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SOURCES OF MARKEDNESS IN LANGUAGE STRUCTURES

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1. Markedness: theoretical background

The basic question of our paper is why and how marked phenomena arise in a natural language. The main approach to answering it is to inspect external evidence mainly from diachrony, but also first language acquisition and socio-cultural variation. The theoretical frameworks are naturalness theory, a building-block model of complexity theory, a semiotic metatheory and the epistemology of functionalism (cf. Dressler 1995, Dressler – Dziubalska-Kołaczyk 1994).

Within naturalnes theory, as elaborated for both Natural Phonology and Natural Morphology in Dressler (1985a, cf. the volumes Hurch – Rhodes 1996 and Dziubalska-Kołaczyk 1996), marked corresponds to unnatural. This concept is relative in the sense of "less natural than" (more marked than) and theoretically specified. Within the subtheory of universal markedness, which is a preference theory, marked means universally dispreferred on a given parameter. Within the second subtheory of type adequacy, it means less adequate for a specific language type. And within the third subtheory of language-specific system-adequacy, it means marginal in some respect. For example, unproductive phonological or morphological patterns do not belong to the core of language-specific phonology or morphology (cf. Dressler 1997b). In this contribution we will focus on Natural Morphology (cf. Dressler et al. 1987; Kilani-Schoch 1988) and on Natural Phonology (cf. Dressler 1984; Dziubalska-Kołaczyk 1995, in press) and, within these two fields, on the first and third subtheories.

We understand complexity theory (cf. Bar-Yam 2000, Lemke 1999, Zurek 1990) as a theory of dynamic complex systems, as used for describing complexity and emergence of complexity across all traditional systems of science, from physics through economics to sociology, specifically in a tradition which goes back to Prigogine (1961). Among the various approaches to complexity theory, one consists in distinguishing between positive and negative complexity. This distinction may be

applied, within linguistics, to the wide-spread positive attitude towards regularity and unmarked structures as opposed to a negative attitude towards irregularity and marked structures. A positive attitude is taken in constructivist frameworks which describe the self-organizing emergence of complexity in physical, chemical and biological systems. In this vein, constructivist and emergentist models of language acquisition describe how children construct and reconstruct, step by step, the complexity of their target systems. Put in a nutshell, we assume that children first construct primitive systems of phonetics and cognitive social pragmatics. Only afterwards they construct their first phonological, lexical and syntactic protosystems, and only later their first elementary morphological system ("protomorphology"), as the most intermediate component of all the traditional grammatical components (cf. Dziubalska- Kołaczyk 1997, Bittner et al. 2000).

Such conceptions of complexity theory usually combine with a "building-block" model or a "part-whole" model (cf. Górska 1999) of complex systems. Finally, computational models measure complexity in terms of logical depth, i.e. in the execution time which is necessary for generating the object in question.

How are these building blocks as parts of wholes structured, e.g. in the case of morphology? In their simplest format, they consist of basic and derived elements, such as E. *go* vs. *go-es*, *go-ing* in inflectional morphology or *go* vs. *go-er* in derivational morphology. This fundamental relation between unmarked and marked elements is one way in which complexity arises and that constitutes the backbone of even modest morphological richness which all language types possess, with the exception of the ideal isolating language type. We will not focus on the sources of this aspect of markedness, but rather on the following: if an element is marked, it may be more or less marked. Now it would be reasonable to assume that among such alternatives, speakers would opt for the least marked alternative.

So why then should a speaker opt for the second instead of the first of the following choices?

(1) Come in!
(2) Would you be so kind as to come in?

Clearly the second alternative (2) is highly marked in terms of syntactic, morphological, lexical, prosodic and stylistic, expenditure, when compared with the alternative (1). Pragmatics answers the question of choice by referring to politeness, courtesy rituals, face-work, i.e. to sociocultural sources for the rise of such marked politeness strategies.

Sociocultural accounts are also important in text linguistics. Let us take the semiotic parameter of indexicality. On this parameter of universal markedness theory (cf. Dressler 1996) indexical signantia are preferred which refer anaphorically backwards, over signantia which refer cataphorically forwards to their signata. Thus anaphoric signantia such as *the above* are preferred over cataphoric signantia such as *the below.* The reason is that anaphoric relations produce more reliable signs (in the sense of Morris) than cataphoric relations, because it is much easier to identify without equivocation the antecedent of *the above* than the postcedent of *the below.*

A glaring counterexample, however, is represented by titles of a text. A title is always cataphoric, it refers forward to the text which is to follow. This highly marked option on the parameter of indexicality has several converging motivations: 1) diachronically, it is the end-result of a long cultural evolution starting in medieval times, when a cataphoric *incipit* still had an *explicit* as its anaphoric correspondent. More important, because synchronically valid, are the following motivations: 2) the function of a title is to awake tension and curiosity, which is cataphoric in nature; 3) the title need not be a reliable sign, and often it is very unreliable because of the previously mentioned function; 4) many titles, e.g. book titles, originate from an act of name-giving, a special case of Peircean indexicality which must be cataphoric.

Sociocultural changes are a historic source of markedness in other language components as well and may often transcend the task of linguistics. For example, the highly marked typological mix of English morphology goes back, in the long run, to the battle of Hastings.

2. Markedness of clusters

In phonology, a good example of a universally marked structure is constituted by consonant clusters. Consonant clusters are rare in the languages of the world (Maddieson 1999). In a sample of 30 representative languages 70% had no consonant clusters or of a frequency of less than 1%. In every one of these languages at least 85% of the syllables had simple or zero onsets (Maddieson 1999: 2525). The ground for this is the universal preference for the CV-structure.[1]

There are languages, however, among them also some major world languages with respect to the number of speakers, which do allow for

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1 Cf. e.g. Dogil and Braun (1988: 13f), Dziubalska-Kołaczyk (1995: 63ff for a summary of evidence).

clusters of consonants. Though they differ from language to language, clusters share certain universal traits which either guarantee their survival in a language or let them be similarly treated, cross-linguistically, by children, aphasics, learners of foreign languages or every-day casual talkers. Those universal traits are expressible in terms of phonotactic preferences which derive the preferred clusters for all positions. Their function is, on the one hand, to *counteract the CV-only preference* and, on the other, to counteract the creation of dysfunctional clusters. Most typically across phonological models, such conditions on clusters are expressed in terms of phonotactic *constraints.*

What all this suggests is that, once a language does have clusters, not all of them are equally marked. What is relevant for the present discussion is, (a) how the relatively more marked clusters arise in languages, and, (b) how to measure the relative markedness of clusters. One occasion when we can observe the rise of marked clusters is in phonostylistic variation. Before we inspect some cases of this, we need the aforementioned measure of markedness.

2.1. Universal phonotactics

Phonotactic preferences in the Beats-and-Binding phonology (Dziubalska-Kołaczyk 2001) specify, for a given position in a word, the hierarchy of clusters, i.e. they divide a potential *cluster space* into the preferred clusters, the dispreferred clusters (which are possible, though functionally less adequate in the given position) and the impossible clusters.[2]

The **Optimal Sonority Distance Principle (OSDP)** defines the way in which segments should order themselves in a successful sequence: the relations between sonority distances between pairs of neighbouring phonemes should be **optimally balanced**.

They refer to the sonority values of the scale below:[3]

The sonority hierarchy:

vowels	semivowels	liquids	nasals	fricatives	affricates	plosives
0	1	2	3	4	5	6

2 The dispreferred clusters are all potentially existent. They are dispreferred due to their misplacement within a word. The impossible clusters are excluded on logical grounds by the well-formedness conditions.

3 Cf. Dziubalska-Kołaczyk (1995: 87 and other places) for discussion of the notion of sonority.

e.g.
la = distance of two positions = 2, *sw* = distance of three positions = 3, *ka* = distance of six positions = 6, etc.; so, e.g. *ka* > *sw* > *la*

For instance, the preferred double initials are defined by the following condition:

C_1C_2V: **|son (C_1) son (C_2)| ≥ |son (C_2) son (V)|**
i.e.: sondis (C_1,C_2) ≥ sondis (C_2,V)

The condition reads:

*In word-initial double clusters, the sonority distance (***sondis***) between the two consonants should be greater than or equal to the sonority distance between a vowel and a consonant neighbouring on it.*

Sonority distances between segments as specified by the phonotactic preference conditions show a regular distribution when plotted on a two-dimensional diagram. Below a diagram representing preferred double initials is shown.

sondis (C_1,C_2)

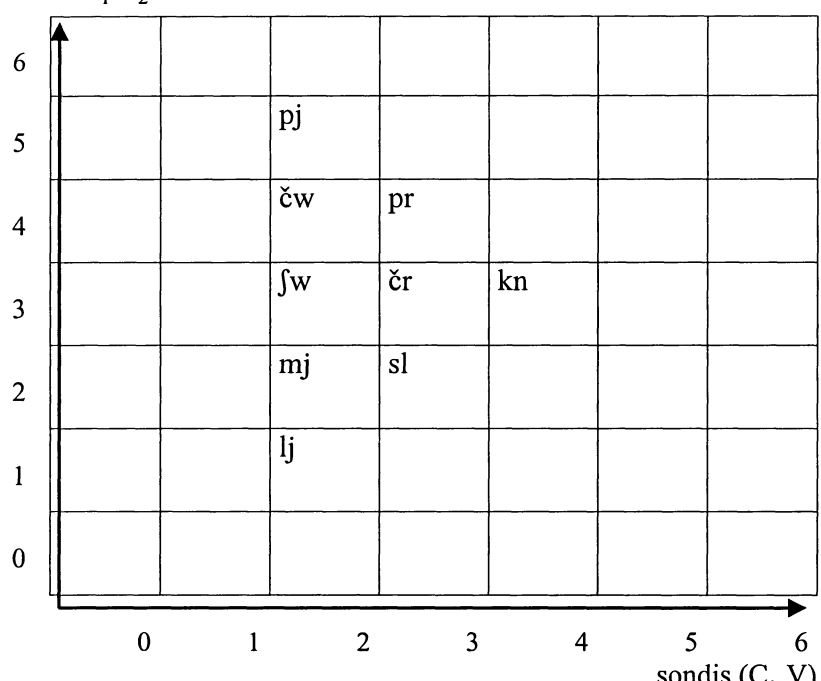

Figure 1. Cluster space of initial doubles.

There is neither space nor reason to present the whole model of the Beats-and-Binding phonotactics here (cf. Dziubalska-Kołaczyk 2001, in press). Still, the model will be used when evaluating the degree of markedness of clusters arising in phonostylistics and in diachrony.

2.2. Rise of marked clusters in phonostylistics

Casual style is a potential source of marked clusters. The application of casual speech processes, i.e. mainly speaker-friendly lenitions (especially massive vowel reductions), may lead to a temporary rise of "new" clusters which are marked with reference to the universal phonotactics. Some of them may potentially get socioculturally reinforced and become part of language-specific phonotactics.

In the examined data (cf. Madelska 1987), out of 3106 lexical word types, in the production of 27 types marked clusters were found, all but three word-initial. They arose via vowel reduction.

Table 1. "New" clusters resulting from vowel reduction

Double clusters (12)	nč ṇč ʒč ṃm ṣs ss (2) ṃv zdz zz ẓts ṇd
Triple clusters (9)	tlk tḷk pʃk fʃs ṃvj pʃn ssn pʃp ṣtd
Four-consonant clusters (4)	fʃsk pkʃw pʃʃw (2)
Five-consonant clusters (2)	fʃstk fʃsts
Triple medials (3)	rst (2) ččn

Table 2. Examples of words with "new" clusters

Rank no. (text freq.)	*word type in spelling*		*lexical form transcription*	*token phonostylistic transcription*
30.	znaczy	C	znači	nčɨ ṇčɨ
35.	tylko	C	tilkɔ	tlkɔ tḷkɔ
61.	wszystko	C	fʃɨstkɔ	fʃskɔ fʃstkɔ
84.	przykład	C	pʃikwat	pʃkat pʃkwat
118.	wszyscy	C	fʃɨstsɨ	fʃsɨ fʃstsɨ
188.	rzeczywiście	C	ʒɛčivi̯ɕtɕɛ	ʒči-
204.	mimo	C	mimɔ	ṃmɔ
271.	mówię	C	muvjɛ̃	ṃvjɛ
360.	swoim	C,H	sfɔjim	ṣsɔim
464.	przynajmniej	C	pʃinajmɲɛj	pʃna-

Summing up, all "new" initial clusters produced in the corpus were universally marked. Thus, phonostylistic variation of casual speech shows as a potential source of marked clusters.

Another process standing out in the inspected corpus of Polish casual speech is that of smoothing of an intervocalic consonant which produces a vowel hiatus with the first vowel stressed. The transition between the two vowels remains rather smooth (slightly gliding), still the weakening or deletion of an intervocalic consonant leads to the distortion of a CVCV structure, and as such produces a marked effect (with respect to the CV preference). In the corpus of 3106 word types, 177 underwent the process and thus demonstrated the hiatus.

Table 3. Examples of "new" hiatuses (first ten cases)

Rank no. (text freq.)	*word type in spelling*	
46.	teraz	H
55.	potem	H
69.	miałam	H
77.	dużo	H
79.	domu	H
106.	takiego	H
110.	człowiek	H
142.	trzeba	H
144.	wydaje	H
153.	mama	H

2.3. Converging (?) evidence from diachrony

Casual speech vowel reductions leading to the formation of new clusters or at least to the rise of syllabic consonants as observed in the Polish data remind one of the diachronic emergence of syllabic liquids /r̩l̩/ in some other Slavic languages (Czech, Slovak, Serbo-Croatian, Slovene; cf. e.g. Czech and Slovak *prst* 'finger', *vlk* 'wolf'). Thus, their potential source could be a similar casual speech process, producing marked structures in terms of the CV preference and the general figure-and-ground principle. In other words, the resulting structures are functionally much less effective for the listener; however, they result from the speaker-friendly preference for ease of articulation. In casual speech the speaker is the winner, and therefore a conflict between speaker-friendly and listener-friendly preferences is resolved to the benefit of the speaker, even if the arising structure is marked.

Another diachronic example of a weak vowel reduction was the disappearance of weak yers in the early history of Polish (still in the pre-written period). As a result, consonant clusters came into being, e.g. *łba*, *psa*, *sjem* (later *sejm*), *bochnek* (later *bochenek*), *szmer*, *Łoktek* (later *Łokietek*), *msza*[4] (cf. Walczak 1999: 37ff). All the word-initial clusters mentioned here are marked initials (with reference to the universal phonotactic preferences); the medial ones are good medials. A casual speech vowel reduction in the discussed corpus also produced marked initials and unmarked medials. In the time of the above changes, Polish had free movable stress, i.e. typologically it could be classified as a stress-timed language.[5] Vowel reductions are typical of stress-timed languages, triggered especially by the casual style and fed into the formal style. Consonant clusters are a predictable outcome; since they are not aims in themselves, but a side-effect of another process, they are predictably relatively marked.

Vowel contraction in sequences with an intervocalic /j/ may serve as an example confirming such a simplification tendency, typical of casual speech. The forms /VjV/ changed from Proto-Slavic via Slavic to Polish as in the following example: **mlod*/aja/ → młod/ā/ → *młod*/a/. Therefore, in Polish, *graje* → *gra*, *umieje* → *umie*, *rozumieje* → *rozumie*.

The last example shows a case of univerbation as part of grammaticalization in Polish whereby an arising marked cluster was repaired already in an intermediate form: *był jeśmi* → *byłeśmi* → *byłemi*.

3. Markedness in morphology

For the rise of markedness in morphology we bring evidence from verb inflection in Standard Italian and in Italo-Romance dialects. Following Dressler – Thornton (1991), we assume that all Italian verbs should be arranged into two macroclasses. The first macroclass[6] (infinitive type *amare* 'to love') is the really productive and homogeneous one and represents the default, unmarked macroclass. The second macroclass (infinitive type *temere* 'to fear', *credere* 'to believe', *finire* 'to finish') is not homogeneous and constitutes the marked macroclass. Here marked-

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4 Some of those clusters later on (in Old Polish) underwent simplification, e.g. *czsokoli* → *cokoli* (cf. Walczak 1999: 85).

5 In Old Polish stress shifted to the initial vowel of a word, while at the turn of Old and Middle Polish – to the penultimate position (cf. Walczak 1999: 79ff).

6 With the exception of the isolated paradigms *dare* 'to give', *stare* 'to stay', *andare* 'to go', *fare* 'to do'.

ness refers to the third subtheory of language-specific system adequacy, as pioneered for morphology by Wurzel (1984). A macroclass is hierarchically built up from microclasses according to a building-block model of complexity theory.

The first case we are going to present is the expansion of the present indicative and subjunctive 1st plural marker *-iamo* in Standard Italian. This suffix replaced the earlier and etymologically expected markers *-amo*, *-emo*, *-imo*, such as in, e.g. *am-a-mo*, *cred-e-mo*, *fin-i-mo*, still present in some Italian dialects.

The source of the suffix *-iamo* is Latin *-eamus* or *-iamus*, that is, the Present Subjunctive 1st plural ending of verbs like *timere* 'to fear', *credere* 'to believe', *finire* 'to finish'.

Table 4. Italian 1st plural present

	1st macroclass	**2nd macroclass**		
	amare 'to love'	temere 'to fear'	credere 'to believe'	finire 'to finish'
Latin Indicative	*amamus*	*timemus*	*credimus*	*finimus*
Latin Subjunctive	*amemus*	*timeamus*	*credamus*	*finiamus*
Old. It. Ind.	*amamo*	*tememo*	*credemo*	*finimo*
Old. It. Subj.	*amemo*	*temiamo*	*crediamo*	*finiamo*
13th C Flor. Ind.	*amiamo*	*tememo*	*credemo*	*finimo*
13th C Flor. Subj.	*amiamo*	*temiamo*	*crediamo*	*finiamo*
Mod. St. It. Ind.	*amiamo*	*temiamo*	*crediamo*	*finiamo*
Mod. St. It. Subj.	*amiamo*	*temiamo*	*crediamo*	*finiamo*

Three successive stages of the spread of the suffix *-iamo* can be differentiated (see Table 4):

Stage 1: Old Florentine texts (approximately 12th-13th C) attest the expansion of the 2nd macroclass present subjunctive 1st and 2nd plural endings *-iamo*, *-iate* to the 1st macroclass present subjunctive, as in, e.g. *temiamo*, *dormiamo* and *amiamo* (cf. Castellani 1952). Note that the etymological first macroclass present subjunctive 1st plural *amemo* looked like the second macroclass indicative 1st plural *tememo*; hence a distinction between indicative and subjunctive was called for. Thus *-iamo* became a superstable marker, that is, a marker that holds for all verb classes in the subjunctive. This generalization represents an optimization on the universal naturalness parameter of biuniqueness. The differentiation of 1st plurals according to the thematic vowels still holds in the unmarked indicative, though. Thus we have in the indicative *amamo* "we

love", *tememo* "we fear", *finimo* "we finish". The neutralization in the marked category subjunctive finds a parallel in the neutralization of all three persons in the singular.

Note that any homophony between indicative and subjunctive is avoided in all other persons, e.g. in Standard Italian pres. ind. 1st sg. *amo*, *credo*, 2nd sg *am-/cred-i*, 3rd sg. *ama*, *crede* vs. pres. subj. 1st-3rd sg. *am-i*, *cred-a*; pres. ind. 2nd pl. *amate*, *credete* vs. pres. subj. 2nd pl. *am-/cred-iate*, pres. ind. 3rd pl. *amano*, *credono* vs. pres. subj. 3rd pl. *amino*, *credano*.

Stage 2: The 1st plural ending *-iamo* spread to the present indicative of the first macroclass verbs, e.g. *amiamo* vs. *tememo* and *finimo*.[7] This extension seems to contradict biuniqueness and the tendency to replace marked with unmarked forms, for *-iamo* extended from a marked category of the marked second macroclass to an unmarked category of the unmarked first macroclass. However, the Latin subjunctive functioned both as subjunctive and as hortative in the 1st plural. Thus, we can explain the expansion of *-iamo* from the marked subjunctive into the unmarked indicative as a case of markedness reversal in early child speech. Often the first occurrences of 1st plurals appear as hortative in early child speech (cf. Makovec-Černe – Dressler 1997). Thus we can assume that the subjunctive 1st plural with hortative function was acquired and used before the indicative 1st plural and that the dominant hortative form was extended to all occurrences of 1st plural.

Stage 3: The indicative ending *-iamo* expanded from the productive first macroclass to the unproductive second macroclass.[8] Thus, it became a superstable marker both in the indicative and in the subjunctive. Such a process both corresponds to and contrasts with the universal naturalness parameter of biuniqueness: on the one hand there is just one marker of 1st plural in the present tense (without class or mood differentiation; for the

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7 Early Italian texts attest the following pairs in 13th century Italian: pres. ind. 1st pl. *dicemo* 'we say', *difendemo* 'we defend', *attendemo* 'we wait for' vs. pres. subj. 1st pl. *diciamo*, *difendiamo*, *attendiamo* (cf. Alinei 1968).

8 Note that in the pres. ind. of the second macroclass the ending *-iamo* has been used for a long time together with the endings *-emo* and *-imo* in free variation, as attested in Old Florentine texts, such as the 14th century *Lettere e istruzione della prima metà del secolo XIV dettate dai Cancellieri [di Firenze] in lingua volgare* (1350), where the pres. Ind. 1st plurals *vedemo*, *ricevemo* 'we see, receive' (inf. *vedere*, *ricevere*) and *rispondiamo* 'we answer' (inf. *rispondere*) are in the same paragraph! Many Old Florentine texts attest that the 1st plurals in *-iamo*, *-emo*, *-imo* cohabited in free variation up to the 16th century.

other tenses cf. superstable Fut. *-(re)mo*, Impf. *-(va)mo*, Passato Remoto *-(V)mmo*), on the other hand the distinction of indicative and subjunctive in the 1st plural is neutralised. This is a unique phenomenon in Standard Italian verb inflection.

Dialectal data support our analysis:

- In Southern and Central Ligurian, Western Lombard, Old Veneto, Sicilian Gallo-Italian and in the Latium dialects of Velletri, Nemi and Cervara, we find the superstable ending *-emo* in the indicative (cf. Forner 1997, Savoia 1997, Lurati 1988, Rohlfs 1968). These dialects have lost the subjunctive. Since in no dialect the indicative 1st plural *-emo* of *temere*, *credere* has expanded at the expense of *-amo* and *-imo*, the source of the superstable 1st plural indicative *-emo* must be the old hortative of the 1st macroclass (type *amare*, indicative *amamo*, subjunctive *amemo*). This supports our analysis of the expansion of *-iamo* to the indicative of the first macroclass in stage 2 and of its further extension to the second macroclass in stage 3.
- In Southern Latium and Bolognese dialects we find the superstable 1st plural marker *-amo* in the indicative (in the precise forms *-amə* and *-am*, [an], respectively; cf. Foresti 1988, Hajek 1997, Rohlfs 1968, Jaberg – Jud 1928-1940). The expansion of *-amo* from the first macroclass to the second macroclass supports our analysis of the spread of *-iamo* from the first productive macroclass to the second macroclass in stage 3.

The extension of *-iamo* is a part of a general typological shift from the strong inflecting language Latin to the weak inflecting language Italian: the increase of superstable markers brings about a decrease of class differentiation.

We assume (cf. Dressler 1997) that the unmarked core of morphology consists in its productive patterns, i.e. productive categories, rules and classes. Therefore the first macroclass type *amare* may be regarded as the unmarked core of both Latin and Italian verb inflection (cf. Dressler 1999). This notion of Natural Morphology, at first sight, can be reconciled with the psycholinguistic dual mechanism model. According to this model (cf. Clahsen et al. 1992, Clahsen 1999, Pinker – Prince 1994), Italian verbs are arranged into "regular" verbs, i.e. the default, productive first macroclass, and "irregular" ones, i.e. the non-default, unproductive second macroclass, whereas the so called regular verbs are handled by rules, so called irregular verbs are simply stored in the mental lexicon as such and not subject to rules, that is, all inflectional forms of

amare are generated by rules, all inflectional forms of *temere*, *credere*, *finire* are stored and accessed via lexical look-up.

One diachronic process which operates on stored morphological forms is surface analogy (cf. Motsch 1981). Therefore, surface analogy phenomena are claimed to be possible only for stored morphology, i.e., only in the second macroclass of Italian verbs and of their Latin antecedents. However, some noteworthy phenomena exist in Italo-Romance dialects that cast doubt on this dual mechanism model of the Italian mental lexicon.

For example, the dual mechanism account for Italian verb inflection is challenged by the expansion of absolute past markers *-edi* and *-etti* in Italo-Romance dialects (cf. Väänänen 1982, Vineis 1974, Rohlfs 1968, Pasquarelli Clivio 1994, Magni 1997)

Latin Perfect forms such as 1. sg. *amavi* (from *amare*), *finivi* (from *finire*) yielded the Italian "weak" absolute past forms *amai* 'I loved', *finii* 'I finished'. In contrast, the irregular Latin verb *dare*, 1st singular indicative present *do*, perfect *dedi* yielded Italian *dare* 'to give', indicative present *do* and Standard Italian absolute past *diedi*, archaic and dialectal *dedi*. Now, in various Italo-Romance dialects this pattern was analogically extended from *diedi/dedi* and even a suffix *-iedi/-edi* was extracted. Again, we can differentiate three or even four successive stages

Stage 1: In the first stage, *diedi* was extended to compounds and prefixations of *dare* (which had a different perfect in Classical Latin) and even to non-cognate, phonologically similar verbs with root-final */-d/*. Note that already since the 1st century BC, and then particularly in Vulgar Latin, perfect forms are attested, such as, *descendidit* 'went down' (Q. Valerius Antias 1st century BC, according to Gellius, 6, 9, 17), *reddedit* 'gave back' (CIL V 6464), *perdedi* (CIL III 8847), *prendiderunt* 'they took' (Itala, Joh. 21, 3), *adcendederunt* 'they ignited' (Act. Arv., 240 A.C.), *respondidi* (Caper, Gramm. VII, 103, 7).[9] Italian dialectal attestations are: Old Italian,[10] Modern Tuscan, Umbrian and Northern Laziale *rendiede* 'gave back' (vs. Standard Italian *rese*, infinitive *rendere*), *vendiedi* and *vendedi* 'I sold'

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9 Further attestations are: *edidit* 'ate' (CIL III 13608), *impendidit* 'spent' (CIL VIII 21538), *prandiderunt* 'they lunched' (Itala, Joh. 21, 15; cf. *prandidi* in Appendix Probi, IV, 184, 18-21 (6th C BC) and *prandiderint* in Peregrinatio Aetheriae, 27, 9 (4th C BC)), cf. Väänänen (1982: 247).

10 The absolute past 1st singular form *rendiedi* 'I gave back' is attested in 14th century Tuscan (cf. Negroni 1885).

(vs. Standard Italian *vend-e(tt)i*, infinitive *vendere*), *rispondiedi* 'I answered' (vs. Standard Italian *risposi*, infinitive *rispondere*).

Table 5. Extension of *-edi*: First Stage

	Classical Latin	Late Latin	Ital. dialects
Lat. *reddere*, pr. ind. 1. sg. *reddo* > It. *rendere*, pr. ind. *rendo*	*reddidit* 'gave back'	*reddedit*	*rendiede*
Lat. *vendere*, pr. ind. 1. sg. *vendo* > It. *vendere*, pr. ind. *vendo*	*vendidi* 'I sold'	*vendedi*	*vendiedi*
Lat. *perdere*, pr. ind. 1. sg. *perdo* > It. *perdere*, pr. ind. *perdo*	*perdidi* 'I lost'	*perdedi*	*perdiedi*
Lat. *prehendere*, pr. ind. 1. sg. *prehendo* > It. *prendere*, pr. ind. *prendo*	*prehendi* 'I took'	*prendidi/ prendedi*	*prendiedi*
Lat. *respondere*, pr. ind. 1. Sg. *respondeo* > It. *rispondere*, pr. ind. *rispondo*	*respondi* 'I answered'	*respondidi/ respondedi*	*rispondiedi*
Lat. *adcendere*, pr. ind. 1. Sg. *adcendo* > It. *accendere*, pr. ind. *accendo*	*adcenderunt* 'they ignited'	*adcendederunt*	*accendiedero*

Stage 2: The second stage of expansion concerned other 2nd macroclass verbs with roots ending in unvoiced dental, e.g. Pisano, Pistoiese, Elbano *mettiede* 'he/she put', *battiedi* 'I beat PAST', *potiedi* 'I was able', *partiede* 'he/she left', *sentiedi* 'I heard' (infinitives *mett-ere*, *batt-ere*, *pot-ere*, *part-ire*, *sent-ire*; cf. Jaberg – Jud 1928-1940, Rohlfs 1968, Giannelli 1976). This is a phonologically based extension from voiced dental to all dental stops. Such a phase is anticipated in Late Latin texts as well, e.g. perfect subjunctive *battederit* (Lex Salica 35, 4 cod. 5).

Stage 3: In the third stage, the suffix *-iedi/-edi* expanded to the verb *stare*, yielding the Tuscan and Umbrian absolute past form *stiedi*.

The Italian rhyme-verbs *dare* 'to give' and *stare* 'to stay' form a 'short verb family'. According to our model of stored morphology in Pöchtrager et alii (1998), "a family of paradigms is a looser group of paradigms than any type of (paradigm) class". With the term paradigm family we refer to the Wittgensteinian notion of family resemblances and to surface morphological generalizations such as rhymes and other phonologically based similarities.

All the above described processes are compatible with the dual mechanism account of Italo-Romance verb inflection, because they affect

the unproductive second macroclass or unproductive isolated paradigms of the first macroclass.

Stage 4: Yet, in some Corsican dialects we find a fourth stage: here *-edi* expanded through surface analogy to the productive first macroclass verbs as well (cf. Rohlfs 1968, Melillo 1977), as in, e.g. inf. *purtà*, absolute past *purtèdi* 'I brought' (vs. Standard Italian *portare*, *portai*), inf. *vultà*, absolute past *vultèdunu* 'they turned' (vs. Standard Italian *voltare*, *voltarono*), inf. *marità*, absolute past *si maritède* 'he/she got married' (vs. Standard Italian *maritarsi*), inf. *calà*, absolute past *calèdunu* 'they let down' (vs. Standard Italian *calare*, *calarono*), inf. *cumprà*, absolute past *cumprèdi* 'I bought' (vs. Standard Italian *comprare*, *comprai*), inf. *chiamà*, absolute past *chiamède* 'he/she called' (vs. Standard Italian *chiamare*, *chiamò*).

The generalization of *-edi* introduced a marked stored element into the productive and homogeneous first macroclass absolute past, and even neutralized the class distinctions via the thematic vowels /-a-/ vs. /-e-/. However, such a process is natural on the universal parameter of biuniqueness by following the system-independent naturalness preference for uniformity of exponence. Moreover this change introduced a more salient perfect ending.

Whereas this analogical extension challenges the generative dual mechanism model of Pinker (1994), Clahsen (1999) and their research associates, it is compatible with the psycholinguistic competition and race models of Frauenfelder – Schreuder (1992). Such models have been also used within Natural Morphology (cf. Dressler et al. 2001). According to such models, there is an overlap of, and a competition between, rule mechanism and storage. On the one hand, frequently used forms of productive patterns are also stored: thus, the perfect pattern *d/stiedi* extended to dental-final roots of the first macroclass, e.g. *purt-à*. On the other hand, speakers may extract abstract rule patterns from frequent and homogeneous stored patterns. Thus, speakers of Corsican extracted a suffix *-edi/-e* from verbs with dental final roots and used it productively even within the first productive macroclass.

A parallel to the *-edi/-iedi* generalization is represented by the extension of the rival pattern *-etti*. The Proto-Romance perfect form **stetwi* (from the verb *stare*, ind. pres. 1st sg. *sto*) yielded Italo-Romance *stetti*, a pattern that was extended as well (cf. Magni 1997, Rohlfs 1968, Pasquarelli Clivio 1994).

Stage 1: In a first stage, the pattern extended to the phonologically most similar rhyme-word *dare* (short verb, dental onset), thus yielding the Italian absolute past by-form *detti*;

Stage 2: In a second stage, it extended to second-macroclass verbs ending in dental, such as *credetti* 'I believed' (inf. *credere*), *perdetti* 'I lost' (absolute past by-form *persi*, inf. *perdere*), Old Italian and dialectal *rendetti* (vs. Standard Italian *resi*, inf. *rendere*), and so on;

Stage 3: In a third, still later stage, *-etti* expanded to other second macroclass verbs whose root did not end in dental, both in Standard Italian and, even more widely, in many Italian dialects (cf. Radtke 1988, Rohlfs 1968, Foresti 1988, Pasquarelli Clivio 1994), e.g. Standard Italian and dialectal *ricevetti* 'I received' (inf. *ricevere*), Old Italian and dialectal *tacetti* 'I was silent' and *tenetti* 'I kept' (respectively vs. Standard Italian *tacqui*, inf. *tacere* and *tenni*, inf. *Tenere*);

Stage 4: In a fourth, still later stage, *-etti* spread to the dental-final root of the suppletive paradigm *and-are* 'to go', as in, e.g. Tuscan *andetti*, Umbrian and Northern Laziale *annètte* (vs. Standard Italian 1st sg. *andai*, 3rd sg. *andò*; cf. Jaberg-Jud 1928-1940, Giannelli 1976, Rohlfs 1968).

Again, all the above quoted data and processes still fit to the dual mechanism account of Italo-Romance verb inflection.

Stage 5: However, when we look at other dialect data (cf. Giammarco 1979, Marinucci 1988, Rohlfs 1968, Jaberg-Jud 1928-1940, Pasquarelli Clivio 1994, Foresti 1988), we find that the spread of the Absolute Past form *-etti* involved the first macroclass as well, as in e.g. Old Umbrian (Cassio da Narni, 16th C) *guardètte* 'he watched', inf. *guardà* (vs. Standard Italian *guardò*, *guardare*), or Modern Umbrian (Todi) *magnètte* 'he/she ate', inf. *magnà* (vs. Standard Italian *mangiò*, *mangiare*), *lavétti* 'I washed', inf. *lavà* (vs. Standard Italian *lavai*, *lavare*), or Modern Western Abruzzese *fermétta* 'I/he stopped', inf. *fermà* (vs. Standard Italian *fermai /fermò*, *fermare*), *parlétta* 'I/ he talked', inf. *parlà* (vs. Standard Italian *parlai/parlò*, *parlare*), *truvétta* 'I/he found', inf. *truvà* (vs. Standard Italian *trovai/trovò*, *trovare*), *cumbrétta* 'I/he bought', infinitive *cumbrà* (vs. Standard Italian *comprai/comprò*, *comprare*), or in Northern Laziale (Grotte di Castro) *cerchétti* 'I looked for', infinitive *cercà* (vs. Standard Italian *cercai*, *cercare*), *diventètte* 'he became', infinitive *diventà* (vs. Standard Italian *diventò*, *diventare*), Marchigiano (Petritoli and Monterubbiano) *pensétti* 'I thought', infinitive *pensà* (vs. Standard Italian *pensai*, *pensare*), *cominciétte* 'he began', infinitive *comincià* (vs. Standard Italian *cominciò*, *cominciare*).

Thus, here again, we find first surface analogical extensions and then productive rule extraction.

Our analysis of the expansion of *-edi* and *-etti* are further supported by those dialects where *-edi* and *-etti* endings coexist in free variation (in the following we abstract from the precise phonological realisation of the types *-iedi* and *-etti*). We find free variation between

diedi	*detti* (inf. *dare*, ind. pr. 1st sg. *do*) *detti* (inf. *dare*, ind. pr. 1st sg. *Do*)
stiedi	*stetti* (inf. *stare*, ind. pr. 1st sg. *Sto*)
andiedi	*andetti* (inf. *andare*, ind. pr. 1st sg. *vo*)

in Tuscan, Umbrian and Northern Latium dialects of Arezzo, Firenze, Pisa, Lucca, Pistoia, Stia, Greve in Chianti, Barberino del Mugello, Elba, Acquapendente, Perugia, Marsciano, Castagneto Carducci, Chiusdino, Gavorrano, Sinalunga, Montefollonico, Tarquinia (cf. Giannelli 1976, 1988, Jaberg-Jud 1928-1940, Rohlfs 1968). The variant *andiedi* is missing in the dialects of Chiavaretto, Montefiascone and Cerveteri. Up to the 19th century the dialect of Lucca had all the three variable pairs plus the *-etti* forms (cf. Pieri 1890-1892):

fetti (inf. *fare* 'to do', ind. pr. 1st sg. *Fo*)

etti (inf. *avere* 'to have', ind. pr. 1st sg. *ho*)

The Tuscan dialect of Santa Fiora (Amiata Mount) has all the three variable pairs in *-etti* plus the following ones (cf. Rohlfs 1968):

fetti (inf. *fare* 'to do', ind. pr. 1st sg. *Fo*)

etti (inf. *avere* 'to have', ind. pr. 1st sg. *Ho*)

setti (inf. *essere* 'to be', ind. pr. 1st sg. *so*)

These distributions confirm both the relevance of the paradigm family of rhyming short verbs, (cf. the above mentioned third stage of *-edi* expansion and of the first and fourth stage of the *-etti* extension) and the limitation of *-iedi* to dental final verb roots (with the much later exception of Corsican).

4. Morphological vs. phonological markedness

In the previous examples we have had cases of markedness conflicts between various parameters of universal naturalness within the same component or module. We have discussed phenomena which are unmarked on one parameter, but marked on others, either within phonology or morphology. Much more work has been done on markedness conflicts be-

tween parameters of different components, especially between phonology and morphology (e.g. Dressler 1985, Wurzel 1980, Singh 1994). Thus we do not want to go into the often treated diachronic mechanisms of morphologisation of phonological rules, conflicts which introduce marked phonological and morphonological phenomena to the benefit of an unmarked solution on some morphological parameter.

Instead we want to briefly discuss examples from our respective languages, where the universal morphological parameter of morphotactic transparency interacts with universal phonological parameters.

The first example comes from Austrian and Swiss German dialects where the definite plural and feminine singular article *die* has undergone a phonological shortening to *d'* (cf. Dressler 1984b, Suter 1992): this represents a natural phonological weakening process (lenition) which tends to be maximised in unstressed function words. This process, however, results within the phonological word of a definite noun phrase in difficult marked consonant clusters. As a phonological repair strategy (as some phonologists, such as Singh 1987, would say), further natural phonological processes of fusion reduce phonological markedness. Table 6 gives a simplified overview, where the nouns are given in its Standard German shape:

Table 6. Effects of G. *die* > dialectal *d'* 'the' (Pl./fem.Sg.)

d' Sau	[ts]au	'the sow'
d' Frau	[pf]rau	'the woman'
d' Blume(-n)	[b:]lume(-n)	'the flower(-s)'
d' Männ-er	[m:]änn-er	'the men'

Although the affricates [ts] and particularly [pf] and word-initial geminate consonants are phonologically marked phenomena, they are less marked phonologically than the input clusters to the left of the table. But this decrease of phonological markedness is outweighed by an increase in morphological opacity, i.e. a greater difficulty to identify the definite article and the word-onset of the noun. This means introduction of markedness on the morphological parameter of morphotactic transparency.

The second set of examples for a markedness conflict between phonology and morphology comes from Italian. Due to a natural phonological rule, the final vowel *-a* of the feminine definite article *la* is deleted before nouns with vocalic word-onset in Standard Italian, e.g. *la/una amica* > *l'/un'amica* 'the/a friend FEM' (cf. Dardano – Trifone 1985,

Serianni 1991). Yet this phonological rule is sometimes infringed in contemporary written Italian, notably in journalistic usage (Vanvolsem 1983, Mengaldo 1994, Dardano – Trifone 1985, Nencioni 1997). Here morphotactically transparent alternatives are preferred, such as *la amica*, *la urgenza* 'the urgency FEM' (Serianni 1989: 163), *la ossificazione* 'the ossification' (Stuart 1984: 133), *la Ale* 'the Alexandra' (cf. Coveri et al. 1998: 205). In the last example, the feminine gender of the proper name *Ale* is transparently expressed via the full article *la*, as the clipped form *Ale* can refer both to a feminine proper name, i.e. *Alessandra*, and to a masculine one, i.e. *Alessandro* (thus *l'Ale* is a clipping of masculine *l'Alessandro* only). In such examples the morphological principle of morphotactic transparency prevails over phonological naturalness, thus yielding outputs that are phonologically marked but morphologically unmarked.

Inhibition of the phonological vowel deletion rule is much more frequent with the indefinite article *una* than with the definite article *la*, e.g. *una ipotesi* 'a hypothesis FEM', *una amnistia* 'an amnesty FEM', *una ustione* 'a burn FEM', *una immagine* 'an image FEM' (Stuart 1984: 133).

This may be due to the greater salience of *uno*, *una* (with at least secondary stress on the first syllable). According to the "rich get richer principle" (cf. Dressler 1984a) the already more salient character of *una* gets reinforced by more morphotactic transparency within the noun phrase.

Note that morphotactic transparency is not restored in the masculine definite article, e.g. *l'amico* (**lo amico*) 'the friend MASC', *l'osso* 'the bone MASC', *l'istituto* 'the institute MASC', *l'uncino* 'the hook MASC'. What may be responsible for this difference? The full form of the masculine definite article is either *il* (default) or *lo*, which is used only before nouns with word-onset in *z*, *x*, *pn*, *ps*, *gn*, *sc*, *sb*, *sl*, *st*, *sg*, *sf*. Therefore, the definite article with vowel deletion *l'* marks only the masculine nouns beginning with a vowel in written Italian. The restitution of transparency via inhibiting antevocalic vowel deletion would result in restoring the special form *lo* and not the default form *il*.

An analogous case is the substitution of the older amalgams of preposition plus definite article *pel*, *pello*, *pella*, *pei*, *pegli*, *pelle* and *col*, *collo*, *colla*, *coi*, *cogli*, *colle* with, respectively, the morphotactically transparent *per il*, *per lo*, *per la*, *per i*, *per gli*, *per le*, *con il*, *con lo*, *con la*, *con i*, *con gli*, *con le* 'through/with the'. Whereas forms such as *per il*, *per i*, *per la* and so on are by far the most common in contemporary Standard Italian, the prepositional amalgams *col*, *coi* are still sometimes used as alternative to the morphotactically transparent correspondents *con il*, *con lo*, *con i*.

An apparent counterexample could be the prepositional amalgams *nel*, *nello*, *nella*, *negli*, *nei*, *nelle* 'in the', as they are never substituted with their morphotactically transparent correspondents *in lo*, *in il*, *in la*, *in gli*, *in i*, *in le* in contemporary Standard Italian. However, because of their great opacity, these prepositional amalgams are in all probability stored as such. Since the similarity between *nel* and *in* etc. is smaller than between *pel* and *per* etc., the *in-* amalgams are less accessible to analogical processes (for this principle cf. Schindler 1971).

These convergent optimizations of morphotactic transparency in contemporary written Standard Italian may be due to the increasing use of Standard Italian by ever greater parts of Italian society, which have very divergent dialectal backgrounds, which renders a very transparent *koiné* preferable.

Note also that the infringement of the phonological naturalness occurs more often in written Standard Italian, where phonological naturalness plays a much smaller role than in spoken Standard Italian.

A third example comes from the prehistory of Italian, i.e. the initial stages of the loss of word-final *-s* and *-m*: as shown in Dressler (1973), the loss of word-final *-s* and *-m* represents two two-step natural weakening processes which resulted in generalising the phonologically unmarked state of vowel-final phonological words. But originally, at least in the 3rd century BC it was a variable rule or, in terms of Natural Phonology, a casual speech process which was maximized in the casual styles of spoken language and of low-level funeral inscriptions, whereas it was the more inhibited the more formal the style (register) became (demonstrated by the study of different formality of styles in inscriptions and in Plautinian comedies). However, in the period of Golden Classical Latin Standard of the first century before and after Christ, these casual phonostylistic processes vanished nearly completely from written documents. The reason is twofold: 1) in a sociolinguistic perspective, this is a matter of puristic standardisation and reactionary sociocultural restoration, 2) in a grammatical perspective, the loss of final *-s* and *-m* opacified the expression of important case endings such as Nom. and Gen.Sg., Nom., Acc., Dat. and Abl.Pl. in *-s*, Acc.Sg. and Gen.Pl. in *-m*. Increased inhibition of the opacifying phonological processes meant restoration of morphotactic transparency. Thus, similar to the previous Italian examples, markedness shifted back from morphological to phonological markedness for a while, presumably until the great morphosyntactic shifts from Latin to Proto-Romance took place.

Another example of the interplay between morphological and phonological parameters of naturalness comes from Polish.

- Consonant-final prefixes and *w-* and *z-* prefixes added to verbs trigger an epenthetic vowel when a verb begins with a consonant cluster, e.g. *wbiec* vs. *wętknąć* (cf. *wtykać*), *zdać* vs. *zębrać* (cf. *zbierać*). In the case when the verb begins with respectively the same consonant (i.e. *w-* or *z-*), the resulting complex word begins with a geminate, e.g. *wwieść*, *zsypać*.

- Consonant-final prepositions and *w-* and *z-* prepositions preceding nouns generally do not require an epenthetic vowel before a cluster, thus *w biegu* and *w tkaniu*, *z Danią* and *z bronią*. However, when the noun begins with the same consonant, i.e. respectively, *w-* or *z-*, followed by another consonant in a cluster, an epenthetic vowel is triggered, e.g. *we Wrocławiu*, *ze złotem*. In the context of a noun-initial single *w-* or *z-*, geminates result, as in the case of the prefixes, e.g. *w Warszawie*, *z sobą*.

Both multiple initial clusters and initial geminates resulting from the above morphological operations are phonologically marked; geminates, however, are relatively more marked than clusters in this position (cf. the universal phonotactic preferences). Still, geminates seem to be tolerated better than clusters, although in the case of prepositions, clusters are also tolerated (with the exception of those triples which would start with a geminate, if it weren't for the epenthesis, as in *we Wrocławiu*). Interestingly, geminates are also worse from the point of view of morphology, since the boundary between a prefix or preposition and a base word following it is blurred in them. This results in the decrease of morphotactic transparency. The geminate-initial structures are thus relatively marked both in phonology and morphology. Now what happens in the pronunciation of many Poles in the case of the second operation (i.e. in preposition+noun structures) is that they epenthesize a vowel in *we Warszawie*, *ze sobą*. This variation shows that markedness is not tolerated by everybody and that the structure is marked, in the first place. It is marked on the parameter referring to biuniqueness, since the allomorphy *w-/we-*, *z-/ze-* conflicts with the principle of biuniqueness (and distorts uniformity). Interestingly, prefixed structures are not "corrected" (on the one hand, *wwieść* must be kept different from *wywieść*, still **wewieść* could be used, in analogy to *we Warszawie*, but is not). Thus, markedness is tolerated better across a word-internal morphological boundary than across a clitic boundary, although both structures are phonological words. This is because the transparency of clitic words (and word boundaries) is more important than the transparency of affixes (and affix boundaries). It

also points to the priority of morphological naturalness over phonological naturalness, in accordance with the predictions of natural linguistics.

5. Marked options in acquisition

An important domain for the study of the rise of markedness is diachronic change which originates in scenarios of early phases of language acquisition (cf. Dressler 1997a). The first phenomenon that we are going to expound is morphological hypercharacterisation. This phenomenon consists in the reenforcement of a morphological marker by a synonymous (or even (paen)identical) second marker, exemplified by colloquial Spanish plurals such as:

(3) pie-s-es 'feet', café-s-es 'coffee-s' (Malkiel 1957: 79, 98f)

Morphological hypercharacterisation is a marked phenomenon insofar as there is double exponency of the plural and thus a violation of biuniqueness. In this case, the motivation of hypercharacterisation is of a prosodic nature: normally, the Spanish plural suffix *-s* is preceded by an unstressed vowel *-o*, *-a* or *-e*, as in:

(4) pez 'fish', Pl. pec-es, pared 'wall', Pl. pared-es

Therefore the second, hypercharacteristic *-s* with automatic insertion of /e/ restores prosodic normalcy.

The same holds for the Old Latin 3.Pl.Pres. *da-n-unt*, byform of Classical *da-nt* 'they give', cf. *am-a-nt*, *cred-unt* 'they love/believe'.

In the diachronic changes

(5) Lat. es-se 'to be' > It. esse-re, Fr. être; E. Pl. child-er > child-r-en

we find another motivation: the "hypercharacteristic" final suffix was at the time of its addition a productive morphological marker, whereas the preceding marker for the same category had become unproductive. Thus the first suffix is, at best, a minor marker, whereas the second marker is the main, and soon the only recurrent and thus identifiable marker.

Such hypercharacterization is well attested in an intermediary stage of first language acquisition (cf. MacWhinney 1985: 1102, 1126), e.g. in English-learning children's plural *feet-s* (directly comparable with German adult *Füß-e*), cf. for Austrian German children:

(6) Auto-s-en, Erbs-i-s-en, Ball-i-s-en
adult: Auto-s, Erbs-e-n (dim. Erbs-i-s), Bäll-e (dim. Ball-i-s)
'car-s, pea-s, ball-s'

These hypercharacteristic markings occur in an acquisition phase where *-(e)n* plurals have become productive, whereas *-s* plurals not yet (cf. Vollmann et al. 1997).

Thus if we look closer at morphological hypercharacterisation, then we can say that it is an imprecise concept that is only justified in a very superficial morphotactic or panchronic perspective. In a more precise synchronic analysis, in all cases shown, the socalled "hypercharacteristic" second marker is in fact the only "characteristic marker" in the sense of productivity and generality. The preceding first marker is an unproductive or otherwise exceptional marker and thus difficult to identify in parsing. Therefore double exponency and thus morphological markedness is only apparent. The addition of the "hypercharacteristic" marker is a natural, thus unmarked, replacement of an unproductive or exceptional marker by the corresponding productive and/or general marker. In a diachronic perspective we find here a shift of the functional load from the first to the second marker and a compensating counteraction against phonetic attrition, i.e. phonological shortening of word shapes.

How are other marked morphological options acquired? Let us take the example of German strong verbs, which represent the marked, non-default macroclass in contrast to weak verbs which form the unmarked, default macroclass. What we were able to study best, is past participle formation. Their properties are, similar to English: the constitutive property of using the suffix *-(e)n* instead of *-(e)t*; the typical property of several microclasses to have an ablaut (apophony) in the participles, e.g.:

(7) Inf. reit-en 'to ride', strong PP ge-ritt-en vs. Inf. leit-en 'to lead', weak PP ge-leit-et.

Austrian (like German) children acquire their first PPs as rote-learnt, i.e. entire stored forms without morphological analysis. Then they extract and acquire the transparent and productive pattern of weak verb PP formation and overgeneralise it to weak verbs (cf. Vollmann et al. 1997), such as:

(8) ge-wasch-t ← ge-wasch-en 'wash-ed', ge-geb-t ← ge-geb-en 'giv-en'

But soon they also identify and overgeneralise the allomorphic suffix *-(e)n*, as in:

(9) ge-bohr-en ← ge-bohr-t 'drill-ed'

However they do not yet acquire ablaut alternation (cf. Lindner 1998) and thus eliminate ablaut, as in:

(10) ge-schneid-en ← ge-schnitt-en, Inf. schneid-en 'to cut'

Only later they acquire the minor rules of ablaut alternation in German strong verb microclasses. What can we conclude from this order of acquisition?

- Marked options are acquired after unmarked options, i.e. productive *-(e)t* before unproductive *-(e)n* and transparent lack of ablaut before opaque and modificatory ablaut.
- As morphology, during the acquisition process, gets richer and more complex, children are induced to extract generalisations from the increasing stock of rote-learnt forms, e.g. from the alternations in

	Inf.	PP
'to ride'	reit-en	ge-ritt-en
'to quarrel'	streit-en	ge-stritt-en
'to cut'	schneid-en	ge-schnitt-en
'to suffer'	leid-en	ge-litt-en

they induce the generalisation Pres. *-ei-* vs. PP *-i-*, accompanied by consonant modification, i.e. unvoicing of voiced dentals. In other words, in order to make any morphological sense of lexically stored parallel forms, they must reconstruct marked morphological rules.

6. Conclusion

This last example leads us directly to the general source of markedness: the dynamics of complexity. Whenever a linguistic subsystem becomes more complex, the introduction of markedness is necessarily involved. This is unavoidable both in language acquisition and in interactions between different linguistic subsystems. This is the case in conflicts between phonology and morphology, in conflicts between morphological principles of different inflectional classes and in conflicts between different phonological registers.

Sources of markedness can be conceived of either in an evolutionary or in a diachronic perspective. While refraining from speculations about the phylogenesis of markedness within the necessary increase of complexity in the evolution of language, we want to stress that the diachronic perspective can be best understood in relating it to the "locus" of origin and spread of markedness. For this purpose we can use the concept of "scenario of language change", as proposed in Dressler

(1997a): the changes in Italian verb morphology (section 3 above) and the sources of morphological hypercharacterization (section 5) can be "localized" in the scenario of pre-school stages of children's language acquisition. Of course, hypercharacterization in learned vocabulary, such as E. *datum*, Pl. *data* > *datas* (→ new singular *data* via backformation) and ongoing change in G. *Lexikon*, Pl. *Lexika* > *Lexikas* (and still more negatively sanctioned, rarely pronounced, substandard Pl. *Lexikan*) originate much later in adolescent acquisition of Latinate morphology. The acquisition of marked strong verbs in Germanic languages, briefly mentioned in section 5, usually leads to diachronic decrease of markedness (i.e. replacement of strong-verb inflection by weak-verb inflection, rarely the other way round – in the case of rime-words, e.g. G. *preisen* 'to praise', weak preterite *preis-te* > strong preterite *pries*, after *weisen* 'to indicate', *wies*.

Such scenarios of change can also be located in pre-school acquisition, as well as the interactions between phonology and morphology (discussed in section 4) which lead to greater morphological opacity. Those interactions, however, which result in greater morphological opacity probably originate in adolescent and adult speech. Phonostylistic change (discussed in section 2) is a phenomenon of spread which may occur in several periods of the life-time of speakers. Finally, the textual development of titles (mentioned in section 1), is a phenomenon of adult learned creativity. Thus, sources of markedness are varied as much as the increase of complexity itself.

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