PRESPECIFICATION AND LEXICAL EXCEPTIONS

John T. Jensen & Margaret Stong-Jensen
University of Ottawa

1. Introduction

Interesting questions arise in phonological theory when some forms are exceptional to an otherwise valid generalization, as defined in (1).

(1) Exception (definition)
An exception is a form that does not conform to an otherwise valid generalization.

The chart in (2) summarizes various proposals for encoding exceptions in both rule theory and OT.

(2)

Rule theory	Optimality theory
Exception features	Constraint reranking
Lexical (pre)specification	Lexical (pre)specification
	Parochial constraints

Exception features necessarily require a rule system. In OT, violations of constraints can be forced only by higher ranking constraints; forms cannot be marked as exceptions to constraints. Lexical prespecification can be used both in rule theory and in OT. Constraint theory can also use constraint reranking or parochial constraints that are restricted to a particular class of items.

Inkelas, Orgun and Zoll (1997) (IOZ), using an OT framework, argue that prespecification is sufficient to account for lexical exceptions, and that exception features are problematic and unnecessary. We will propose that, at least in some cases, exception features are needed to account for exceptions, and that exception features have advantages over constraint reranking.

An explanatory account of lexical exceptions should be able to distinguish regular cases from exceptions. One place where this is problematic is in Non-derived Environment Blocking (NDEB), where the failure of non-derived forms to undergo regular alternations appears to be a regularity of language. An example of NDEB is found in English Trisyllabic Laxing, where monomorphemic words like *nightingale* and *stevedore* fail to undergo TSL.

Kiparsky (1982) explains the problem thus (3):

(3) [Marking forms like *nightingale, stevedore* as exceptions to Trisyllabic Laxing] 'misses the generalization that *all* non-derived words subject to the Trisyllabic shortening rule fail to undergo it, and it furthermore wrongly claims that such words are irregularities, and should tend to get

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"regularized" by shortening their first syllable, which does not appear to happen' (Kiparsky 1982: 36).

2. Finnish Assibilation and e-Raising

Kiparsky (1993) proposes to account for NDEB effects exclusively in terms of underspecification and structure building rules. He discusses two rules of Finnish, Assibilation of *t* before *i* and Raising of word-final *e*. He claims that both are purely structure filling; this accounts for the NDEB effects in Assibilation. Some examples of Assibilation are given in (4).

(4) a. /tilat+i/ → tilasi 'ordered' (first infinitive: *tilata*)
b. /vete/ (Raising) → veti → vesi 'water' (essive: *vetenä*)
c. /lasi/ → lasi 'glass'

Assibilation is stated in (5a), and the default for obstruents is in (5b).

(5) a. Assibilation (Kiparsky 1993:286)

$$\begin{bmatrix} \text{+coronal} \\ \text{+obstruent} \end{bmatrix} \rightarrow [\text{+continuant}] \; / \; \underline{\quad} \; i$$

b. Default [–continuant]
[+obstruent] → [–continuant]

Raising is stated as in (6).

(6) Raising

$$\begin{bmatrix} \text{V} \\ \text{–back} \\ \text{–low} \\ \text{–round} \end{bmatrix} \rightarrow [\text{+high}] \; / \; \underline{\quad} \;]]$$

Kiparsky assumes strict binarity of feature values within radical underspecification theory. This means (7):

(7) "[i]n each environment, we can have at most [0F] and [αF], where [–αF] is the value assigned by the most specific rule (language-particular or universal) which is applicable in that environment" (Kiparsky 1993: 285).

Kiparsky proposes that non-alternating *t* is specified [–continuant] before *i* (8e). The segment *s* is not specified [+continuant] before *i* (8d), because here [0continuant] will be realized as *s* by Assibilation (5a). In other contexts, [0continuant] will be realized as *t* (8c) by Default rule (5b), and *s* is specified [+continuant] (8c). Where *t* alternates with *s,* the segment will also be specified [0continuant] and its realization will depend on the context, as in (8a, b).

(8) a. tilaT+a → [tilata] ‘to order’
b. tilaT+i → [tilasi] ‘ordered’
c. saTa → [sata] ‘hundred’
d. laTi → [lasi] ‘glass’
e. koti → [koti] ‘home’
where /s/ = [+continuant], /t/ = [–continuant], T = [0continuant]

The segments *t* and *s* also alternate in words like *vesi* ‘water’ (9c). The segment *s* is invariant in *kuusi* ‘fir’ (9d), where the final segment alternates between *i* in final position and *e* before a suffix.

(9) a. lasi, lasi+na ‘glass, nom. sg. and essive sg.’ /laTi/
b. koti, koti+na ‘home’ /koti/
c. vesi, vete+nä ‘water’ /veTE/
d. kuusi, kuuse+na ‘fir’ /kuusE/
where /i/ = [+high], /e/ = [–high], E= [0high]

The chart in (10) observes strict binarity, since in any context, only two values — [0cont] and either [+cont] or [–cont] — can appear. We have added some examples to the chart and added the third set of cases where a morpheme-final *t* or *s* may appear before suffixes, some of which may begin with the vowel i that conditions Assibilation. The consonants of interest are in bold (from Kiparsky 1993: 287, his (26)).

(10)

	/t~s/	/t/	/s/
Before tautomorphemic /i/	— —	[–cont] ko**t**i ‘home’ **t**ilata **t**ilasi ‘order’	[0contl la**s**i ‘glass’
Before tautomorphemic /E/	[0cont] ve**s**i, ve**t**enä ‘water’	— — *ma**t**i, ma**t**ena	[+cont] kuu**s**i, kuu**s**ena ‘fir’
Morpheme final before various suffixes	[0cont] tila**t**a, tila**s**i ‘order’	— — (No exceptions in derived environments)	[+cont] kihi**s**tä, kihi**s**i ‘sizzle’
Elsewhere	— —	[0cont] sa**t**a ‘hundred’	[+cont] **s**ata ‘hundred’

Kiparsky notes that a fifth hypothetical pattern in (11) does not exist in Finnish.

(11) /…tE/: *mati, *matena (hypothetical)

To acount for (11), we would have to specify *t* [–continuant] in the context before /E/, violating strict binarity by having a three-way contrast in this context. Inkelas, Orgun and Zoll (1997) propose a three-way contrast to account

for Coda Devoicing in Turkish; however, we see that a theory that allows three-way contrasts is incapable of predicting that examples such as (11) do not exist in Finnish. (Since there are no exceptions to Assibilation in derived environments in Finnish, there are also no examples of a morpheme final *t* that remains constant before *i* or suffixes beginning with other sounds.)

Kiparsky notes that a marginal three-way contrast exists in the case of height (12).

(12) *Nursery words*
nukke 'doll'
nalle 'teddy bear'
Hypocoristic names
Kalle 'Charlie'
Ville 'Willie'
Abbreviations
Yle 'public radio,' from *Ylesradio*

This could be accounted for by (13), where a three-way height distinction appears word-finally (Kiparsky 1993: 288).

(13)

	/e~i/	/e/	/i/
In env. __]	[0high]	[–high]	[+high]
Elsewhere	— —	[0high]	[+high]

However, Kiparsky prefers to maintain strict binarity, and to mark the words in (12) as exceptions to the word-final raising of /E/ (rule (6)), as in (14). He remarks that this solution better represents the marginal status of these stems. The feature distinctions are given in (15).

(14) nukke
[–Raising]

(15)

	/e~i/	/e/	/i/
In env. __]	[0high]	[0high] nukk**e** [–Raising]	[+high]
Elsewhere	— —	[0high]	[+high]

3. English Trisyllabic Laxing

In this section we will consider whether English TSL can be analyzed as a structure-building rule which accounts for NDEB effects in terms of Kiparsky's 1993 proposal. We give examples in (16), in all cases referring to stressed vowels only.

(16) a. *Tense vowel in final or penultimate syllable alternating with lax vowel in trisyllabic context*

serene	divine	sane	semen
serenity	divinity	sanity	inseminate, seminal

b. *Tense vowel in final or penultimate syllable that remains tense in all contexts*

obese	nice	siphon
obesity	nicety	siphonal

c. *Lax vowel in final or penultimate syllable that remains lax in all contexts*

abet banner

d. *Tense vowel in morpheme-internal antepenultimate syllable*

nightingale stevedore overture

e. *Lax vowel in morpheme-internal antepenultimate syllable*

sycamore veronal

Under Kiparsky's proposal, lexical specifications would be as in (17), and the rules as in (18). Note the three-way distinction of the feature [ATR] in the first line, contrary to strict binarity. Note also that *obese* and *stevedore* have the same feature representation, though *obese* is truly exceptional and *stevedore* is regular by NDEB.

(17)

	$\bar{V} \sim \breve{V}$	$\bar{V}$	$\bar{V}$	$\breve{V}$	$\breve{V}$	$\bar{V}$
	s**e**rene, s**e**men	s**i**phon, ob**e**se	st**e**vedore	ab**e**t	v**e**ronal	w**ee**d
Morpheme-internal final or penultimate σ	[0ATR]	[+ATR]	— —	[–ATR]	— —	[0ATR]
Morpheme-internal antepenulti-mate σ	— —	— —	[+ATR]	— —	[0ATR]	— —

(18) a. Trisyllabic Laxing

$$V \rightarrow [-ATR] / \_\_\_\_ C_1 \left[\begin{matrix} V \\ -stress \end{matrix} \right] C_0 V C_0$$

b. Default

$V \rightarrow [+ATR]$

Alternatively we can analyze *siphon* and *obese* as underspecified for ATR and exceptions to Trisyllabic Laxing, as shown in (19). This representation has the desirable effect of distinguishing *obese,* which is a true exception, from *stevedore,* which, though exceptional, is regular by NDEB.

(19) siphon, obese [0ATR]
[–TSL]

We ask now if TSL can be reanalyzed as a structure-filling rule without resorting to exception features, along the lines that Kiparsky (1993: 295ff) adopts for Finnish Consonant Gradation. We could represen*t sane* and *sanity* as in (20) with two tiers, a CV tier and a melody tier, which are initially unassociated in most cases.

(20) sane: C V V C sanity: C V V C + V C V

s æ n s æ n + ɪ t ɪ

In the unmarked case, the tiers link one-to-one, with consonants linking to C slots and vowels to V slots, but a single vocalic melody will link to two V slots if available, producing a long vowel. In the Trisyllabic context, however, a vowel is permitted to link to only one V slot. Prelinking vocalic melodies to two V slots overrides this restriction. On these assumptions, the representations of (20) can be recast as in (21).

(21)

	$\bar{V} \sim \breve{V}$	$\bar{V}$	$\bar{V}$	$\breve{V}$	$\breve{V}$	$\bar{V}$
	ser**e**ne, s**e**men	s**i**phon, ob**e**se	st**e**vedore	ab**e**t	v**e**ronal	w**ee**d
Morpheme-internal final or penultimate σ	V V Rt	V V Rt	— —	V Rt	— —	V V Rt
Morpheme-internal antepenultimate σ	— —	— —	V V Rt	— —	V Rt	— —

The representations in (21) differ in two ways: in the number of V slots associated with each vowel and in whether or not the slots are prelinked. Considering these parameters separately allows us to maintain strict binarity in this case. However, *obese* and *stevedore* have the same representation in this analysis.

In the next section we turn to an example that cannot be recast in such a way as to preserve strict binarity without invoking exception features.

4. Turkish Coda Devoicing

Turkish has a rule of coda-final devoicing of stops which is nearly exceptionless in word-final position. Consider the examples in (22).

(22)

			UR (standard GP)	UR (markedness)	UR (IOZ)
a.	kanat	'wing'	/kanad/ [+voice]	/kanad/ [+voice]	kanaD [0voice]
	kanatlar	'wings'			
	kanadɨ	'wing (acc.)			
b.	devlet	'state'	/devlet/ [–voice]	/devleD/ [0voice]	devlet [–voice]
	devletler	'states'			
	devleti	'state (acc.)'			
c.	etüd	'study, étude'	/etüd/ [+voice] [–CD]	/etüd/ [+voice] [–CD]	etüd [+voice]
	etüdler	'studies'			
	etüdü	'study (acc.)'			

(CD = Coda Devoicing)

In standard Generative Phonology with full specification, 'wing' would have the underlying representation with a final voiced stop, with a rule devoicing this in final position. This would be a structure-changing rule. 'State' would have the corresponding voiceless stop, while 'study' would have an underlying voiced stop but be marked as an exception to final devoicing. Under markedness (underspecification) theory only the voiced stops would have an underlying voicing specification, with devoicing by rule or by default.

IOZ propose instead an underlying three-way voicing distinction, with stops alternating in voicing having the underlying specification [0voice] while stops invariant in voicing (either voiced or unvoiced) are specified with the appropriate value of voicing. In a rule analysis, the rule can be structure-filling. Their OT analysis ranks Faithfulness over Coda Devoicing (23). For *etüd* and *devlet,* high-ranked Faith forces the specified feature value to prevail. For *kanat,* neither feature value of [voice] satisfies Faith, since neither is specified in the input; hence, the candidate that satisfies Coda Devoicing is selected.

(23) Faith >> Coda Devoicing (Inkelas, Orgun & Zoll 1997, 408)

One objection to this analysis is that it allows [voice] to have three distinct underlying values, which is theoretically undesirable (Stanley 1967), as also pointed out by Green (2005). Phonetically, there are only two possibilities, so the [0voice] specification is used as a diacritic, not in the manner of underspecification theory to represent a redundantly underspecified value.

A more important objection is that this analysis puts irregular cases like *etüd* on a par with the regular cases, whereas it is clear that such cases are restricted to (recent) borrowings.[1] By contrast, there are many examples like (22a, b) in the native vocabulary of Turkish.

(24) Regular cases: kanat, devlet
Irregular cases (restricted to recent borrowings): etüd

Inkelas, Orgun, & Zoll (1997:396) define 'rule theory' as one that uses rules to account for alternations and (inviolable) constraints to account for static patterns. This characterization is not entirely accurate. There are versions of rule theory that use rules to account for static patterns as well as alternations, such as the theory of Lexical Morphology and Phonology developed by Kiparsky (1982).

Inkelas, Orgun, & Zoll (1997) use the term "cophonologies" to refer to the situation where some lexical items are specified as exceptions to rules. The idea is that the phonology of the items conforming to the rule is distinct from the phonology of the items that do not conform to the rule in that one phonology includes a rule that the other lacks. They use rhe term "distributional method" for the method used to establish cophonologies, although no one to our knowledge has proposed using this method in actual practice. They define the distributional method as in (25).

(25) DISTRIBUTIONAL METHOD for establishing co-phonologies: Given a phonological property P, assume that its presence is enforced by a grammar. If not all morphemes in the language possess property P, then establish two co-phonologies: one which requires the presence of P and another which requires its absence. Assign each morpheme to one of these two co-phonologies. (IOZ 1997, 399)

As IOZ point out, this leads to the establishment of uninteresting cophonologies, such as a pair of cophonologies in Turkish such that in one all roots conform to NoCoda and in the other some syllables have codas.

[1]According to Kaisse (1990) this class includes older but well integrated borrowings (she notes the name *Serhad*). Most of the examples we've seen are recently adopted from European languages (Kaisse notes *ofsayd* 'offside' and *diftong* 'diphthong').

(26) *Two co-phonologies* (from IOZ 1997, 399)
Co-phonology A: No syllable may have a coda.
Examples: *su* 'water', *iki* 'two', *Adana* 'place name'

Co-phonology B: At least one syllable must have a coda.
Examples: *ham* 'unripe', *karpuz* 'watermelon'

As they correctly point out, no insight is achieved by establishing such cophonologies, and no learner would establish such categories. But, they claim, the distributional method requires that such categories *must* be established. Accordingly, they reject the distributional method, and with it, the possibility of having marked exceptions to rules.

We certainly agree that the distributional method as defined by IOZ leads to the establishment of absurd cophonologies, but reject their conclusion that rules cannot have exceptions. A learner of Turkish would not learn the cophonologies in (26) (strict NoCoda vs roots that have at least one coda), since this corresponds to no linguistic generalization whatever. Instead, the learner would simply learn the morphemes, some of which have codas and some of which do not. There is nothing to be gained by dividing morphemes as suggested by the two cophonologies, and by the simplicity criterion the learner would rightly ignore such a division.

On the other hand, a linguistic generalization like TSL in English does correspond to a clear generalization that is robust for the learner in that it is supported by a great many alternations. If exceptional morphemes appear, the learner will mark these as exceptions to the generalization rather than fall back to the null hypothesis that all morpheme variants must be learned as allomorphs and that there is no generalization.

A related problem that IOZ claim for cophonologies is that they proliferate unacceptably. This is a problem only when the distributional method for establishing cophonologies is applied in an unconstrained manner. Obviously, a great many uninteresting cophonologies will be established by this method. If the distributional method is rejected and only such cophonologies are allowed that conform to genuine linguistic generalizations, there will not be such a profusion of cophonologies. Any well motivated linguistic rule can have exceptions. In what follows we will avoid the term 'cophonology' and simply speak of lexical exceptions to rules.

IOZ argue that exceptional markings may have to refer to individual segments in a morpheme and cannot be restricted to marking whole morphemes. They give the Turkish examples (27a, b), which have word-internal codas that do not devoice by Coda Devoicing. (*eǰdat* is apparently an Arabic broken plural.) Note that voiceless stops also occur in word-internal position (27c)

(27)	a.	eǰdat	<ecdad>	'ancestors'	(singular: ǰet <ced>)
		eǰda:dɨ	(accusative)		

b. istibdat <istibdad> ‘despotism’
istibda:dɨ (accusative)

c. kutbu ‘pole (acc.) (nom: kutub)
makbul ‘accepted’

IOZ argue that these morphemes cannot be marked with a single exception marking, since each has two stops in coda position, one of which is always voiced, while the other alternates in voicing. In their representation (28a), these stops would be marked respectively [+voice] (morpheme internal) and [0voice] (morpheme final).

(28) a. *eǰdat* according to IOZ
e ǰ da t
[+vc] [0 vc]

b. *eǰdat* according to rule theory
e ǰ da t
[+vc] [+ vc]

In a rule theory representation (28b), both could be lexically marked [+voice], and a principle of NDEB will block a structure-changing rule from devoicing the morpheme-internal stop (which is not in a derived environment) but allow devoicing of the morpheme-final stop when it is also word final, assuming this counts as a derived environment. The exception feature required for *etüd* can refer to the morpheme and does not have to be differently stated for different segments of the morpheme. This is represented in (29).

(29) Turkish devoicing with a structure-changing rule with NDEB

	t~d	t	d
in env ____]$_\sigma$]]	[+voice] kana**t/d**	[0voice] devle**t**	[+voice] etü**d** [–CD]
Elsewhere	— —	[0voice] **k**anat/d ku**t**bu	[+voice] **d**evlet e**ǰ**dat (NDEB)

Rules: CD: [–cont,+obst] → [–voice] / ____]$_\sigma$
Default [–cont,+obst] → [–voice]

Alternatively, the same facts can be accounted for in Kiparsky’s (1993) framework, where rules are only structure building and no more than two distinctions are necessary in any given environment. An exception feature is required for *etüd,* but no principle of NDEB needs to be stipulated. This is shown in (30).

(30) Turkish devoicing as in Kiparsky (1993)

	t~d	t	d
in env ____]σ ⟧	[0voice] kana**t/d**	[–voice] devle**t**	[0voice] etü**d** [–CD]
in env ____]σ	— —	[0voice] ku**t**bu	[+voice] e**ǰ**dat
elsewhere	— —	[–voice] **k**anat/d	[0voice] **d**evlet

Rules: CD: [–cont,+obst] → [–voice] / ____]σ
Default [–cont,+obst] → [+voice]

5. Stress

Stress is another area where both prespecification and rule exception features have been used to account for exceptions. Kiparsky (1982:50) suggests that English words like *Attila* are lexically represented with a foot on the last two syllables (31a), which by the SCC blocks regular stress assignment to the first syllable. Jensen (1993: 116) suggests that *Attila* is an exception to Noun Extrametricality, which marks the final syllable of nouns extrametrical prior to the operation of stress rules (31b).

(31) a. F (Kiparsky 1982:50)
A t t i l a

b. /Attila/ (Jensen 1993: 116)
[–Noun Extrametricality]

Otherwise, however, the stress rules of English operate normally in (31b), placing a binary foot over the last two syllables. Lexical prespecification as in (31a) could in principle place stress on any syllable, allowing the three possibilities in (32a) (assuming feet may be monomoraic, as in *raccoon*). In contrast, the exception marking analysis in (31b) allows only the two possibilities in (32b).

(32) a. 'Attila At'tila Atti'la (with lexically specified feet)

b. 'Attila [+Noun extrametricality] At'tila [–Noun extrametricality]

Within OT, Pater (2000) analyzes secondary stress on the second syllable of words like *chimpanzee* as a consequence of two factors: (1) the lexically marked stress on the syllable *-pan-* and (2) a morpheme-particular constraint Ident-Stress-S_1 requiring faithfulness to this lexically marked stress. Ident-Stress-S_1 is ranked above *Clash-Head, which prohibits adjacent stresses as in (33). (S_1 is

the class of items subject to this Ident-Stress constraint.) Note that in *Argentina* and *information,* which do not belong to S_1, *Clash-Head blocks any lexical stress on the medial syllable.

(33) Pater (2000:253) on *chìmpànzée* (/chimpànzee/)
Ident-Stress-S_1>> *Clash-Head>>Ident-Stress
(S_1 = {chimpanzee, condensation, …})
(cf. Àrgentína, ìnformátion)

The analysis in (33) is doubly redundant. First, it uses two lexical markings—a lexical stress, and information that *chimpanzee* belongs to the class S_1, since other items, like *Argentina,* do not belong to that class and have no stress on the second syllable. Second, the lexically marked stress on *-pan-* of *chimpanzee* is on a heavy syllable that would be expected to receive stress anyway, given the constraint Weight-to-stress that favours stress on heavy syllables.

Pater points out that his constraint hierarchy does not allow for stressing light syllables in the same context. For example, a lexical stress on the second syllable of *Montebello* would be eliminated by Ft-Binary, which is ranked at the top of the hierarchy (34).

(34) Pater (2000:256) on *Mòntèbéllo
Ft-Bin >> Ident-Stress

However, the ranking in (34) creates other problems. Ft-Binary, being undominated, should never be violated, but there are a fair number of violations of Ft-Binary in English, with both primary and secondary stress, as in (35).

(35) Overt monomoraic feet in English (Pater 2000:268)

Primary stress	Secondary stress
sátìre	ràccóon
Sémìte	bàbóon
éssày	bàssóon
rábbì	sèttée

Pater notes that an Ident-Stress constraint ranked above Ft-Binary as in (36a) (with a lexical stress on the initial syllables of the words of (35)) would incorrectly allow monomoraic words (36b).

(36) a. Ident-Stress S_4 (word-initial) >> FtBin
(S_4 = {satire, raccoon, …})

b. Monomoraic words excluded
*[bæ]
*[tɛ]
*[pɪ]

Assigning stress by rules, such as in (37), and allowing rules to have exceptions, accounts for these cases without any problem.

(37) English stress rules
- Cyclic rules
  - Consonant Extrametricality
  - Syllabification
  - Syllable Extrametricality
  - English Stress Rule
  - Sonorant Destressing
  - Word Tree Construction
- Postcyclic rules
  - Initial Destressing

In this system, *chimpanzee* is an exception to Sonorant Destressing and *raccoon* is an exception to Initial Destressing (38). *Satire* is actually not exceptional in any way. It is assigned two feet by the English Stress Rule. The first foot is marked strong by Word Tree Construction. Under the restriction that feet marked strong cannot be destressed, Initial Destressing is inapplicable, and the observed stress pattern is obtained.

(38) chimpanzee
[–Sonorant Destressing]

raccoon
[–Initial Destressing]

satire (unexceptional)

In (39) we compare Ft-Binary with the English Stress Rule. The effect of both is binary feet in outputs. Ft-Binary requires binary feet in all positions, since it is undominated. The English Stress Rule builds maximally binary, quantity sensitive feet, and it can build a monomoraic foot if it has no other option. Hence it is not violated by the monomoraic foot on the initial syllables in (35).

(39) FtBin: Feet must be binary
English Stress Rule: Feet are maximally binary; can be monomoraic

In (33), Pater is using a kind of constraint reranking, a form of cophonologies, such as have been proposed for different lexical strata in Japanese by Itô & Mester (1995). His proposal may not differ substantially from such lexically stratified reranking. For example, *Clash-head blocks a secondary stress immediately adjacent to a primary stress. *Clash-head is violated in *bàndána,* where the initial syllable, if unstressed, would not be parsed into a foot, expressed in the ranking in (40).

(40) Pater (2000: 263) on *bàndána*
Parse-σ >>*Clash-Head

However, a number of words, including many words with Latinate prefixes, lack stress in this position, such as *condémn*. For these, Pater proposes a lexically specific version of *Clash-Head that is ranked above Parse-σ (41). He calls this *Clash-Head-S_2, where S_2 is the class of lexical items that show destressing of pretonic heavy syllables.

(41) Pater (2000: 265) on *condémn*
*Clash-Head-S_2 >> Parse-σ
(S_2 = {condemn, admire, companion, …})

In these cases Pater combines reranking with lexical specification; as he puts it:

(42) "…constraints can be multiply instantiated in a constraint hierarchy: in a general and a lexically specific version." (Pater 2000: 258)

We could also have constraint reranking without lexical specification, as in (43), where *chimpanzee* and *Argentina* are governed by two distinct constraint hierarchies.

(43) *chimpanzee* (without lexically specified stress) (chìmpànzée)
Weight-to-Stress >> *Clash-Head

Argentina (Àrgentína)
*Clash-Head >> Weight-to-Stress

Pater (p. 262) opts for lexically specific constraints since they allow for maintaining a single grammar, rather than requiring multiple co-grammars, as Itô and Mester propose.

Lexically marked constraint reranking would however allow impossible stresses like **Mòntèbéllo* (cf (34)). This can be done with a lexical stress on the second syllable of *Montebello* along with lexically specific Id-Stress-S_3 ranked above Ft-Binary (44).

(44) *Mòntèbéllo* with lexically marked stress and constraint ranking (hypothetical)

Id-Stress-S_3 >> Ft-Binary >> *Clash-Head
(S_3 = Montèbello, Tatamàgouchi, phonètician …})

6. Conclusion

We have shown that we need both prespecification and rule exception features in different situations to capture lexical exceptions. We have found that accounts such as the OT analysis of IOZ that use only prespecification lose the ability to distinguish the regular cases from the exceptions in Turkish, and that an OT account of English stress that relies on lexically specific constraints overgenerates to predict nonexistent stress patterns.

References

Inkelas, Sharon, C. Orhan Orgun, & Cheryl Zoll (1997) "The implications of lexical exceptions for the nature of grammar," in Iggy Roca (ed.) *Derivations and Constraints in Phonology,* Oxford: Clarendon Press, pp. 393–418.

Inkelas, Sharon (1998) "Phonotactic blocking through structural immunity," in B. Stiebels & D. Wunderlich, eds. *Proceedings of the Lexicon in Focus Workshop*, Düsseldorf.

Jensen, John T. (1993) *English Phonology,* Amsterdam: Benjamins.

Green, Antoni D. (2005) *Phonology Limited.* ms. ROA 745-0605.

Itô, Junko & Ralf Armin Mester (1995) "Japanese phonology," in John Goldsmith (ed.) *The Handbook of Phonological Theory,* Oxford: Blackwell, 817–838.

Kaisse, Ellen M. (1990) "Toward a typology of postlexical rules," in *The Phonology-Syntax Connection,* eds. Sharon Inkelas and Draga Zec, 127–143. Chicago: University of Chicago Press.

Keyser, Samuel J. & Paul Kiparsky (1984) "Syllable structure in Finnish phonology," in *Language Sound Structure* (Mark Aronoff & Richard T. Oehrle, eds.) pp. 7–31. Cambridge, MA: MIT Press.

Kiparsky, Paul (1982) "Lexical morphology and phonology," I.S. Yang (ed.) *Linguistics in the Morning Calm,* Hanshin, Seoul, 3–91.

Kiparsky, Paul (1993) "Blocking in nonderived environments," in *Phonetics and Phonology 4: Studies in Lexical Phonology,* San Diego: Academic Press, 277–313.

Myers, Scott (1987) "Vowel shortening in English," *Natural Language & Linguistic Theory* 5, 485–518.

Pater, Joe (2000) "Non-uniformity in English secondary stress: the role of ranked and lexically specific constraints," *Phonology* 17, 237–274.

Ringen, Catherine O. (1988) "Transparence in Hungarian vowel harmony," *Phonology* 5, 327–342.

Ringen, Catherine O. and Robert M. Vago (1998) "Hungarian vowel harmony in Optimality Theory," *Phonology* 15, 393–416.

Stanley, Richard (1967) "Redundancy rules in phonology," *Language* 43, 393–436.