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Morphological Aspects of Nominal Compounding in German and Certain other Languages: what to Acquire in Language Acquisition in Case the Rules Fail?

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1. In one respect, psycholinguistics seems contingent upon theoretical linguistics: in order to understand the acquisition or the development of language in the language learner, a certain understanding of what is to be acquired or learned appears to be prerequisite.[1] Reliance upon the feasibility of a neat separation of pure and applied sides of the science inevitably entails, then, that psycholinguistics of the day envisages its subject matter in terms that are defined by theoretical linguistics of the day. Consider a specific instance of this division of scientific labour. Most current psycholinguistic investigations of the acquisition of morphology, of whatever language, proceed from one a priori and mostly tacit assumption, viz. that the particular language investigated displays, over a certain period of time, a well-defined (by the theoretical linguist), consistent, and stable system of morphological rules that are uniformly, regularly, generally (as far as they go), predictably, and more or less productively employed by all adult competent speakers of that language, and that consequently are the target all learners of that language attempt to aim at. Obviously, this conception of actual language and language learning behaviour derives from, i.e. takes for reality, the two idealizations of classical transformational generative grammar, which is in fact not supposed to be a theory of actual language use, viz. the ideal speaker-listener, who knows his language and its morphological

[1] For this supposed truism cf. McNeill (1970:1061), Reibel (1972:198-99), and Slobin's comments on the successive states of the art in Ferguson & Slobin (1973:169-73).

rules perfectly after acquisition by means of a language acquisition device is completed, and the ideal completely homogeneous language community consisting of a set of utterly conformist ideal speakers-listeners. Now, it would seem that it is an empirical and practical question whether an abstract theoretical framework like that may profitably be applied to studies of the acquisition of morphology. As far as Modern English is concerned, that theoretical prejudice apparently turns out to be not too implausible a guide for developmental psycholinguistics; at least this holds for inflectional morphology. Most adult speakers of English would presumably agree about what is the correct plural of any noun that is used in everyday language. And a child who, at some stage of his language acquisition process, for some reason ('overgeneralization') resorts to the incorrect plurals *gooses* and *childs* will have no difficulty finding out, sooner of later, that he is in conflict with his models, who unanimously have decided to say *geese* and *children* instead. English derivational morphology, on the other hand, ought to confront the learner with some problems -- if he relies entirely on lexicon-independent 'generative' rules, that is. How is he to decide, for instance, what suffixes to append to adjectives such as *kind* and *wide* in order to get nouns? Is it *kindhood, kindness, kindth,* or *wideness, widity, width*? One further example bears on phonology as well. Ohala (1974:372) was able to demonstrate, by asking his subjects to produce deverbal nouns from *obtain* and *pertain* on the model of *detain/detention* as well as deverbal adjectives on the model of *explain/explanatory,* that actual linguistic creativity is not rule-governed in the way current transformational generative theory would lead one to expect. In Ohala's experiment, that is to say, most speakers, but not all, left the stems [ʌbt^{h}ejn] and [pət^{h}ejn] unchanged in the respective derivatives; they did not apply the supposedly general vowel alternation (i.e. laxing and tensing) rules. Anyway, 'transformational generative' de-

velopmental psycholinguistics so far basically sticks to the tenet of uniform and stable systems of morphological rules to be picked up, stored in the memory (i.e. brain), and henceforth mastered indiscriminately by all language learners[2], albeit possibly rather late, as, for instance, in the case of Egyptian Arabic noun plurals (cf. Slobin 1973:181), where there still occur mistakes at the age of 15 due to the large number of irregularities and minor regularities, exceptions, that is, to otherwise general, regular, uniform and stable rules.

In this paper I shall demonstrate that there are quite productive morphological phenomena, accompanying nominal compounding in languages such as German, Afrikaans, Dutch and Swedish[3], which are far from conforming to the orderly picture of morphological systems delineated by generative grammar and taken over by current developmental psycholinguistics. Instead, these areas in the grammars of these languages are characterized by extreme inter- and intraindividual variability, by an excess of exceptions over rules, in transformational generative terms. I shall argue that accounts of the acquisition of these morphological systems that are based on either of two alternative transformational generative treatments of this subject matter fail to provide any insight into what there is actually acquired, apart from being empirically inadequate, in the first place; secondly, that the concept of generative morphological rules, and the interpretation of language learning as rule, and exceptions thereto, learning are not justified empirically in this case, simply because it is almost impossible, for the child if not the

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[2] Cf. again Slobin's comment on the present state of the art in Ferguson & Slobin (1973:170): 'The central problems are how to characterize this systematicity [in the language of children--FP] and how to account for its development and eventual convergence with the structures of adult language.' From this it seems that universal and overall systematicity (Saussure's 'où tout se tient') is taken for granted, as the conditio sine qua non of rule-governed and rule-changing linguistic behaviour.

[3] In fact, these morphological phenomena are not confined to nominal

linguist, to discover anything like rules; and lastly, that such a conception, unlike the traditional notion of analogy, is delusive in so far as it adduces a wrong rationale -- or none at all -- for actual creative language and language learning behaviour in these particular cases of the acquisition of morphology. In short, 'all grammars leak' (Sapir 1921:38), and theoretical as well as applied linguists have to face the fact that speakers use their language creatively and productively even there where the grammar leaks and the rules (the linguist's, at least) fail.

2. The capacity of children to understand and use compounds appropriately has been investigated several times in recent developmental psycholinguistics.[4] As these studies were concerned mainly with the semantics of nominal compounds and as, moreover, English, the language investigated primarily, is rather trivial with respect to inflectional morphology proper, the problem that is at issue here was not touched upon there; with the exception of Voyles (1967:17-18), who offers an insufficient, superficial treatment of it, however, which merely repeats what traditional grammars have always said: there are lots of exceptions to any rule, in case there are any rules; and which does not even mention the language learning aspect. Notice that Modern English very rarely uses anything else but noun stems in creating determinative nominal compounds.[5] Examples like *lambswool*, *beeswax*, *tradespeople*, and *calvesfoot*, where the determinans consists of a nominal stem plus a suffix *-s-*, which

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compounds. Due to space limitations, compounds with verbal and adjectival constituents cannot be dealt with in the present paper.

[4] See Berko (1958), Livant (1962), Voyles (1967), Gleitman & Gleitman (1970:chapters 3-5).

[5] Henceforth, I shall refer to the immediate constituents of a determinative nominal compound as the determinans and the determinatum; no particular semantic significance is to be attached to these terms, though.

is formally identical to the plural and the possessive suffix, have to be regarded as lexical relics. Although at some time in the history of English, the use of *-s-* may have been extended analogically to compounds that originally did not contain it -- cf. *doomsday* vs. Old English *dōmdæg*, and *herdsman* vs. Middle English *herdeman* --, this tendency has become obsolete in Modern English, and obviously, each of these items has to be learned individually. The situation is different in Modern German, Afrikaans, Dutch and Swedish. For the purpose of illustration, I shall concentrate on German, but it has to be emphasized that the other languages mentioned are very similar to German, with respect to juncture suffixes. I am drawing mainly on German because my systematic data (cf. § 4 and Plank 1974) are gathered from speakers and learners (L1 and L2) of German; I also questioned informants about Afrikaans, Dutch and Swedish, though rather informally.

Basically there are four suffixes that can go with the determinans root:[6] *-en-*, *-(e)s-*, *-er-*, and *-e-*; and the root can also occur without a suffix (written as *-ø-*). There is another, marginal, suffix *-ens-*, and some non-native nouns may have *-o-* and *-i-*, on a Greek and Latin pattern; but these will be neglected here. Likewise the occurrence of [ə] in *-(e)s-*, which is not particularly systematic either. Consider a number of examples that most competent speakers of German would presumably agree are morphologically well-formed:

(1) a. *Bärenkäfig* 'bear cage' NOM SG *Bär* NOM PL *Bären*
    b. *Zeitungsjunge* 'news boy' NOM SG *Zeitung* **Zeitungs*
    c. *Hühnerei* 'hen's egg' NOM SG *Huhn* NOM PL *Hühner*
    d. *Pferdestall* 'horse stable' NOM SG *Pferd* NOM PL *Pferde*

[6] I assume that root-morphemes, rather than stems or NOM SG's, are the basic forms an account of the distribution of inflectional and derivational suffixes has to depart from, though perhaps not in earliest child language.

e. *Kuhstall* 'cow shed' NOM SG *Kuh* NOM PL *Kühe*
f. *Schulferien* 'school holidays' NOM SG *Schule* root *Schul-*
g. *Staatsmann* 'statesman' NOM SG *Staat* GEN SG *Staat(e)s*

Most forms of the determinans coincide with forms familiar from the respective declensional paradigms (cf. 1a,c,d,e,g), or with the pure stem (1f). There are at least three exceptions to this 'rule', however. Firstly, certain feminines occur with the juncture suffix *-s-* (cf. *Liebesheirat* 'love-match', and, fairly generally, feminine derivatives with certain suffixes, like 1b) although feminines never have an inflectional ending *-s*; secondly, certain compounds are 'diachronic islands' in so far as they preserve an inflectional form that no longer exists in the present-day language (cf. *Nachtigall* 'nightingale' from Middle High German *nahtegal(e)*, already lexicalized at that time or *Schwanensee* 'swan lake', where the *-en-* coincides with an older inflectional suffix; *kyrkogård* 'churchyard' and *gatukorsning* 'cross-roads' are Swedish analogues); and thirdly, there are juncture suffixes (mainly *-en-*) unlike any inflectional endings present or past of preferably non-native determinans nouns (cf. *Inseratenannahme* 'advertisement department' vs. NOM SG *Inserat*, GEN SG *Inserat(e)s*, NOM PL *Inserate*). Such 'irregularities' are by no means a peculiarity of fully lexicalized compounds only; that there is just one lexicalized, i.e. more or less common, compound with a non-inflectional determinans form may suffice for any new compound with the same determinans to follow suit. Hence, *Schwanentümpel* 'swan puddle', *Schwanenbraten* 'roast swan' etc. would presumably stand a good chance of being considered morphologically well-formed by most speakers of German. There is one further complication to worry the rule-oriented linguist. Rather than co-occurring with one and the same juncture suffix in any compound, a large number of determinans nouns may show up in alternative forms. The fol-

lowing types of alternatives can be distinguished. Firstly, there are geographical differences; a case in point is Southern German *Rindsbraten* vs. Northern German *Rinderbraten* 'roast beef'. Secondly, alternative juncture suffixes may distinguish semantically compounds otherwise morphologically identical, on the grounds of a posteriori conventions to utilize the alternatives in a certain manner (two forms-two meanings), and not because of some inherent meaning of the suffixes. *Landmann* 'countryman, farmer' vs. *Landsmann* 'compatriot', and *Wassernot* 'scarcity of water' vs. *Wassersnot* 'flood' are favourite specimens of that. Sometimes, the semantic difference may be taken to be one of singular vs. plural; cf. *Gottesglaube* vs. *Götterglaube* 'believe in god(s)', *Gottes* being GEN SG, and *Götter* NOM/GEN/ACC PL. Analogously, with different determinata; cf. *Volksvertreter* 'representative of the people' vs. *Völkerwanderung* 'migration of nations'. Thirdly, alternative juncture suffixes may differentiate compounds stylistically, cf. *Mondschein* (colloquial) vs. *Mondenschein* (poetic) 'moonshine', or, with different determinata, *Sternwarte* 'observatory', which is not usual in poetic language, vs. *Sternenschein* 'starlight'. And fourthly, alternative juncture suffixes occur in free variation; cf. *Motor(en)lärm* 'noise of engines', or *Welt(en)raum* 'universe', *Empfang(s)schein* 'receipt'.

The crucial thing, now, for the linguist and the language learner and user, is to determine what factors condition the distribution of juncture suffixes; or, to be more specific, the distribution of these suffixes in newly created compounds. Compounds like *Nachtigall* and perhaps *Schwanensee*, which are learned as a whole by rote, may justifiably be exempted from these eventual productive morphological rules, although they may very well be analysed by the speaker-listener into their integral morphological parts. On the basis of essentially four different types of grammatical information the occurrence of a juncture suffix might appear to be generally and systematically predictable. The

first two possibilities draw on the resemblance between juncture suffixes and inflectional endings. Perhaps juncture suffixes in fact are inflectional endings? If, firstly, the syntagmatic semantic notion of number is considered the conditioning factor, then there are counterexamples in plenty; *Bischofskonferenz* 'conference of bishops' is among the more notorious ones, *Bischofs* being GEN SG, which obviously is not compatible with the meaning of the compound.[7] Syntagmatic case relationships holding between determinans and determinatum in some underlying or superficial syntactic representation likewise fail to qualify as conditioning factor. Again, the number of counterexamples is virtually infinite -- remember cases like *Zeitungsjunge* where the *-s* is no possible case ending of the simplex *Zeitung* --, thus rendering accidental and insignificant examples that look like supporting this supposition. Might it not be the phonological environment, euphonic factors, or phonotactic constraints, then, that allow to predict which juncture suffixes to choose? As to the segmental phonological environment of the juncture, there may indeed exist spurious generalizations (with lots of 'exceptions') of the following sort: *-e-* is preferred over *-Ø-* after voiced plosives, which otherwise would undergo final devoicing (*Pferdefleisch* 'horse-flesh'); non-inflectional *-s-* preferably occurs after polysyllabic feminines ending in a voiceless dental plosive (*Anstaltsdirektor* 'director of an institution'). Likewise, the interpretation of juncture suffixes as signalling, unambiguously and systematically, morpheme boundaries, by way of building up consonant sequences that cannot occur morpheme- (or syllable-) internally (Trubetzkoy's 'Abgrenzungslehre')[8], does not capture

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[7] Nevertheless, informants, if questioned, sometimes back their choices of juncture suffixes in dubious cases with reference to plural- or singularlike meaning.

[8] According to this view, the consonant sequence [lksv] in *Volkswagen*

a linguistically significant generalization, and, above all, is of no predictive value. There is one possibility left, viz. morphological conditioning. And indeed, the declensional paradigm of a determinans noun to a certain extent limits the choice of juncture suffixes. It may be established, then, as a rule of thumb and with certain provisos (see above), that inflectional endings (or stem-formants) of a noun are possible juncture suffixes, and also that the root-morpheme can constitute the determinans without any modification. Being more specific than that -- claiming, for instance, that weak nouns, which have *-en*-plurals, as a rule take the juncture suffix *-en-* -- entails rising numbers of exceptions. There is a second type of morphological conditioning: determinans nouns with certain derivational suffixes (such as *-heit, -ung, -schaft*) more often than not take *-s-* (*Zeitungsjunge* etc.). And a third, related though less general kind of morphological conditioning can be gathered from 2:

(2) *Hofmauer* 'yard wall' - *Kirchhofsmauer* 'churchyard wall'
hofkapel 'court chapel' - *kerkhofskapel* 'churchyard chapel' (Afrikaans)
vägkarta 'road map' - *järnvägskarta* 'railway map' (Swedish)

I.e. morphological complexity of the determinans favours the occurrence of *-s-*, as compared to the *s*-less simple determinans.

To conclude this theoretical linguistic paragraph, none of the factors discussed -- neither separately nor in combination -- allows to predict systematically the distribution of juncture suffixes in newly created compounds. There simply are no general necessary or sufficient conditions for the choice of one and the avoidance of another junc-

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is to aid the listener or reader in his immediate constituent analysis; it precludes, for instance, a segmentation like *Vol+kswagen*.

ture suffix in German, Swedish, Dutch and Afrikaans.[9] This state of affairs ought to confront language users and, in particular, learners, who are quite productive in creating new and using old nominal compounds and, therefore, cannot avoid using juncture suffixes (maybe zero)[10], with insurmountable obstacles -- at least if they expect to acquire orderly, stable, and more or less general, generative morphological rules. One other thing might be inferred from this lack of systematicity and predictability. Would it not be surprising if there were no inter- and intraindividual variation, i.e. heterogeneity and inconsistency, in the use of juncture suffixes? If all speakers had strong, clear-cut and, above all, coinciding intuitions about the morphological wellformedness of compounds with alternative juncture suffixes?

3. There are available two transformational generative treatments of this subject matter; Botha (1968) on Afrikaans, and Wurzel (1970) on German. Both Botha and Wurzel address themselves to the ideal competent speaker-listener, talking and learning to talk in an ideal completely homogeneous speech community; no provisions whatever are made for the possibility of variation in the choice of juncture suffixes. Moreover, the ideal speaker-hearer is endowed with formidable intuitions indeed: for any compound, new or old, he absolutely knows which juncture suffixes are perfectly allright and which ones are perfectly bad. Botha and Wurzel do not agree, though, about how exactly the ideal speaker's grammar achieves this accurate predictability in so fuzzy an area of morphology.

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9 For a more detailed discussion of possible conditioning factors cf. Plank (1974). For the other languages mentioned consult any non-prescriptive traditional grammar; for Afrikaans cf. also Botha (1968:157-80).

10 Hence, juncture suffixes cannot be considered too peripheral a phenomenon in the grammars of Modern German, Afrikaans, etc.

Wurzel purports to distinguish the general and systematic distribution of juncture suffixes, which is conditioned by independent morphological criteria, from the more or less idiosyncratic, but nevertheless predictable distribution. Unlike new compounds, lexicalizations, which are merely reproduced as a whole by the speaker, remain unanalysed, there being no such mechanism as analytical -- as opposed to productive or synthetic -- morphological rules that could break down lexical entries like *Schwanensee* into their constituents. Wurzel (1970:96) realizes, informally, that such lexicalizations presumably influence, on a large scale, compounds that individual speakers themselves create on the spur of the moment. However, his grammar lacks a mechanism that could explicate this notion of lexical patterns or models. Thus the following three 'general rules' of Wurzel's function irrespective of prior lexicalizations: Certain derivational suffixes (*-heit, -schaft* etc.) of the determinans trigger insertion of *-s-*; weak determinans nouns require *-en-*, except they are derivatives with *-heit* etc.; all other nouns as a rule do without any juncture suffix. The rest is an excessive taxonomy of exceptions. Of course, the general rules above have lots of 'negative' exceptions, i.e. do not apply to nouns that meet their structural descriptions, which consequently has to be stated in the lexical entries of these nouns; the general rules do apply to nouns that do not meet their structural descriptions; that they are 'positive' exceptions has to be stated in their lexical entries, as well as in the rule itself. The distribution of *-e-* and *-er-* is totally idiosyncratic, according to Wurzel; therefore, the respective rules apply to exceptions only. In certain cases, alternative juncture suffixes may be chosen according to the singular- or plural-like meaning of the compound. Particularly irregular cases are listed in the lexicon; i.e. the lexical entry of the determinans is accompanied by a statement of which rule to apply in the environment of which determinatum. The empirical claim (cf. Wurzel 1970:103) is

that the more irregular compounds are, the more difficult they are for the speaker. There are several problems with Wurzel's grammar; the complexity-claims are empirically empty, and, above all, it is not particularly clear how this grammar might be acquired. On what data basis are language learners to formulate hypotheses, and, in the end, identical hypotheses about the distribution of juncture suffixes if the regularities are enshrouded in exceptions? How are they to differentiate lexicalizations, which are irregular without being generated by rules, from new creations, which are irregular (on the whole) and rule-governed? How can they manage to keep their blinkers that prevent them, in their own creations, from relying, instantaneously and far from generally, on lexical patterns? Why should learners reconstruct and depend on rules that complicated that, from the semiotic point of view, do not seem to be particularly useful?

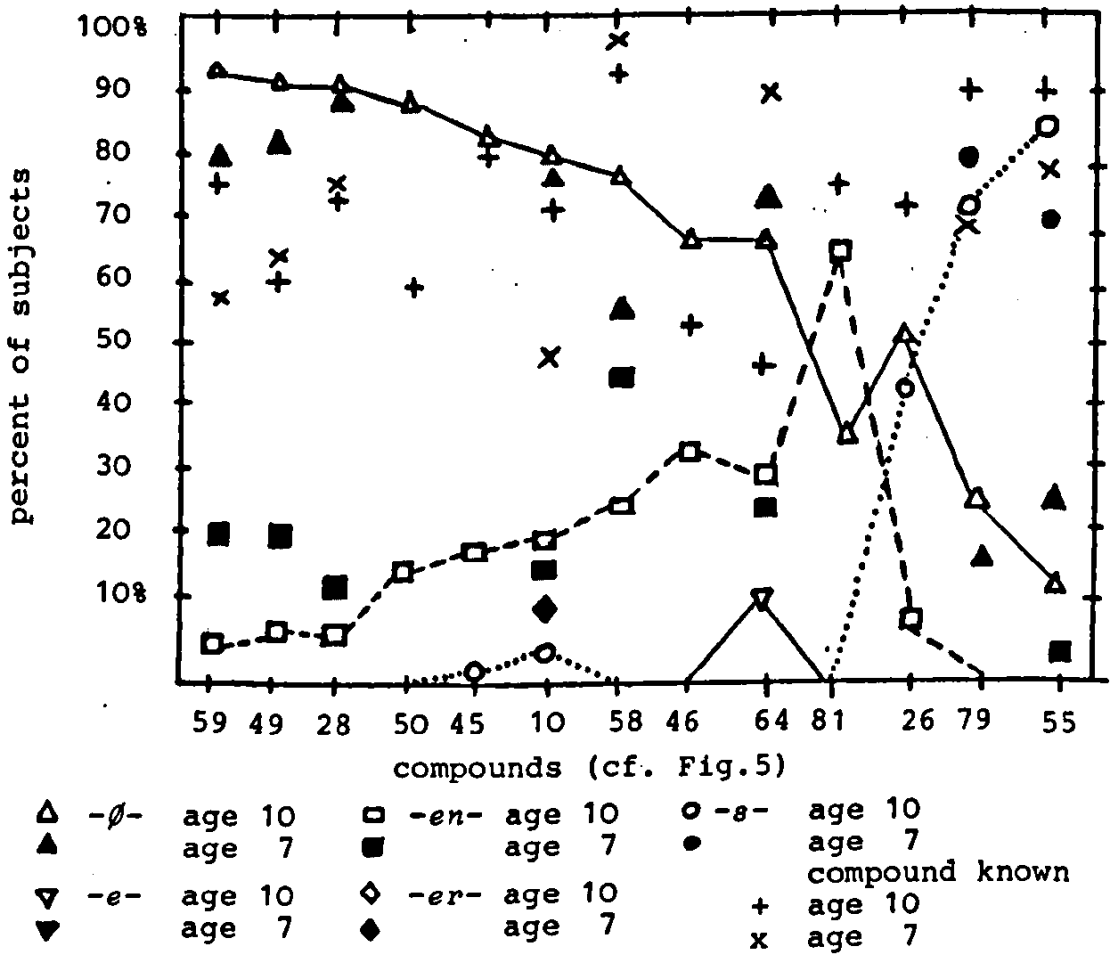
Botha is more explicit about how learners of Afrikaans acquire the ability to choose the appropriate juncture suffixes. Apart from marginal minor regularities (cf. 2 above), there is no general rule that could predict the distribution of *-s-*, *-e-*, and *-∅-* in Afrikaans nominal compounds. On the other hand, compounds are created, by means of general recursive rules, systematically and regularly, as far as their syntax, semantics and (partly) intonation are concerned. Due to these regular and predictable properties, compounds need not be stored as a whole in the lexicon -- after all, they are syntactic surface structures --; but since syntactic surface structures of compounds lack juncture suffixes, Botha (1968:246) sets up 'another dictionary-like device' which is to contain (the phonological forms of) all compounds with unpredictable juncture suffixes, i.e. suffixes other than zero. Because the lexicons of the ideal speaker-hearer are finite, the following claim is made by Botha's grammar: Each newly created compound,

which cannot yet be in the extra-lexicon, remains without juncture suffix -- which apparently amounts to considering no suffix the regular, unmarked case. Now, Botha (1968:247) himself notices the implications of this proposal for language acquisition. As the learner has to build up his lexicons from the scratch, there will, at first, be no lexical entries of compounds with otherwise unpredictable juncture suffixes available. Therefore, children initially realize their compounds without juncture suffixes, as long as they are not corrected by competent speakers whose extra-lexicon contains an entry of that particular irregular case. The implausibility of Botha's approach is obvious. It claims that competent speakers are not creative at all, with respect to using suffixes other than zero in unfamiliar (i.e. not yet lexicalized) compounds. At least the intuitions of the one competent speaker of Afrikaans I was able to consult did not confirm this assumption. Secondly, children, in particular, tend to invent novel compounds, and adults, lacking the respective lexical entries, may not be in a position, then, to correct the child; which implies that children would have to go on using these compounds without any juncture suffix. According to the data from early language acquisition in Stern & Stern (1928: chapter 22), this is at odds with empirical evidence -- at least from German, but presumably from Afrikaans as well. If, on the other hand, learners avoiding suffixes are corrected very often, i.e. learn by rote long lists of exceptions, how are they to maintain the generalization that no suffix is the general case?

4. In order to determine whether the idealization of the omniscient speaker-hearer removes theory too far from reality in this area of grammar, and in order to fathom the degree of actual inter- and intraindividual variability among language learners and competent speakers of German, two experiments were carried out. 33 7-year-old and 64

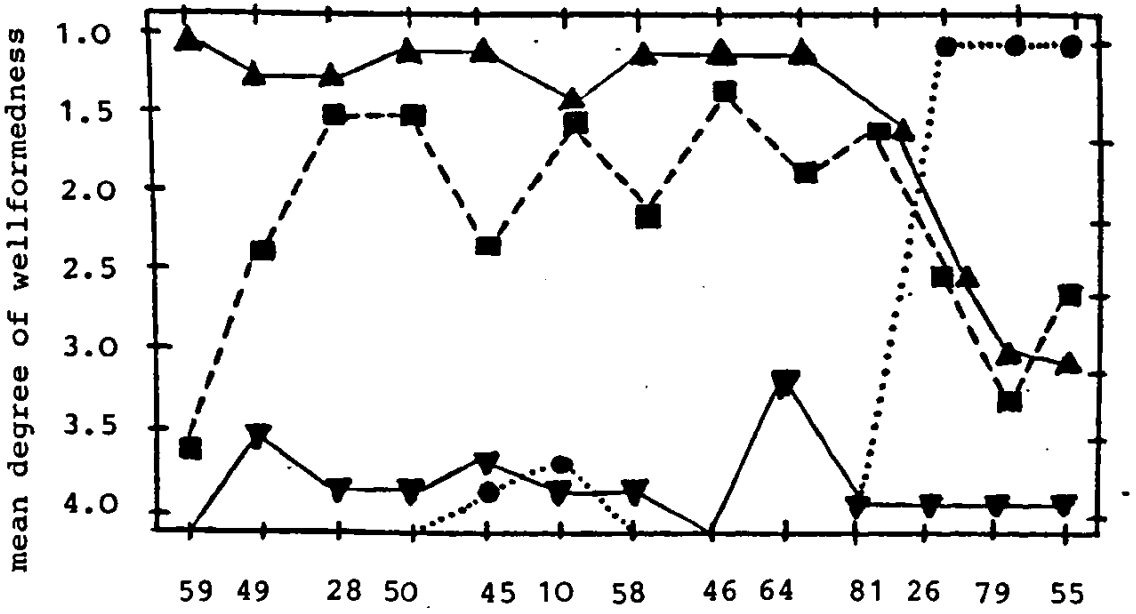
10-year-old schoolchildren were given a questionnaire with 40 and 80, respectively, pairs of nouns (NOM SG). They were asked to fill in the appropriate juncture suffix(es), and to indicate whether they already knew the respective compounds. With the 10-year-olds, the same experiment was repeated seven weeks later in order to survey intra-individual variation. Six adult speakers of German were asked to evaluate the morphological wellformedness of the alternative forms produced by the 7- and 10-year-old subjects. For some of the results of these experiments consult Figures 3-5;[11] the relevant determinans nouns are feminines without final *-e* in NOM SG.

(3) JUNCTURE SUFFIXES CHOSEN BY 7- AND 10-YEAR-OLDS (PERCENT).



[11] For a detailed analysis cf. Plank (1974).

(4) MEAN DEGREES OF WELLFORMEDNESS OF COMPOUNDS WITH ALTERNATIVE SUFFIXES (ADULTS).



degrees of well-formedness:

1.0 perfectly o.k.
2.0 worse than 1.0
3.0 better than 4.0
4.0 perfectly bad

▲ *-ø-*
■ *-en-*
● *-s-*
▼ *-e-*
◆ *-er-*

(5) IMPLICATIONAL SCALING OF DISTRIBUTION OF SUFFIXES AMONG A SAMPLE OF 10-YEAR-OLDS.
LINGUISTIC ENVIRONMENT: WEAK FEMININE DETERMINANS NOUNS (1=*-(e)n-*, 2=*-e-*, 3=*-Ø-*, 4=*-s-*).

informant	compounds												
	59	49	28	50	45	10	58	46	64	81	26	79	55
5b31	1	13	13	11	1	11	13	11	11	11	14	4	44
5b09	3	33	33	11	1	11	11	13	$\frac{1}{3}$1	11	44	4	44
5a07	3	33	33	13	1	11	13	11	32	11	14	4	43
5a15	3	31	33	33	3	33	11	31	31	11	31	3	34
5b19	3	13	13	33	3	31	33	13	32	11	43	4	44
5b23	3	33	33	33	3	11	33	11	31	31	34	4	44
5b11	3	33	33	33	1	43	33	11	33	11	44	4	44
5b02	3	33	33	33	3	33	13	13	33	13	33	4	43
5b17	3	33	33	33	3	33	33	33	33	13	13	4	43
5a04	3	33	33	33	3	33	33	33	33	13	33	4	44
5b28	3	33	33	33	3	33	31	33	32	33	34	3	44
5a18	3	33	33	33	3	33	33	33	32	31	33	3	44
5a05	3	33	33	33	3	33	33	33	32	31	33	3	44
5b20	3	33	33	33	3	33	33	33	33	33	33	3	43

xy: x=1st test
y=2nd test
$\frac{x}{y}$: both forms supplied in one test

compounds tested:

59	*Bahn damm*
49	*Schachtel macher*
28	*Arznei macher*
50	*Galerie besucher*
45	*Burg graf*
10	*Burg eroberer*
58	*Uhr macher*
46	*Mauer brecher*
64	*Tür(e) hüter*
81	*Last träger*
26	*Anstalt leiter*
79	*Zeitung träger*
55	*Mannschaft führer*

Examined independently of Fig. 4, the considerable diversity among learners at a fairly late stage of language acquisition that can be gathered from Fig. 3 could seem to suggest that the rules to be acquired, which uniformly and consistently underlie adult speech, are rather complicated. Fig.4, however, reveals that adult speech, or rather intuition, is not that regular either. With almost any compound tested, adults tend to accept two, or more, alternatives as morphologically (more or less) well-formed; and this non-uniqueness is mirrored, generally, in interindividual variation among learners. Moreover, adults rather often do not at all agree as to the wellformedness of alternatives; unfortunately, this is not shown in Fig. 4, which gives mean scores only. Matrix 5 records, in detail, the behaviour of a sample of individual informants. It demonstrates that apart from heterogeneity there is also intrainformant variation; the overall degree of inconsistency in my data approximates 30 %. Although Matrix 5 is no perfect Guttman Scale, it is nevertheless obvious that the variation observed is patterned rather than completely random. There are informants with a strong preference for *-en-* (top rows); others avoid *-en-* and prefer *-Ø-* (bottom rows). Compounds may be scaled, likewise: there are clear cases of *-Ø-* (left columns); but up to no.81, preference for *-en-*, and simultaneously interinformant variation, are increasing steadily. To conclude, there are patterns and regularities, but I submit that empirical data from various stages of language development do not justify positing generative morphological rules to account for the distribution of juncture suffixes.

5. This conclusion leaves developmental psycholinguistics with the question of what learners do learn, then. I would like to suggest, in all brevity, that it is mainly two things that are acquired here; firstly, an increasing number of lexical entries of nominal compounds, which are identified and segmented by the learner, rather than being

taken as unanalysable wholes -- though perhaps not in very early language acquisition; and secondly, the ability to analogize, on the basis of -- probably highly idiosyncratic -- lexical patterns, and without the aid of stable (once they are acquired) generative rules. Recognizing that *Schwanensee*, a form already lexicalized, and *Schwan tümpel* are similar in so far as they share the determinans ought it to make rather easy for the learner to choose the right suffix. By increasing his stock of lexicalized compounds, the learner at the same time acquires constraints upon his analogizing creativity. Being unfamiliar with a compound such as *Bahndamm* 'railway embankment', i.e. being unable simply to reproduce this form from memory, a child may very well decide on *Bahnendamm* instead, on the analogy of some compound with a (morphologically) similar determinans.[12] At different times, different references may be made to the lexicon, which explains variability. Unlike the rule-approach, the concept of lexical patterns can provide a semiotic motivation for juncture suffixes. In part, they are a lexical habit; but the variability observed may be made use of, according to the principle 'one meaning - one form'. That *Tagebuch* 'diary', which is an old lexicalization, and *Tagesbuch* 'daily book' differ semantically is not a function of some inherent meaning of both suffixes; rather *Tagesbuch* is created on the semantic pattern of *Tageszeitung* 'daily newspaper', and in morphological and semantic contrast to the other lexical model, *Tagebuch*. Sometimes, patterns consolidate; and the resulting regularities are called 'rules' by the linguist. Therefore, developmental psycholinguistics would seem to be mistaken if it grants 'rules' an independent, objective reality.

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[12] From some items in Fig.3 it seems that there is more interinformant variation among 7-year-olds, which would support the claim of increasing (with age) lexical restrictions of analogical creativity.

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