"
	sizal „sisal"		muzeum „museum"

In Hausa (Nina Pawlak, p.c.), a coda consonant must be sonorant, but obstruents are found in loan-words, (5a), and ideophones, (5b).

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(5)

a/	sã:tífikẽt „certificate"	b/	ɗáyá ták „only one"
	tãksî: „taxi"		ƙó:nẽ ƙũrmús „burn completely"
	ká:mũs „dictionary"		yí cánjãrás „to draw"
	hedkwátã: „headquarters"		jí táf-táf „hear tramping"

In an OT analysis, an explanation of such cases lies in a different ranking of particular morphemic (Morph) constraints with respect to phonological (Phon) constraints. Specifically: Morph-Foreign/Ideophones >> Phon >> Morph-Native. In the process of nativization specific Morph constraints may move downward the hierarchy so that the „regular" phonology starts to affect them. This is often preceded by the stage of variation (modelled as indetermined ranking of Morph and Phon), cf. Swahili *rizki~riziki* „profit", *rais~raisi* „president" etc. (see Kraska-Szlenk 1996 for a detailed analysis and other examples).

While the above examples are 'exceptional' in disrespecting the phonological constraints which are normally satisfied, grammatical morphemes often seem to obey phonological constraints which are otherwise „invisible' in a given language (cf. McCarthy and Prince 1995). In a sense, they obey more constraints than they should. Kraska-Szlenk (1996) argues that many cases of allomorphy are explainable on the phonological grounds, if the ranking of the relevant Morph constraints is sufficiently low, below the 'invisible' phonological constraints. The familiar English *a ~ an* allomorphy provides a typical example. In the 'regular' English grammar, the No-Coda constraint (prohibiting consonants in the coda position) is 'invisible', i.e. it does not play any active role and coda consonants appear wherever required in the realization of particular morphemes. This is modelled as the dominance of Morph constraints over No-Coda. But one single morpheme, the /an/ of the indefinite determiner, is subject to No-Coda at the cost of deleting the [n]. The ranking: Morph(Reg) >> No-Coda >> Morph-AN correctly predicts that the indefinite determiner is realized as [a] before a consonant-initial word and as [an] before a vowel-initial word. In the first environment, [an] would violate the higher constraint of No-Coda by which would be a worse output than the [a] violating the lowest constraint; in the latter environment, [an] is the best output which satisfies all three constraints (no need to delete the n).

A language with rich allomorphy may provide evidence for a complex interaction of different Morph constraints and 'invisible' phonological constraints, as shown for Turkish in Kraska-Szlenk (1996). Some lexical morphemes (e.g. *elma* „apple", *dahi* „also") and some suffixes (*ki*, *das*) are not subject to vowel harmony or any other alternations; some lexical morphemes contain only harmonizing vowels (e.g. *oda* „room", *dere* „river") and some suffixes harmonize with roots (e.g. *lar~ler* „plural", *ya~ye* „dative"); finally, some of the harmonizing suffixes delete their initial consonant after consonant-final stems (in order not to create a coda, e.g. *si~i* „possessive", *nin~in* „genitive"). A sample constraint hierarchy is then as in (7) below. Notice that there are no non-harmonizing suffixes which would idiosyncratically delete some of their segmental material. This is not an incidental gap but is predicted by the constraint model, specifically, by the strict dominance of Vowel-Harmony over No-Coda.

(7)

Morph-*ki/elma* >> Vowel Harmony >> Morph-*lar/oda* >> No-Coda >> Morph-*si/ni*

To summarize, „exceptional" morphemes, whether those which are „immune" to some phonology or those which are too „sensitive" to some phonology, reveal that the phonological

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system of a language expands more widely than what is felt to be the core regular phonology. At the same time, „exceptions" are not really „exceptional" because they do not have any formal property that would make them different from other morphemes. They only show that the phonology is relative: whether you get less or more of it depends on where you stand.

2. THE PROBLEM AND PREVIOUS ACCOUNTS

As shown by the discussion in the previous section, the possibility of different ranking of specific Morph constraints with respect to general phonological constraints appears as a powerful descriptive tool in analyzing particular types of exceptions. But it is by no means a sufficient tool to provide an adequate treatment of all exceptions. A problem appears when the general phonology requires that the dominance relation between two constraints X and Y be such that X >> Y, but for some (one, a class of) lexical items the desirable ranking appears to be the opposite, i.e. Y >> X. It has been suggested in the OT literature that problems of this kind can be solved by postulating parallel constraint hierarchies, so that one portion of the lexicon would be subject to the X >> Y ranking and another portion of the lexicon would be subject to another hierarchy with the reversed dominance Y >> X. For example, McCarthy and Prince (1993a:28ff.) propose this strategy to account for affixation of possessives in Ulwa. Normally, the possessives, exemplified below by *ka* „his", are infixed after the initial foot of the stem, as in (8a), but in the case of some exceptional lexical items they are suffixed to the complete stem, as in (8b). In McCarthy and Prince's analysis, the data as (8a) are predicted from the ranking: Align-To-Foot >> Align-In-Stem, and the data as (8b) are predicted from the reversed ranking: Align-In-Stem >> Align-To-Foot.

(8)

a/ siwanak „root" (siwa)-ka-nak „his root"

b/ gobament „government" (goba)ment-ka „his government"

A similar approach could be adopted to account for exceptional stress patterns, e.g. the contrast between English verbs and nouns as *prodúce* vs *próduce*, or exceptional syllabification, e.g. Romanian *pomy* „trees" vs *pomi* „the trees" (Deligiorgis 1990, cf. the discussion later in this section), and various other cases of exceptions which apparently involve opposite constraint rankings. However, there are reasons to believe that the multi-hierarchy strategy does not seem suitable for dealing with such data. Let us first observe that in order to accommodate the analysis of exceptions, the theoretical apparatus would have to include some formal mechanism which would make possible: 1/ selecting of an appropriate (for a given morpheme) constraint hierarchy, and 2/ switching back and forth between different constraint hierarchies. Since in OT, a constraint hierarchy defines a grammar, what we are dealing with here are different grammars within the same language. From the theoretical point of view, there is nothing wrong with such a model, however complex it appears. In fact, it could be argued that there is independent motivation for it, for example in the area of code-mixing and switching phenomena in bi- or multi-lingual settings. Typically, a bilingual speaker chooses the 'appropriate' grammar with the 'appropriate' morpheme: a Swahili-English bilingual speaker would tolerate word final consonants in the English lexicon but not in the Swahili lexicon, an Arabic-French speaker would put the final stress on French words but not on most of Arabic words etc. If a bilingual speaker can switch from one grammar to another, why should not a monolingual speaker switch from the „regular" grammar to the „exceptional" grammar? Apparently, this should be fine. However, the analogy between these two cases is not accurate. Notice that bilingualism involves two complete grammars, with many constraints differently

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ranked in each code. On the other hand, exceptions of the kind discussed here, require that only one of the constraints in the „regular" hierarchy be „misplaced". These differences are pictured in (9).

(9)

a/ code-switching (mixing):

Grammar A: C1 >> C2 >>...Ci...>>...Ck...>>...Cn

Grammar B: any permutation of {C1, C2,...Ci,...Ck,...Cn}

b/ exceptions:

Grammar A: C1 >> C2 >>...Ci... >>...Ck...>>...Cn

Grammar B: C1 >> C2 >>...Ck... >>...Ci...>>...Cn

Consequently, the multi-hierarchy approach appears as too powerful for the analysis of exceptions because it predicts the (9a) type of constraint interaction which is not attested empirically. Conversely, the (9b) type of interaction which is commonly found in exceptions is not predicted by he multi-hierarchy approach to be any „better" or „more likely" than the (9a) type. Therefore, it seems more appropriate to look for some other theoretical apparatus which would predict in a straightforward manner that exceptions interact with the „regular" phonology in such a way that (9b) effects are observed and not those of (9a). Building on the proposal made in Kraska-Szlenk (1995) I will argue that a desirable strategy involves „exceptional" constraints rather than „exceptional" constraint rankings.

I assume that in addition to appropriately ranked universal constraints, grammars of particular languages may contain constraints referring to the structure of specific morphemes. Such constraints will have the same formulation as universal constraints except that instead of operating on a general domain (e.g. „every vowel [i]"), they operate on a specific sub-domain (e.g. „the particular vowel [i] of such and such morpheme"). For the lack of a better term, I will call such constraints „specific". By the principle known as Pānini Theorem (Prince and Smolensky 1993, cf. also Elsewhere Condition), if specific constraints are to cause visible phonological irregularities, they have to dominate respective general constraints. In fact, there has to be some other active constraint between them in the hierarchy, as schemetized in (10), where Ck-spec stands for a specific constraint, Ck - a respective general constraint, and Ci is another general constraint whose structure requirement is in a conflict with that of the Ck constraint.

(10)

Ck-spec >> Ci >> Ck

Notice that the constraint hierarchy in (10) corresponds exactly to the partial rankings of the two hierarchies in (9b). In the case of „regular" morphemes, Ck-spec constraint of (10) is vacuously satisfied, hence, irrelevant for the output evaluation; „regular" morphemes are affected only by the Ci >> Ck ranking, which corresponds to Grammar A in (9b). On the other hand, in the case of exceptional morphemes, Ck of (10) is inactive because its role is taken over by the dominant more specific Ck-spec constraint. Hence, exceptional morphemes are subject to the reversed ranking: Ck(spec) >> Ci, analogously to Grammar B in (9b). Therefore, the (10) constraint hierarchy makes the same predictions as to output evaluation as the joint hierarchies of (9b). If these two approaches are empirically equivalent, the approach based on specific constraints should be preferred for the reasons mentioned earlier: it avoids the problem of overgeneralization and it does not require complex theoretical apparatus. In addition, it naturally complies with the overall technique of OT in that more specific facts are predicted by more dominant constraints. There is, however, one particular case for which the

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multi-hierarchy approach and the approach proposed here are not empirically equivalent. I illustrate the problem using an example brought to attention by Inkelas et al. (1996:8) who independently argue against the multi-hierarchy approach.

In Turkish, intervocalic velars do not surface except in a limited number of exceptions. The regular behavior is illustrated in (11a) where the final velar of the stem deletes before the accusative suffix; an „exceptional" intervocalic velar appears stem-medially in (11b). Notice, however, that the stem final *k* in (11b) does delete before the vowel of the accusative suffix.

(11)

a/ bebek „baby" bebe-i „baby, Acc."
b/ sokak „street" soka-i „street, Acc."

Inkelas et al. argue that the behavior of morphemes as the one in (11b) presents a problem for the multi-hierarchy approach (*cophonologies* in their terminology). The essence of their argument is the following: if the exceptional stem-medial *k* of *sokak* results from being subject to a special constraint hierarchy, the stem-final *k* of the same morpheme should remain intact, too. But it does delete which demonstrates that one morpheme seems to be subject to two constraint hierarchies out of which one affects a certain portion of the morpheme and another affects another portion of it. Notice that the approach based on specific constraints does not create such a problem, because it captures the exceptionality of particular segments, not morphemes in their whole entities. Hence, the analysis works fine if the specific dominant constraint against the *k*-deletion has only the medial *k* as its domain, by which the final *k* of *sokak* is unaffected by it (i.e. vacuously satisfies it). Generally, whenever a similar problem would appear in the multi-hierarchy analysis, it ceases to exist in an analysis advocated here. Hence, at least for such cases, the latter approach seems superior on empirical grounds.

As a better alternative to the multi-hierarchy approach to exceptions, Inkelas et al. (1996) propose an analysis based on prespecification, i.e. encoding of additional (exceptional) structure in input forms. Indeed, prespecification seems to be capable of accounting for certain kinds of exceptions, as shown by the following discussion of simple cases of exceptional stress and exceptional syllabification.

As pointed out by Burzio (1994:28ff.), Italian follows a familiar Latin-like pattern of stressing the heavy penult of the word or the antepenultimate syllable if the penult is light. Since there is no phonemic vowel length contrast (but lengthening characterizes stressed vowels), the only heavy syllables in the language are closed syllables. The data in (12a) and (12b) have regular stress, penultimate and antepenultimate, respectively. In a number of exceptions, stress falls on the penultimate syllable although it is light, as in (12c). Burzio points out that such exceptions result from the historical loss of vowel length; the penultimate syllables of (12c) used to be long and received stress by the mentioned earlier principle assigning stress to heavy penults.

(12)

a/	agósto	b/	pópolo	c/	lodáto
	cappéllo		súbito		subíto
	studénte		áncora		ancóra

The prespecification analysis would assume that cases as (12c) are underlyingly specified with a metrical foot built in, as in (13). (Alternatively, the underlying specification could include only the alignment of prominence with the penultimate syllable and a disyllabic trochee would be „projected" by regular constraints of Italian.)

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(13)

σ('σσ)

In the classical input-output OT model, the appropriate constraints of the Parse-type (Parse-Foot or Parse-Prominence) have to dominate the general foot structure constraints in order to guarantee that the latter would not overrule the exceptional stress. Without going into too much detail, the general line of argument appears as in (14), where Foot-Structure is a cover term for constraints, such as Foot-Form, Weight-to-Stress, Non-Finality etc., which all together predict the „normal" facts of Italian.[1]

(14)

input: lo('dato)	Parse-Foot	Foot-Structure
>> lo('dato)		*Non-Finality
('loda)to	*!	

Input: popolo	Parse-Foot	Foot-Structure
>> ('popo)lo		
po('polo)		*!Non-Finality

The prespecification analysis roughly sketched above easily translates into the framework of one-level model adopted in this paper. The exceptional structure, instead of being built into input forms, may be very well expressed by appropriate constraints provided that the latter are ranked above the „regular" Foot-Str constraints analogously to the dominant ranking of Parse-Foot (Parse-Prominence) in (14). Let us consider some possible analyses. The closest analogue to the previous prespecification approach is to include the requirement for the penultimate stress in the formulation of „exceptional" morphemic constraints, as illustrated in (15a). Notice that while Morph-lodato etc. must strictly dominate Foot-Str, the ranking between Morph-Reg and Foot-Str is irrelevant. A different strategy is to appeal directly to the exceptionality of particular segments - the penultimate vowels of certain morphemes, by means of a specific constraint which requires that specific vowels of certain morphemes be stressed (prominent). Such a prominence alignment constraint has to dominate Foot-Str, as shown in (15b). Notice that under this approach, the ranking of all Morph constraints is irrelevant. The simplest analysis is to assume that they are the lowest in the hierarchy, below all active phonological constraints.

(15)

a/ Morph-*lodáto*, Morph-*popolo* >> Foot-Str

or: Morph-*lodáto* >> Foot-Str >> Morph-*popolo*

b/ Align-Prom-$a_{[lodato]}$ >> Foot-Str >> Morph (all)

In the particular case of Italian stress discussed here both solutions in (15) seem to work just fine. However, the analysis in (15b) is preferable as a general strategy for the reasons mentioned earlier in the discussion of Turkish. Notice that when Morph constraints referring to an „exceptional" morpheme dominate some Phon constraint which is active for other „regular" morphemes, they „immunize" all the structure of the given morpheme against the effect of the

[1] In all tableaux showing input evaluation the „>>" sign points to the optimal output (i.e. the actually pronounced form); stars are used to mark violations of appropriate constraints and the exclamation mark points to the so-called „fatal" violation which rules out a given output as worse than the optimal one. Constraints' dominance relation is shown by their left-to-right ordering.

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Phon constraint. If it happened that a particular morpheme had more than one instance of some structure potentially subject to a lower Phon constraint but only one instance of this structure would be „exceptionally" unaffected by that Phon constraint, we would face a problem analogous to the multi-hierarchy analysis of the Turkish example in (12). Naturally, there is no such a danger under the (15b)-type of analysis which appeals directly to the desired portion of exceptional structure. In the later discussion I will ignore alternative analyses of the (15a)-type and proceed directly to analyses based on specific constraints.

Another common phenomenon for which prespecification seems to be an especially suitable strategy are cases of exceptional syllabification. The following examples from Romanian, Modern Greek and Berber are cited after Deligiorgis (1990:83). The author argues that in these languages high vowels and glides occur in complementary distribution predictable from general phonotactics. By the principle which minimizes the total number of syllables, whenever possible, a high segment syllabifies as a glide. The examples in the left-hand column in (16) represent regular occurrences of glides. However, what Deligiorgis refers to as „true" vowels may be found in identical environments too, as shown by the right-hand examples in (16). In Deligiorgis's analysis such „true" vowels are underlyingly specified as syllable nuclei.

(16)

Romanian:	pomy „tree"	po.mi „the trees"
Modern Greek:	mu.ryá „mulberry tree"	po.rí.a „march"
Berber:	tus.yax „she carried us"	tu.ri.yax „she wrote us"

An OT analysis of the above data may proceed as follows. The general tendency to syllabify high segments as glides can be attributed to the dominance of the constraint against parsing *i* as a syllable peak *Peak(i) over the constraint against parsing *i* as a syllable margin *Margin(i) (cf. Prince and Smolensky 1993). Exceptional syllable peaks are either underlyingly specified as such (under the prespecification approach), or result from a dominant specific constraint (under the present approach). Both analyses, sketched, respectively, in (17), are fairly similar to the previous example of the exceptional stress.

(17)

a/ Parse-Syll-Peak >> *Peak(i) >> *Margin(i)

b/ *Margin(i-spec) >> *Peak(i) >> *Margin(i)

In a similar fashion, any other analysis which relies on the notion of prespecification can be easily phrased in terms of the approach advocated here. This is because the latter is powerful enough to express any „exceptional" structure requirement in the form of constraints. As shown by the earlier discussion, the two approaches appear as quite synonymous except for the technical details. However, this similarity is only apparent and does not hold when some other types of exceptions are considered. In fact, I will argue that prespecification is too limited and may not handle all instances of exceptionality, contrary to the claim made by Inkelas et al. (1996:17).

The relation between prespecification and a constraint-based analysis of exceptions can be compared to the relation between a rule-based phonological theory and a constraint-based phonological theory. Both, prespecification and a rule-based phonogical theory concentrate on structure: the first one, on the differences between the „regular" versus „exceptional" structure; the latter, on the structural differences before and after a rule application. A constraint-based analysis of exceptions or of any other phonological phenomenon in general concentrates not as much on the structure as on the reasons behind it. Whenever there is a one-

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to-one relation between the structure and the reason behind it, both phonological theories as well as both accounts of exceptions work equally well and the difference between the two techniques is reduced to the difference in phrasing. However, as proved by the overwhelming OT literature, the relations between the structure and the reasons behind it are often of much more complex nature, and these are precisely the cases for which a constraint-based analysis appears as much more explanatory than a rule-based analysis. Similarly, if such complex relations exist in the area of exceptions, a constraint-based analysis, as the one proposed here, can handle them better than a prespecification analysis.

The two examples of exceptions discussed in the following section are intentionally chosen to expose the adequacy of a constraint-based analysis. In both of them, the exceptional item is characterized by prosodic weakness: the inability to bear stress. Such special weakness is encoded by means of a specific constraint of the prohibition-type: *Prominence. Notice that constraints which express prohibition typically bring out more complex than one-to-one relations between the structure and the reason behind it. The satisfaction of *Prominence constraint by being „unstressed" is not in binary opposition to being „stressed". While the latter implies that a given syllable (mora) is a head of a metrical foot, the former implies one of the three possibilities: a given syllable (mora) may occur in a foot weak position, may be unfooted, or may be even unpronounced (deleted). Consequently, one exceptional property (the „reason") corelates with different surface structures. Which of these structures should be prespecified under the prespecification approach? Apparently, whichever particular structure would be chosen, some generalization would be lost, if exceptionality truely consists in not having certain structure rather than having some structure.

3. THE BAN ON STRESS IN POLISH

3.1. The background.

This section discusses two cases of exceptional „unstressability". Both examples come from the standand Polish and are summarized after Kraska-Szlenk (1995); the first example involves a peculiar behavior of some clitics, the other one involves a class of exceptionally stressed nouns. Before the discussion of exceptions, I will briefly recapitulate relevant facts of the general stress system of Polish as analyzed in the OT framework by Kraska-Szlenk (1995).

Polish stress is quantity insensitive and based on syllabic trochees (Foot-Form:Trochee unviolated; Weight-to-Stress irrelevant). With the exception of monosyllabic words whose only syllable forms a monosyllabic foot (due to the undominated constraint that the morphosyntactic word be stressed: Mword⊃Foot), in all other circumstances feet are always disyllabic even at the cost of leaving some syllables of the word unparsed. This points out to the ranking: Foot-Binarity >> Parse-Syllable. Every morphosyntactic word has a foot aligned with its right edge (but see the exceptions below) as a result of the high ranking of an appropriate word-foot alignment constraint Align-Mword(R): {Align: Mword, Right, Foot, Right}. In addition, words as well as larger prosodic domains („clitic groups") show the general leftward „orientation" of feet which is expressed as dominance of Parse-Syllable over Align-Foot: {Align: Foot, Left, Word, Left}. The partial constraint rankings relevant for the later discussion are shown in (18).

(18)

Trochee, Mword⊃Foot, Al-Mword(R) >> Foot-Bin >> Parse-Syllable >> Al-Foot(L)

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Notice the examples of typical stress patterns in (19). The monosyllabic word in (19a) is stressed due to the high ranking of Mword⊃Foot. The only foot of the trisyllabic (19b) is at the right edge because of the dominant Al-Mword(R), and its initial syllable is unfooted because Foot-Binarity dominates Parse-Syllable. The same dominance accounts for the unparsing of one syllable in the seven-syllable long (19c); notice that this unparsed syllable is the third one from the right edge, as predicted by the interaction of the dominant Al-Mword(R) with the lower Al-Foot(L).[2]

(19)

a/	(ˈσ)	e.g. dom „house"
b/	σ(ˈσσ)	e.g. robotnik „worker"
c/	(ˋσσ)(ˋσσ)σ(ˈσσ)	e.g. zagospodarowany „cultivated"

With this background, I will move to the discussion of exceptional clitics.

3.2. „Unstressable" clitics.

Certain clitics in Polish may occur either as enclitics or proclitics depending on a variety of syntactic, pragmatic and phonological factors which are beyond our concern here (cf. Kraska-Szlenk 1993). They include „weak" variants of object pronouns (e.g. *mi* „me-Dat", *mu* „him-Dat", *go* „him-Acc"), the reflexive pronoun *się*, the modal particle *by* „would", as well as cliticizing variants of some monosyllabic words, typically, adverbials (e.g. *tu* „here", *tam* „there") or subject pronouns (e.g. *on* „he-Nom", *my* „we-Nom). Such clitics often occur in clusters which may also incorporate „true" enclitics (which need a host to their left), as verbal subject markers *śmy* „1 pl." and *ście* „2pl." or emphatic particles (e.g. *no*, *że*).

Clitics do not form Mword domains, hence are not subject to the dominant Mword⊃Foot constraint. This, together with dominant Foot-Binarity, predicts that a monosyllabic clitic will be never parsed by a monosyllabic foot. This prediction is confirmed by the data: a clitic may be parsed into a (binary) foot only with another clitic or with a part of the host word, as shown in (20).

(20)

σ(ˈσσ)=σ	kupili=by „they would buy"
σ(ˈσσ)=(ˋσ=σ)	kupili=by=mu „they would buy for him"
σ(ˈσσ)=(ˋσ=σ)=(ˋσ=σ)	kupili=by=ście=mu=go „you (pl.) would buy it for him"
(ˋσ=σ)(ˈσσ)	by=kupili „they would buy"

Apparently, the mentioned earlier Parse-Syllable constraint is responsible for the maximal parsing of clitics into binary feet. What remains to be examined is the parsing of odd-numbered sequences of clitics so that appropriate alignment constraints can be detected. But this seems

[2] The Polish data are based on my own dialect of the "standard Warsaw" variety and are written in the standard Polish orthography; I depart from it in using the "=" symbol to mark the host-clitic (or clitic-clitic) boundary and, occasionally, in marking the foot structure by means of parentheses. Given that syllable count is relevant for the discussion, it should be noted that the letter *y* indicates the vowel [i] and the letter *i* indicates palatalization of the preceding consonant, if followed by a vowel (i.e. in the environment: C_V, otherwise, it is pronounced as the vowel [i]). The primary stress will be marked by the ˈ sign and the secondary (and tertiary) stress by the ˋ sign. (Note that the primary stress never falls on a clitic but this issue will not be discussed here, cf. Kraska-Szlenk 1995).

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to be a problem. Consider the data in (21) and (22) below which contain sequences of respectively, three and five monosyllabic enclitics. In such cases, one syllable of the clitic sequence has to remain unparsed (due to Foot-Bin) but its position does not seem to follow from any alignment constraints. In (21), the unparsed syllable is either at the left or at the right edge of the clitics' sequence. In (22), it is either at the left edge, in the middle, or at the right edge of the five enclitic sequence. (The initial foot in the parsing schemata denotes the final foot of the host.)

(21)

a/ parsing: ...(‘σσ)=(`σ=σ)=σ
ku(‘pili)=(`by=ście)=go „you (pl) would buy it”
zgu(‘bili)=(`by=się)=tam „they would get lost there”
zgu(‘bili)=(`mi=się)=tam „they got lost there”

b/ parsing: ...(‘σσ)=σ=(`σ=σ)
ku(‘pili)=ście=(`mi=go) „you (pl.) bought it for me”
zro(‘bili)=no=(`by=ście) „could you (pl.) do”

(22)

a/ parsing: ...(‘σσ)=σ=(`σ=σ)=(`σ=σ)
(‘zgubił)=się=(`by=on)=(`wam=tu) „he would get lost here”

b/ parsing: ...(‘σσ)=(`σ=σ)=σ=(`σ=σ)
(‘zgubił)=(`by=się)=on=(`wam=tu) „he would get lost here”

c/ parsing: ...(‘σσ)=(`σ=σ)=(`σ=σ)=σ
zgu(‘bili)=(`by=ście)=(`mi=się)=tam „you (pl) would get lost there”

A careful examination of the data containing odd-numbered sequences of enclitics reveals that their footing depends on which clitics occupy particular positions in the sequence. Consider the contrast in (22a) versus (22b). Notice that both these examples contain the same clitics and that the order of the first two clitics in (22a) is reversed in (22b) (while the three other remain in the same order). In (22a), when *się* is initial in the sequence, it is unfooted, hence, unstressed. In (22b), *się* is a weak member of a foot, hence, it is unstressed, too. Whether *by* is initial, as in (22a), or the second one, as in (22b), it is stressed. The pair in (22a-b) clearly shows that whichever position of the first foot is prefered, its rightward orientation, as in (22a), or its leftward orientation, as in (22b), a relevant alignment constraint has to be dominated by some other constraint which recognizes *się* as distinct from *by*. Such a constraint could either appeal to the „unstressability” of *się* or to the „stressability” of *by*. The first possibility seems more natural given that clitics as such are prosodically weak. A requirement for a clitic to be stressed would be a very ad hoc device, especially since no other lexical item in Polish needs to be specified as „stressed”. Under the „unstressability” analysis, the data are accounted for as follows.

I assume that certain clitics, including the reflexive *się* and subject verbal clitics *ście* „2 pl.” and *śmy* „1 pl.” (cf. the data in (21)), are prone to the specific constraint against alignment of prominence *Prom{*sie*, *ście* etc.}. Its general variant, *Prom (which is a *Str type of constraint), is obviously dominated by all „regular” foot structure constraints, so that the foot structure predicted by the latter may emerge on surface. Other clitics, such as the modal *by* and object pronouns, are outside the class of exceptional prosodically „weak” clitics, hence are not subject to the specific *Prom constraint. The ranking: *Prom{*sie*, *ście* etc.} >> Foot-Str >> *Prom reflects the familiar relation between the specific (exceptional) and general (regular) facts.

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The dominant specific *Prom constraint predicts alternations in stress patterns of sequences as those in (21) and (22) which combine clitics of both types. In all these examples the configurations of feet are such that stress falls only on „strong" clitics: object pronouns or *by*, and never on „weak" clitics as *się* or *ście*. The satisfaction of the dominant *Prom{*sie, ście* etc.} constraint is possible in (21) and (22) because clitics of two types are adjacent one to another. Therefore, whenever stress were predicted by alignment constraints to fall on an „unstressable" clitic, an adjacent „strong" clitic could host it instead, with the impression of the foot being „moved" leftward or rightward, respectively. Consequently, examples as such do not shed much light on the alignment constraints. But the alignment constraints can be determined from the data containing odd-numbered seqences of only „strong" or only „weak" clitics.

By comparing appropriate sequences of clitics, Kraska-Szlenk (1995) argues that the active alignment constraints are: Align-ClGr(R) >> Align-Foot(L). Notice, for example, the data in (23) below which show the relevance of the higher Align-ClGr(R) constraint. The first two clitics are both „strong" in (23a) and both „weak" in (23b). Therefore, the specific *Prom constraint does not participate in deciding on the position of the stress. In both cases the stress is penultimate, as predicted by the rightward alignment constraint.

(23)

a/ ku(ʻpili)=by=(ˋmi=go) „they would buy it for me"

b/ zgu(ʻbili)=ście=(ˋsię=tam) „you (pl) got lost there"

Notice that in (23b) stress falls on an „unstressable" clitic violating the specific *Prom constraint. This violation may not be enforced by the Align-ClGr(R) constraint which, as argued earlier, has to be ranked lower (cf. (21) and (22)). The only reason behind the violation of *Prom is the higher ranking of Parse-Syllable. Additional evidence for the ranking: Parse-Syllable >> *Prom *{się, ście* etc.} is provided by even-numbered sequences of clitics which are exhaustively parsed no matter which clitics carry stress. Notice, for example, the data as (24) in which stress falls on „unstressable" *ście* or *się*.

(24)

a/ parsing always: ...(ʻσσ)=(ˋσ=σ)

ku(ʻpili)=(ˋście=mi) „you (pl.) bought for me"

zgu(ʻbili)=(ˋsię=tam) „they got lost there"

b/ parsing always: ...(ʻσσ)=(ˋσ=σ)=(ˋσ=σ)

ku(ʻpili)=(ˋście=mu)=(ˋgo=tam) „you (pl) bought it for him there"

zgu(ʻbili)=(ˋby=mi)=(ˋsię=tam) „they would get lost there"

The complete hierarchy of the constraints relevant for the placement of stress in enclitics is shown in (25) with sample examples of output evaluation (earlier examples of (21a), (23a) and (24a)). Not included in (27) are other dominant constraints of (18) above; among them, Align-Mword(R) which guarantees that parsing of clitics will not „disturb" the final foot of the host word, and Foot-Bin which ensures that only binary feet will be formed; the low constraint of Align-Foot(L) is omitted, too. (Not included are also violations induced by the clitic's host which has the identical shape in all examples given.)

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(25)

kupili=by=ście=go	Parse-Syllable	*Prom {*ście* etc.}	Al.-ClGr(R)
>> σ(‘σσ)=(`σ=σ)=σ	*		*σ
σ(‘σσ)=σ=(`σ=σ)	*	*!	
σ(‘σσ)=σ=σ=σ	***!		*σσσ

kupili=by=mi=go	Parse-Syllable	*Prom {*ście* etc.}	Al.-ClGr(R)
>> σ(‘σσ)=σ=(`σ=σ)	*		
σ(‘σσ)=(`σ=σ)=σ	*		*σ!
σ(‘σσ)=σ=σ=σ	***!		*σσσ

kupili=ście=mi	Parse-Syllable	*Prom {*ście* etc.}	Al.-ClGr(R)
>> σ(‘σσ)=(`σ=σ)		*	
σ(‘σσ)=σ=σ	**!		**

Notice that the constraint-based analysis of exceptional prosodic weakness of particular clitics explains not only why these clitics are usually unstressed but also why they occasionally get stressed. If clitics' „unstressability" is expressed as a constraint occupying a certain position in the constraint hierarchy, their being stressed naturally follows if demanded by a higher constraint. In addition to Parse-Syllable which, as discussed above, has a power to introduce stress on „weak" clitics, there is one more dominant constraint which has the same effect.

Recall that clitics discussed here may also occur as proclitics. The left edge alignment constraint Align: {ClGr, L, Foot, L} is responsible for the presence of a foot at the left edge of a group containing proclitic(s). But unlike its mirror-image Al-ClGr(R), the Al-ClGr(L) constraint is ranked very high in the hierarchy, above all the constraints of (26), including the specific *Prom constraint (cf. also the discussion of analogy in section 1). Therefore, if it happens that a „weak" clitic occurs initially in the „proclitic group", it has to give in its „unstressability" in order to satisfy more dominant alignment, as shown by the example in (26).

(26)

parsing: (`σ=σ)σ(‘σσ), not: *σ=(`σσ)(‘σσ)
(`się=wy)pro(‘wadził) „he moved away"

To summarize, I have argued that certain clitics in Polish are exceptionally unstressable, subject to a specific constraint against prominence alignment. This constraint dominates some alignment constraints, including Al-ClGr(R), which causes apparent irregularities in foot structure of enclitics, but is itself dominated by other constraints, including Al-ClGr(L) and Parse-Syllable. Whether the „unstressable" clitics bear stress on surface or not, is predicted by the interaction of the constraints, as always in OT.

3.3. The „exceptional" nouns.

The case discussed in this section is in a sense much simpler than the previous example of „unstrassable" clitics since, as we will see, the dominant „unstressablity" constraint is always satisfied on surface. Consequently, its interaction with general phonological constraints is straightforward and not as interesting as the complex dominance relations shown in section

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3.2. But it is exactly this simplicity which deserves to be mentioned. It happens that the exceptional nouns dealt with here have been subjected to numerous previous analyses which in one way or another attribute their particular stress pattern to the exceptional stress rather than exceptional not being stressed as argued here. Therefore, my purpose is to compare the two approaches and show that it is only the latter which captures the true generalization of the facts.

Recall from section 3.1 that in polisyllabic words in Polish the penultimate syllable is stressed as a result of the high ranking of Align-Mword(R) constraint. However, a limited class of nouns have stress on the antepenultimate syllable (with the penultimate and final syllables unstressed). The antepenultimate stress appears only in certain inflected forms of such nouns and not in others in which the regular penultimate stress is found. As observed by many authors (Rubach and Booij 1985, Halle and Idsardi 1992, among others), the distinction between forms stressed on the antepenult and those stressed on the penult can be generalized according to the length of the inflectional suffix which follows the stem. Two groups of nouns can be distinguished, as shown in (27) (where hyphens mark stem-suffix boundaries). In (27a), the antepenultimate stress is found only in forms with a monosyllabic suffix. When the inflectional suffix is disyllabic or zero, stress falls on the penult. Most nouns of this group are of feminine gender (likewise: *polityka* „politics", *gramatyka* „grammar"), but there are a few masculine nouns, too (e.g. *fanatyk* „fanatic"). In (27b) stress is antepenultimate when the inflectional suffix is phonologically null and is penultimate when the inflectional suffix is one or two-syllable long. There are very few nouns of masculine gender that exhibit this kind of behavior (likewise: *prezydent* „president").

(27)

a/	σ(ˈσσ)-σ	republik-a „republic, Nom"
	σ(ˈσσ)	republik „republic, Gen pl"
	(ˌσσ)σ-(ˈσσ)	republik-ami „republic, Ins pl"
	σ(ˈσσ)	katolik „Catholic, Nom."
	σ(ˈσσ)-σ	katolik-a „Catholic, Gen"
	(ˌσσ)σ-(ˈσσ)	katolik-ami „Catholic, Ins pl"
b/	(ˌσσ)(ˈσσ)σ	uniwersytet „university, Nom"
	(ˌσσ)(ˌσσ)(ˈσ-σ)	uniwersytet-u „university, Gen"
	(ˌσσ)(ˌσσ)σ-(ˈσσ)	uniwersytet-ami „university, Ins pl."

Many analyses of this exceptional stress pattern involve some kind of lexical stem marking. Two slightly different lines of approaches can be distinguished, one based on the notion of extrametricality, and another one assigning a particular foot pattern to exceptional stems. I will start by considering the latter first.

Inkelas (1990) proposes that the two kinds of exceptional stems have an underlying trochaic foot, respectively, at the right edge, as in (28a), or in the pre-edge position, as in (28b). When the „lexical" foot is not final in the word, the general rule of word final trochee takes over erasing the „lexical" foot, as exemplified by the derivation in (28c) and (28d). A similar treatment is proposed by Halle and Idsardi (1992), with the only difference that „lexical" feet are formed by specific edge parameter rules.

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(28)

a/	re(publi)k-a	b/	uni(wersy)tet	
c/	re(publi)k-ami	d/	uni(wersy)tet-u	„lexical" foot
	re(publi)(k-ami)		uni(wersy)(tet-u)	main stress rule
	republi(k-ami)		uniwersy(tet-u)	foot erasure

Notice that the final rule of „foot erasure" in (28) is necessary in order to predict the leftward orientation of secondary stress (predicted by later rules in derivation), cf. (30). In the OT framework, the stem marking approaches exemplified above, can be rendered by means of an idiosyncratic alignment constraint, as pointed out by Idsardi (1994). He proposes a constraint formulated in (29) which aligns the right edge of lexically specified stems with the right edge of a foot. If the constraint in (29) is ranked above Align-Mword(R), antepenultimate stress can be correctly predicted.

(29)

Align-G constraint (Idsardi 1994): Align ({*gramatyk, republik* etc.}, R, Ft, R)
Align-G >> Align-Mword(R)

At the same time, however, Idsardi (1994) notes that the constraint in (29) has to be dominated by Align-Foot(L), given the secondary stress pattern in (30). But, Idsardi argues, there is independent evidence for the ranking Align-Mword(R) >> Align-Ft(L) (cf. section 3.1), hence there appears to be a paradox in constraint dominance hierarchy, as shown in (31). Therefore, an analysis based on a special alignment constraint would be incorrect.

(30)

(`grama)ty('k-ami) *gra(`maty)('kami)
(`repu)bli('k-ami) *re(`publi)('kami)

(31)

Paradox: Align-G >> Align-Mword(R) >> Align-Foot(L) >> Align-G

Notice that a prespecification analysis of these data would face exactly the same problem. Under the prespecification account, Parse-Foot (i.e. parsing of the underlying „lexical" foot) must dominate Align-Mword(R), analogously to the high ranking of Align-G in (31). If not, the „lexical" antepenultimate stress would not have a chance to appear on the surface. At the same time, Parse-Foot must be dominated by the lower constraint of Align-Foot(L) in order to predict the secondary stress, corresponding to the low ranking of Align-G in (31).

To summarize, it seems impossible to have an OT analysis which would correspond to the rule-based analysis involving an „underlying foot". I believe that this is because the „exceptional foot" does not capture a true generalization of the Polish facts.

A different generalization of the data emerges from the approaches utilizing the notion of extrametricality (e.g. Dogil 1979, Franks 1985, Rubach and Booij 1985, Halle and Vergnaud 1987). It is assumed that a particular stem syllable (the final one in (27b) class and the post-final one in (27a) class) is lexically marked as extrametrical (or has extrametricality assigned by a rule). Given that extrametricality holds for edge constituents only, antepenultimate stress arises exclusively in cases when the lexically marked syllable is word final, as in (32a) below. Otherwise, the extrametricality is lost and the regular penultimate stress assignment rule can apply, as in (32b).

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(32)

a/	re(‘publi)<k-a>	(ˋuni)(‘wersy)<tet>
b/	(ˋrepu)bli(‘k-ami)	(ˋuni)(ˋwersy)(‘tet-u)

Unlike the approach discussed previously, the „extrametricality" analysis attributes the exceptionality of these particular nouns to the unstressability (in its most radical form i.e. *„unfootability"*) *of specific vowels. In this sense it is similar to the approach proposed here to* which I will return momentarily. Still, the above analysis is rather complex: it divides the exceptional stems into two kinds for no principled reason and it heavily relies on rule ordering. I believe that this unnecessary complexity arises from the inaccurate generalization of the data: it is not the vowels indicated in (32a) but the vowels which precede them which are exceptional, and they are not „unfootable" but only „unstressable". This line of argument has been originally proposed by Comrie (1976), as summarized below.

Comrie (1976) observes that the vast majority of the exceptional nouns contain a stem final Latinate suffix *Ik*, realized as [ik] or [ik] depending on the quality of the preceding consonant. There are also nouns which do not have the above suffix, but only a high vowel [i] or [i] (orthographic *y*) in the stem final or pre-final position (cf. *uniwersytet).* In Comrie's analysis, these particular stem vowels are lexically marked as „unstressable" which has consequences for foot building rules.

The examples below show that Comrie's generalization holds for all inflected forms of both types of exceptional nouns, no matter how long the inflectional suffix is: zero, one syllable or two syllables. In any case, the particular *i/y* stem vowel does not bear stress and no syllable count is necessary to determine that the main stress foot will be always maximally final and at the same time will respect the *i/y* vowel „unstressability" condition (the unstressable vowel is underlined).

(33)

re(publi̲k)	(uni)(wersy̲)tet
re(publi̲)k-a	(uni)(wersy̲)(tet-u)
(repu)bli̲(k-ami)	(uni)(wersy̲)te(t-ami)

In the present framework, the spirit of Comrie's „unstressability" is interpreted as the vowel's inability to be a nucleus of a syllable in the foot head position. The specific *Prom constraint has as its domain the *Ik* suffix (which accounts for most cases of the exceptional nouns) and a handful of other vowels (see Kraska-Szlenk 1995, ch. 2 for details). In order to be able to „overrule" the regular penultimate stress, the specific *Prom constraint must be ranked above* Align-Mword(R), as shown in the tableau below.

(34)

republi̲ka	*Prom {*Ik* etc.}	Al-Mword(R)	Parse-Syllable	Al-Foot(L)
>> σ(‘σσ̲)σ		*σ	**	*σ
(ˋσσ)(‘σ̲σ)	*!			*σσ

republikami	*Prom {*Ik* etc.}	Al-Mword(R)	Parse-Syllable	Al-Foot(L)
>> (ˋσσ)σ̲(‘σσ)			*	*σσσ
(ˋσσ)(‘σ̲σ)σ	*!	*	*	*σσ

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The correct predictions made by the specific *Prom constraint are due to the fact that unlike the „special" alignment constraint in (29) it does not require the particular stem syllable to be in a particular (i.e. weak) position within the foot, but leaves two options: the syllable may be in the weak position of a foot, as in (34a), or may be unfooted, as in (34b). Notice that the analysis based on the „unstressability" of a particular stem vowel is not synonymous with treating this particular vowel as „unfootable", or „transparent" with respect to the foot structure. If in Polish the „unstressable" vowel did not participate in the foot structure, wrong predictions would be made for the distribution of the left-to-right rhythmic stresses in certain longer words. For example, the word *uniwersytety* „universities" would be predicted to have two stresses only, as shown in (35a) (where <σ> indicates an unfootable syllable) instead of the correct (35b) with three stressed syllables.

(35)

a/ *(`σσ)σ<σ>('σσ) *`uniwersy'tety

b/ (`σσ)(`σσ)('σσ) `uni`wersy'tety

To conclude this section, I have shown that exceptionally stressed nouns in Polish involve exceptionality of particular segments (the vowel of the *Ik* suffix in most cases) rather than exceptionality of stems. Under the „unstressability" account, the facts are trivially simple: due to the high ranking of the specific *Prom constraint, the exceptional segments are never stressed. Consequently, the whole issue of the antepenultimately stressed nouns in Polish becomes trivially simple, contrary to many other highly complex analyses of this problem.

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