On the reapplication of morphological rules after phonological rules and other resolutions of functional conflicts between morphology and phonology*

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Abstract

This paper adds further support to the assumption that it must be possible for phonological rules to precede morphological rules, specifically such morphological rules as have already applied once prior to phonology. Morphological rules apparently never reapply obligatorily to their own output (unless this iteration is intended to have semantic significance), but when they do so optionally, it is usually for one particular reason: integrative phonological rules have changed the exponent of the morphological category concerned beyond syntagmatic recognition. The functional rationale of the semantically vacuous reapplication of a morphological rule, thus, is to resolve a conflict between morphology and phonology in favor of morphology. But since such conflicts admit of a variety of resolutions and the choice among these does not seem entirely arbitrary, it is desirable to specify the circumstances favoring one or the other of the alternatives available. To explain the incidence of the reapplication of morphological rules, the key notion (if not the only significant factor) is syntagmatic transparency rather than paradigmatic contrast.

1. Introduction

As is the eventual fate of all dogmas, the one that all morphological rules must precede all phonological rules has ceased to be universally accepted as true without question. One point that has come into question is what this dogma actually prescribes — granting that it does prescribe something rather than being a mere tautology stating that some word-level rules, hence called morphological, precede some others, hence called phonological. More elaborate rule typologies and principles of rule application have been developed and attempts have been made on this more sophisticated theoretical basis to defend general constraints about

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possible interactions of the various kinds of word-level rules (including, for example, cliticization rules, morphological rules proper, rules of allomorphy, morphonological rules, and rules of phonetic detail) in lieu of the old global dogma. Apart from provoking theoretical controversies about rule systems and lexical representations, the dogmatic requirement that the phonological information in principle available to (certain or all) morphological rules be exclusively that contained in ('underlying') lexical forms, prior to the application of phonological rules, was bound to invite empirical doubts. Much evidence has been accumulated in recent times suggesting — quite convincingly, I believe — that the old dogma is untenable in any interestingly strict form, no matter how sophisticated its modern guise.

My intention here, however, is not to evaluate previous arguments to the effect that under certain circumstances certain kinds of morphological rules may apply after certain kinds of phonological rules, and may thus be sensitive to phonological information not contained in underlying, lexical representations of formatives. Rather, I would like to focus attention on a kind of interaction between morphology and phonology that, to my knowledge, has been ignored, or at least not been systematically studied, in the relevant literature. What I wish to argue for specifically is that it must be possible for one and the same morphological rule to REapply after phonological rules, but without any double semantic or other value corresponding to the repeated application of the morphological rule concerned. As it is obviously desirable to constrain the interactions of different components of grammars as far as possible, it would be unfortunate if, by admitting that morphological rules may reapply after phonological ones, we licensed all of them to do so under all circumstances.

The analyses suggested in the following discussion are intended to be the empirically most reasonable ones compatible with reasonable theoretical assumptions about underlying/lexical representations of words and other formatives and about morphological and phonological rules. Even though absolute theory-neutrality is impossible to attain, I am confident that in crucial respects, as far as the claim is concerned that morphological rules may reapply after phonological rules, the conclusion reached here will be accepted regardless of the particular assumptions one may entertain about word representations and morphological and phonological rules, and regardless of possible disagreements about particular descriptive details. As regards rule types, for present purposes it suffices, roughly, to distinguish between morphological rules proper (which add a morphological category to a base), morphological realization rules (which specify the formal realization of morphological categories, including the selection of allomorphs, to the extent that all nonautomatic alternations

are taken care of), morphonological rules (which effect formal modifications of phonological representations subject to morphological or lexical conditions), and phonological rules (which, if diverse, have in common that they modify phonological representations without any reference to morphological or lexical categories). The distinction between the first two rule types is usually disregarded in the following discussion, where 'morphological rule' serves as a cover term for both. And morphonological rules will be subsumed under phonological rules proper whenever neglect of this distinction seems unobjectionable.

2. Morphology and phonology in conflict

In view of what is known to be the normal, everyday behavior of morphological rules, it seems no doubt unusual for a morphological rule to reapply to its own output with no semantic effect, regardless of whether or not phonological rules have operated on the output of its first application. The emphasis here is on 'without semantic effect', for there is no dearth of examples where morphological rules reapply, each time adding the appropriate semantic value. Thus, *ur* prefixation in German may in principle iterate indefinitely (e.g. *Ur-ur-ur-...-grossvater* 'great-great-great-...-grandfather', *ur-ur-ur-...-alt* 'very very very ... old'); double, triple, or even quadruple morphological causativization is found in languages such as Quechua (e.g. *huañu-chi-chi* die-Caus-Caus 'make kill') or Turkish (e.g. *öl-dür-t-tür-t-mek* die-Caus-Caus-Caus-Caus-Infinitive, with different allomorphs of the causative suffix); various Semitic languages may pluralize (maybe even twice) nouns that are already in the plural in order to indicate that the number of referents is more than a few or that several collectives rather than individuals are being referred to (cf. Arabic *kalb* 'dog', broken plural *kilāb* 'dogs', external plural *aklub* 'a few dogs', broken plural of this external plural *akālib* 'many dogs'; see Jensen 1952: 16). Given the meaning of the morphological categories involved, it is not terribly surprising that the morphological rules that introduce them should be capable of reapplying. But why should morphological rules reapply semantically vacuously? They might of course do so for no particular reason at all (if they do). In general, however, one would prefer to be able to point up reasons WHY linguistic structures are the way they are according to adequate descriptions. In the case at hand there in fact seems to be a perspective from which the comparatively rare semantically vacuous reapplication of morphological rules can be made sense of. This explanatory functional perspective is afforded by considerations about possible conflicts between morphology and phonology. If valid, these

considerations should help us understand why morphological rules are particularly prone, and perhaps confined, to reapply semantically vacuously after intervening phonological rules.

One functional goal of phonology, though by no means its only one, is to facilitate pronunciation. Sound segments or sequences that are easily pronounceable in isolation may require greater articulatory effort when combined with other segments or sequences in connected speech. The functional rationale of a high proportion of phonological (including morphonological) rules in all languages accordingly is to alleviate this articulatory burden. Context-dependent phonological rules subserving the goal of relatively easy pronounceability may be summarily characterized as integrative; the actual adjustments they effect may be diverse (for example, they may consist in assimilations or in dissimilations, in elisions or in epentheses). Needless to emphasize, phonological rules may have other rationales as well, in particular that of facilitating perception, which entails the strengthening rather than the weakening of auditory contrasts, even at the expense of easy pronounceability. (See, for example, Dressler and Drachman 1977 for a phonological rule typology on such functional grounds.)

The overall functional goal of morphology, in languages where words are indeed internally structured, is to subserve expressivity: morphology has to provide the formal exponents of those categories for which words may or must be marked, in particular languages, in order to transmit information and/or to structure complex, multiword messages. In order to be able to subserve purposes of expression, the exponents of such categories obviously must be recognizable as such, i.e. there must be paradigmatic contrasts between the exponents of different categories or subcategories, and also between the presence and the absence of a particular category. And the exponents ought to be easily recognizable, i.e. morphological constructions ought to be syntagmatically transparent. Syntagmatic transparency entails that complex words be formally recognizable as complex rather than simplex without having recourse to paradigmatic contrasts, and presumably also that the exponence of one (sub)category be relatively uniform in all its occurrences. As with phonology, there are likely to be additional, and potentially conflicting, demands on morphology, e.g. that its rules be relatively easy to learn and the resulting forms relatively easy to process.

At this level of generality these functional goals of phonology and morphology should not arouse much controversy. And for our purposes we indeed need not be more specific, because all I want to suggest here is that there is a real potential for conflicts between pronounceability and expressivity. Ideally, of course, there should be an equilibrium, with

morphological information being easily pronounceable, and with no infringements of integrative phonological rules on the expressivity requirements of morphology. In actual fact, however, there is no a priori guarantee that whatever material is productively combined by morphological rules, if easily pronounceable in isolation, will conform to the standards of easy pronounceability of connected speech as defined by the pertinent phonological rules of the language. As soon as we reckon with the potential danger of integrative phonological rules threatening to affect or even destroy morphological exponents, we are faced with the empirical question how such conflicts are resolved. One is perhaps tempted to opt, on plausibility grounds alone, for the assumption that in the resolution of such conflicts expressivity must never be completely sacrificed to ease of pronunciation, because more is to be said for expressing something with difficulty than for expressing nothing with ease. Nevertheless, it is worthwhile to investigate empirically to what extent languages, or rather their speakers, abide by this conversational maxim. The following sections survey the various resolutions of such functional conflicts between morphology and phonology, one of which turns out to be the reapplication of morphological rules.

3. Resolution 1: morphology lost

Morphology may indeed end up a loser in conflicts with integrative phonology, in so far as phonological rules may be allowed to obliterate the exponents of morphological categories. Here are only a few pertinent examples.

3.1. Consider first the person prefixes of nouns and verbs in the Algonquian language Delaware. (I rely on Voegelin 1946 for the data, the transcription, and the justification of underlying forms and [mor]phonological rules.) The integrative phonological, and partly morphonological, rules affecting the 1st, 2nd, and 3rd person formatives /nə/, /kə/, and /wə/, when these are prefixed to noun or verb stems, include the deletion of unstressed schwa before most consonants (except nasals and laterals, with slight differences depending on person) or its contraction with stem-initial vowels (unless an intrusive /t/ intervenes), assimilations of alveolar /n/ to following nonhomorganic consonants, the degemination of initial double consonants (except laterals and nasals), the metathesis of /w/ and a following consonant (sometimes contingent on the contractibility of prefixal schwa with a stem-internal vowel), and the deletion of this

semivowel /w/, or rather its absorption by back vowels, after a consonant. Disregarding irrelevant details, the eventual result of such phonological rules may be a complete (1b, 1c, 1d) or almost complete (1a) obliteration of the person prefixes:

(1)	a.	nə + pó·ma	morphological rule (person prefixation)
		'my thighs'	
		npó·ma	phonological rule (schwa deletion)
		mpó·ma	phonological rule (assimilation)
	b.	wə + pó·ma	MR (person prefixation)
		'his/her thighs'	
		wpó·ma	PR (schwa deletion)
		pwó·ma	PR (/w/-metathesis)
		pó·ma	PR (/w/-absorption)
	c.	kə + kə́ʀukw	MR (person prefixation)
		'your knee'	
		kkə́ʀukw	PR (schwa deletion)
		kə́ʀukw	PR (degemination)
	d.	wə + we·ʀanə́mən	MR (person prefixation)
		'he took it'	
		wwe·ʀanə́mən	PR (schwa deletion)
		we·ʀanə́mən	PR (degemination)

Notice, however, that morphological expressivity is not completely sacrificed even though the exponents of the marking of nouns and verbs for the person of their possessor or subject (or rather, referentially highest-ranking participant) are phonologically defaced or even obliterated in such combinations of prefixes and stems. Expressivity implies contrast, and the paradigmatic contrasts between the three persons are always maintained with any given stem, because no more than one person may ever lack an overt exponent: cf. *mpó·ma* vs. *kpó·ma* (where no further integrative rules affect initial /k/) vs. *pó·ma* 'my/your/his thighs'. And when there is no overt exponent of a person prefix left after phonology, no serious confusion is likely to arise concerning the presence or absence of the morphological category of person of 'possessor/subject', because this category as such is obligatory with verbs (where person prefixes alternate with suffixes depending on mode and, within the usually prefixal independent mode, animacy, transitivity, and person) and with some inalienably possessed nouns. Such forms with phonologically obliterated person exponents will accordingly be interpreted as exhibiting zero marking of the respective subcategory of person rather than as being unmarked for person. In the case of nouns where person marking is not obligatory and possessed forms with obliterated person exponent could thus be mistaken

for absolute forms (e.g. 'my/your/his dog' for 'a dog'), a special suffix /m/ or even suppletive noun stems are avilable to overtly distinguish possessed forms from absolute ones.

It is tempting to conclude from this case study that phonology may wreak havoc upon morphological exponents as long as this does not interfere with morphological distinctness requirements. One conclusion, at any rate, is safe: even the complete phonological obliteration of some morphological exponents is not necessarily tantamount to the destruction of morphological expressivity.

3.2. Consider next imperfective verb formation in Palauan, a language of Micronesia. (The source of my account is Josephs 1975: 136ff.) The imperfective marker, which is prefixed to verb stems and follows the 'ergative' verb marker, has three allomorphs, viz. /l/ (appearing before /t,d,s,l,n/), /ng/ (appearing before /k,ʔ/), and /m/ (appearing before /b/). There is only one integrative phonological, or rather morphonological, rule that interests us here: after a consonant, the initial consonant of verb stems is deleted. Exceptionally, instead of the stem-initial consonant, the /l/ preceding it is deleted with some stems beginning with /s/ (cf. [2d]).

(2)	a.	mę+ka	MR (ergative marking)
		'be/get eaten'	
		mę+ng+ka	MR (imperfective marking)
		'eat'	
		męnga	PR (initial consonant deletion)
	b.	mę+leng	MR (ergative marking)
		'be/get borrowed'	
		mę+l+leng	MR (imperfective marking)
		'borrow'	
		męleng	PR (initial consonant deletion)
	c.	mę+seşęb	MR (ergative marking)
		'be/get burned'	
		mę+l+seşęb	MR (imperfective marking)
		'burn'	
		męleşęb	PR (initial consonant deletion)
	d.	mę+sebęk	MR (ergative marking)
		'be/get kicked'	
		mę+l+sebęk	MR (imperfective marking)
		'kick'	
		męsebęk	PR (/l/-deletion) (*męlebęk, with regular deletion of stem-initial consonant)

As examples such as (2b) and (2d) show, the phonological reduction of verb stems or obliteration of imperfective prefixes may result in homonymies of imperfective and ergative verb forms. This seems perhaps most remarkable with cases such as *mẹsebẹk* 'be kicked/kick', where the application of the regular rule of stem-initial consonant deletion could easily have preserved the contrast between imperfective and ergative.

The situation in Palauan, then, suggests a slight modification of the conclusion we drew from the Delaware case study. It seems that strictly MORPHOLOGICAL distinctness requirements in fact are being interfered with here because there is no way of telling, from paradigmatic contrasts alone, whether forms such as *mẹleng* or *mẹsebẹk* are imperfective or ergative. Nevertheless, GRAMMATICAL expressivity is not entirely destroyed because syntactic clause constructions differ depending on whether the verb is imperfective or ergative. Thus, we should presumably take into account syntax when asking to what extent phonological integration may affect morphology.

3.3. As a last example in this section, consider, again in Palauan, the ergative verb marker itself (cf. Josephs 1975: 162f.). The phonological derivations of combinations of the verb marker /mə/ and stems are typically rather complex, involving mostly integrative phonological or morphonological rules such as deletions of unstressed vowels (of stems and of the prefix), the metathesis of the segments of the verb marker and of the stem, the vocalization of postconsonantal /m/ in unstressed syllables, the deletion of /u/ when followed by a high vowel, and straightforward consonantal assimilations. Here are some illustrations of the astonishing but still regular metamorphoses of underlying representations of common verb forms:

(3)	a.	mẹ + kimud + íi	MR (ergative marking)
		'cut it'	(3rd person singular object present perfective)
		mẹkimdíi	PR (deletion of unstressed stem vowel)
		kmẹimdíi	PR (metathesis)
		kmimdíi	PR (schwa deletion)
		kuimdíi	PR (/m/-vocalization)
		kimdíi	PR (/u/-deletion)
	b.	mẹ + dul + úr	MR (ergative marking)
		'barbecue it'	(3rd sg. object present perfective)
		dmẹulúr	PR (metathesis)
		dmulúr	PR (schwa deletion)
		duulúr	PR (/m/-vocalization)

	dulúr	PR (/u/-deletion)
	durúr	PR (assimilation)
c.	mę + d-il-ul + úr	MR (ergative marking)
	'have barbecued it'	(3rd sg. object past perfective, with infix /il/)
	dmęilulúr	PR (metathesis)
	dmilulúr	PR (schwa deletion)
	duilulúr	PR (/m/-vocalization)
	dilulúr	PR (/u/-deletion)
	dillúr	PR (deletion of unstressed stem vowel)
	dilrúr	PR (assimilation)
	dirrúr	PR (assimilation)

No trace at all, not even an indirect one, is left of the verb marker /mə/ in forms such as *kimdíi*, *durúr*, or *dirrúr*: the surface forms would look no different if no /mə/ had been present in underlying, prephonological representations.

As a matter of fact, the Palauan verb paradigm does include perfective verb forms that characteristically lack an ergative verb marker, viz. the hypothetical forms, meaning 'if (he/she etc.) VERBed it', and the clausal syntax here does not differentiate hypothetical and actual counterparts. Yet, even though on account of the phonological obliteration of /mə/ this marker may fail to signal the paradigmatic contrast between actual and hypothetical, the two forms are not homonymous because the hypothetical is marked by an additional prefix.

4. Resolution 2: phonology blocked

The most radical resolution of phonology–morphology conflicts in favor of morphology is to suspend the otherwise obligatory integrative phonological rules which threaten to affect severely or even to obliterate morphological markings. Examples of the blocking of phonological rules for this functional reason are rather well known, if occasionally controversial on largely ideological grounds, having to do with the neogrammarian slogan that languages (or rather their speakers) do not practice prophylaxis, or with the general aversion to functional explanations occasionally met with among historical linguists (such as Lass 1980). However, there is no need here to take issue with these antiprophylactic and antifunctionalist ideologies: I assume that even their staunchest defenders would be prepared to admit that there are some instances where the nonapplication of an integrative phonological rule can only be accounted for synchronically in functional terms.

4.1. The Ancient Greek future suffix /(e:)s/ was up to its task of distinguishing future from present tense verb forms as long as the verb roots did not end in a vowel. The marker /s/ is present on the surface after root-final consonants in most dialects (4a), whereas /e:s/, underlyingly present with roots ending in a liquid or nasal, is transformed to /e:/ by a phonological rule that deletes /s/ intervocalically, and eventually to /e/ by a phonological rule that shortens a long vowel before another long vowel (4b). The remaining /e/ here still suffices to keep apart future from present tense forms. If roots end in a vowel, however, intervocalic /s/-deletion would obliterate any trace of the future marker, and as the attested pertinent verb forms all seem to preserve their /s/ (4c), the conclusion suggests itself that /s/-deletion was blocked under precisely these circumstances.

(4)	a.	trép + s + o:	'I will turn'	—	trép + o: 'I turn'
		deík + o:	'I will point'	—	deík + nu: + mi 'I point'
	b.	men + é:s + o:	'I will remain'	—	mén + o: 'I remain'
		mené:o:	PR (/s/-deletion)		
		menéo:	PR (shortening)		
	c.	lú: + s + o:	'I will loosen'	—	lú + o: 'I loosen'
		poié: + s + o:	'I will do'	—	poié + o: 'I do'

The traditional interpretation of future forms such as *lúsō* and *poiḗsō* is that their /s/ was originally indeed deleted but was later reintroduced analogically. If this is accepted, in spite of the nonattestation of /s/-less future forms such as *lúō* and *poiéō*, the phonology–morphology conflict would provide the functional rationale for an analogical morphological change rather than for the synchronic blocking of a phonological rule.

4.2. Analogous examples are found in Balto-Finnic, except that there can be no question here of lost morphological material having been analogically restored (cf. Anttila 1972: 79f.).

The phonological rule of deleting a final nasal, for instance, applies to illative singular forms in Karelian, where a segment of the case desinence remains, but is blocked with genitive singulars, where /n/ alone is the case desinence:

(5)	a.	vete + hen	MR (illative singular)
		'into water'	
		vedeh	PR (deletion of final nasal)
	b.	venehe + n	MR (genitive singular)
		'of a boat'	
		*veneh(e)	PR (deletion of final nasal)

In North Estonian and West Votian, on the other hand, the final /n/ is deleted even with the genitive singular, which removes the whole exponent of this case marking:

(6) kanna+n MR (genitive singular)
'of a base'
kanna PR (deletion of final nasal)

A suffix /n/ is also used as the exponent of 1st person singular marking on verbs, and with this morphological category, /n/-deletion is blocked:

(7) kanna+n MR (1st sg. marking)
'I carry'
*kanna PR (deletion of final nasal)

Note that if reductive phonology had its way with 1st person singular markers, such verb forms would be homonymous with imperatives (*kanna* 'carry!'), and there would be the danger of real ambiguity due to the lack of corresponding syntactic differences. On the other hand, if phonological reduction renders the genitive singular homonymous with the desinenceless nominative singular, syntactic differentiations are likely to compensate the obliteration of the morphological contrast. Even though this may help explain why the genitive singular yields to phonological reduction in North Estonian and West Votian, the problem remains why it does not yield in Karelian as well.

4.3. Some dialects of American English delete final /t/ after a consonant, and this reductive phonological rule threatens the past tense suffix of weak verbs. However, this rule is allowed to remove the past tense suffix only as long as the past tense stem of a verb differs from its present tense stem, whereas it is blocked otherwise (cf. e.g. Twaddell 1935 [1966]: 79):

(8)	a.	kep+t	krep+t	swep+t	MR (past tense)
		kep	krep	swep	PR (/t/-deletion)
		cf. *keep*	*creep*	*sweep*	
	b.	step+t	kik+t	laɪk+t	MR (past tense)
		*step	*kik	*laɪk	PR (/t/-deletion)
		cf. *step*	*kick*	*like*	

5. Resolution 3: morphology side-steps

Another solution in favor of morphology is to choose alternative, more resistant means of expressing a given morphological category whenever

an exponent of that category is threatened by integrative phonology. This evasive strategy of course presupposes the availability of suitable alternatives of expression. In our previous case of imperfective verb formation in Palauan (section 3.2), for example, there indeed were three allomorphs of the imperfective marker, and by choosing among them judiciously, homonymies of imperfective and ergative verb forms could have been avoided. Alas, the choices that would seem optimal in this morphological respect are simply not the ones prescribed by the grammar of Palauan. (It seems conceivable, though, that under such circumstances the existing rules of allomorph distribution might be meddled with, provided they are really felt to have utterly undesirable consequences. But then one also wonders how they got this way in the first place.)

5.1. Diminutive formation in German exemplifies this third resolution (cf. Plank 1981: 155–158). The two major diminutive suffixes are /çen/ and /lajn/, and some nouns allow both while others prefer one or the other suffix. One factor in choosing one or the other diminutive suffix is phonological: /çen/ tends to be avoided with nouns ending in a velar or palatal fricative, and /lajn/ analogously with nouns ending in an alveolar lateral. More specifically, /çen/ is obligatory in cases such as (9a), where the integrative phonological rule of consonant degemination would eliminate one /l/ if /lajn/ were appended to a base ending in /l/ — which, apart from maiming the noun stem, could entail actual ambiguities, as in our example: cf. *See-lein* 'lake'-dimin. Degemination also applies in cases such as (9b) if /lajn/ is chosen as diminutive suffix; yet with (phonetically) disyllabic noun stems ending in [l] or [el], this final lateral seems more easily dispensable, and /çen/ therefore is not always the only, if still usually the preferred choice. On the other hand, /lajn/ is obligatory in cases such as (9c) (or maybe, in some varieties, alternates with the extended suffix /el-çen/: *Däch-el-chen*), where degemination would eliminate one /ç/ if /çen/ were appended to a base ending in /ç/ — even if the stem-final fricative would be palatalized only as a consequence of diminutive formation itself and its attendant morphonological rule of Umlaut. When the adjoining fricatives are minimally distinct, as in (9d), degemination is inapplicable and both diminutive suffixes are possible (although /lajn/ seems preferable).

(9)	a.	*se:l + lajn	se:l + çen	MR (diminutive)
				'little soul'
		*se:lajn		PR (degemination)
	b.	e:z(e)l + lajn	e:z(e)l + çen	MR (diminutive)
				'little donkey'
		e:z(e)lajn		PR (degemination)

c.	dax 'roof'		
	dax + lajn	*dax + çen	MR (diminutive) 'little roof'
	dɛxlajn	*dɛxçen	PR (umlaut)
	dɛçlajn	*dɛççen	PR (palatalization)
		*dɛçen	PR (degemination)
d.	elx + lajn	elx + çen	MR (diminutive) 'little elk'

The rationale of this subpattern in the distribution of German diminutive suffixes is evidently to minimize the risk of clear morpheme (in particular stem) recognition being impeded by integrative phonology, in particular by the rule of consonant degemination.

5.2. Even though they may not be the most typical general phonological rules, haplological shortenings are prototypically integrative: they reduce sequences of identical or almost identical syllables that are difficult to pronounce, having come about accidentally at the internal boundaries of morphological or syntactic constructions rather than intentionally in the process of reduplications. Now, one often finds that allomorphs are preferred which are phonologically as dissimilar as possible from adjoining syllables: thus, English prefers negative *un-* rather than *in-* even with non-native adjectives when these begin with /in, im/ (*unintelligible*, *unimportant*); in the earlier Turkish example of semantically nonvacuous multiple causativization, different causative allomorphs were seen to alternate (but not in the corresponding Quechua example!); adjectivizing suffixes such as *-āceus* rather than the otherwise most common *-īnus* are preferred in Latin if noun stems already end in /i:n/ (*gallīn-āceus*/**īnus* 'of a hen'). The usual explanation of such allomorph distributions is that they are motivated by a general tendency to avoid sequences of phonologically identical or similar syllables (except in reduplication). But given that haplology must always be reckoned with under such circumstances, the choice of dissimilar allomorphs can also be interpreted as a measure of precaution against the eventual haplological obliteration of affixes or parts of stems.

Whether one tries to account for patterns like those outlined in sections 5.1 and 5.2 by incorporating the phonological conditions in the actual rules governing the selection of allomorphs or by allowing phonologically relatively unrestricted rules of allomorph selection to look ahead to what is going to happen in phonology (a position that is most strongly supported by examples such as [9c]), the patterns of phonologically

conditioned allomorph distribution make sense only when interpreted in terms of the resistance of allomorphs to integrative phonological rules. (See Plank 1981: section 3.2 for further arguments in favor of the surface orientation of constraints on morphology.)

6. Resolution 4: rules reordered

If rules are normally intrinsically ordered so as to maximize their potential of applying, and if it is the maximal application of integrative phonological rules which hinders morphological expressivity, a further logically possible resolution of such conflicts could seem to be to extrinsically reorder the rules concerned so as to minimize the applicational potential of those rules which might intolerably damage morphology. But if the rules reordered are segmental-morphological on the one hand and phonological on the other, this strategy effectively amounts to the nonapplication of the integrative phonological rule(s), and thus is no real alternative to our resolution 4, viz. the blocking of a phonological rule when morphologically disastrous. Phonological rules need something to operate on, and requiring them to apply before the introduction of the relevant morphological material which they would affect is tantamount to suspending them from applying in environments where they would normally apply. (Discussing examples from Luiseño, Anderson 1975: 45–48 argues for an exceptional extrinsic ordering of the phonological rule of /č/-spirantization to precede the morphological rule of the reduplicative derivation of adjectivals from verbs; but it would be equally possible to assume that such reduplicatives do not spirantize because with them this integrative rule happens to be blocked.)

Things are different, however, with morphological exponents that are suprasegmental rather than segmental. Here it is easy to construct examples where the blocking of a phonological rule and its reordering relative to a morphological rule have different results. Thus, consider a hypothetical language where stress assignment is morphological, with nouns being stressed on the penultimate syllable and verbs, including those nonsegmentally derived from nouns, on the antepenult. An integrative phonological rule in this language converts prevocalic unstressed /u/ into the nonsyllabic glide /w/. As shown in (10a), given a lexical entry such as /eteluo/ whose stress pattern and word-class membership are not lexically specified, the application of phonological glide formation after morphological word-class categorization by stress assignment has the unfortunate consequence of interfering with morphological expressivity: the stress pattern is that of a noun rather than of a verb! Blocking glide

formation would avoid this consequence, as would the reversal of the morphological and the phonological rule, though the surface form would be different here, as shown in (10b).

(10) a.	eteluo		b.	eteluo	
	etéluo	MR (verbalization)		etelwo	PR (glide formation)
	etélwo	PR (glide formation)		ételwo	MR (verbalization)

No matter whether with the corresponding noun, stress assignment precedes, hence 'bleeds', glide formation (/etelúo/), or glide formation precedes, and does not 'bleed', stress assignment (/etélwo/), the noun form ends up distinct from the antepenult-stressed verb.

I have resorted to a hypothetical example to illustrate this resolution because I am not aware of an actual one that is reasonably uncontroversial. The putative real instances of the reordering of morphological and phonological rules that I have seen discussed in the literature do not involve genuinely morphological rules but rather morphologically conditioned phonological ones and/or depend on questionable empirical analyses (see for example Anderson 1975; Warburton 1976; Nyman 1981). Nevertheless, instances of this strategy are conceivable, and may indeed be attested. It is another matter whether they would be easily recognized: it might not always be easy to discern on the surface that a phonological rule has actually applied, or to justify that this early rule indeed is phonological.

7. Resolution 5: morphology strikes again

The hypothetical derivation in (10a) already suggests a further strategy that would help preserve morphological expressivity: if the morphological rule of stress assignment were reapplied to the output of glide formation, it would shift the stress to the antepenult, giving the form the appearance of a verb (/ételwo/). Fortunately, to illustrate semantically vacuous reapplications of a morphological rule after integrative phonological rules, we need not resort to hypothetical examples. (In fact, this possibility has already been hinted at by Warburton 1976: 272ff., though in my opinion with less than convincing empirical exemplification.)

7.1. In Swiss German (as well as in other varieties of Alemannic), /n/ tends to be deleted unless it is prevocalic, sporadically causing nasalization of the preceding vowel; there is some regional variation in Switzerland as to how extensively this phonological rule applies. There also exists

the complementary reverse rule of /n/-epenthesis, applying in hiatus position, not only word-internally. In the Swiss varieties where /n/-deletion applies even after a stressed vowel of monosyllabic stems, which include that of Zürich and of many cantons in the northeast, adjectives such as *chly(n)* 'little' thus appear without final /n/ when uninflected and not followed by a vowel-initial word (i.e. as [xli:]), and with /n/ when accompanied by a vocalic suffix (e.g. /i, əm, ər/: [xli:ni], [xli:nəm], [xli:nər]) or followed by a vowel-initial word. Now, the nominative/accusative singular neuter suffix of the weak adjective declension is /(ə)z/, and it is relatively immaterial for present purposes whether its schwa, which appears only after a sibilant, is assumed to be deleted or inserted in the appropriate environments by phonological rule, or whether the /əz/–/z/ distribution is taken care of by a rule of allomorphy. When this inflectional suffix /(ə)z/ is appended to /xli:n/ in the varieties mentioned, [xli:z] is the regular surface form. But an alternative form is found as well, viz. [xli:zəz], which is naturally accounted for as resulting from a reapplication of the same inflectional rule:

(11)	xli:n + (ə)z	MR (inflection)
	[xli:nz	PR (schwa deletion)]
	xli:z	PR (/n/-deletion)
	xli:z + əz	MR (inflection) — *optional*

It seems that *chly(n)* is the adjective most likely to exhibit such double inflection; other adjectives with final deleting /n/ are much less commonly furnished with an additional suffix /əz/, if admitting it at all (disyllabic ones, e.g. *offe* 'open', never do).

The integrative phonological rule of /n/-deletion clearly does not wipe out the exponent of inflection. Rather, by mutilating the end of the adjective stem, it welds stem and suffix more closely together — so closely in fact that the morphological combination could easily pass for a simple uninflected adjective. The reapplication of the inflectional rule renders the form morphologically more transparent, excluding the danger of misanalysis as uninflected.

In (11) I tacitly assumed the lexical representation of *chly(n)* to be /xli:n/, necessitating the rule of /n/-deletion. But, as briefly mentioned above, Swiss German also has a rule of /n/-epenthesis, and it is possible, therefore, to posit /n/-less lexical representations such as /xli:/, final /n/ being supplied in the appropriate environments by phonological rule. The derivation of [xli:zəz], then, would be as follows:

(11′)	xli: + (ə)z	MR (inflection)
	[xli:z	PR (schwa deletion)]
	xli:z + əz	MR (inflection) — *optional*

That is, if the questionable phonological (integrative) rule of schwa deletion is disregarded, the inflectional rule would reapply to its own output in spite of no phonological integration having taken place. The motivation for the reapplication on this analysis could at best be sought in the lack of transparency of the morphological exponent itself, when combined with vowel-final stems. It could seem that, at least for strictly non-nasalizing varieties of Swiss German like that of Zürich, the assumption of /n/-less basic forms such as /xli:/ can only be rejected on etymological grounds, i.e. cannot be rejected synchronically at all. It should be noted, however, that /n/-epenthesis in fact is not fully productive in inflectional forms, while /n/-deletion is — which argues for (11) rather than (11′). Furthermore, if double inflection occurs at all, it occurs only with monosyllabic adjectives where final /n/ has etymological justification, never with adjectives with stem-final vowel where unetymological /n/ is introduced before vocalic inflections (e.g. *früe* 'early': [fryəni], [fryəz]/*[fryəzəz]). On the /n/-epenthesis analysis this restriction on double inflection would be completely arbitrary. Thus, the /n/-deletion analysis, as shown in (11), has the dual advantage of permitting the prediction when double inflection may in principle occur and of providing a functional reason why it should occur.

7.2. In North and Middle Bavarian three variants correspond to the Standard German inflectional suffix *-(e)n*, viz. /n/, /ɒ/, and /ɒn/. The distribution of these variants is, first of all, phonologically conditioned and depends on the preceding segment. For present purposes it is immaterial whether some or all of these variants are derived by phonological rule from a common underlying representation (presumably /ɒn/) or whether they are distributed by a rule of allomorphy. It should be noted that their distribution is slightly different in different regional varieties of North and Middle Bavarian, and above all differs depending on the morphological categories of which this suffix is an exponent. The suffix at issue in fact serves as the exponent of no less than seven categories: (a) the infinitive, (b1) the 1st and (b2) 3rd person plural of present tense verbs, (c) the perfect participle of strong verbs, (d) the singular and plural stem formative of a class of masculine and feminine nouns, (e1) the plural and (e2) the oblique singular case (where morphologically distinct) of weak nouns, (f) the plural and oblique singular of the weak declension and the oblique singular and plural of the strong declension of adjectives, and (g) certain adverbs or prepositions which are not really derived by a synchronically productive rule of suffixation. In the variety of Lower Bavaria on which

my account is based, this is the distribution of /n/, /ɒ/, and /ɒn/: with categories (a)–(d) and maybe (g), /ɒ/ appears after a nasal and after the velar and labiodental fricatives /x,f/, with /n/ appearing elsewhere (and less commonly also as a free variant of /ɒ/ after /x,f/); with categories (e)–(f), /ɒ/ only appears after a nasal, while /n/ does duty everywhere else; /ɒn/ is a free variant of /ɒ/ in categories (b), (e1), and (f). Sporadic disturbances of this pattern are to be attributed to interference from other varieties or the standard language. As an occasional free variant of /ɒ/, /ɒn/ is disregarded in the subsequent discussion.

The addition of /n/ to consonant-final bases creates the environment calling for the application of phonological rules of assimilation, which render the final nasal homorganic with the preceding consonant. Homorganic clusters consisting of a lenis stop plus nasal, viz. /gŋ, bm, dn/, are further simplified by effectively eliminating the stop, obligatorily so with /gŋ, bm/, optionally and with certain restrictions with /dn/. (Possible intermediate steps, assimilating the stop to the nasal, need not concern us here; at least in the case of velar stops, anticipatory nasal assimilations certainly are attested, if only before vowels, cf. *Signal* [siŋná:l].) What further adds to the impression that stems take rather different form, depending on whether they are uninflected or followed by a vocalic suffix or one or another consonantal suffix, is a variety of phonological rules all of which are manifestations of one general process known as consonant lenition. Thus, lenis stops often disappear when in final position, especially again /b,g/, more rarely also /d/. Intervocalically, the bilabial lenis stop /b/ shows up as the corresponding voiced unrounded glide /w/, and the velar lenis /g/ sometimes as fricative /ɣ/. This was only a glimpse of the complex consonantal phonology of Middle/North Bavarian, but it suffices to understand the morphological phenomena to be dealt with presently.

Surveying the endings in the several morphological categories that take /n,ɒ/ as their exponent, it turns out that after phonological integration the morphological exponent may optionally be added anew, if only, and sometimes marginally, in the case of 1st person plural verbs (b1), weak plural nouns (e1), plural and oblique singular adjectives (f), and — somewhat surprisingly because no productive morphological rules are involved — adverbs/prepositions (g). That a morphological exponent is added twice is particularly obvious here because the phonological environments before and after the application of the relevant phonological rules demand different variants of the suffix at issue — which is only possible because integrative phonology modifies, but does not completely obliterate, the effect of the first application of the morphological rule.

(12)					
a.	he:b + n	biɒg + n	žnajd + n	MR (infinitive)
	'to lift'	'bend'	'cut'	
	he:bm̩	biɒgŋ̩		PR (assimilation)
	he:m	biɒŋ	žnajn	PR (lenis stop deletion)
	*he:m + ɒ	*biɒŋ + ɒ	*žnajn + ɒ	MR (infinitive)
b1.	⋮	⋮	⋮	
	?he:m + ɒ	?biɒŋ + ɒ	?žnajn + ɒ	MR (1pl present) — *optional?*
b2.	⋮	⋮	⋮	
	*he:m + ɒ	*biɒŋ + ɒ	*žnajn + ɒ	MR (3pl present)
c.	g + ho:b + n	bo:g + n	g + žnit + n	MR (participle)
	kho:bm̩	bo:gŋ̩		PR (assimilation)
	kho:m	bo:ŋ	gžni:n	PR (lenis stop deletion)
	*kho:m + ɒ	*bo:ŋ + ɒ	*gžni:n + ɒ	MR (participle)
d.	žду:b + n	ždiɒg + n	lɔ:d + n	MR (stem formation)
	'room'	'stairs'	'shop'	
	žду:bm̩	ždiɒgŋ̩		PR (assimilation)
	žду:m	ždiɒŋ	lɔ:n	PR (lenis stop deletion)
	*žду:m + ɒ	*ždiɒŋ + ɒ	*lɔ:n + ɒ	MR (stem formation)
e1.	buɒb + n	frɔ:g + n	re:d + n	MR (plural)
	'boys'	'questions'	'speeches'	
	buɒbm̩	frɔ:gŋ̩		PR (assimilation)
	buɒm	frɔ:ŋ	re:n	PR (lenis stop deletion)
	buɒm + ɒ	?frɔ:ŋ + ɒ	*re:n + ɒ	MR (plural) — *optional*
e2.	⋮		⋮	
	*buɒm + ɒ		*re:n + ɒ	MR (singular oblique)
f.	gelb + n	hajlig + n	brɔɒd + n	MR (pl/obl adj)
	'yellow'	'holy'	'broad'	
	gelbm̩	hajligŋ̩		PR (assimilation)
	gelm	hajliŋ	brɔɒn	PR (lenis stop deletion)
	?gelm + ɒ	hajliŋ + ɒ	*brɔɒn + ɒ	MR (pl/obl adj) — *optional*
g.	o:b + n	ve:g + n		'MR' (adv/prep)
	'above'	'because of'		
	o:bm̩	ve:gŋ̩		PR (assimilation)
	o:m	veŋ		PR (lenis stop deletion)
	o:m + ɒ	veŋ + ɒ		'MR' (adv/prep) — *optional*

Not only is the readdition of /ɒ/, where possible, always optional; even within the admissible categories individual base forms vary greatly as to whether or not, or how felicitously, they admit this readdition. If the additional /ɒ/ is an exponent of plural of weak nouns (12e1), base forms with final /b/ seem to welcome it most readily, and bases with final /d/ are usually most resistant. If the additional /ɒ/ encodes the plural/oblique singular (weak) or the oblique singular/plural (strong) of adjectives (12f), the bases are again likelier to end in /b/ than in /d/; they are even more likely to end in /g/ here, and adjectives in *-ig* (such as *deirig* 'expensive', *abscheilig* 'horrible', *greislig* 'ugly', *bfundig* 'great', *granddig* 'morose') in fact are the class where double inflection is fully productive and encountered most frequently.

In view of the multiplicity of morphological functions of suffix /ɒn, ɒ, n/, the question arises why double inflection should be an option with precisely those categories where we have observed it. Disregarding adverbs/prepositions (12g), the clearly preferred domain of double inflection are nominal rather than verbal categories, specifically the plural of nouns (12e1) and oblique case and plural of adjectives (12f). One could speculate that these categories more than the others need easily recognizable overt exponents, being conceptually crucial and not very well marked elsewhere by morphological or syntactic devices (as the relevant verbal categories no doubt are). While certainly plausible, this speculation should not be overtaxed either, so as to exclude categorically double /ɒ,n/-inflection from verbal morphology. Note, for example, the existence of perfect participles such as [kfunɒ] 'found', which is a free variant of [kfuntn̩] and seems to be derived from /g+funt+n/, via assimilations and deletions leading to /kfun/, by adding another participial suffix in the shape of /ɒ/. But recall also that the difference between nominal and verbal morphology is reflected in slight differences in the distribution of /ɒ/ and /n/ as well.

A necessary precondition for the (optional) reapplication of /ɒ/-suffixation, at any rate, is phonological: it is only after the disappearance of stem-final consonants that the morphological rule may reapply. Assimilation of /n/ to the preceding consonant does not yet suffice as a trigger. This is demonstrated by stems with a final fortis consonant, which causes assimilation but is not deleted afterwards; double inflection is never found under such circumstances in the varieties of Bavarian described: cf. /dɛp+n/ → /dɛpm̩/ → */dɛm/ → */dɛm+ɒ/ 'fools', /do:f+n/ → /do:fm/ → */do:m/ → */do:m+ɒ/ 'stupid', /rajx+n/ → /rajxɒ/ → */rajŋ̩/ → */rajŋ+ɒ/ 'rich'. This precondition must not be misinterpreted as implying that it is the phonological mutilation of the stem as such which is apparently intolerable, hence provokes reinflection. And it should also be borne in mind that even after the stem losses and assimilations, forms that are inflected only once still remain paradigmatically distinct: thus, observe the contrasts between [buɒm] and the nominative singular form [buɒ], whose underlying final /b/ has been removed by lenis deletion, or between [hajliŋ] and the uninflected adjective form [hajlig], whose final /g/ usually resists lenis deletion. The precondition referring to the loss of final stem consonants evidently gains its significance from the fact that, considered by themselves, forms which have experienced this loss are morphologically opaque, i.e. look as if they had not been inflected at all. As long as the stem-final consonant is retained, there is also a following syllabic segment which, in spite of being assimilated to the segment which happens to precede it, is recognizable at the surface as a variant of suffixal /n/.

With only the assimilated nonsyllabic manifestation of /n/ remaining, however, there is no way of identifying such forms as inflected: judging by their surface appearance, [buɒm], [hajliŋ], etc., could equally well pass for uninflected forms, because final [m, ŋ, (n)] are possible surface segments without necessarily originating from /b+n, g+n, d+n/, and there is no indicator left pointing to such an origin. Thus, it is the impossibility of syntagmatic recognition of a morphological exponent due to integrative phonology, rather than the phonological obliteration of paradigmatic contrasts, which must be seen as the crucial functional reason of reinflection in North/Middle Bavarian. And this is the same conclusion we arrived at in the earlier case of double inflection in Swiss German.

Some aspects of the preceding analysis may appear problematic. Thus, in cases such as /buɒb/ 'boy' (12e), an underlying final segment was postulated which never makes it to the surface as an independent segment. However, this is no artefact at best justifiable by the etymology and the Standard German spelling of such words (cf. MHG *buobe*, Modern German *Bub(e)*); it is well motivated by phonological patterns. The regular plural and oblique singular form [buɒm], with the final bilabial nasal due to assimilation, cannot be accounted for unless one posits a stem-final bilabial consonant triggering the assimilation; also, diminutive forms such as [buɒwɒl]/[biɒwɒl], with intervocalic voiced unrounded glide /w/, are the expected result of an underlying form /buɒb/ whose final bilabial lenis stop is intervocalically lenited by regular phonological rule. A perhaps more critical aspect of the above analysis is that double inflection is also assumed with forms that are not really the results of productive inflectional rules, viz. the adverbs or prepositions in (12g). On account of paradigmatic contrasts (cf. *ob-en* 'above'/ *ob-ig* 'above' (Adjective)/*ob-er* 'upper') and formal analogies (cf. *oben/drüben* 'yonder'/*unt(en)* 'below', *wegen/gegen* 'against' etc.), however, the final /n/ here would seem to deserve being attributed morphological status, if only within the domain of analytic rather than synthetic morphology. And this seems to have been sufficient reason to provoke the addition of a further suffix /ɒ/ under the appropriate phonological circumstances. Finally, one might also consider rejecting the whole analysis and argue instead for some other source of the final /ɒ/ which is here assumed to be the exponent of the reapplication of a morphological rule. One possibility might be to ascribe this /ɒ/ to some phonotactically motivated phonological epenthesis rule operating at clause or phrase level. It would be rash to reject this alternative out of hand; nevertheless, it seems to me that a sandhi analysis would face enormous difficulties in accounting for the whole phonomorphological pattern of the distribution of /ɒ/ which falls out naturally from the present reapplication analysis.

7.3. To form morphological causatives, Sinhalese adds the suffix /wə/ after present verb stems, and this combination may feed integrative phonological, and maybe morphonological, rules. The colloquial and the literary language do not differ crucially in these integrative processes, nor in a possible reaction to them. (My sources include Geiger 1938: 154–156; de Silva 1960; Gair 1970: 68–70; and the native intuitions of J. A. Y. Perera.) The integrative (mor)phonological rules most relevant here are the optional contraction of /əwə/ to /o:/; the sometimes optional, sometimes obligatory elision of the final thematic vowels /ə/ (conjugation class 1) and /i/ (class 2) (class 3 verbs do not causativize), subject to the condition that ensuing assimilatory rules result in admissible geminate consonants (viz. /pp, bb, dd, tt, ṭṭ, ss, mm, nn/; inadmissible are */rr, ll, ḷḷ/ and */hh/, which may however be transformed into admissible /ss/); the obligatory assimilation of the glide /w/ to a preceding consonant, effectively doubling that consonant; and the replacement of the thematic vowel /i/ of verbs of class 2, usually by /ə/. The forms in (13a) exemplify these rules; those in (13b) show something else as well, viz. the optional, semantically vacuous reapplication of causativization at a certain stage of phonological integration. (/nəwa/ in the following examples is the infinitive suffix. Impossible surface forms are marked with an asterisk.)

(13) a.	ka: + wə + nəwa 'to make eat'	akuḷə + wə + nəwa 'to make gather'	*ari + wa + nəwa 'to make send'	MR (causative)
			arəwənəwa	PR (theme exchange)
		akuḷo:nəwa	aro:nəwa	PR (contraction)
b.	?kapə + wə + nəwa 'to make cut' (kapo:nəwa)	*pani + wə + nəwa 'to make jump'	mahə + wə + nəwa 'to make sew'	MR (causative) (PR (contraction))
		(panəwənəwa)		(PR (theme exchange))
	*kapwənəwa	*panwənəwa	*mahwənəwa	PR (theme elision)
	kappənəwa	pannənəwa	*mahhənəwa	PR (assimilation)
			massənəwa	PR (/h/→/s/)
	kappə + wə + nəwa	pannə + wə + nəwa	massə + wə + nəwa	MR (causative) *— optional*
	kappo:nəwa	panno:nəwa	masso:nəwa	PR (contraction)

What differentiates the forms in (13b) from those in (13a) is that the thematic vowel of the basic verb may be elided, which necessitates the complete assimilation of the initial segment /w/ of the causative suffix to the now stem-final consonant. It is at this stage that causativization may reapply — and in fact does reapply very productively with all phonologically pertinent verbs (rather than only the three listed in [13b]). Such double causative forms may further undergo /əwə/-contraction. But causativization itself cannot now reapply indefinitely, because the schwa preceding the second causative suffix, which is the vocalic remains of the

first causative suffix, does not elide in the manner of a thematic vowel, triplets of any consonant being inadmissible in Sinhalese.

Note that the reapplication of causativization does not presuppose the phonological neutralization of paradigmatic contrasts: even after assimilation, causative forms such as /kappənəwa/, pannənəwa/, /massənəwa/ remain distinct from the corresponding noncausative verbs /kapənəwa/, /paninəwa/, /mahənəwa/, if not strikingly so in cases such as /kappənəwa/. As with the Swiss and North/Middle Bavarian German double inflections, it is the phonologically induced lack of syntagmatic recognizability of the original morphological exponent which enables the morphological rule to reapply. Phonologically integrated causatives such as /akuḷo:nəwa/ or /aro:nawa/ (13a) are still recognizable as causatives in spite of the rather drastic metamorphosis of the causative marker /wə/: they are impossible to misanalyze as (infinitives of) basic verbs because these end in one of the thematic vowels /ə, i, e/ rather than in /o:/. Causatives such as /kappənəwa/ (13b), on the other hand, could well be (infinitives of) basic verbs: their final schwa could be the thematic vowel of conjugation class 1, and their geminate consonants could be phonologically basic or could have sources other than /Cw/.

8. Reanalysis

The claims made about reapplications of morphological rules in section 7 were intended to be valid synchronically. Our aim was not to pursue morphological archaeology and to uncover forms that had once been regular morphological combinations but had long ceased to be analyzable as complex. Such forms where a reapplication analysis has diachronic validity in fact seem much more numerous than clear instances with synchronic justification. On occasion, however, it may not be dead easy to tell apart sychronic from diachronic reapplications of morphological rules.

Confronted with a Modern English plural noun such as *truce-s*, nobody would seriously suggest that it is doubly inflected for plural, even though this suggestion is historically correct in so far as *treow-es* used to be the regular Old English plural of *treow* 'faith, fidelity, truth' and Modern English *truce-s* contains one /əz/ more than its ancestral form. What has long since happened is that the original plural *treowes* was reanalyzed as the new basic form, presumably stimulated by the frequent use of the plural form with apparently singular meaning. After this reanalysis no synchronic evidence remained on which to infer a basic form without final sibilant, whose existence would be implied by the claim that *truces* is doubly inflected (i.e. /tru+s+əs/).

The situation is slightly different with plurals such as *chickens*. Here a basic form indeed is synchronically attested, viz. *chick*, which could serve as the point of departure for double pluralization, if the first time by means of the rather unproductive allomorph /ən/ (which in fact was originally a diminutive suffix). However, the fact that the putatively intermediate form *chicken* is synchronically singular and in this sense itself basic, even if as the result of a reanalysis of an historical plural form, renders the double plural analysis synchronically unfeasible.

What these two examples have in common is that even in the past it was never synchronically justified to assume that pluralization took place twice. The forms resulting from single pluralization were reanalyzed as basic (i.e. singular) at one point in history, and ever after they were available for single pluralization. In this respect they differ from examples such as the German perfect participle *ge-gess-en* 'eaten', where some reanalysis is likely to have taken place as well but where nonetheless the reapplication of the rule of /ge/-prefixation once must have been a synchronic reality, as outlined in (14).

(14)	ge + ʔes + n	MR (participle)
	gesn	PRs (glottal stop deletion, shortening of sequence of identical vowels)
	ge + gesn	MR (participle) — *optional*

This last form resulting from double prefixation, then, seems to have been reanalyzed as /ge + ges + n/, with its originally morphologically complex constituent /ges/ being taken for a special participial, and noncomplex, stem variant of /ʔes/.

But we are skating on really thin ice when we wish to distinguish between double affixations of the kinds exemplified by Standard German *ge-g-essen* and Swiss German *chly-s-es* (11). On which grounds, after all, are we attributing synchronic validity to the latter while denying it to the former? That is, is there a principled reason to rule out the possibility that a reanalysis of the doubly suffixed form /xli:zəz/ has taken place, yielding a special inflectional stem /xli:z/ besides the basic adjective stem /xli:(n)/? One criterion suggesting synchronic rather than merely diachronic validity of double affixations presumably is the existence of more than one pertinent form, with reanalyses being more typically restricted to individual instances. Double participial prefixation in German once used to be more common, if largely in dialects rather than in the standard written language, and was even found with verb stems not beginning in a vowel (e.g. *ge-g-halten* 'held', *ge-g-wöhnt* 'used'); at present, however, *ge-g-essen* is the only survival. As mentioned in section 7.1, double suffixation as in *chly-s-es* in fact is not equally characteristic of all adjectives of suitable

phonological shape in the relevant varieties of Swiss German; if *chly-s-es* really were the only possible case, it would be difficult indeed to argue synchronically for the reapplication analysis. A second criterion may be the synchronic productivity of the integrative phonological rules involved, in normal, not too allegro speech. On this count, at any rate, *chly-s-es* differs most clearly from *ge-g-essen*: /n/-deletion is an obligatory rule even in lento styles of Swiss German, while the optional deletion of an intervocalic glottal stop and the attendant shortening of a sequence of identical vowels is at best found in very allegro styles of Standard German (normally pairs such as *ge-erbt* 'inherited' and *gerbt* '(he/she) curries (leather)' are kept phonetically distinct).

Not only may affixes be reanalyzed as parts of stems, as in our previous examples; they may also be reanalyzed as parts of other affixes. The majority of the instances of what is known as 'affix pleonasm' appear to involve such reanalyses rather than genuine synchronic reapplications of morphological rules. Here are some typical examples of ostensibly pleonastic affixation from German:

(15) a. Prinz-ess-in prince-Motion-Motion 'princess', koloss-al-isch colossus-Adj(ectivization)-Adj 'colossal'
b. Kerl-e-s lad-Pl-Pl 'lads', Examin-a-s exam-Pl-Pl 'exams'

The circumstances under which such 'affix pleonasm' tends to occur are similar in inflection and derivation: a morphological category has alternative exponents (which may, but need not, be in free variation: cf. *Kerl-e/Kerl-s*, *Prinz-ess/??Prinz-in*, *Examin-a/*Examen-s*, *koloss-al/*koloss-isch*), of which one is less regular and less productive (often confined to non-native bases) than the other. These paradigmatic alternatives, then, are syntagmatically combined. These combinations are not random, however: usually the less regular, less productive affix is appended before its more regular and productive counterpart (thus, **Prinz-in-ess*, **koloss-isch-al*, **Examen-s-a*); or, typically in inflectional morphology, the two affixes are combined so as to resemble already existing morphological exponents (thus, **Kerl-s-e*). It is these restrictions on syntagmatic combinations which argue most strongly against analyses of forms like those in (15) in terms of synchronic reapplications of derivational or inflectional rules. It seems more appropriate to explain such forms diachronically as the result of the innovation of new affixes by means of affix extension or contamination, i.e. of reanalyses of previously existing morphological paradigms (rather than of syntagmatic morphological combinations, as with the stem reanalyses above). On such an analysis, *-ess-in*, *-al-isch*, and perhaps *-a-s* are newly created extended motional, adjectivization, and plural suffixes coexisting with nonextended variants

such as *-ess* (non-native) and *-in* (native), *-al* (non-native) and *-isch* (native), *-a* (non-native) and *-s* (non-native and restrictedly also native), respectively, and, like these, synchronically appended by a single application of the respective morphological rules. Likewise, *-es* is a newly created contaminated plural suffix coexisting with such allomorphs as *-e* and *-s*, synchronically like these appended by a single application of pluralization. (For more extensive discussion see Plank 1981: 76–81.)

Since Bavarian supplied one of our few examples of a genuine reapplication of a morphological rule (12), it is appropriate to point out that varieties of Bavarian are characterized by stem and suffix reanalyses on a massive scale, all involving the inflectional and stem-formational suffix *-(e)n*. For one thing, plural /n/ has been widely reanalyzed as part of the singular stem of many nouns (compare e.g. Standard German *Wiese — Wies-en* 'meadow — meadow-s' with Bavarian *Wies-n* Sg./Pl.), and often, though rarely if at all in the variety described in section 7.3, the regular plural suffix is then optionally attached to such reanalyzed stems (thus e.g. *Wiesn-a* 'meadows'). However, /ɒ(n)/ may also be added in the plural generally, or only in the dative plural (16a), or also as infinitive marker (16b), without the preceding /n/ having been reanalyzed as part of the stem:

(16) a. Ochs — Ochs-n/Ochs-n-a(n) 'ox — oxen'
Bursch — Bursch-n/Bursch-n-a(n) 'lad — lads'
Frau — Frau-(a)n/Frau-n-a(n) 'woman — women'
b. mah — mah-n/mah-n-a(n) 'mow! — to mow'
tua — toa-n/toa-n-a(n) 'do! — to do'

Such optional variants with /nɒ(n)/ are widespread in Austria and do not seem to be mere sandhi forms. There are no integrative phonological rules comparable to those illustrated in (12) operative here which could motivate the reapplication of plural or infinitive marking. It seems not implausible to assume, therefore, that on the basis of the existing common plural and infinitive suffix variants /n/ and /ɒ(n)/ a combined suffix /nɒ(n)/ has been innovated, probably on analogy with the numerous nouns (and verbs) ending in /nɒ(n)/ in the plural (or infinitive), and ultimately in the interest, thus, of creating a more uniform exponent of the respective inflectional categories. Though no doubt plausible, this analysis of patterns like those in (16) is not the only one possible; and once more a decision is difficult to justify between a diachronic (reanalysis) and a synchronic (reapplication) account.

9. Which resolution?

With no less than five possible (synchronic) resolutions of conflicts between morphology and integrative phonology available in principle, it

would be gratifying to be able to predict which of them is likely to be preferred in particular instances — provided the preferences of languages, or their speakers, are not random in this respect.

9.1. Two necessary conditions on the choice of the resolution that interests us most, the reapplication of a morphological rule, should have become obvious by now.

First of all, integrative phonology must not completely wipe out any formal manifestation of the morphological category at issue, but must leave a trace, if an indirect one, of the original exponent; otherwise the morphological rule could reapply indefinitely, meeting its phonological fate, the (locally) irrecoverable loss of a paradigmatic contrast, each time anew. A further example shows that this condition, if taken literally, may in fact turn out to be too strict. According to Harris (1983), in Old Georgian the morphonological rule of 'ablaut', reducing the suffix /en/ to /n/ in front of a full grade suffix, and the phonological rule which deletes /n/ when preceded by another /n/ were able to eliminate any trace of the exponent /en/ of inactive plural marking on verbs, as exemplified in (17).

(17)	damdabl + n + *en* + en	low + inceptive + inactive plural + subject plural optative 'they shall be brought low'
	damdablnnen	PR (ablaut)
	damdablnen	PR (/n/-deletion)

There is, however, a further morphonological rule dissimilating /n/ to /d/ when preceded by /l, r, n/, giving the actually attested surface form:

(17)	damdablden	PR (dissimilation)

In principle, after dissimilation the inactive plural exponent could be added anew, and in this phonological environment would not be eliminated again:

(17′)	damdabld + *en* + en	MR (inactive plural)
	damdabldnen	PR (ablaut)

But this last form is hypothetical and not attested. The mere possibility of such derivations, however, suggests a somewhat more liberal restatement of the above condition, allowing morphological rules to reapply even if no trace is left of the original exponent — provided that subsequent phonological rules have changed the environment so as to prevent the repeated loss of the relevant paradigmatic contrast.

Second, the complex form resulting after the first application of a

morphological rule must be syntagmatically opaque rather than transparent; i.e. its phonological shape must resemble that of word forms that are possible in the language without being morphologically complex. In sum, as far as the reapplication of morphological rules is concerned, syntagmatic transparency is more important than paradigmatic contrast as the particular expressivity requirement to be reinforced. Also noteworthy is a further generalization emerging from the empirical survey of section 7: if morphological rules reapply, they always do so optionally, never obligatorily.

In our three examples of section 7, the lack of syntagmatic transparency of morphological combinations was argued to be the result of integrative phonological rules. In principle, however, it is also conceivable that morphological combinations are syntagmatically opaque for a reason other than phonological integration: without being phonologically transformed, morphological exponents may be incapable of signaling unmistakably that a word is supposed to be marked for a particular category. Thus, on the analysis (11') which we rejected for Swiss German, the singly inflected but phonologically unaffected form /xli:z/ would presumably qualify as syntagmatically opaque because no internal morphological boundary is signaled and final /z/ need not necessarily be interpreted as the exponent of some inflectional category. If Bavarian 'double' plurals and infinitives like those in (16) could not be accounted for in terms of suffix reanalysis, it would likewise be possible to justify the addition of final /ɒ(n)/ by the syntagmatic opacity of nouns and verbs with a single, phonologically undamaged suffix /n/. Provided data were found where such analyses are preferable, we could maintain syntagmatic opacity as a necessary condition for the reapplication of morphological rules, but would have to concede that they may reapply without intervening phonological rules.

The obvious fact that it is pointless to reapply a morphological rule if phonological integration is bound to eliminate any trace of its exponent rules out this fifth resolution in many examples of our survey: often in the case of person prefixation in Delaware (1b,1c,1d) and of imperfective and ergative marking in Palauan (2b,2d,3), with future marking in Ancient Greek (4c), genitive singular and 1st person singular marking in Karelian and North Estonian/West Votian (5b,7), and past tense marking in American English (8b).

9.2. One factor in the choice between the first resolution, viz. to put up with the phonological obliteration of morphology, and the others seems to be the presence or absence of a relevant formal contrast elsewhere, in

the morphology or syntax of a construction containing the victim of integrative phonology. At least in those cases where integrative phonology would entirely eliminate any trace of a paradigmatic contrast (i.e. where the reapplication of the morphological rule is no viable option), the presence of some formal contrast elsewhere in the word or the clause certainly renders resolution 1 tolerable, while the absence of such contrasts clearly calls for some strategy or other to rescue morphological expressivity. Nevertheless, the absence of any morphological or syntactic contrast is by no means a necessary condition for the resolutions other than the first: evidently, some rescuing action or other may be taken with contrasts, even local paradigmatic ones (cf. 9a,9c,12e1,12f,12g,13b), present.

9.3. We have already seen that the reapplication of a morphological rule presupposes the maintenance of some paradigmatic contrast. Resolution 4, viz. to reorder morphological and phonological rules, likewise presupposes a rather specific structural configuration to be effective (and recognizable). And resolution 3, viz. the choice of phonologically more resistant alternative exponents, obviously presupposes that appropriate alternative exponents in fact are readily available (if possible without altering the current rules governing the distribution of allomorphs). Thus, the actual choices between resolutions of phonology–morphology conflicts will often involve less than the whole gamut of five alternatives, with resolutions 1 (no rescuing action) and 2 (the blocking of phonological rules), and, subject to the conditions of section 9.1, also 5 (reapplying a morphological rule) being available most commonly. I doubt that further necessary or even sufficient conditions on these choices can be established conclusively, but factors such as the following deserve to be taken into consideration as potentially influential, individually or in combination.

9.4. It is conceivable that the kind of morphological category makes a difference.

Allowing for certain difficulties of precise delimitation, it might be that different resolutions tend to be chosen with inflectional and with derivational categories. If we grant that Sinhalese causativization, despite its productivity, is derivational, this criterion even fails with regard to the fifth resolution alone: in Swiss German and North/Middle Bavarian, morphological rules are reapplied which are clearly inflectional. Inasmuch as our entire exemplification of resolutions 1 and 2 is also more or less

typically inflectional, the distinction between inflection and derivation cannot be very significant — even though it is probably legitimate to conclude that conflicts between morphology and integrative phonology are likelier to arise with inflectional than with derivational morphology in the first place. A possible reason for this asymmetry is that derivational exponents tend to be more substantial, hence phonologically more resistant than inflectional ones (in languages that clearly recognize a difference between these two types of morphology). It may or may not be an accident that our illustration of resolution 3 came entirely from derivational morphology. It may, at any rate, be wise not to rule out the choice of more resistant alternative exponents as a possible option also for inflectional morphology. The remaining phonetic substance of derivational exponents, even if derived words are not syntagmatically very transparent (cf. 9a,9c), could, nevertheless, be a factor in discouraging the reapplication of the derivational rule concerned.

Another distinction worth considering here is that between markers assigned by syntactic agreement and other morphological categories. As is well known, some such distinction is significant if one wants to predict which morphological exponents are likelier to be lost than others in diachrony. But a principle like that suggested by Kiparsky (1978: 42),

> Morphological material which is predictable on the surface tends to be more susceptible to loss than morphological material which is not predictable on the surface.

does not allow very accurate synchronic predictions within the present context. Recall that Swiss German and North/Middle Bavarian adjective inflections are agreement-determined, and the inflectional rules nevertheless reapply, while the morphological rules also reapply in the case of Bavarian pluralization and Sinhalese causativization, which are not agreement-determined. Noun plural in Bavarian on the contrary determines verb, adjective, and pronominal agreement, and thus tends to be highly predictable on the surface. Likewise resolution 2, the blocking of phonological rules, is also found with agreement-determined (person–number in North Estonian/West Votian [7]) as well as with other categories. That none of our examples of resolution 1, where morphological material is allowed to be lost, involved categories determined by agreement is likelier to reflect an accidental gap of our empirical documentation than some principled reason. (Person marking in Delaware and other Algonquian languages is clearly not agreement-determined; inactive plural marking in Old Georgian [17] may have to be dealt with in terms of genuine agreement, and thus would actually fill the gap.)

A further distinction, partly overlapping with the former ones, is whether or not a morphological rule may reapply semantically nonvacuously. That it may not would seem to be rather plausible as a further necessary condition on resolution 5: if a morphological rule may reapply with as well as without semantic effect, it could become difficult to figure out in particular instances how the reapplication was intended. Thus, one factor in turning the scale in favor of resolution 3 in the case of German diminutives (9a,9c) might be seen in the possibility of forming double diminutives (e.g. *See-lein-chen* lake-Dim-Dim) whose semantic effect is to intensify the affective tinge of diminution. However, while Swiss German adjectives (11) and Bavarian nouns and verbs (12), as expected, do not admit semantically nonvacuous double inflection, Sinhalese verbs (13) do on occasion causativize twice with semantic effect. Although, according to Gair (1970: 68ff.), a periphrastic construction ought to be chosen in colloquial Sinhalese whenever a verb is to be causativized that is already morphologically causative, my informant allows two further options as well, at least for certain verbs. One is to employ a verb with a single causative suffix also with the meaning of a double causative; the other is to add a second causative suffix:

(18)	ka + nəwa	eat-Inf	'to eat'
	ka + wə + nəwa	eat-Caus-Inf	{'to cause to eat, feed' / 'to cause to feed'}
	ka + wə + wə + nəwa / kawo:nəwa	eat-Caus-Caus-Inf	'to cause to feed'

Undesirable though it may be, the conclusion thus seems inevitable that morphological rules may reapply semantically vacuously even if they may also do so nonvacuously.

9.5. Which resolution to prefer could also depend on the kind of integrative phonological rules involved. Distinctions worth considering here include those between optional and obligatory rules (of a given speech style), between properly phonological rules and morphonological rules (whose conditions are partly nonphonological), and perhaps between phonemic rules and rules specifying phonetic details. On the whole, however, the importance of all of them seems rather limited. Thus, morphological rules reapply after obligatory rules (/n/-deletion in Swiss German) as well as after optional rules (deletion of stem-final lenis stop in Bavarian, usually also the elision of the theme vowel of verbs in Sinhalese). Similarly with resolution 3: more resistant exponents are selected no matter whether the dangerous phonological rules are oblig-

atory (consonant degemination in German [9], except in unnaturally lento style) or optional (haplology). Resolutions 1 and 2 of course presuppose obligatory phonological rules; otherwise we would simply be faced with patterns where optional rules do not apply. The distinction between phonological and morphonological rules likewise yields mixed results: rules of both types seem to be found with all resolutions. For instance, theme vowel elision in Sinhalese is morphonological, and presumably also stem-final lenis deletion in Bavarian, whereas /n/-deletion in Swiss German appears to operate without nonphonological conditions. In sum, what is presumably most important about phonological rules is not what type they belong to but merely that they are integrative.

As briefly mentioned in the introduction, phonological integration may be achieved in all sorts of ways: by assimilations or dissimilations, by elisions or by epentheses, for example. But not all sorts of integrative rules are equally capable of endangering paradigmatic contrasts and syntagmatic transparency: not surprisingly, this danger is caused above all by assimilations and elisions, which indeed recur throughout our entire survey of resolutions of conflicts between morphology and phonology. What seems most significant for purposes of prediction is whether or not phonological integration involves segment elisions: only if it does, morphological rules may reapply.

9.6. Although we have so far ignored nongrammatical factors such as style, register, tempo, medium, or social status, it is conceivable that the resolutions of conflicts between morphology and phonology, and the likelihood of occurrence of such conflicts in the first place, are contingent upon such distinctions as those between written, formal, lento, standard varieties on the one hand and oral, informal, allegro, dialect varieties on the other. From the data collected in the preceding chapters, one may indeed get the impression that some such factors are at least statistically significant, at least as far as the incidence of conflicts and the preference for some of the resolutions is concerned. The less a linguistic variety is regimented, one might speculate, the likelier are such conflicts and the likelier are resolutions 1 and 5. Nevertheless, such speculations do not always yield very accurate predictions: only recall that causativization is reapplied in colloquial and literary Sinhalese alike. In the case of North/Middle Bavarian noun plurals and adjective oblique or plural agreement, however, the likelihood of double inflection indeed increases with informality and the speaker's emphasis on speaking unadulterated dialect.

9.7. Finally, morphological typology too may supply useful distinctions. First, morphology–phonology conflicts seem much more likely to arise when morphology is inflective (or fusing) rather than agglutinative. This should not come as a surprise, because with agglutinative morphology stems and affixes do not form such closely integrated word-units as typically with inflective morphology, notwithstanding integrative ties like those created by vowel harmony.

Second, and more specifically, a factor should be taken into consideration that might be called the morphological 'style' of a language. To illustrate this notion, observe that in typically inflective Indo-European languages the exponents of morphological categories are predominantly affixes or vocalic alternations (ablaut, umlaut). Marking morphological categories by consonantal alternations simply would not be in style in such languages, even though this might be a common kind of morphological exponent in other inflective languages. Now, paradigmatic contrasts in terms of consonantal alternations is precisely what is achieved by phonological integration in our Swiss, Bavarian, and Sinhalese examples in section 7. If nothing were done about the deleterious effects of phonology, /xli:(n)/ would contrast with /xli:z/ (Swiss German), /hajlig/ with /hajliŋ/ (North/Middle Bavarian), /kapənəwa/ with /kappənəwa/ (Sinhalese). It is the reapplication of the morphological rules concerned which recreates exponents which are in style: separate suffixes. Thus, on the evidence available, it seems legitimate to conclude that the morphological style of a language may well tip the scale for resolution 5 and against resolution 1.

10. Other reapplications

The conclusion reached so far is that morphological rules may reapply only for basically two reasons: first, if some semantic value is to be added more than once to a single word; second, semantically vacuously if the form resulting from one application is syntagmatically opaque, and in particular if this form is rendered syntagmatically opaque by integrative phonology. The question that remains to be explored in this final chapter is whether this relatively restrictive position is empirically defensible.

10.1. Double plurals as found in Khalkha Mongolian illustrate one kind of apparent counterexample (cf. Poppe 1970: 117):

(19)	lamə 'lama'	noyən 'prince'	erə 'man'	
	lamə + nər	noyə + d	erə + s	MR (plural)
	lamə + nər + uud	noyə + d + uud	er + s + ɯɯd	MR (plural)

Most plural allomorphs in Khalkha Mongolian are largely phonologically conditioned; only /nər/ is selected by a semantic class of nouns (including those referring to relatives, senior persons, and gods). There are some morphonological or allomorphic regularities, including the elision of stem-final /n/ and /ə/; but let us grant that they do not seriously interfere with the syntagmatic transparency of combinations of noun stems and first plural suffixes. The reapplication of pluralization, always by means of allomorph /ɯɯd/, then, can hardly be motivated by syntagmatic opacity. Nor does the repetition of pluralization add once more the proper semantic value of this category, in the manner of multiple pluralizations in Semitic, mentioned in section 2: double plurals like those in (19) do not refer to more lamas, princes, men, etc., than the corresponding simple plurals. The counterexample is still apparent rather than real, because the second pluralization here indeed does have semantic, or maybe pragmatic, effect: double plurals, rather than increasing the quantity of referents, are reverential forms which only highly esteemed persons are entitled to.

The moral of this example is that morphological rules may reapply if the relevant categories are capable of being invested with special semantic or pragmatic significance only indirectly related to their basic meaning. But under such circumstances reapplications clearly should not be regarded as semantically vacuous.

10.2. A second kind of possible counterevidence is reapplications of morphological rules after other morphological rules. As this example of double case marking of dual nouns from Kaititj, an Arandic language (Koch 1980), shows, this may happen without any semantic or pragmatic significance being attributable to the reapplied rule:

(20)	(aMu + ṯir	MR (dual) 'both snakes' (absolutive case without suffix))
	aMu + ŋ	MR (ergative) 'a snake' (singular without suffix)
	aMu + ŋi + ṯir	MR (dual)
	aMu + ŋi + ṯiri + l	MR (ergative) — *optional*

The epenthesis of /i/ after case and number suffixes followed by other suffixes is (mor)phonologically regular and evidently does not affect syntagmatic transparency; nor does the optional addition of a second ergative case allomorph after the dual number suffix in any way alter the meaning or syntactic potential of nouns. Structurally analogous patterns are sporadically attested in other languages too. Thus, diminutive nouns in Breton, marked by the suffix *-ic/-ig*, may receive a plural suffix *-ou*

(diminutives of collectives are generally pluralized in this way), but in general the diminutive and plural suffixes are added to forms already carrying a plural suffix (cf. Hemon 1975: 39):

(21)	(paotr + ig	MR (diminutive) 'little lad' (singular without suffix))
	(*paotr + ig + où	MR (plural) 'little lads')
	paotr + ed	MR (plural) 'lads'
	*paotr + ed + ig	MR (diminutive)
	paotr + ed + ig + où	MR (plural) 'little lads'

The plural of possessed nouns in Standard Hungarian is expressed by the suffix *-ai/-ei* preceding the possessive person–number suffix (e.g. *tehen-ei-m* cow-Pl-1sg 'my cows'), whereas otherwise plural is expressed by the final suffix *-(V)k* (e.g. *tehen-ek* 'cows'). There are dialects of Hungarian, however, where possessed nouns exhibit the two plural markers simultaneously, one preceding and one following the possessive suffix (cf. Imre 1972):

(22)	tehen + ek	MR (plural)	'cows'
	tehen + em + ek	MR (possessive)	'my cows'
	tehen + (ej)i + m + ek	MR (plural)	

The intermediate form, with a single plural suffix following the possessive suffix, is attested in other dialects, but apparently not in those favoring two plural suffixes.

The conclusion, thus, seems inevitable that it must be possible for morphological rules to reapply semantically vacuously after other morphological rules, without being triggered by syntagmatic opacity. While this position would still prohibit the IMMEDIATE semantically vacuous reapplication of a morphological rule unprovoked by syntagmatic opacity, it could be criticized as being undesirably liberal, as effectively licensing the reapplication of any morphological rule after any other and under all circumstances. And there are indeed indications suggesting that such nonimmediate reapplications can only be expected under rather special circumstances.

In our examples from Kaititj and Hungarian these special circumstances are of a diachronic nature. In Kaititj, the dual marker is no prototypical, well-established suffix but seems to be on the brink of being reanalyzed as a suffix and still shows traces of its original status of an independent word. In fact there still exists an independent word for 'two', *aṯir*, which is transparently related to the dual marker and which may carry a case marker of its own when occurring in a case-marked noun phrase (e.g. *aṯiri-ʃiltʸi-ŋ* two-Erg hand-Erg 'with two/both hands'). The

double case-marking on the last form of (20), thus, is a remnant of the former, and still partly preserved, phrase status of this word. In the relevant Hungarian dialects, the reapplication of pluralization, as outlined in (22), may not really be a synchronic phenomenon at all; rather, complex nouns containing a possessive plural suffix *-(ej)i* may well have been reanalyzed as singular and thus as suitable bases for the addition of one final plural suffix *-(V)k* (cf. Vago 1975: 488 for this interpretation). Alternatively, the double plural forms could be interpreted as reflecting an intermediate stage in the development of uniform plural marking for possessed and unpossessed nouns by a final suffix *-(V)k*, a goal already attained in those dialects with possessive plurals such as *tehen-em-ek* rather than standard *tehen-ei-m*.

I am not aware of similar attentuating diachronic circumstances in the case of double pluralization of diminutives in Breton. It seems worth pointing out, however, that the two plural suffixes co-occurring in nouns such as *paotredigoù* are normally distributed along referential-semantic lines: *-ed/-et* is the plural suffix most commonly found with nouns referring to human beings, animals, trees, and coins, while *-(i)ou* as a rule forms the plural of nouns referring to things (cf. Hemon 1975: 30ff.). Now, it is well known that diminutives in general tend to be classified as nonpersonal, socially less significant, and the like, if indeed classified differently from the corresponding nondiminutive nouns. In Breton, plural marking is one area where such nominal classification gains grammatical significance, and it might be that the double pluralization of diminutives reflects a conflict of classification: as nouns referring to persons and other individuals (and the doubly pluralized diminutives indeed usually have such reference), diminutives deserve the plural marker *-ed/-et*, but owing to diminution itself their referential rank is as it were downgraded to that of thing-nouns, where the appropriate plural suffix is *-(i)ou*. This speculation is admittedly ad hoc; its appeal would certainly profit from further evidence elsewhere of morphologically unusual behavior of diminutives involving nominal classification.

For the time being, this concludes a survey which I hope is representative of the special diachronic and synchronic circumstances under which morphological rules may reapply semantically vacuously without being triggered by the syntagmatic opacity of the results of their first application.

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