

Morphological Typology and First Language Acquisition: Some Mutual Challenges

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If one believes that external evidence (e.g. from first language acquisition) is relevant for linguistic theory and that acquisition studies should be done in relation to linguistic theory and to theory-guided descriptions of adult input systems, then one finds many problems which are relevant both for morphological and typological theory and for acquisition but which have not been dealt with adequately in connection with both fields, if at all. This paper attempts to raise the level of awareness for such problems and to propose solutions for them.

My acquisition data come from the “Crosslinguistic Project on Pre- and Protomorphology in Language Acquisition” (cf. Dressler 1997, Dziubalska-Kołaczyk 1997, Gillis 1998, Voeikova & Dressler 2002, Bittner, Dressler & Kilani-Schoch 2003). This project studies in more than a dozen languages the acquisition of morphology up to the age of three years and collects, transcribes, codes (in CHILDES format, cf. MacWhinney 2000) and analyses longitudinal corpora in strictly parallel ways. I have to thank all researchers of this project, whose published and prepublished work I am using (and citing) here. The aims of this project are to arrive at universal, typological and language-specific generalisations, in parallel to the grammatical model espoused, which is Natural Morphology (Dressler et al. 1987, Kilani-Schoch 1988, Dressler 2000) with its three subtheories of universal preferences or universal markedness, of typological adequacy and of language-specific system adequacy.

The subtheory of typological adequacy has taken over many ideas from Skalička (1979, cf. 2002), notably the concepts of linguistic types as ideal constructs which natural languages approach to various degrees. Thus these ideal types, despite their largely identical names, are not classes, such as the morphological types of classical morphological typology (cf. Lehmann 1983, Ramat 1995). These ideal types are characterised by (mostly mutually) favouring properties. We have reanalysed many of these properties as mutually and symmetrically or asymmetrically favouring or disfavouring preferences and have based them on the premises of our first subtheory of universal morphological preferences (cf. Dressler 1985a: 227ff, 1985b). Moreover, Skalička’s concept that the inflectional and the word formation component of a language may behave different typologically, must be extended to the subcomponents or submodules of inflectional morphology. Thus noun inflection and verb inflection may have a different typological character within the same language and develop diachronically in typologically different directions (this answers the critiques of Plank 1998 and Wurzel 1996).

Due to the available child-language data of our project as well as of the literature, I will deal with the inflecting-fusional, the agglutinating and the isolating ideal language types of Skalička. The noun and verb inflection systems of the following languages can be ordered gradually in regard to inflectional morphology on the scales of

(a) isolating ↔ inflecting-fusional ideal type, (b) inflecting-fusional ↔ agglutinating ideal type:

- a. Noun inflection: French – Spanish – English – Dutch – Italian – German – Greek – Slavic languages – Lithuanian
- a'. Verb inflection: English – Dutch – German – Spanish – French – Italian – Slavic languages – Greek – Lithuanian
- b. Noun and verb inflection: Lithuanian – Slavic languages – Finnish – Hungarian – Turkish

The main typological criteria that I will use, are: morphological richness (amount of productive morphology), morphological complexity (morphological richness plus unproductive morphology), the universal preference parameters of morphosemantic and morphotactic transparency, constructional iconicity, preferred shape of morphological units, binarity and biuniqueness (as preferred over uniqueness and especially ambiguity).

The typological value of the concepts of agglutinating and inflecting-fusional morphology has been severely criticised by many specialists, such as Anderson (1985: 10), Bauer (1988: 170), Plank (1998), Haspelmath (2000), but cf. Bossong (2001), Plungian (2001). However these critics neither distinguished between morphological class and morphological type of languages nor did they consider the possibility that noun inflection, verb inflection, derivational morphology and compounding may be typologically different within the same language. Thus I claim that typology is more than cross-linguistic comparison and different from research in universals, both in general typology (here in accordance with Seiler's (2000) UNITYP model) and in child-language studies. This is linked to a claim, most vigorously defended by Coseriu (1970) within a structuralist framework, that typology is a basic and not an epiphenomenal level of accounting for linguistic generalisations.

Now, if we want to use evidence from child language as evidence for this claim, then we must construct a bridge-theoretical link (cf. Botha 1979) between the domain of external evidence (in our case: first language acquisition) and the domain of the other theory (in our case: theory of linguistic typology). The main bridge-theoretical hypothesis that makes external evidence from child language relevant for morphological typology is the following: if typology is more than cross-linguistic comparison and different from research in universals and if typology is a basic and not an epiphenomenal level of accounting for linguistic generalisations, then this means within a mentalist framework which takes morphological typology seriously, that typological generalisations of morphology are themselves basic. Since psycholinguistic claims by, e.g., Jakobson (1941) and accounts of empirical work on processing by Burani et al. (2001) postulate that what is acquired early by a child is more basically represented in the adult system of representation and processing than what is acquired later, one may expect that basic typological generalisations should emerge early in first language acquisition. Analogously, *ceteris paribus*, unmarked options should be acquired earlier than their respective marked correspondents, as already postulated by Jakobson (1941), cf. Mayerthaler (1981).

Our developmental approach is constructivist (cf. Maturana & Varela 1979, Karmiloff-Smith 1992, Karpf 1991, Iturrioz Leza 1998): we do not assume that grammatical (sub)modules are genetically inherited but that they are gradually constructed by the children themselves, i.e. they construct a primitive system of grammar. When this global system, by accumulation of acquired patterns, becomes too complex, then it dissociates into modules of syntax and morphology, and later on the latter into submodules of inflection and word formation. This developmental model is integrated with the linguistic model, insofar as children's pattern selection and self-organisation is considered to take the preferences of Natural Morphology into account (cf. Dressler & Karpf 1995).

Comparative acquisition studies in morphology are rare and nearly always simply crosslinguistic, i.e. juxtaposing acquisition studies of each single language without comparing them in the sense of comparative typological linguistics or, if at all, only according to one contrastive variable each time (e.g. word order), with the notable exceptions of Peters (1997) and parts of Slobin's (1985-1997a, 1997b) seminal work. Or they concern very few languages or just one or two special morphological or morphosyntactic areas (e.g. Tsimpli 1996 on optional infinitives and agreement markers in six different languages). Furthermore, the comparison of evolving systems must be conducted along several dimensions which comprise, in addition to chronological age, also lexical age (measured, for example, in terms of timing of lexical acquisition) and morphological age (measured in terms of timing of emergence of morphological patterns and form oppositions). Previous work within the "Crosslinguistic Project on Pre- and Protomorphology in Language Acquisition" has striven to advance from crosslinguistic studies (as in Dressler 1997, Dziubalska-Kořaczyk 1997, Gillis 1998) to truly comparative ones, such as in Kilani-Schoch et al. (1997), Stephany (2002, on number), Voeikova (2002, on case), Bittner et al. (2003, on verbs).

We divide early morphological development into three subsequent phases:

1. Premorphology, a rote-learning phase in which the child's speech production is limited to a restricted number of lexically stored inflectional forms. Extragrammatical morphological operations such as reduplicative onomatopoeics (cf. Dressler et al., in print) and truncations are flourishing. Thus this phase partially and superficially resembles a reduced version of an isolating language. Word classes are hardly differentiated, i.e. words may be polyvalent, as with the Austrian girl's Katharina's onomatopoeics (as analysed by Sabine Laaha):

- | | | | |
|-----|------|------|---|
| (1) | 1;6 | brm | for the noise made by toy cars (or nominal for car) |
| | 1;9 | kra | for crowing (or nominal for birds) |
| | 1;10 | wawa | for barking (or nominal for dog) |
| | 1;11 | ia | for neighing (or nominal for horse) |

A strict distinction between extragrammatical (or expressive) and grammatical (or plain) morphology (cf. Dressler 2000b, Zwicky & Pullum 1987) is relevant for our topic in two ways: First of all, only grammatical morphology appears to play a role in morphological typology. Thus very isolating languages, such as South East Asian languages, may have no inflection and little grammatical word formation, therefore may lack a real morphological module, but may abound in extragrammatical morphology, which is not curbed by a grammatical module. Second, something similar happens in

early language acquisition: many children have much extragrammatical morphology in their premorphological phase. But when they detect and start to construct grammatical morphology in protomorphology, extragrammatical morphological operations decrease dramatically (cf. Bittner et al. 2003, Dressler et al. in print). This is, for example, the case with the extragrammatical phenomenon of fillers (Kilani-Schoch & Dressler 2000: 96).

2. Protomorphology, a phase in which the child starts to generalise over rote-learned forms, thereby detecting the morphological principle of (de)composing form and meaning word-internally. (S)he begins to construct morphology but also to use morphology creatively in coining first analogical formations (cf., e.g., MacWhinney 1978, Dressler & Karpf 1995). This phase partially resembles, at least initially, the reduced version of a weakly agglutinating language. The universal preferences for morphotactic and morphosemantic transparency, for biuniqueness (with reservations below), for constructional iconicity and binary relations are largely followed. However the bases for the typological identity of the respective language are already laid.

3. Morphology proper or modularised morphology, where (according to Dressler & Karpf 1995) the child constructs (sc. non-innate) modules and submodules and acquires a qualitatively adult-like morphology which already possesses all of its basic typological properties.

The first typological differences emerge already in premorphology: in reaction to, and in accordance with, the maternal or other adult input, the child selects and stores morphological patterns of high token frequency and which occur in the basic syntactic patterns that the child has taken up from the input. These patterns largely consist of unmarked forms, such as nominative singulars of singular-dominant nouns, plurals of plural-dominant nouns (e.g. G. *Eier* 'eggs'), infinitives, singular imperative, first or third singular present forms (particularly of atelic verbs). This has typological implications, for example whether these forms are zero-base forms (Peters 1997: 179f, cf. also Croft 2003: 162ff), such as 3.Sg.Pres. in Turkish, Hungarian, Finnish, Lithuanian, Polish, Croatian, Spanish, French and, partially, Italian, or not, as in German, Russian, Greek. If, however, the 3.Sg.Pres. form is affixed, whereas the first person is a zero-base form, as in English and Dutch, then the 3.Sg.Pres. emerges later (cf. Bittner et al. 2003). This is a crosslinguistic manifestation of the above-mentioned principle "unmarked before marked".

There is a second typological option in the 3.Sg.Pres. as base form, namely whether it has a thematic vowel or other stem indicator (a property of the inflecting type), as in Lithuanian, Polish, Croatian, Spanish, Italian, or not, as in agglutinating Turkish, Hungarian, Finnish and in more isolating French (cf. Dressler, Kilani-Schoch, Spina & Thornton 2003, Dressler & Kilani-Schoch 2004). In the second case, the child can start and often does focus on an uninflected form, in the first case all first forms of verbs are in some way inflected (cf. Kilani-Schoch 2003: 288).

What is typologically most important, is the degree of morphological richness (not complexity!) of a language, i.e. of productive morphology. In morphologically rich languages morphology fulfils more functions, already visible in more form-meaning mappings (cf. Slobin 1973, 1985b, 2001) and hence is more "informative" (Wijnen et

al. 2001) than in morphologically poorer languages. This is most obvious in Turkish, where the role of morphology is much greater, and correspondingly the role of syntax smaller, than in inflecting-fusional languages and particularly in weakly inflecting-fusional languages which share properties of the isolating type. Children become aware of the respective role of morphology in the language they are acquiring, i.e. they are more “tuned” to morphology if they are acquiring a morphology-rich language. Thus we can expect (cf. Slobin 1985b) that such children should detect morphology earlier than children acquiring morphologically poorer languages.

But how can we identify detection of morphology by children (cf. Dressler, Kilani-Schoch & Klampfer 2003)? For this purpose Kilani-Schoch & Dressler (2002) have elaborated the concept of the emergence of miniparadigms, i.e. incomplete paradigms (from the adult perspective). For example, the first miniparadigm produced by the Viennese boy Jan at 1;10 (Klampfer 2003: 314) is:

- (2) Inf. machen, 3.Sg.Pres.Ind. macht, PPP gemacht ‘to make’

Whenever we find three lemmas of the same word class of which three morphotactically and morphosemantically clearly distinct paradigm members have emerged and recurred in spontaneous production in various contexts, then we can safely assume that such a child has enough pattern variety in its uptake in order to detect the morphological principle of (de)composing form and meaning word-internally. This principle then appears soon to be extended from bound morphology to the morphology of (generally) monomorphemic function words, i.e. bound morphology, especially productive (bound) morphology tends to develop faster than free morphemes (function words, cf. Dressler, Kilani-Schoch & Klampfer 2003, Peters 1997: 180). Thus we hypothesise that the time point of the emergence of form oppositions is determined by the degree of morphological richness of the respective target language.

In support of this hypothesis, for verb inflection the miniparadigm criterion has been observed to be fulfilled for Turkish at 1;7 (Aksu-Koç & Ketrez 2003; first verb oppositions even at 1;5), for English after 2;5 (Gülzow 2003, cf. de Villiers & de Villiers 1985), cf. for the early emergence of Turkish morphology in general Aksu-Koç & Slobin (1985), Stephany (2002), Voeikova (2002). At first sight this result may seem paradoxical, because it should be much easier to acquire the very poor inflectional systems of English than the very rich inflectional systems of Turkish. What appears to be much more important for the child than superficial simplicity, is the much greater usefulness of acquiring inflectional morphology in Turkish than in English, plus the great difference in orderly variation available in the respective inputs.

If we now compare agglutinating with strong and weak inflecting-fusional languages, we must keep in mind that for each language the miniparadigm criterion has been investigated only for very few children (Bittner et al. 2003) and that no such gross differences have been found as between Turkish and English (cf. also Stephany 2002 for the emergence of nominal number). Still it is compatible with our hypothesis that the miniparadigm criterion has been fulfilled at the same age as with Turkish only with one Finnish child (at 1;8 with the other), i.e. solely for the other strongly agglutinating language of the language sample in Bittner et al. (2003). These two agglutinating languages are rather closely followed (at 1;10) by Lithuanian nouns and verbs, Croatian and Spanish verbs (rather strongly inflecting systems), and for verbs by one Italian boy (Dressler, Tonelli et al. 2003), by one French-learning girl (the other at 2;1), followed

by Greek (1;11). Yucatec Maya, Russian, Italian (except the afore-mentioned boy), German and Dutch come later.

These results presuppose, that we distinguish, as proposed above, within each language, different morphological systems. For example, in French, the noun system is of a very isolating type, the verb system much less. Thus it is French verbs where children first must detect morphology, whereas in German it is noun inflection and noun-compounding as well (cf. Dressler, Kilani-Schoch & Klampfer 2003), since much more different patterns in noun morphology are productive and show inflecting-fusional characteristics than in verb morphology. For example, the Austrian boy Jan produces at the onset of protomorphology (1;8) first oppositions between compounds and their members:

- (3) *Feuer(wehr)auto* ‘fire(brigade)-car’ and simplicia *Auto* ‘car’, *Feuer* ‘fire’, compound *Doppeldeckerbus* ‘double-decker-bus’ and its member *Doppeldecker* ‘double-decker’, compound *Segelschiff* ‘sailing-boat’ and simplex *Schiff* ‘boat’

At 1;9, a first example of analogy appears:

- (4) **Laster+wagen* ← *Laster* = *Last+wagen* ‘truck’,

evidence for the child’s creative use of compound formation. The recurrence of nouns within compounds and as autonomous words must have induced him to identify the basics of compounding. Among all languages of our project, only German compounding appears rich enough for stimulating children to use them productively at an early age. This represents further evidence for Skalička’s (1979) view that different subcomponents of morphology may approach different ideal types.

Such a morphological difference, as between German and French, appears to have even repercussions for the relative timing or preponderance of the emergence of word classes. The acquisition of many languages shows a “noun bias”, i.e. nouns emerge earlier and first expand faster than verbs. This is explained as being due to the greater cognitive ease of identifying reference to (especially concrete) objects than to actions or states (Gentner 1982, Gentner & Boroditsky 2001). And if in Mayan languages or Korean, etc. verbs emerge earlier, then this is explained by semantic and pragmatic (incl. cultural) properties underlying greater “verb friendliness”, plus by prosodic factors (De León 1998: 154ff, cf. the summary in Pfeiler 2002). Also syntactically nouns are easier to grasp, as they are, on the average, much less relational than verbs. But words and word classes are not only defined pragmatically, semantically and syntactically, but also morphologically (cf. Dixon & Aikhenvald 2002). And since, in French, nouns have a largely isolating morphology, but verbs a fair amount of properties of the inflecting-fusional type, this can be assumed to curb the noun bias in the acquisition of French (cf. Kilani-Schoch 2003: 288). Similarly in incorporating languages where verb morphology is central, verb morphology develops earlier than noun morphology (cf. Slobin 1992: 9, Fortescue & Olsen 1992). In accordance with this claim nouns have a priority in both lexical and, later, inflectional development in German (Dressler, Kilani-Schoch & Klampfer 2003), Lithuanian (Savickiene 2003, Wójcik 2003), Italian (Noccetti 2002), Yucatec Maya (Pfeiler 2002) among the languages of our project.

The inflectional-fusional type differs from the agglutinating type in having a complex hierarchical branching system of inflection classes (cf. Dressler 2003), whereas the ideal agglutinating type has none. Thus (cf. Pöchtrager et al. 1998) nearly all Turkish nouns and verbs inflect each according to a single type, Hungarian has few and hierarchically rather shallow class differences, Finnish already more, whereas Estonian is also in this respect rather an inflecting-fusional language, similar to Italian verb inflection. As a consequence, in Turkish, diminutives inflect in the same way as any other common noun, whereas in all the other diminutive-rich languages (derivationally) productive diminutives belong to the productive inflectional classes. For example, It. *tribù* ‘tribe’ is indeclinable, *poeta* ‘poet’, *amico* ‘friend’, and *pelle* ‘skin’ belong to unproductive classes, whereas their diminutives *tribu-ina*, *poet-ino*, *amich-etto*, *pell-icina* belong to productive classes. Since, *ceteris paribus*, productive patterns have a higher chance to be taken up by children than unproductive ones (cf. Dressler et al. 1996, cf. Smoczyńska 1985: 624ff, Peters 1997: 180f), diminutives of simplicia belonging to unproductive classes emerge earlier than their simplex bases and thus diminutives appear to help children to acquire inflection (cf. Gillis 1998, Savickiene 2003). This effect does not exist in Turkish.

In inflecting-fusional languages diminutives tend to belong to classes which are morphotactically very transparent, cf. It. *ami[k]o*, Pl. *ami[č]-i*, *uomo*, Pl. *uom-ini* ‘man’, but the respective diminutives have more transparent plurals: *amichetto*, *amichetti*; *omicino*, *omicini*. Again morphotactic transparency, similar to productivity, is known to facilitate early acquisition (cf. Slobin 1985b: 1216, Peters 1997: 181, Savickiene 2003, Aksu-Koç & Slobin 1985: 847).

A result of these intralinguistic and crosslinguistic differences in morphotactic transparency is that children acquiring inflecting-fusional and introflecting languages, after having detected morphology, tend to overgeneralise productive, and later even unproductive but more transparent patterns, such as Fr. *prendre* ‘take’, PP *pris* → *prend-u*, after *rendre*, *rendu* (cf. Kilani-Schoch 2003), a procedure which is scarcely possible in an agglutinating language.

Another instance where a specific morphological category helps to develop morphology is prefixation. Lithuanian is very rich in productive prefixation in the verbal system, and prefixation interacts with placement of clitic reflexives, as in:

- (5) kel-ti-s vs. at- si- kel-ti
 V-Inf.-Refl. Prefix-refl.-V-Inf.
 ‘to get up’ (imperfective vs. perfective)

Thus, on the one hand, reflexivity, which is a pervasive category for expressing passive voice in Lithuanian, can only be successfully handled in reference to prefixes. On the other hand, the insertion of the reflexive between prefix and verb root, renders prefixes easier to identify and to segment. And, indeed, Lithuanian prefixes emerge relatively early in protomorphology (Wójcik 2000, 2003), in contrast to the other languages of our project. The only, and superficial, exceptions are German and Dutch whose separable prefixes (or verb particles) are even easier to identify and to segment, e.g. German:

- (6) aúf-dreh-en vs. aúf-ge- dreh-t vs. ich dréh-e aúf
 P- V -Inf P- PP prefix-V-PP suffix I V-1.Sg. P
 ‘to turn on’ ‘turned on’ ‘I’m turning on’

Here main stress on the prefix/particle and change of position in finite forms render it even more salient. As a consequence such verb particles are with many German- and Dutch-learning children the first “verb forms” to emerge, as in German:

- (7) ab! ‘off!’ = adult: mach ab! ‘make off, separate it!’, cf. Inf. ab-mach-en (Dressler, Kilani-Schoch & Klampfer 2003, cf. Bennis et al. 1995)

A typological variable is also relevant for the acquisitional phenomenon of inflectional imperialism, identified by Slobin (1985b: 1216, cf. MacWhinney 1985) as the total or nearly total substitution of competing morphological patterns by a single one of them. This phenomenon, however, occurs less often in acquisition than postulated by Slobin. And this gives further evidence against the overestimation of the importance of the default concept by, e.g., Pinker (1984) and relegates it to a typological variable: it is irrelevant in a very agglutinating language such as Turkish, but is important in weakly inflecting-fusional and introflecting languages as well as in languages which approach both the ideal agglutinating and the inflecting-fusional type only to some extent. In strongly inflecting-fusional languages there is often no default or only a weak default among competing morphological patterns (cf. Dressler 1999), e.g. among verb macroclasses in Slavic languages or Lithuanian. Thus in the acquisition of Lithuanian, no instance of inflectional imperialism has been found for noun inflection (Savickiene 2003), whereas one instance has been found in verb inflection at the age of 1;8 (Wójcik 2003: 414; 2000: 111f):

- | | | | | |
|-----|---------------------------|-----------------------------|---|-------|
| (8) | Inf. sed-e-ti
‘to sit’ | 3.Sg.Pres. sed-i
‘sit-s’ | → | sed-a |
| | nor-e-ti
‘to want’ | nor-i
‘want-s’ | → | noj-a |

The macroclass with the thematic vowel /a/ is the richest and most frequent of the three Lithuanian macroclasses. Moreover small children, probably due to phonological reasons, seem to prefer the thematic vowel [a] to other thematic vowels, as we have found also in Slovene and Polish children.

In general, the higher amount of productivity, constructional iconicity and transparency favours acquisition of agglutinating morphology. Note the lack of infixes (which make the lexical root discontinuous and thus less transparent) in the agglutinating type. Note, for example, the lack of infixes in the agglutinating type: infixes make the lexical root discontinuous and thus less transparent. As to acquisition, infixes appear to be acquired late. They first lack in Tzeltal child speech (Brown 1998: 141), for Lithuanian cf. Wójcik (2000: 115). Note also the early reduction of the equally discontinuous and thus opacifying German past participle *ge-...-t/n* via loss of the prefix part (cf. Klampfer 2003: 306), as in:

- (9) runter-(ge)-fall-en ‘fallen down’, um-(ge)-d(r)eh-t ‘turned over’

Another favouring property of the agglutinating type is the greater preference for biuniqueness over uniqueness and ambiguity. Compare the following fragment of declension of the word ‘room’ in Turkish and Russian:

	Nominative		Genitive		Locative	
	Turk.	Russ.	Turk.	Russ.	Turk.	Russ.
Sg.	oda	komnat-a	oda-nIn	komnat-y	oda-da	v komnat-e
Pl.	oda-lar	komnat-y	oda-lar-In	komnat	oda-lar-da	v komnat-ax

Here, Turkish only uses affixation (highest degree of constructional iconicity), whereas Russian has no affix in the genitive plural of this feminine noun, with the effect that, in a non-iconic way, the morphosemantically marked plural form is shorter than the unmarked singular form. This results in children substituting the non-iconic zero form with the genitive plural suffix *-ov* of masculine nouns (cf. Smoczyńska 1985: 627f), thus obtaining an iconic, affixed form which is, in a non-iconic way, even longer than the respective singular form. Moreover agglutinating languages have no gender, a category which contributes to morphosemantic and morphotactic opacity in inflecting-fusional languages. Finally Turkish expresses Plural, Genitive and Locative in a biunique way, whereas Russian, in a non-unique way, expresses number and case cumulatively and has allomorphs for each number-case form.

Biuniqueness corresponds to the acquisitional principles of contrast in lexical acquisition (cf. Clark 1993) and Slobin's (1985b: 1227f) unifunctionality operating principle. In the acquisition of morphology, this principle can be easily followed in agglutinating morphology and when a default can be overgeneralised via inflectional imperialism (see above). But when acquiring a weakly inflecting language with many homophonies and syncretisms, as they exist, e.g., in the verbal systems of French and German, trying to introduce biuniqueness would require enormous efforts. Thus children at first settle for the second-best solution and rather exploit homophony and syncretism (cf. Kilani-Schoch & Dressler 2000: 102, 107), i.e. they focus on such widely usable homophonous forms. In other words, again, children adapt very early to typological characteristics of the language they acquire.

The early exploitation of homophony and syncretism may explain "why infinitives emerge earlier when they are homophonous with other verb forms" (Bittner, Dressler & Kilani-Schoch 2003: xviii), as in English, German (infinitive *-en* = 1. & 3.Pl. = suffix of strong past participles) and French (only productive inf. /e/ = only productive past participle = 2.Pl.). And this, in turn, (better than syntactic accounts), may explain the presence of bare infinitives in the child productions of these languages as opposed to their absence or near-absence in other languages (cf. Phillips 1995, Wijnen et al. 2001, Kilani-Schoch 2003: 289). As to typology, this supports the importance of syncretism and certain types of homophony as an instance of paradigm economy (cf. Carstairs 1987) in weakly inflecting-fusional morphologies.

Now in Italian verb inflection biuniqueness plays a bigger role than in strongly inflecting-fusional languages, insofar as in each tense at least the 1st and 2nd persons singular and plural are expressed by a superstable marker in the indicative. Thus it makes sense for children to pursue biuniqueness and to overextend it also to the 3rd person indicative, as in the early forms *ved-a* for *ved-e* 'sees'. Much more common are 2nd person singular imperatives of the first macroclass in *-a*, which are substituted by the form of the second macroclass in *-i*, which is homophonous with the superstable marker of the 2nd person singular indicative, e.g. in the protomorphological phase of several children (Berretta 1993: 163, Noccetti 2003: 368):

(10)

Child:	tir-i!	leg-h-i!	lav-i!	mang-i!	telefon-i!	guard-i!
Adult:	tir-a!	leg-a!	lav-a!	mangi-a!	telefon-a!	guard-a!
	‘draw!’	‘bind!’	‘wash!’	‘eat!’	‘phone!’	‘look!’

The agglutinating type presents two difficulties for the acquisition of morphology: (i) the occurrence of long sequences of suffixes within the same polysynthetic word form (cf. Pöchtrager et al. 1998: 60), (ii) the variable order of certain morphemes (with only pragmatic meaning differences), as described for Turkish, Mari and Quechua (cf. Sebüktekin 1974) in long polysynthetic word forms. In contrast, the inflecting-fusional and the introflecting type are devoid of these acquisitional difficulties because of the preference for having just one affix (with cumulative meaning, see above) per inflectional form, an instantiation of the universal preference for binary relations. Now, when starting to acquire morphology, even Turkish and Hungarian children greatly prefer having just one suffix per word form (cf. Peters 1997: 180f, and Fortescue & Lennert Olsen 1992: 141ff & Slobin 1992 for Greenlandic, Iturrioz Leza 1998: 108ff and Gómez López 1998: 187 for Huichol) and thus follow this universal preference for binary relations. In this preference they are supported by adults in early child-directed speech, which also appears to prefer short word forms, especially in motherese (cf. Iturrioz Leza 1997, 1998: 10ff, 51, 110ff, De León 1998: 159). Thus the two difficulties of the agglutinating type may become relevant much later in acquisition, but this has not yet been investigated.

The agglutinating type presents another property which facilitates acquisition: in an iconic and transparent way, morphology is word-based, i.e. typically declension is built up on a zero form of the morphosemantically unmarked elementary form of the Nom.Sg., conjugation analogously on the 3.Sg.Pres. form. In contrast, the inflecting-fusional and the introflecting type prefer in a morphology-pervasive way stem-based and root-based morphology. Although this diminishes iconicity and morphotactic transparency, children cannot avoid acquiring stem- and root-based paradigms. This starts, for inflecting-fusional languages, already in the protomorphological phase. Thus these basic and all-pervasive typological properties emerge early in language acquisition.

A noteworthy result of our project has been the finding (Voeikova 2002, cf. Stephany 2002) that case distinctions appear to emerge in agglutinating languages before number distinctions, whereas in inflecting languages case distinctions emerge after number distinctions (exception: Lithuanian, s. Savickiene 2003). Number is a more basic category than case. One can propose even an implication: if a language has case distinctions, it also has number distinctions, but not vice versa. Thus we can expect number to emerge earlier in acquisition than case. Now why is there the reverse order in the acquisition of, at least, Turkish, Finnish and Hungarian? Note that plural and case are marked separately in these languages and case after plural, e.g. Turkish:

(11) N.sg. ev ‘house’, N.Pl. ev-ler, Loc.Sg. ev-de, Loc.Pl. ev-ler-de

Thus, in case of a plural oblique case form it is easier for the child to strip off the case suffix than the plural suffix. Compare. also the well-known recency effect, which makes ends of words easier to segment than beginnings (cf. Slobin 1973: 191f, Peters 1997:

181f) and is the main reason for the suffixing preference (cf. Hall 1992). Also in our project languages suffixes emerge earlier than prefixes, except in the above-mentioned cases of separable prefixes.

There is a close connection between morphological and syntactic properties in linguistic typology, and consequently Skalička's ideal types are characterised both by morphological and syntactic properties. Such close connections, provided that they are viewed as pertaining to a basic typological level of language, present a problem to a nativist modular approach whereby morphology and syntax are identified as different innate modules, because interaction between different modules is limited to their superficial outputs but banned from their basic design. However, since we assume, and have found evidence for, that basic typological properties are acquired in the protomorphological phase, i.e. before the modules of morphology and syntax are dissociated, this problem does not exist for our constructivist approach. In protomorphology the emerging but not yet modularised components of morphology and syntax can freely interact. In this way data from first language acquisition can support the approach to typology as representing a basic level of language.

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Morphological Typology and First Language Acquisition: Some Mutual Challenges

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