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Repair in Grammar by Syntactic Epenthesis

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ABSTRACT. In natural language, the syntax-semantics relation can be disrupted in various ways. Ideally, misfits are only apparent and can be removed within an adequate linguistic theory. In this talk, seven cases will be discussed, each of which appears to jeopardize the Fregean principle of compositionality. It will be shown that all these exceptions succumb to a single generalization by which a formal syntactic defect is “repaired” by an insertion operation. Insertion of a default form takes place for the pure satisfaction of syntactic well-formedness and without semantic involvement. Similar insertion operations are known in phonology as *epenthesis*. For instance, the segment [t] in German *hoffen[t]lich* (‘hopefully’) is a default that is not present in underlying structure. It appears for purely formal reasons avoiding unacceptable or sub-optimal phonotactics. The claim is that an operation like epenthesis is at work in syntax, too. Its application helps circumvent formal deficits without semantic consequences. If the logic of this argumentation succeeds, a number of apparent exceptions to regular compositionality would disappear. A consequence for the architecture of the language system is a primacy of syntactic composition (*merge*) over semantic interpretation.

1. Form, Meaning, Recursion

[Die Sprache] steht ganz eigentlich einem unendlichen und wahrhaft gränzenlosen Gebiete, dem Inbegriff alles Denkbaren gegenüber. Sie muß daher von endlichen Mitteln einen unendlichen Gebrauch machen, und vermag dies durch die Identität der Gedanken und Sprache erzeugenden Kraft.

Wilhelm von Humboldt (1836). *Über die Verschiedenheit des menschlichen Sprachbaus und ihren Einfluß auf die geistige Entwicklung des Menschengeschlechts*. Zit. aus (1998) Paderborn: Schöningh, S. 221.

✱

Erstaunlich ist es, was die Sprache leistet, indem sie mit wenigen Silben unübersehbar viele Gedanken ausdrückt, dass sie sogar für einen Gedanken, den zum ersten Male ein Erdenbürger gefasst hat, eine Einkleidung findet, in der ihn ein anderer erkennen kann, dem er ganz neu ist. Dies wäre nicht möglich, wenn wir in dem Gedanken nicht Teile unterscheiden könnten, denen Satzteile entsprechen, sodass der Aufbau des Satzes als Bild gelten könnte des Aufbaus des Gedankens.

Gottlob Frege (1918/1919?). *Logische Untersuchungen*. Zit. aus (1966): Göttingen: Vandenhoeck & Ruprecht, S. 72.

✱

Viewing the language L as a derivation-generating procedure, we may think of it as applying to a numeration N and forming a sequence S of symbolic elements ($\sigma_1, \sigma_2, \dots, \sigma_n$) terminating only if σ_n is a pair (π, λ) and N is reduced to zero (the computation may go on). S formed in this way is a derivation, which converges if the elements σ_n satisfy FI [full interpretation, JB] at PF and LF, respectively.

Noam A. Chomsky (1995). *The Minimalist Program*. Cambridge, Mass.: The MIT Press, S. 225f.

Neither von Humboldt nor Frege had the tools of what we call "syntax" today. Frege had a clear idea, but the formal tools were not available yet. These did not come into the game until Chomsky's application of automata theory in the early 1950s.

Thanks to the recursive merge algorithm of syntax, access to a finite vocabulary gives rise to unlimited structures in which form (π) and meaning (λ) are related to one another. This simple solution of the form/meaning problem obtained in this way can be regarded as universally valid.

In the following it will be shown that nevertheless problems reminiscent of paradoxes arise, and what might be a realistic way to unveil these paradoxes or pseudo-problems. Each of the cases considered could be brushed aside as an "exception" or "idiosyncrasy," but in their totality

they demand an explanation. I will discuss seven cases, all pointing in the same direction. At the end, I will formulate an explanation. A comparison with epenthesis in phonology seems to be highly suggestive.

2. Specificity in Turkish

The morpheme *-(y)I* of Turkish is not only an accusative marker but also an indicator of specificity (Enç 1991). Here is its application to indefinites.

- (1) a. (Ben) bir kitap oku-du-m. INDEFINITE/NON-SPECIFIC
 I a book read-PAST-1SG
 ‘I read a book.’
- b. (Ben) bir kitab-ı oku-du-m. INDEFINITE/SPECIFIC
 I a book-ACC read-PAST-1SG
 ‘I read a certain book.’

Von Heusinger & Kornfilt (2005:24): *the referential index of a specific expression must be in an inclusive relationship to the set of corresponding indices of an established set (established in the discourse or made otherwise salient).*

-(y)I causes the difference between (1a) und (1b).

- (2) a. Ali kadın -lar -in iki -sin -i tanı -yor -du
 Ali woman-PL -GEN two-AGR[3]-ACC know-PROG-PAST
 ‘Ali knew two of the women.’ (Enç 1991: ex. 28)
- b. *Ali kadın-lar -in iki -si tanı -yor -du.
 Ali woman-PL-GEN two-AGR[3] know-PROG-PAST

(2b) is apparently ungrammatical because *iki* (two) must be specific. It denotes a subset of an already specified set. As Kornfilt (2001) observes, however, this argumentation fails. Indeed, there are contexts in which *-(y)I* occurs independently of semantic interpretation. Its absence evokes ungrammaticality. The morpheme *-(s)I(n)* is a nominal congruence marker that must be followed by the accusative morpheme in a transitive construction. Interestingly, this rule holds even when the +spec and -spec interpretation is undetermined. (2b) is apparently ungrammatical because *iki* (two) must be specific. It denotes a subset of a set that is already determined.

- (3) Kitap-lar-in iki -sin -i al, geri -sin -i
 book-PL-GEN two-AGR(3)-ACC buy remainder -AGR(3) -ACC
 kutu-da bırak.
 box-LOC leave
 ‘Take (any) two of the books and leave the remainder [of the books] in the box.’

The accusative-marked subset of books can be +spec or –spec. This is unexpected if -(y)I is already lexically determined as +spec.

Von Heusinger and Kornfilt (2005: 37): *Where the accusative marker is required for formal reasons, it is not a reliable marker for specificity; elsewhere, it is.*

In other words, we are dealing with some sort of “exception” by which semantic interpretation does not follow what is demanded by morphosyntactic well-formedness.

3. Specificity in Bengali

In Bengali, the morpheme for the object case *-ke* occurs only on the direct object (DO), which is +hum. [CL is a classifier]

- (4) a. ami chele-Ta-ke dekhechi +hum
 I boy-CL-DO saw
 ‚I saw the boy‘
- b. ami ĩdur-Ta (*-ke) dekhechi -hum
 I mouse-CL saw
 ‚I saw the mouse‘

The indirect object (IO) is free from this semantic restriction. It is always marked with *-ke*.

- (5) a. dilip chele-Ta *(-ke) khabar dilo
 dilip boy-CL -IO food gave
 ‚Dilip gave food to the boy‘
- b. dilip ĩdur-Ta *(-ke) khabar dilo
 ‚Dilip gave food to the mouse‘

In connection with numeralia, *-ke* triggers a specific interpretation. Thereby the factor +human plays no role (Probal Dasgupta, p.c.):

- (6) a. ami du -To chele-ke khũjchilam INDEFINITE/SPECIFIC
 I two-CL boy-DO searched
 ‚I was looking for two boys (known to me)‘
- b. ami du -To chele khũjchilam INDEFINITE/NON-SPECIFIC
 ‚I was looking for two boys (e.g. as opposed to girls)‘
- (7) a. dilip du-To chagol-ke khũjche INDEFINITE/SPECIFIC
 dilip two-CL goat-DO searches
 ‚Dilip is looking for two specific goats (e.g. which he had lost before)‘
- b. dilip du-To chagol khũjche INDEFINITE/NON-SPECIFIC
 ‚Dilip is looking for two goats (e.g. as opposed to sheep)‘

Again, the case may arise where *-ke* becomes obligatory and at the same time the semantic effect of *-ke* is cancelled. (8) is compatible with +spec as well as and with –spec.

- (8) khali dilip-i du-To chagol *(-ke) du-To bhERa bhab-te pare
 only dilip-FOC two-CL goat -DO two-CL sheep think-INF can
- a. ‚Only Dilip can mistake two arbitrary goats for two arbitrary sheep‘
 ‚Nur Dilip kann meinen, dass zwei beliebige Ziegen zwei beliebige Schafe wären‘
- b. ‚Only Dilip can mistake two of these specific goats for two of these specific sheep‘
 ‚Nur Dilip kann meinen, dass zwei bestimmte Ziegen, z.B. Milu und Philu, zwei bestimmte Schafe wären, z.B. Molli und Bolli‘

Chagol-ke can be interpreted as two specific goats known to the speaker, or as two arbitrary goats. Here, *-ke* is obviously required for case reasons. Thus, we have a case of exceptional case marking (ECM). Thus, the use of *-ke* is a repair in the service of syntactic well-formedness. The semantic interpretation of *-ke* stops precisely at this point.

We are again dealing with a kind of "exception", where the semantic interpretation does not follow the requirement of morphosyntax.

B.t.w., Oinam Nganthoibi (JNU, Delhi, p.c.) informs me that in Hindi the same effect shows up in connection with the case marker *-ko*.

4. Genitive im Romanian

Romanian has an enclitic definite article, represented here as the achimorpheme *-L-*, as in *codru-l* (forest-D; 'the forest') or *frate-le* (brother-D; 'the brother'). According to Grosu (1994), *-L-* also inheres the noun *prietna* ('female friend').

-L- is used to assign the genitive.

(9) a. *Băiatu-l înalt a plecat*
boy -L tall has left
'The tall boy has left.'

b. *Prietna băiatu-lui înalt a plecat*
friend(F)-L boy -L(GEN) tall has left
'The tall boy's girlfriend has left.'

Grosu (1994:160)

Grosu (1994: 147) says: *-L-* "is the sole assigner of GEN(itive) Case in Romanian, and this, regardless of whether or not it has determiner status." Consider now (10):

(10) *Un palat *(a-l) un-ui rege*
a palace a-L a-Gen king
'a palace of a king'

According to Alexander Grosu (p.c.), *-L-* appears at the functional preposition *a* although *un palat* is clearly indefinite.

Following the natural assumption that there is only one abstract morpheme *-L-* in the language, one must conclude that it can be used to repair a violation of the case filter, and that exactly in this case its usual semantic interpretation may be suspended.

Thus, if one does not follow the inelegant solution according to which different lexical items L_1, L_2, \dots, L_n can be drawn from the lexicon depending on the context, another kind of "exception" arises: The use of *-L-* is enforced, while the semantic interpretation as the definite article is suspended.

6. Split topicalization

An NP can move out of DPs that are determined by an adjective or by a quantifier. In the core cases, the NP takes a topic function while the residual DP remains in the rheme.

- (16) a. Er hat nicht viele Bücher
he has not many books
,He doesn't have many books'

b. Bücher hat er nicht viele Bücher
,Books, he doesn't have many'

It has long been known that split topicalization is more than simple word order arrangement.

- (17) a. Er hatte kein Hemd mitgebracht
he had no shirt with.brought
'He had not taken along a shirt'

b. Hemd hatte er keines / *kein mitgebracht

The adjectival quantifier cannot simply be orphanized. It must take the form of a grammatically legitimate DP, as shown by the elliptical form *Er hatte keines mitgebracht*.

Now, for many – especially South German – speakers there is yet another defect in (17b), to which Henk van Riemsdijk has drawn our attention. Count nouns like *Hemd* usually cannot stand undetermined.¹ The solution is to enrich them by inserting a determiner.

- (18) **Ein** Hemd hatte er keines mitgebracht
a shirt had he none with.brought

If this DP were reconstructed back into its base position, the result would be **... hatte er keines ein Hemd mitgebracht*. Thus, the indefinite article *ein* cannot really be part of the numeration that caters to the generation of (18); *ein* does not seem to be part of the semantic representation at all. On the other hand, van Riemsdijk (1989) shows that DP splitting follows the well-known movement diagnostics. How can this paradox be resolved? Van Riemsdijk's solution is: *Regeneration*. Presupposing X-bar theory, he formulates his solution as follows: Regeneration will "grow back" on an X' its maximal projection node XP (p. 117). Of course, the relexicalization of the XP must be restricted. Relexicalization is subject to a strict recoverability requirement: only words that are fully determined by the features of the head of the moved phrase may be relexicalized. Regarding the special form of the indefinite article,

¹ Van Riemsdijk (1989: 124f). Naked count nouns would have to be confined to occurrence in the SpecCP position because apart from this they can at best arise in telegraphic speech.

van Riemsdijk (p. 118) suggests: [...] pick the unmarked form of the determiner and relexicalize it in terms of the recoverable features. [...] The simple indefinite article is the unmarked form of the nominal determiner, an assumption that strikes me as a quite natural one (p. 118).

Given the constraints of X-bar theory, van Riemsdijk's theory was met with skepticism in the 1980s. It seemed to weaken the theory, and it had the flavor of an ad hoc device. However, in the context of the cases of "repair" considered so far, it appears in a new and, I think, rather attractive light. DP splitting leads to partially ungrammatical structures. These are repaired by the use of a default form oriented to the base position; in the present case, this is clearly the article *ein*. The main innovation is that the inserted article is not semantically interpreted. If it were interpreted, (18) would amount to a contradiction. Consider (19).

(19) Er hatte ein Hemd mitgebracht, und er hatte kein Hemd mitgebracht
,He had brought along a shirt and he had brought along no shirt‘

This interpretation of (18) is totally absurd. How can it be avoided? The solution must be that the part of the structure that has been regenerated by a default insertion is semantically ignored. Thus, regeneration fits perfectly into the series of cases that we have already observed so far.²

7. The auxiliary verb *tun* and V2

German, among several other West-Germanic, Scandinavian but also other languages, is characterized by the V2 property. In the main clause, the finite verb moves from its clause-final base position to the C position, and some XP-constituent moves to SpecCP. Preposing of the finite verb is absolutely essential. Several less formal variants of German allow fulfillment of the V2-constraint by using the dummy verb *tun* ('to do'). Instead of *Ich erreiche dich schon die ganze Zeit nicht* (,I can't reach you since a long time‘) we can get (20).

(20) I tua di scho di ganze Zeit net erreichen.
I do you already the whole time not reach

Abraham & Fischer (1998: 41)

²This does not mean that there are no open questions. The violation of P-stranding as in **Einem Mitsubishi hat er von keinem geträumt* ('A Mitsubishi, he did not dream of') is avoided, for example, by copying the preposition: *Von einem Mitsubishi hat er von keinem geträumt*. A challenge is the well-known c-command problem in *Ein Buch über Syntax gekauft hat er sich noch keines*. '[Bought a book about syntax] has he none so far'. These problems are, however, not directly related to the regeneration idea.

Stylistically, the construction is associated with child language or also with somewhat infantile adult language. The use of *tun* is reminiscent of *do*-support in English. However, there are important differences. Unlike the auxiliary *do* of English, *tun* in German retains an agentive semantics that is compatible with *stage-level* predicates, but not with *individual-level* and *non-volitional* predicates.

- (21) Der Hund tut schon wieder auf dem Sofa liegen. TEMPORARY STATE/VOLITIONAL
 the dog does already again on the sofa lie
 ‘Gee, the dog is on the sofa again!’
- (22) *Die Brille tut auf dem Schreibtisch liegen. TEMPORARY STATE/NON-VOLITION
 the glasses do on the desk lie
- (23) *Konstanz tut am Bodensee liegen QUASI-ETERNAL STATE
 Konstanz does on.the Lake Constance lie
- (24) *Er tut einen lautereren Charakter besitzen
 he does an immaculous character possess
- (25) *Er tut seinem Großvater ziemlich ähneln
 he does his grandfather much resemble
- (26) *Er tut schon sehr gut Italienisch sprechen
 he does already very well Italian speak

The intriguing discovery is that all semantic effects that occur with *tun* disappear as soon as the predicate is topicalized, and *tun* is inserted in the C position to save the V2 structure.

- (27) [Auf dem Schreibtisch liegen] tut die Brille nicht. Ich habe schon nachgesehen ...
 on the desk lie do the glasses not. I’ve already looked
- (28) [Am Bodensee liegen] tut Stuttgart zum Glück nicht. Das wäre ja schrecklich ...
 at.the Lake Constance lie does Stuttgart luckily not. This would be horrible
- (29) [Einen lautereren Charakter besitzen] tut er auf alle Fälle. Du kannst ihm vertrauen ...
 an immaculous character possess does he in any case, you can trust him
- (30) [Seinem Großvater ähneln] tut nur der Karl. Seine Brüder sehen wie die Mutter aus ...
 his grandfather resemble does only the Karl. His brothers look like their mother
- (31) [Sehr gut Italienisch sprechen] tut er schon seit seinem zweiten Semester
 very well Italian speak does he already since his second semester

in Verona. Die Sprachprüfung könnte er also sofort machen ...
in Verona the language.test could he thus immediately make

Since the lexical verb is already "used up" by the topicalization, some insertion must occur in order to fulfill the V2 constraint. The verb that is ready to fulfill this job is the default verb *tun*. Interestingly, the agentive semantics of *tun* is turned off exactly at this point. Again, we see that the very same lexical item can play an exclusively syntactic role as an auxiliary. The semantics of *tun* remains silent.

8. The present participle in German

👋 Watch out! Now it's getting political 🇩🇪

In the German-speaking countries, a movement is on the rise whose supporters believe that the current language is unfair because it favors men and makes women (and other sexes) invisible. Among other things, de-verbal derivations ending in *-er* for humans are being criticized, such as *Lehrer* 'teacher', *Mieter* 'tenant', *Sänger* 'singer', *Sieger* 'winner', *Sprecher* 'speaker', *Verlierer* 'loser'. According to the new Duden dictionary, see <https://www.duden.de/woerterbuch>, these nouns are said to refer unambiguously to male persons. *Lehrer*, "male person who teaches at a school", *Mieter*, "male person who rented something" etc. To avoid any gender bias, the recommendation is to use double forms especially in the plural, i.e. *Lehrer und Lehrerinnen*, or to use the so-called gender-star: *Lehrer*innen*, phonetically realized with a glottal stop: */lehrerʔinnen/*.

Another strategy to avoid the masculine form is to use the nominalization of adjective forms derived from the past participle: $[V \text{ schlafen}] \Rightarrow [V \text{ schlafend}] \Rightarrow [A \text{ schlafend}] \Rightarrow (ein) [N \text{ Schlafender}] / (eine) [N \text{ Schlafende}]$. However, since the resulting noun in the singular requires the choice of one of the two genders, this form has been reserved only for the plural. Instead of *(die) Schläfer* 'the sleepers' one could use, we are told, *(die) Schlafenden* 'the sleeping ones'). Semantically, the replacement of the masculine *-er* ending by the present participle is highly problematic. The participle usually denotes an action in progress, i.e. it corresponds to the continuous form of English. For agentive nouns, this denotation does not hold, of course. A *Trinkender* is someone who is drinking something at a temporal reference point, whereas a *Trinker* is someone who usually drinks (too much alcohol). One can talk about a deceased singer (*ein verstorbener Sänger*) but not about a deceased person who is singing at speech time (*#ein verstorbener Singender*). Many supporters of the gender corrected language seem to be ready to sacrifice the difference between *-er* and *-end*.

The reason for my excursion into the realm of gender-corrected language is that it has been denied that the present participle ending in *-end* is obligatorily linked to the progressive aspect. Examples for this claim are nominals like the following, s. Glück (2020: 24).

- (32) a. der Vorsitzende, die Vorsitzende
 the chairman the chairwoman
- b. der Reisende, die Reisende der Handlungsreisende, etc.
 the male traveler the female traveller the travelling salesman
- c. der Überlebende, die Überlebende
 the male survivor the female survivor

A chairperson does not have to preside at the time of speaking, nor does a traveling salesman have to be on the road at speech time. (33) gives relevant examples.

- (33) a. Der Vorsitzende ist momentan im Urlaub.
 ‘The chairman is on holiday right now’
- b. Der Handlungsreisende liegt schon seit Wochen im Krankenhaus.
 ‘The travelling salesman is already hospitalized since weeks’
- c. Viele Überlebende aus den KZs sind nach Palästina gegangen.
 ‘Many survivors from the concentration camps went to Palestine’

How come that this is possible? A look at the potential morphological alternative to the *-end* participial form is sufficient to see the reason for this semantic widening: There are no such alternatives

- (34) a. *der Vorsitz, *die Vorsitzin
 b. *der Reiser, *die Reiserin, *der Handlungsreiser etc.
 c. *der Überleber, *Die Überleberin

For whatever reason, the morphology of German does not permit an *-er* derivation for these verbs. Thus, a default morpheme is needed, and the highly productive *-end* form is chosen. Exactly at this point, the aspectual reading of the present participle disappears, and the interpretation becomes free. Arguably, this freedom allows coverage of various interpretations among which the agentive interpretation.³

The principle that perspires through all the cases considered above is confirmed in this example from morphology. Due to the non-availability of *-er*, a default form, namely *-end*,

³ Notice that the *-end* form in *der Überlebende* (‘the survivor’) or *der Heranwachsende* (‘the adolescent’) must be semantically underspecified; otherwise they would clash with the non-agentivity of the verbs *überleben* (‘to survive’) or *heranwachsen* (‘to grow’).

kicks in, and interpretation is widened. It goes without saying that no reason can be derived from this for the general replacement of *-er* by *-end* as suggested by gender linguistics.

9. What did we learn?

The observed interpretative gaps must be subject to a general principle. When this principle is understood, it will be seen that the elegant solution of the form/meaning problem as envisaged by von Humboldt, Frege and executed by Chomsky is confirmed instead of appearing endangered by all kinds of "counterexamples".

The cases considered – and one can be sure that there are more – have a common denominator which I summarize as follows:

(i) Formal constraints monitor the computational steps of grammar (*merge*) in the derivation of syntactic structures. The steps go hand in hand with semantic interpretation. Thus, the meaning of a complex expression is derived from the meaning of its parts as suggested by Frege's principle.

(ii) From the recursive principle and a myriad of lexical options that can satisfy the respective constraints there emerges the power to generate an infinite number of linguistic meanings and thus ultimately thoughts.

(iii) Behind each lexical item (LI) there is a set of alternatives.

(iv) An LI without alternatives cannot have a semantic effect in composition. It is not distinctive.

(v) A formal constraint can be satisfied by choosing an LI for which there are no alternatives in a current operation of merge. We call such an LI a default form, or simply a *default*.

No further elaboration is needed here for (i) and (ii). Point (iii) is trivial although it tends to be forgotten in daily linguistic practice. Instead of merging *Buch* with *das* to derive [*das [Buch]*] zu erhalten, one could also merge *Heft* with *das* to get [*das [Heft]*]. Thus, the LI *Buch* is drawn from a set of alternatives (or competitors). In the same way, the article *das* stems from a set of alternatives. This set contains the indefinite article *ein*. Points (iv) and (v) are non-trivial. What is an LI without alternatives? It must be an unmarked default form. What counts as default in a computational step is determined on a case-by-case basis. The definite article can be used as a default LI because it can provide a morphological case form that meets a requirement of case theory. The indefinite article can be used as a default LI to establish a permissible DP in a determiner language. An unmarked verb like *tun* can be used as default-LI to avoid violation of the V2 constraint. The present participle morpheme *-end* can be used as a default morpheme for the establishment of a de-verbal nominal form.

Defaults are regular LIs with the special property of kicking in in case of a constraint violations. In their role as defaults, they are not in opposition to other LIs. According to (iv), they cannot make a semantic contribution.

The system can be summarized as follows:

(35) CONSTRAINTS

Fulfill morphosyntactic constraints rigorously!

(36) MERGE AND DISTINCTIVITY

Merger of a lexical element LI has a semantic effect iff LI comes from a set of alternatives $\{LI_1, LI_2, \dots, LI_n\}$. LI is therefore distinctive.

(37) DEFAULT


a. Due to a convention of markedness M, an LI can attain default status. Such an LI is no longer a part of $\{LI_1, LI_2, \dots, LI_n\}$. It follows from (36) that an LI with default status is non-distinctive. Its semantic interpretation, if any, is free.

b. Since every LI has formal features, a default LI satisfies (35) as well.

No restriction on the transparency of the syntax/semantics relation follows from this system. What looked at first sight like a collection of inhomogeneous irregularities subordinates itself in this system to a general and simple principle.

10. Phonology

The principle formulated in (35) though (37) is very close to what we know from classical structural and generative phonology. Minimal segments have phoneme status if they come from a set of oppositions. The /t/ in the German noun /ti:r/ "animal" has phoneme status because it is in opposition to /d/, which is able to distinguish the lexeme for animal from the lexeme for "you_{dative}" /di:r/.

However, the segment *t* can also play a very different role, namely as an  epenthetic element. An epenthetic element is inserted to resolve a phonological conflict. Consider the following examples.

- (38) a. **hoffenlich* versus ✓*hoffen[t]lich* ,hopefully‘
b. **versehenlich* versus ✓*versehen[t]lich* ,inadvertently‘
c. **morgenlich* versus ✓*morgen[d]lich* ,morning_{ADV}‘

Obviously, there is a phonological constraint according to which the phonotactics of [$\sigma \dots n$] [σ lɪç] is not euphonic and demands closure of the first syllable with a stop as in [$\sigma \dots nd$] [σ lɪç], *abendlich* (evening_{ADV}). However, in (38) there is no stop consonant in the underlying lexemes. These are *hoffen*, *versehen*, *morgen*. As a consequence, a rule of epenthesis applies by which a dental stop that is not in the derivation gets inserted.⁴

Do epenthetically inserted segments have phoneme status? Obviously not. They play no role in the inventory of the relevant distinct features. Next to *hoffen[t]lich*, there is no *hoffen[k]lich*, and next to *morgen[d]lich* there is no *morgen[g]lich* or *morgen[b]lich*. etc. These epenthetic elements are default segments. Clearly, they lack alternatives. Thus, the central function of the phoneme as the smallest segment in speech that can induce a semantic discrimination is lacking.

The parallel between syntax and phonology is absolutely striking. In both cases, there are forms that get inserted in order to avoid a conflict. The sounds must have the status of phones and not phonemes; they lack, so to say, the "semantic side of phonology". Nevertheless, these forms are in the service of fixing up the sound structure of the language. The forms that get inserted in syntax in order to avoid constraint violations must equally have the status of default forms; although the lexical items are all formally alike, the default forms are outside the system of alternatives and therefore lack the semantic side. Thus, the parallel between syntax and phonology is more or less perfect, and we are entitled to coin the notion "syntactic epenthesis".

⁴ In these examples, the epenthetic element is written. In other cases it is not and appears only in speech, as seen in English *Canada*_[ɪ] and *the USA* for 'Canada and the USA' or in Tuscany Italian *per*_[t]*sona* for 'persona' ('person').

11. Summary and conclusion

We have started with a series of challenges of the form/meaning relation. All these challenges could be shown to derive from the same problem: The syntactic constraints of the grammar have to be met, and if they cannot be met by drawing lexical items LI from the lexicon, the language can switch to the insertion of default LIs. The latter lack lexical alternatives and are therefore non-distinctive. In other words, they lack semantic interpretation. It could be shown that this process corresponds to the operation of epenthetical insertion that is known from phonology.

The approach is helpful by voiding challenges of compositionality as understood from Frege's principle. Syntax-semantics mismatches disappear for the reason that semantics may not play a role in the first place.

If we are on the right track, there are consequences for the architecture of language. There is an unavoidable primacy of syntactic structure over semantic structure. The syntax establishes structure that is normally interpreted at the spot. But the syntax may also establish structure that escapes semantic interpretation in the same way as phonology may establish structure with the help of elements that cater to the euphonic structure of the language without playing a role in the segmental lexical structure.

For a comparison, assume that syntax and phonology are the musical side of language while semantics is the side of words, meanings and messages. The topic of Richard Strauss' opera *Capriccio* is the question whether there are first the words and then the music, or whether there is first music and then the words. The question remains unresolved. In the case of language, it seems to me the conflict should be resolved in favor of music: *Prima la musica e dopo le parole*.⁵

⁵ The title of Bayer (2017)

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ご清聴ありがとうございました

Thanks for your attention

Danke für Ihre Aufmerksamkeit