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Published on: 01 Jan 1997 - Folia Linguistica (De Gruyter)

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DOI: <https://doi.org/10.1515/flin.1997.31.3-4.331>

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ZORA URL: <https://doi.org/10.5167/uzh-91239>

Journal Article

Originally published at:

Schmid, Stephan (1997). The Naturalness Differential Hypothesis: Cross-linguistic Influence and Universal Preferences in Interlanguage Phonology and Morphology. *Folia Linguistica*, 31:331-348.

DOI: <https://doi.org/10.1515/flin.1997.31.3-4.331>

The Naturalness Differential Hypothesis: Cross-linguistic Influence and Universal Preferences in Interlanguage Phonology and Morphology*

Stephan Schmid

Abstract

The role of the mother tongue has been a major topic of second language acquisition research over the last few decades, but despite the overwhelming empirical evidence of cross-linguistic influence in learner language a number of questions still remain to be answered: what and how much is transferred when, how and why? This study explores the extent to which a theory of linguistic naturalness — the conceptual opposite of markedness, as formulated in Natural Phonology and Natural Morphology — might provide some insights into the issue of cross-linguistic influence. As an alternative to Eckman's (1977) 'Markedness Differential Hypothesis', a more detailed 'Naturalness Differential Hypothesis' is formulated in terms of phonological processes and morphological preferences. Unlike typological markedness, which may be regarded as a mere research tool, the notion of naturalness offers an explicit functional explanation of the observed learning difficulty, mainly in terms of ease of production and perception. Empirical support for these claims will be drawn from research on the spontaneous acquisition of Italian as a second language.

1. Introduction

The present study discusses the question of how cross-linguistic influence in second language acquisition (SLA) is constrained or favoured by universal preferences. The first part gives a brief survey of the various approaches to transfer adopted in the history of SLA research, paying particular attention to the 'Markedness Differential Hypothesis' (Eckman 1977). In the second part, I will restate this hypothesis in terms of linguistic naturalness, claiming that a 'Naturalness Differential Hypothesis' allows more specific predictions as to where transfer may occur. Ultimately, my purpose is to provide a unified theoretical framework for the explanation of cross-linguistic influence in interlanguage phonology and morphology.

The empirical evidence for this claim is drawn from an analysis of the Spanish-Italian interlanguages spoken in Switzerland. In the German-speaking part of this country, Italian is widely used as a 'lingua franca' among foreign workers of different origins, not only by Spaniards and Portuguese, but also by Greeks and Turks, who learn it at work or in the neighbourhood from Italian immigrants (or sometimes even from non-native speakers, like the Spanish-speaking learners we focus on).¹ The study is based on a cross-sectional analysis of the transcription of twelve conversational interviews.²

2. Cross-linguistic influence and the Markedness Differential Hypothesis

The role of the mother tongue has been a controversial issue in SLA theory since the times of the Contrastive Analysis Hypothesis (CAH). Two quotations from a classic reference book on contrastive linguistics may illustrate the underlying assumptions of this approach.

(1) The Contrastive Analysis Hypothesis

"(...) individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of their native language and culture to the foreign language and culture" (Lado 1957:2).

"(...) we can predict and describe the patterns that will cause difficulty in learning, and those that will not cause difficulty, by comparing systematically the language and culture to be learned with the native language and culture (...)" (Lado 1957, Preface).

As is well-known, the CAH was heavily criticised in the nineteen-seventies. The following is just an arbitrarily chosen statement from one of the many studies which all came to more or less the same conclusion.

(2) The Contrastive Analysis Hypothesis refuted

"Interference (...) plays such a small role in language learning performance that no contrastive analysis (...) could correlate highly with performance data (...)" (Whitman & Jackson 1972:40).

In the nineteen-eighties, however, cross-linguistic influence became a topic of great interest. Given the huge amount of empirical evidence, it is now widely accepted that interlanguages are influenced, at least to some degree, by the native languages of the learners (cf. Larsen-Freeman & Long 1991:96-107). Nevertheless, a number of questions still remain to be answered.

(3) New questions

"The question now has for a long time been not whether transfer exists, but in what circumstances L2-learners transfer *what*; *how much* is transferred and *why*" (Ringbom 1987:2).

This new, cognitively-oriented approach asserts that cross-linguistic influence is not a unique and isolated force in interlanguage development. Rather, it is constrained by certain other factors, like the degree of similarity between the source

and the target languages, as has been highlighted by Ringbom (1987:33-43). Other scholars have pointed out that transfer may interact with general cognitive principles and linguistic preferences, as one may see by looking at Kellerman's 'reasonable entity principle'.

(4) *The 'reasonable entity principle'*

"L1 structures which would serve to work against the assumed reasonableness of the L2 will tend not to be transferred, and those that would bolster it can serve as transfer models" (Kellerman 1983:122).

If we assume that acquisitional difficulty is not simply a matter of difference or similarity, we might choose to explain it by the inherent properties of linguistic features, in the sense that the language user prefers certain forms and structures to others. To put it in Kellerman's terms, learners tend to treat the new language as a 'reasonable entity', and thus search for the "systematic, the explicit and the 'logical'" (ibid.). According to Andersen's 'transfer to somewhere principle', among the factors which determine cross-linguistic influence are the frequency of L1/L2 items, the degree of boundness and complexity of morphemes, and invariance of form.

(5) *The 'transfer to somewhere principle'*

"(...) in such transfer preference is given in the resulting interlanguage to *free, invariant, functionally simple* morphemes which are congruent with the L1 and the L2 (...) and the morphemes occur *frequently* in the L1 and/or the L2" (Andersen 1983:182).

These claims recall a fundamental concept of linguistic theory which might account, in a more general way, for the problem of acquisitional difficulty. The notion of markedness, in fact, was explicitly invoked by Eckman (1977) in his revision of the CAH, which goes under the name of 'Markedness Differential Hypothesis' (henceforth MDH).

(6) *The Markedness Differential Hypothesis*

"The areas of difficulty that a language learner will have can be predicted on the basis of a systematic comparison of the grammars of the native language, the target language and the markedness relations stated in universal grammar, such that

- (a) Those areas of the target language which differ from the native language and are more marked than the native language will be difficult.
- (b) The relative degree of difficulty of the areas of the target language which are more marked than those of the native language will correspond to the relative degree of markedness.
- (c) Those areas of the target language which are different from the native language, but are not more marked than those of the native language will not be difficult" (Eckman 1977:321).

This quotation can be regarded as the 'standard' version of the MDH. A few years later, the same author reformulated his hypothesis in somewhat simpler terms, specifying, however, that 'markedness' is to be interpreted on typological grounds.

(7) *The Markedness Differential Hypothesis reformulated*

"Those areas of the target language which will be difficult are those areas which are

1. different from the native language, and
2. relatively more marked than the native language".

"A phenomenon A in some language is more marked relative to some other phenomenon B if, cross-linguistically, the presence of A in a language implies the presence of B, but the presence of B does not necessarily imply the presence of A" (Eckman 1981:211).

Ten years after the first statement of the MDH, Hyltenstam published a research survey of nineteen studies that refer in some way to the notion of markedness. Most of them investigate the acquisition of syntax, but four also treat phonological issues.³ In his article, Hyltenstam also provides us with a more explicit formulation of the MDH.

(8) *The Markedness Differential Hypothesis revised*

- "1. Where both L1 and L2 have typologically unmarked categories in a certain area, no acquisitional differences will be experienced.
2. Where L1 has an unmarked and L2 a corresponding marked category, the unmarked category will often be transferred from L1 to L2 (...).
3. Where L1 has a marked category and L2 a corresponding unmarked category, transfer from L1 to L2 will be much rarer. (...)
4. Where both L1 and L2 have a marked category, the unmarked category can still turn up in the learner's interlanguage. (...)" (Hyltenstam 1987:69).

Note that the last point is an innovation with respect to Eckman's hypothesis, in the sense that it assigns even greater importance to markedness relations than to transfer itself.

Similarly, Hammarberg (1989:16) views markedness in the target language as the decisive predictor of difficulty; but in his discussion of the relationship between L1/L2 contrast and typological markedness, he proposes abandoning the MDH in favour of a model in which the two factors are not combined, but are permitted to interact in a freer way. Such a model would yield four types of interaction patterns:

(9) *Interaction between L1/L2 contrast and markedness*

	I	II	III	IV
Contrasting	—	—	+	+
Marked	—	+	—	+

In the case of pattern IV, there is empirical evidence against the fourth prediction of Hyltenstam's revised MDH, in that learners rather stick to the marked L1 structure (Hammarberg 1989:15; cf. also Abrahamsson 1996:18).

3. From Markedness to Naturalness

On the whole, we must say that the Markedness Differential Hypothesis has not received the attention it probably deserves:

(10) *The Markedness Differential Hypothesis: state of the art*

"Eckman's MDH seems worthy of more research attention than it has received to date, although it appears that some refinement and modifications will be necessary. First, the precision of the claims needs to be enhanced by adding specific predictions as to the form(s) that 'difficulty' will take in each case (...)" (Larsen-Freeman & Long 1991:103).

In like manner, Hyltenstam (1987:66) criticises the extremely unrestricted way in which the term 'markedness' is sometimes used. In fact, it cannot be denied that the notion displays a certain vagueness and polysemy, depending on whether it is interpreted in a structural, a psycholinguistic, or a typological sense.⁴ In another paper, Hyltenstam (1990:33) even goes one step further, in that he actually denies the explanatory power of typological markedness, which could therefore be used only as a diagnostic research tool: explanations should be looked for rather at a processing level, for example in the physiological constraints in production and perception.⁵

A possible way out of this dilemma can be found if we adopt a theory of linguistic naturalness, such as Natural Phonology or Natural Morphology (cf. Dressler 1984, Dressler et al. 1987, Dressler 1990). In some sense, naturalness can be regarded as the conceptual opposite of markedness, but the claims of these theories are more explicit from both the theoretical and the descriptive points of view. The basic tenets of naturalness theories rest on a functional view of language structure, which is conceived of as basically reflecting the needs and capacities of its users.

In Natural Phonology, the phonological system of a particular language is regarded as "the residue of a universal system of processes reflecting all the language-innocent phonetic limitations of the infant" (Donegan & Stampe 1979:126). In first language acquisition, some of these processes are suppressed, some continue to be productive, and others remain latent. With regard to second language acquisition, Donegan & Stampe (1979:127) claim that "from adolescence, (...) the residual processes have become the limits of our phonological universe (...), imposing a 'substratum' accent on languages we subsequently learn".

It goes without saying that such a theory is rather appealing for SLA research; and it is not surprising that a number of scholars have used the theoretical guidelines of this framework to explain findings in empirical research or to develop models of second language phonology.⁶ However, the application of Natural Phonology to the study of foreign accent requires some further theoretical

elaboration and may also lead to divergent assumptions about the dichotomy between interference and developmental processes (see, e.g., Major 1987a:208-209), a classic controversy in SLA theory (cf. 2.). It is precisely at this point that the MDH turns out to be both extremely fruitful and perfectly compatible with the approach of Natural Phonology. In fact, the notion of 'relative markedness', introduced by Dziubalska-Kołaczyk (1990:46-50) in her model of SLA phonology, is an illustration of the MDH in naturalist terms (even if she does not mention Eckman's work). As Abrahamsson (1996) points out, it is in particular the interference vs. development problem for which Natural Phonology provides a plausible solution.⁷

As for interlanguage morphology, it is quite astonishing that the MDH has not led to considerable research on this topic (cf. Hyltenstam 1987). Obviously, the state of the art is not determined by the intrinsic possibilities offered by the concept of 'markedness'; on the contrary, the latter does indeed have far reaching implications for morphology. In fact, we have at our disposal not only a large body of typological generalisations from the Greenbergian tradition, but also theoretical elaborations on this type of evidence (see, e.g., Zwicky 1978). Rather, the fact that second language morphology has not been a testing ground for the MDH reflects the marginal role played by morphology in the development of SLA theory (which, on the other hand, is partly due to the fact that the most widely investigated second language, English, is rather poor in morphology). As soon as one studies the acquisition of a language with a rich inflectional and derivational system, e.g. Italian, markedness relations prove to be an important issue.⁸

The concept of 'markedness' I follow here is that of Natural Morphology. This theory shares the basic assumptions of Natural Phonology, in that it views linguistic universals as reflecting the substantial capacities and difficulties of human beings in language performance; in morphology, the 'extralinguistic' foundation of linguistic naturalness predominantly depends on restrictions on perception, processing and memorisation (cf. Dressler et al. 1987:11-12, Dressler 1990:76).⁹

As for the specific parameters of morphological naturalness, the theory states four universal preferences, namely biuniqueness, morphotactic transparency, morphosemantic transparency, and constructional iconicity/diagrammaticity (cf. Mayerthaler 1987). The language user has a preference for biuniqueness, in the sense that one meaning should ideally correspond to one form; thus, within this parameter, allomorphy is dispreferred.¹⁰ The preference for morphotactic transparency requires a language to have clear boundaries between the formatives, the optimum being the coincidence between morpheme and syllable boundary. Mor-

phosemantic transparency is achieved when the meaning of a complex expression is a function of the meaning of its constituent parts. For instance, the meaning of the German word-form *Frau-en* 'women' can be derived from the lexical morpheme *Frau* and the suffix *-en*. In the light of this parameter, the ideal language type is the agglutinating one, and syncretism is dispreferred. Finally, the principle of constructional iconicity predicts that, within a grammatical category, the semiotically unmarked value tends to receive no mark. Thus, it is natural to have no morpheme for the singular or the active voice, but an additional affix to express plurality or the passive.

Besides these four universal morphological preferences, there are two system-dependent aspects of naturalness in inflection (cf. Wurzel 1987). The 'principle of system-congruity' states that, in the case of competing morphological features (like the Umlaut as opposed to suffixes for plural formation), the quantitatively dominant one will win over the other. Likewise, the 'dominant paradigm condition' predicts the shift of lexical items from the smaller to the more numerous inflectional classes. Note that these two principles of morphological naturalness are system-dependent, in the sense that they may be relevant or not according to the structure of a particular language. Ultimately, however, they reflect a universal preference for a biunique relationship between grammatical signantia and signata (cf. Dressler & Thornton 1996:2, n. 4) and are therefore related to the more general biuniqueness principle.¹¹

Adopting the framework of linguistic naturalness in order to improve and refine the MDH, we can thus, as a first step, simply restate the original version by replacing the expression 'more marked' with 'less natural'.

(11) *The Naturalness Differential Hypothesis*

The areas of difficulty that a language learner will have can be predicted on the basis of a systematic comparison of the grammars of the native language, the target language and the universal preferences for linguistic naturalness, such that:

- a) Those areas of the target language which differ from the native language and are less natural than the native language will be difficult.
- b) The relative degree of difficulty of the areas of the target language which are less natural than those of the native language will correspond to the relative degree of naturalness.
- c) Those areas of the target language which are different from the native language, but are not less natural than those of the native language will not be difficult.

However, we need a more explicit hypothesis which makes precise predictions about the linguistic structures where transfer is expected to occur. This is the purpose of the following two sections of our contribution, which deal respectively with linguistic naturalness in second language phonology and morphology.

4. Phonological Naturalness

According to the theory of Natural Phonology, the sound shape of human languages is tailored by two main types of phonological processes, namely the perceptually-motivated fortition or foregrounding processes (such as epentheses and dissimilations) on the one hand, and the lenition or backgrounding processes (such as syncope and assimilations) with their articulatory teleology on the other. Processes may be either paradigmatic (both context-free and context-sensitive) or syntagmatic (only context-sensitive); i.e., they apply in the prelexical constitution of the phoneme inventory for underlying representations, as well as at the postlexical level of speech production.

For the purposes of SLA research, we can therefore formulate a Naturalness Differential Hypothesis in terms of phonological processes.

(12) *The Naturalness Differential Hypothesis*

1. Phonological processes

The areas of difficulty that a language learner will have can be predicted on the basis of a systematic comparison of the phonological systems of the native language, the target language and the set of universal phonological processes, such that:

- a) Those natural processes of the native language which are inhibited in the target language will be difficult to suppress.
- b) Those natural processes of the target language which are either inhibited or latent in the native language will not be difficult to activate.
- c) Those natural processes which are latent in the native language and suppressed in the target language will appear in the interlanguage phonology.¹²

To illustrate the three points of this hypothesis, we can take the natural process of final obstruent devoicing, which, by the way, is one of the examples discussed in Eckman's (1977) seminal paper.¹³ In fact, as predicted in point a) of our hypothesis, it is difficult for a speaker of German to pronounce voiced final obstruents in a language like French (hence, pronunciations like [il mǎʃ] instead of [il mǎʒ]). On the other hand, a Frenchman normally has no difficulties with the final voiceless stops of German, as predicted in b). As to c), it has been reported that speakers of languages which lack final obstruents (like Vietnamese, Chinese and Japanese) do devoice these segments when learning English (Donegan & Stampe 1979:132-133; Singh & Muysken 1995:160).

It seems that the major difficulty for the language learner lies in the first task, namely the suppression of those processes of the native language which are inhibited in the target language. At least, this is the picture which emerges from an analysis of Spanish-Italian interlanguages.¹⁴ The following examples show two fortition processes of Spanish which often appear in these learner varieties.

(13) Epenthesis

$\emptyset \rightarrow e/\#_sC$ *estrada* 'street', *esposato* 'married'

(14) Lengthening

$/r/ \rightarrow [r:]/\#_$ *molto ricca* 'very rich'
me ha rrimasto 'it has remained (to me)'

The first is the insertion of an epenthetic vowel before the word-initial clusters /s/+consonant of the target forms *strada*, *scusi*, *sposato*, in accordance with a general phonotactic restriction of Spanish.¹⁵ The word-initial vibrant lengthening in (14) is a typical example of an allophonic foregrounding process which improves the perceptibility of the segment at the word boundary. Note that, whereas the word-form *ricca* is nearly homonymous in the two languages (cf. it. *ricca*), in the case of *me ha rrimasto* the native process applies to a lexical item not shared by the L1.

However, in these interlanguages, learners fail above all to constrain the backgrounding processes of the native language.¹⁶ What is particularly striking is the frequency of lenition in the traditional sense, i.e. of weakening and shortening phenomena.

(15) Deaffrication

$ts \rightarrow s$ *emigrasione, inisiato*

(16) Spirantization

$[-cnt, +voice] \rightarrow [+cnt]/[+snt, -nas] _$ ['graði, 'albero]

(17) Degemination

$CC \rightarrow C/V_V$ *fredo, dona*

The Spanish phoneme inventory lacks the alveolar affricate /ts/ of Italian words like *emigrazione* 'emigration' and *iniziato* ('begin', past participle), so that Spanish learners replace this segment with the homorganic fricative /s/. This pre-lexical or paradigmatic process is well-known from child phonology. Similarly, Spanish learners tend to interpret the Italian geminates of *freddo* 'cold' and *donna* 'woman' as single short consonants, since long consonants, which are universally dispreferred (cf. Hurch & Oñederra 1987:78), do not occur in the phonological system of their native language. On the other hand, the allophonic spirantization of the voiced intervocalic stops in *gradi* 'degrees' and *albero* 'tree' is a typically postlexical or syntagmatic process, such that in these cases, transfer could also be a mere production phenomenon, rather than a matter of phonological representation.

Speakers of the Andalusian variety of Spanish also exhibit instances of other postlexical lenition processes, e.g. syncope and assimilation.

(18) Syncope

/s/ → ø/V __ C *epagnolo, etato, liberalimo*

(19) Assimilation

/r.l/ → [l:] *palla* 'speaks', *tenelli* 'hold them'

In (18), the sibilant of the target forms *spagnolo* 'Spanish', *stato* 'state', *liberalismo* 'liberalism' is constantly deleted. Note that this backgrounding process operates on the output of the preceding foregrounding process of vowel epenthesis (cf. 13), according to the canonical process order 'fortitions first, lenitions last' postulated in Natural Phonology (cf. Donegan & Stampe 1979:153-156). Finally, the regressive contact assimilation of the vibrant to the following homorganic lateral in (19) is another typical backgrounding process; assimilation between liquids, which can often be observed in the allegro style of speakers of various languages, clearly aims at a lower articulatory effort.

5. Morphological Naturalness

Given the six morphological principles mentioned in section 3, we can formulate a more specific Naturalness Differential Hypothesis for the domain of inflection (cf. Schmid 1995a:276).

(20) *The Naturalness Differential Hypothesis*

II: Morphological Preferences

Morphological items of the target language which differ from the native language will be difficult, if they are not uniformly encoded, not morphotactically and/or morphosemantically transparent, not iconic/diagrammatic, not coherent with system-defining structural properties, or members of a less stable and less numerous inflectional class.

Again, this hypothesis can be illustrated with some data from Spanish-Italian interlanguages. We should, of course, bear in mind that typological aspects play a major role in defining the values of the different naturalness parameters and in establishing the degree of difficulty in second language acquisition. As Dressler (1985:6) points out, language types must combine preferred options with less preferred options from among different (conflicting) parameters such as optimum length of word-forms and morphosemantic transparency.

Now, Italian and Spanish are both inflecting languages, even if Spanish displays some features of an agglutinating language (cf. below). The purpose of this section is to illustrate how, in the acquisition of a closely-related second language, universal and system-dependent preferences of morphological naturalness act as cognitive guidelines together with L1-representations. In the case of a genetically more distant and typologically divergent L1, different learning strategies come into play (which, in fact, are highly interesting from a typological point of view). What is less compelling, then, is cross-linguistic influence, while universal

preferences appear to be even more attractive. As has been shown by Berretta (1992:146), initial learner varieties of Italian often lack any morphological structure and therefore resemble isolating languages, whereas the later development of interlanguage proceeds through intermediate agglutinating-like stages towards the inflecting target system.

Returning to our Spanish–Italian interlanguages and to the first parameter of universal morphological naturalness, an example of the preference for biuniqueness comes from the feminine singular articles.

(21) Biuniqueness in articles

	Italian	Spanish	Interlanguage
def., sg., f.	<i>la, l'</i>	<i>la</i>	<i>la</i>
indef., sg. f.	<i>una, un'</i>	<i>una</i>	<i>una</i>

Both Italian and Spanish have the same basic allomorphs, namely *la* and *una*. Nevertheless, Standard Italian has an additional elision rule which deletes the vowel *-a* if the following noun begins with a vowel.¹⁷

(22) Italian allomorphy rule

$la \rightarrow l' / _ V$ $una \rightarrow un' / _ V$

The natural prediction that Spanish learners tend to avoid allomorphy and to retain their native pattern is borne out by interlanguage forms like *la influenza* ‘the influence’, *la emigrasione* ‘the emigration’, and *una ora* ‘an hour’, *una amica* ‘a friend (f.)’ (cf. the target forms *l’influenza*, *l’emigrazione* and *un’ora*, *un’amica* with the native forms *la influencia*, *la emigración* and *una hora*, *una amiga*). Note that the Italian article paradigm is less natural from the viewpoint of morphotactic transparency, too, since the resyllabification rule obscures the boundaries between the morphemes.

(23) Morphotactic transparency in feminine singular articles

	Italian	Spanish	Interlanguage
def.	/lin.flu.'ɛn.tsa/	/la.in.flu.'en.θia/	/la.in.flu'ɛn.tsa/
indef.	/u.na.'mi.ka/	/u.na.a.'miga/	u.na.a.'mi.ka/

The preference for morphosemantic transparency and constructional iconicity appears in the plural formation of initial learner varieties, as illustrated by the right-hand column of the table in (24).

(24) Morphosemantic transparency and constructional iconicity in plural marking

	Italian	Spanish	Interlanguage
f. sg.	-a	-a	-a
f. pl.	-e	-a-s	*-a-s
m. sg.	-o	-o	-o
m. pl.	-i	-o-s	*-o-s

For instance, compare the interlanguage forms **los vecchios* and **parolas* with the target forms *i vecchi* 'the old' and *parole* 'words': the Spanish plural suffixes *-os* and *-as* can actually be interpreted as being composed of two morphemes, namely the vowels *-o* and *-a* (which denote the masculine and feminine gender respectively) and *-s*, which indicates plurality. Thus, the declensions of Spanish display some characteristics of an agglutinating language, whereas plural formation in Italian is more typically fusional. It is natural that initial learners choose the plural formation rule of their source language as a default strategy, since, in speech processing, substitution is a more complex cognitive operation than mere addition. Obviously, the *-s* suffix also copes better with the requirement of constructional iconicity, since the expression of plurality is achieved by an enlargement of the phonological string.

To illustrate the relevance of system congruity for the second language learner, we may look how a typical feature of Spanish and Italian verbal inflection develops in the interlanguages:

(25) Past Participles and 'thematic' vowels in Italian and Spanish conjugation

Infinitive	Italian p.p.	Spanish p.p.	Interlanguage p.p.
<i>cant-ar(e)</i> 'sing'	<i>cant-ato</i>	<i>cant-ado</i>	<i>cant-ato</i>
<i>dorm-ir(e)</i> 'sleep'	<i>dorm-ito</i>	<i>dorm-ido</i>	<i>dorm-ito</i>
<i>ven-ir(e)</i> 'come'	<i>ven-uto</i>	<i>ven-ido</i>	* <i>ven-ito</i>

A system-defining property of both Italian and Spanish conjugation is the so-called 'thematic vowels' /a/, /e/, and /i/. These elements lack any semantic content, and serve only to signal the class membership of the different verbs. Normally, the thematic vowel appears both in the infinitives, like *cant-are* or *dorm-ire*, and in the past participles, like *cant-ato* or *dorm-ito*. The *-ere* conjugation does not preserve the thematic vowel in past participle formation, the default suffix being the *-uto* (cf. *perd-ere*, *tem-ere* and *perd-uto*, *tem-uto*). Now, this form constitutes a real exception within the *-ire* paradigm, so that it is natural for the Spanish-speaking learner to preserve the thematic vowel in the past participle of *ven-ire*, according not only to the pattern of his native language, but also to the structure of the Italian conjugation system.

The importance of the dominant paradigm condition in second language acquisition is illustrated by the schematic representation in (26), which shows two analogous noun classes of the target and the source language, and the shift of three interlanguage lexical items from the weaker to the stronger paradigm.

(26) The dominant paradigm condition

Declensions	Italian	Spanish	Interlanguage
II (m.)	<i>vin-o</i> 'wine'	<i>vin-o</i>	
III (f./m.)	<i>madr-e</i> 'mother' (f.)	<i>madr-e</i>	
	<i>sol-e</i> 'sun' (m.)	<i>sol</i>	
III (m.) → II	<i>camerier-e</i> 'waiter'	<i>camarero-o</i>	* <i>camarier-o</i>
	<i>signor-e</i> 'mister'	<i>señor</i>	* <i>signor-o</i>
	<i>padr-e</i> 'father'	<i>padr-e</i>	* <i>padr-o</i>

The learners' hypotheses underlying the three forms *camariero*, *signoro* and *padro* are all determined by the attraction of the second declension. This class is not only more numerous, but it also bears the prototypical masculine *-o* suffix, being one of the two productive microclasses of Italian nominal inflection (cf. Dressler & Thornton 1996:6). In the case of *camariero*, the Spanish model and dominant paradigm condition act strongly together. As regards *signoro*, the native form *señor* lacks an overt singular morpheme and therefore permits the stronger declension to attract the interlanguage item. Finally, in *padro*, the system-dependent force of the dominant paradigm appears to be even stronger than the suggestion of the identical Spanish lexeme.¹⁸

Note that learners are guided by the strong attraction of the second declension, not only in the case of cognate words, as in (26), but also in genetically unrelated lexemes such as **fium-o* 'river' (it. *fium-e*, sp. *río*).¹⁹ Nevertheless, even in this case, the search for system-dependent morphological naturalness (a driving force of interlanguage development) is reinforced by previous linguistic knowledge, given the analogous dominance of the *-o* and *-a* type microclasses in Spanish nominal inflection.²⁰

6. Conclusion

An analysis of cross-linguistic influence in Spanish-Italian interlanguages indicates that a reinterpretation of Eckman's Markedness Differential Hypothesis within a theory of linguistic naturalness can overcome the problems inherent in its original formulation. Referring to the phonological processes and morphological preferences highlighted by the 'naturalist' models, we are able to make much more precise statements about the acquisitional difficulty of specific linguistic structures. Moreover, the Naturalness Differential Hypothesis is also more ex-

plicit, in that its functional view of language — along the lines drawn by Dressler & Dziubalska-Kolaczyk (1994) — provides an explanatory approach to the problem of cross-linguistic influence, which continues to be a major issue in SLA research.

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Notes

- * A preliminary version of this paper was presented at the 6th annual conference of the European Second Language Acquisition Association (EUROSLA), Nijmegen, 31.5.1996. I am indebted to Wolfgang U. Dressler, Miren Lourdes Oñederra, and two anonymous reviewers for helpful comments and criticisms. Many thanks are also due to Andrew C. Torr for proof-reading the manuscript.
- 1 See Schmid (1993:404-407, 1994:17-60, and 1995b) for more details on the sociolinguistic background of these learner varieties and, in particular, on the use of Italian as a 'lingua franca'.
- 2 The data was collected within the Research Project "Italian in German-speaking Switzerland", conducted at the University of Zurich from 1987 to 1990 and supported by the Swiss National Science Foundation (No. 1.542-0.87).
- 3 It seems, however, that Eckman's proposal had a somewhat greater impact on research into interlanguage phonology, since there are a number of studies, not considered in Hylltenstam's survey, which explicitly refer to the MDH, e.g. Altenberg & Vago (1983), Broselow (1984), Benson (1986), Fellbaum (1986), Anderson (1987).
Note, however, the total absence of studies on L2-morphology within the MDH research program.
- 4 Cf. also Lalleman (1993), who proposes defining 'markedness' in terms of input frequency, and relating it to the function of a certain structure.
- 5 In defence of the MDH, we should bear in mind that Eckman's concern was precisely the prediction and not the explanation of difficulty in second language learning: "There is nothing logically necessary about the fact that interlanguages either do or do not obey the same markedness relations as primary languages" (Eckman 1985:8).
- 6 Cf. Fasching (1973), Wojcik (1980), Hammarberg (1985:166-167), Hurch (1986), Hurch & Oñederra (1987), Major (1987a), Dziubalska-Kolaczyk (1987, 1990), Schmid (1994:129-169, forthcoming), Dressler & Dziubalska-Kolaczyk (1994), Abrahamsson (1996, forthcoming). See Abrahamsson (1996) for a thorough discussion of the theoretical implications of NP for the study of second language phonology.
- 7 It goes without saying that the interference vs. development issue has far-reaching theoretical implications and is related to another major theme of SLA research, namely the Critical Period Hypothesis. It is outside the scope of this contribution to tackle the age problem here. Note, however, that the idea that there may be continuity, rather than a radical difference, between L1 and L2 phonological acquisition is maintained by a number of scholars (see, e.g., Wode 1992).
- 8 See Berretta (1992) for an in-depth discussion of markedness with regard to the morphological development of Italian interlanguages; cf. also Valentini (1990) and Dal Negro (1994) for particular aspects of morphology in Italian as a second language. A brief overview of Italian

- L2-inflection is given in Schmid (1995a:264-266), and some crucial findings about Italian L2-derivation are mentioned in Karpf & Dringel-Techt (1995:139-141).
- 9 Whether the phonological and morphological components of grammar are determined by the same or by different principles is the subject of an ongoing debate in naturalness theory, on which I do not want to comment here; see Dressler (1996) and Hurch & Nathan (1996) for two diverging positions.
 - 10 Note that, for second language acquisition, the same claim is also made by Andersen's (1983) 'transfer to somewhere principle'.
 - 11 For obvious reasons of lack of space, Natural Morphology is presented here only in a very rough sketch; see Kilani-Schoch (1988a) for an exhaustive introduction to the theory (cf. also Kilani-Schoch 1992). Nevertheless, it should be mentioned that, besides the two modules of universal and system-dependent naturalness (Mayerthaler 1987, Wurzel 1987), a third typological subtheory has been elaborated by Dressler (1985). Moreover, this author proposes additional universal parameters such as optimum size of word-forms (between two and three syllables) and indexicality, i.e. the distance between grammatical signantia and lexical signata. These principles partly conflict with the aforementioned preferences, and permit us to narrow down the alleged optimality of agglutinating languages.
Some implications of Natural Morphology for SLA are discussed in Kilani-Schoch (1988b) and Karpf & Dringel-Techt (1995); cf. also Schmid (1995a).
 - 12 Cf. the five learner's tasks listed by Hurch & Oñederra (1987:76-77) with regard to natural phonological processes: a) to activate the latent L1 processes which are manifest in L2, b) to activate the eliminated L1 processes which are manifest in L2, c) to reconcile the contradictory manifest processes of L1 and L2, d) to activate the non-contradictory processes of L2, and e) to suppress the latent and/or manifest L1 processes which are eliminated in L2.
 - 13 The acquisition of final voiced obstruents has been studied in a number of language pair configurations, e.g. Spanish/English and Chinese/English (Eckman 1981), Portuguese L1/ English L2 (Major 1987b:112-120), Polish L1/English L2 (Dziubalska-Kotaczyk 1990:47-48), and Italian L1/German L2 (Hurch 1986:14-20). In several cases, it has been observed that learners avoid final obstruent devoicing by adding a paragodic schwa (cf. also Singh & Muysken 1995:160-166).
 - 14 Owing to lack of space, the following illustration of the phonology of Spanish-Italian interlanguages is mainly based on the lenition vs. fortition dichotomy. See Schmid (1994: 129-169 and forthcoming) for a more extensive analysis of the data, which also focuses on the distinction between prelexical and postlexical processes.
 - 15 In my view, such constraints on possible phoneme sequences are best regarded as paradigmatic (i.e. prelexical), context-sensitive processes; cf. Abrahamsson (forthcoming) for a somewhat different analysis of epenthesis in Spanish-Swedish interlanguages within the framework of Natural Phonology.
 - 16 It is not clear to me whether this lenition-fortition asymmetry is an effect of the particular language constellation (with Italian suppressing more lenition processes than Spanish) or a general feature of second language speech (due to the 'chaotic' status of interlanguage). Both hypotheses need further investigation.
 - 17 It can be observed that, in Italian Neo-Standard, and in particular in the language of newspapers, there is a tendency to abolish this rule.
 - 18 See Dressler & Thornton (1996) for an exhaustive description and analysis of Italian nominal inflection.
 - 19 Surprisingly, our data do not show any shifts towards the other productive microclass in Italian nominal inflection, i.e. metaplasms of feminine nouns from the third to the first declension (e.g., *mogli-e* 'wife' > **mogli-a*), a phenomenon which is well-known from substandard Italian and Italian dialects (cf. Schmid 1992:293-294, Dressler & Thornton 1996:12).
 - 20 The prototypical association of the Spanish *-a* and *-o* suffixes with feminine and masculine gender is generally acknowledged by grammarians (see, e.g., Alarcos Llorach 1994:60); over-

generalisations of such associations are reported from Spanish substandard and child language (cf. Ambadiang 1993:94).

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