Araştırma Makalesi / Research Article

Lexicalism at Interfaces

Biçimbilim-Sözdizim Arayüzünde Sözlükselcilik

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Abstract: Lexical Integrity Hypothesis has been assumed in a number of morpho-syntactic frameworks as a genuine principle of human language and is taken to rule out some unwanted derivations. However, research over the past few decades has gathered a body of data that call for a rethinking of it. This work discusses Lexical Integrity Hypothesis with reference to a sample of this data, highlights areas where it fails, and considers one particular account which, if correct, requires non-trivial changes in attribute composition.
Keywords: Lexicalism, Lexical Integrity Hypothesis, No Phrase Constraint, bracketing paradoxes, word, modification, concept.

Özet: Sözlüksel Bütünlük Varsayımı, biçimbilim çalışmalarında insan dilinin asli bir ilkesi olarak kabul görmüş ve pek çok istenmedik türetimi önlediği varsayılagelmiştir. Ancak son birkaç on yılda yapılan araştırmalarla derlenen veriler ve varılan sonuçlar, Sözlüksel Bütünlük Varsayımının yeniden gözden geçirilmesi gerekliliğini ortaya koymaktadır. Bu çalışmada Sözlüksel Bütünlük Varsayımı, toplanan bu veri kümesine atıfla yeniden değerlendirmeye tâbi tutulacak, başarısız olduğu noktalar açıklığa kavuşturulacak ve mevcut nitelik birleşimi anlayışımızda önemli bir değişikliğe gidilmesini gerekli kılacak bir kuram tartışılacaktır.
Anahtar Kelimeler: Sözlükselcilik, Sözlüksel Bütünlük Varsayımı, Öbek Kısıtlaması, parantez paradoksu, sözcük, niteleme, kavram.

Since Chomsky's[1] pioneering work on nominalizations, Lexical Integrity Hypothesis (LIH), the embodying principle of lexicalism, has been assumed in a number of morpho-syntactic frameworks as a genuine principle of grammar and is believed to block a great deal of undesired derivations. Given that LIH regulates the interaction at the morpho-syntactic interface, it has significant theoretical repercussions for the modular structure of Grammar, which puts it in the center of linguistic theorizing.

The humble purpose of this work is to provide the reader with a background on LIH. Relevant issues discussed include what LIH is, what literature it has behind it, where is fits in the overall architecture of the grammar, why it was proposed in the first place, and what data is adduced in favor of and against it. In doing so, I will evaluate its predictions against a sample of data from Turkish without offering ways of overcoming its shortcomings. This work is thus intended to highlight areas that require further research on lexicalism.

Why is the reading in (1b) not available?

(1) güzel dans-çı
beautiful dance-r
a. 'a beautiful person who dances'
b. *'a person who dances beautifully'

The intended reading of (1b) requires the adjective to modify a sub-lexical constituent, i.e., the nominal base of a derived word. What principle of grammar, if any, rules out this interpretation? The answer comes from LIH, which states that, as far as their interaction with syntax is concerned, words are atomic, unanalyzable units.[2] This prohibits syntax from either "seeing" the internal structure of morphological objects or "manipulating" parts of them.[3]

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1 Noam Chomsky, "Remarks on Nominalization," in *Readings in English Transformational Grammar*, ed. Roderick Jacobs and Peter Rosenbaum (Waltham: Ginn, 1970).

2 Chomsky, "Remarks on Nominalization"; Anna Maria Di Sciullo, and Edwin Williams, *On the Definition of Word* (Cambridge, MA: MIT Press, 1987); John Bresnan and Sam A. Mchombo, "The Lexical Integrity Principle: Evidence from Bantu," *Natural Language & Linguistic Theory* 13, no. 2 (1995).

3 Stephen Anderson, *A-Morphous Morphology* (Cambridge: Cambridge University Press, 1992), 84.

For the case at hand, this means that though *dans-çı* 'dancer' is morphologically complex, syntax must treat it as a simplex X^0 category.

Now, consider (2).

(2) *sahne-de dans-çı
stage-LOC dance-r
Int.: 'a person who dances on the stage (only)'

Here, we have the opposite problem: A syntactic phrase (NP) is being used as a base for morphological derivation. This kind of derivation is disallowed by No Phrase Constraint (NPC), which prevents lexical rules from "apply[ing] to syntactic phrases to form morphologically complex words".[4]

Both LIH and NPC seem intuitive at first and account for vast amounts of data. However, they are they are a bit too tight as constraints, as we will see. In what follows, I discuss data that pose strong challenges to both LIH and NPC. But before moving on, I would like to clarify a potential source of misunderstanding. The reading in (1) should not be confused with the semantic issue of subsective adjectival modification in (3), brought to my attention by an anonymous reviewer.

(3) iyi dansçı
good dancer
a. ??'a good person who dances'
b. 'a person who dances well'

Since Kamp and Partee,[5] adjectives have been classified minimally into two groups based on the interpretation to which they give rise.[6]

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4 Rudolf Botha, *Morphological Mechanisms: Lexicalist Analyses of Synthetic Compounding* (Oxford: Pergamon Press, 1984), 137.

5 Hans Kamp and Barbara Partee, "Prototype theory and compositionality," *Cognition* 57, no. 2 (1995): 137-38.

6 We also have non-subsective adjectives like *former*, which are associated with the meaning postulate $[\![A\ N]\!] \not\subseteq [\![A]\!]$ & $[\![A\ N]\!] \not\subseteq [\![N]\!]$ (c.f. John is a former president), and privative adjectives like *fake* with the meaning postulate $[\![A\ N]\!] \cap [\![N]\!] = \emptyset$ (c.f. This is a fake gun = This is not a gun).

(4) Adjective Semantics

	Adjective type	Interpretation	Example
a.	intersective	⟦A N⟧ = ⟦A⟧ ∩ ⟦N⟧	John is a rich doctor. = John is rich and a doctor.
b.	subsective	⟦A N⟧ = ⟦A⟧ ⊆ ⟦N⟧	John is a skillful doctor. = John is skillful for/as a doctor.

As we can see, different modes of interpretation are at work in the presence of intersective vs subsective modifiers.[7] A similar process is involved in the interpretation of (3): *iyi* 'good' modifies *dansçı* 'dancer' subsectively, giving rise to the reading *good as/for a dancer* rather than *good person as well as a dancer*. In (1), on the other hand, the adjective behaves as predicted: It modifies the person-denoting noun and is restricted from applying to the root of the derived noun. In general, cases of LIH violation are rather different from subsective modification, as the former lacks an interpretation parallel to the latter.[8]

(5) a. good physicist = good for a physicist (subsective modification)
b. nuclear physicist ≠ nuclear for a physicist (LIH violation)
= a person studying nuclear physics

The reviewer also asks if it were possible to relegate the issues to semantics/pragmatics and keep LIH intact. That, however, comes at the expense of complicating interpretive mechanisms, which should ideally only interpret the syntactic derivation, i.e., the properties of the lexical elements and their specific composition, as dictated by the principle of compositionality. Given the lexicalism is proposed to regulate the morpho-syntactic interface, the general tendency in the literature is to deal with issues at the morpho-syntax interface. Indeed, a semantic account has also been proposed in Beard,[9] which I discuss in Section 5.

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7 Muffy A Siegel, "Capturing the Adjective" (PhD diss., University of Massachusetts Amherst, 1976); James Pustejovsky, "The generative lexicon," *Computational Linguistics* (1991); Barbara Partee, "Lexical semantics and compositionality," in *An Invitation to Cognitive Science (Second Edition). Volume 1: Language*, eds. Lila Gleitman and Mark Liberman (Cambridge: MIT Press, 1995); Kamp and Partee, "Prototype Theory,"

8 See Giegerich (2009) for details.

9 Robert E. Beard, "Decompositional Composition: The Semantics of Scope Ambiguities and 'Bracketing Paradoxes'," *Natural Language & Linguistic Theory* 9 (1991).

The paper is organized as follows: Section 1 gives a brief overview of the discussion, and Section 2 brings in some problematic data that require a rethinking of LIH and/or NPC. In Section 3, I present some previous proposals that specifically address these problematic cases, some totally rejecting LIH and/or NPC and others proposing explanations with varying degrees of success. Finally, Section 4 elaborates on a possible line of analysis that was originally proposed by Beard.[10] Section 5 concludes the paper.

1. LIH and NPC

Lexicalism, which dates back to Chomsky's[11] pioneering work on nominalization, is typically given flesh by LIH, which has varying formulations in the literature. Spencer's[12] strong position that even inflection falls into the domain of LIH is rejected by Anderson,[13] who argues that inflection is a reflex of syntactic features and hence is not subject to LIH. The general consensus seems to be that LIH only concerns derivation and compounding, not inflection.

Both phrases and complex words are products of the combinatorial systems of Grammar. The novelty LIH brings is the proposal that morphology has its own combinatorial system with a different set of principles of combination than that of syntax. The theoretical question, then, is whether this task can be assigned to just one component. Another issue is where LIH comes from. Three lines of argument can be distinguished: (i) LIH is a true principle of grammar, i.e., it exists on its own;[14] (ii) LIH is architectural, i.e., it does not exist but arises due to the structure of grammar;[15] and (iii) LIH is epiphenomenal, i.e., it results from other factors.[16]

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10 Beard, "Decompositional Composition."

11 Chomsky, "Remarks on Nominalization."

12 Andrew Spencer, *Morphological Theory: An Introduction to Word Structure in Generative Grammar* (New York: Wiley, 1991).

13 Anderson, *A-Morphous Morphology*.

14 Steven Lapointe, "A Theory of Grammatical Agreement" (PhD diss., University of Massachusetts, Amherst, 1980).

15 Di Sciullo and Williams, *Definition of Word*.

16 David Embick and Morris Halle, "On the Status of 'Stems' in Morphological Theory," in *Romance Languages and Linguistic Theory 2003*, ed. Twan Geerts, Ivo van Ginneken and Haike Jacobs (Amsterdam: John Benjamins, 2005); David Embick and Rolf Noyer, "Distributed Morphology and the Syntax/Morphology Interface," in *The Oxford Handbook of Linguistic Interfaces*, ed. Gillian Ramchand and Charles Reiss (Oxford: Oxford University Press, 2007).

The LIH-as-a-principle camp argues that theory-independently, the fact that word structure is invisible to syntax (see examples (1) and (2)) is left unexplained without LIH. As for the LIH-as-architectural camp, Di Sciullo and Williams[17] argue that since word formation rules are ordered with respect to syntax, and since syntax operates on the output of morphology, LIH follows from the architecture of Grammar. In the LIH-as-an-epiphenomenon camp, Distributed Morphology (DM), which derives words syntactically, argues that words constitute phases and Spellout prevents syntax from accessing their internal structure.

It should be noted at this point that Lexicalism is a two-edged sword, with one side being LIH and the other NPC. As the edge facing syntax, LIH prevents syntactic operations like movement (6), pronominalization (7), ellipsis (8), and modification (9) from applying to parts of a morphological object.

(6) Movement

a. The police arrested some Trump protestors.

b. *Who did the police arrest some ___ protestors?

c. *Who did the police arrest some Trump ___?

(7) Pronominalization

a. The photograph is popular but the photograph-er is not.

b. *The photograph$_i$ is popular but it$_i$-er is not.

(8) Ellipsis

a. Mark met a flutist and a pianist.

b. *Mark met a flut-___ and a pian-ist. (Head)

c. The president rewarded the successful business-men and sports-men.

d. *The president rewarded the successful business-___ and sports-men. (Non-Head)

(9) Modification[18]

a. Here are the old [bike-rs].

b. *Here are the [old bike]-rs.

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17 Di Sciullo and Williams, *Definition of Word*, 49-54.

18 A reviewer points to the possibility that most of the data in (6)-(9) may receive independent explanations. One could, for instance, argue that (6) is due to a general ban on extraction from adjunction sites, (7) may be because *-er* attaches to nouns but not pronouns, or that (8) maybe because only some functional projections can license ellipsis. In fact, most of these possible lines of analyses have been explored to some extent. It is nevertheless possible to trace all these restrictions back to the lexicalist ban on syntax from manipulating lexical structure.

In (6), attempts to extract part of a compound, itself assumed to be a pre-syntactic lexical/morphological process, fail. In other words, the syntactic operations are successfully prohibited, per LIH, from applying to parts of pre-syntactic constituents. In (7), the pronoun is prevented from taking a sublexical constituent (the nominal root *photograph*) as its antecedent. Given that binding is a syntactic phenomenon and that the internal structure of words is invisible to syntax, the ungrammaticality is in line with LIH. (8) obeys LIH in that the syntactic process of ellipsis is ruled out from applying to morphologically derived words, whose constituents are by definition invisible to syntax. And finally, in (9), *old* can only apply to the word *bikers* denoting persons wholesale, not to the *bike* on which *bikers* is apparently derived. This too is predicted, given that syntax must treat morphologically complex words as simplex X^0 constituents.

NPC, the side facing morphology, also helps block some ungrammatical derivations. These include coordination (10), phrasal compounds (11), and phrasal derivations (12).

(10) Coordination as non-head
  a. *[black and white] board
  b. *[press and release]-ing the button[19]

(11) Phrasal non-heads in compounds
  a. *[unbearable life] changing event
  b. *[cars] park

(12) Phrasal non-heads in derivations
  a. *[delete from the board]-able marker
  b. *[Continental European]-ization of the immigrants

The basic argument of NPC is that morphological processes cannot "borrow" syntactic phrases as bases. In (10), a syntactic coordination is fed into the morphological process of compounding, in violation of NPC. (11) involves an attempt to put an adjectivally modified and pluralized NPs (themselves products of syntax) into the non-head position of compounds, leading to ungrammaticality. In (12a), a syntactically derived phrase seems to act as the base for

19 A reviewer notes that, although these seem to be in line with NPC, alternative accounts like a general ban on VP compounding can be formulated to rule these out. Once again, it is possible to argue that such bans are in fact incarnations of NPC.

morphological derivation, while in (12b) an adjectivally modified NP is doing so, both yielding ungrammaticality as NPC predicts.

Thus, LIH and NPC have received much credit for ruling out these ungrammatical derivations and secured a robust place in linguistic theorizing. Nevertheless, there is massive data that run in clear violation of both LIH and/or NPC. In the next section, I bring in some (primarily Turkish) data which calls for a rethinking of these principles, if not total rejection.

2. Problematic Data

2.1. Phrasal Compounds and Derivations

The first piece of problematic data comes from phrasal compounds. Assuming, with Göksel and Kerslake,[20] that compounding is a morphological process in Turkish and that plurality is syntactically represented by Number Phrase,[21] the following data is a mystery for NPC:

(13) a. öğretmen-ler oda-sı
teacher-PL room-COMP
'teachers room'

b. avcı-lar lokal-i
hunter-PL tavern-COMP
'hunters tavern'

Plurality is normally banned from occurring in the non-head position of compounds, but such violations abound. Two interesting things emerge here: (i) when these compounds are themselves pluralized in Turkish, the PL non-head leads to grammatical degradation (14), and (ii) PL non-heads are largely restricted to animate NPs (15).

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20 Aslı Göksel and Celia Kerslake, *Turkish: A Comprehensive Grammar* (London: Routledge, 2005), 51.

21 Elisabeth Ritter, "Cross-Linguistic Evidence for Number Phrase," *Canadian Journal of Linguistics* 37 (1992).

(14) a. ??öğretmen-ler oda-lar-ı
teacher-PL room-PL-COMP
'teachers room'
c.f. öğretmen oda-lar-ı
b. ??avcı-lar lokal-ler-i
hunter-PL tavern-PL-COMP
'hunters tavern'
c.f. avcı local-ler-i

(15) a. *araba-lar garaj-ı[22]
car-PL garage-COMP
'cars park'
b. *eşya-lar depo-su[23]
thing-PL store-COMP
'things store (warehouse)'

It is surely not the case that every animate non-head NP can receive the PL marker; but the ones that do are almost exclusively animate. Exactly how animacy affects such processes is, to the best of my knowledge, a mystery.

Further, it is often the case that the non-head of a compound/word can be a syntactic phrase, even a sentence.

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22 But see *yayınlar listesi* 'publications list', which is grammatical despite involving an inanimate non-head.

23 Compounds involving a plural non-head should not be confused with near string-identical measuring expressions like (i).

(i) a. kamyon-lar dolu-su b. üç kamyon dolu-su (kitap) c. *üç eşya depo-su
truck-PL full-COMP three truck full-COMP three thing store-COMP
'full of trucks' 'three truck-fuls (of books)' 'a store for three things'

Despite surface similarity to (15), measuring expressions differ rather significantly from compounds syntactically and semantically. For a minimum, they allow a numeral (i.b) to modify the first noun, which is not possible with compounds (i.c).

(16) a. [what the hell are you doing] attitude
b. [I don't care]-ism
c. [ben-i ilgilendir-me-z] anlayış-ı (Turkish)
I-ACC interest-NEG-AOR mentality-COMP
'[it doesn't interest me] mentality'
d. [kral-dan çok kral-cı]-lık
king-ABL more king-pro-ism
'[more royalist than the king]-ism'

Research has concluded that such examples are quite common cross-linguistically. Given that NPC was intended to rule out such cases, we either have to reject NPC part of Lexicalism altogether, which Lieber and Scalise[24] propose, or modify it to accommodate this set of data.

2.2. Movement

Recall that, per LIH, syntax is banned from moving parts of compounds/derived words. This is perhaps the most robust prediction of Lexicalism. However, Bruening[25] discusses cases where nominalizations include raising, concluding that syntactically derived constituents feed morphology, contra Chomsky.[26]

(17) a. Sadly a species' name affects its likelihood [~~likely~~ to survive]. (Raising to Subject)
b. . . . what you are telling us is no proof of [~~prove~~ them to be hackers]. (Raising to Object)[27]

The following Turkish example is a similar case in point, if the derivation proceeds as represented:

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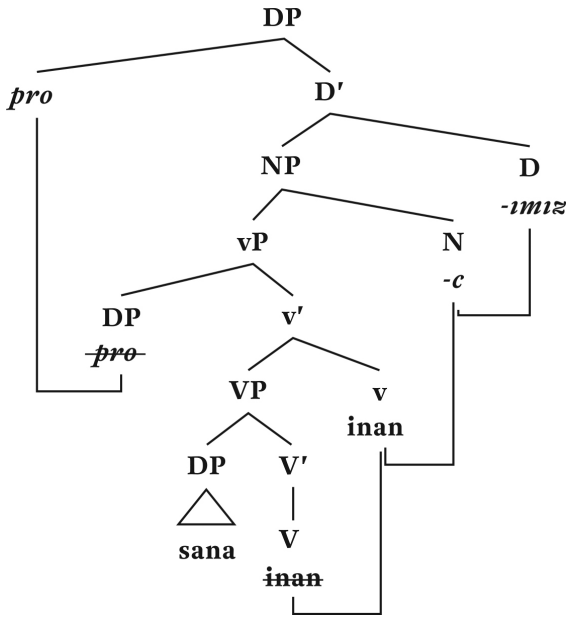
24 Rochelle Lieber and Sergio Scalise, "The Lexical Integrity Hypothesis in a New Theoretical Universe," *Lingue e Linguaggio* 5, no. 1 (2006).

25 Benjamin Bruening, "The Lexicalist Hypothesis: Both Wrong and Superfluous," *Language* 94, no. 1 (2018); Benjamin Bruening, "Word Formation is Syntactic: Raising in Nominalizations," *Glossa: A Journal of General Linguistics* 3, no. 1 (2018).

26 Chomsky, "Remarks on Nominalization."

27 Bruening, "Raising in Nominalizations," 3-4.

(18) [$_{DP}$ [$_{NP}$ [$_{vP}$ San-a inan]-c]-ımız tam.[28]
you-DAT believe-NOML-1PL.POSS complete
'Our belief in you is complete. = We fully believe in you.'



Bruening[29] also mentions Adjectival Passives in which the negative prefix *un-* attaches to a syntactically derived phrase.

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28 Note that this analysis may be on the wrong track. Balkız Öztürk (p.c.) notes that comparable constructions like (i.a) involving accusative case (as opposed to the inherent dative) are ungrammatical.

(i) a. [$_{DP}$ [$_{NP}$ [$_{vP}$ *Sen-i/ San-a sev]-gi]-miz sonsuz.
you-ACC you-DAT love-NOML-1PL.POSS endless
'Our love for you is eternal.'
b. Çocuk-lar-ın deney-i gözlem-i çok yararlı ol-du.
Child-PL-GEN experiment-ACC observation-3PL very useful be-PST
'The children's observation of the experiment proved very useful.'

Nevertheless, the grammaticality of (i.b) shows that deriving de-verbal nouns out of an ACC-involving derivation is not ruled out in principle.

29 Benjamin Bruening, "Word Formation is Syntactic: Adjectival Passives in English," *Natural Language & Linguist Theory* 32, no. 2 (2014).

(19) a. … premises that are un[demonstrated to be true][30]
b. … genes previously un[suspected to be related to the phenotype].[31]

Note that one cannot simply argue that (19b) is a post-syntactic issue, i.e., that *unsuspected* exists as a word of English and spells out the [Neg + *suspected*] sequence at lexical insertion. If this were so, (20) would have the intended reading, as *unpublished* exists as a possible word (c.f. *unpublished PhD thesis*).

(20) */??You must not refer to articles that are un[published in scientific journals].

It is also possible to contrastively focus parts of derived words in Turkish.

(21) ön- değil son-ek (c.f. *önek* 'prefix' and *sonek* 'suffix')
pre not suf-fix
'not pre- but suf-fix'[32]

One thing to note about (21) is that contrastive focusing, as well as coordination, of sub-lexical parts only applies to certain "prefixes" in Turkish. Similar examples are also provided from English in the literature, but they all seem to be prefixes. Assuming with Dai[33] that there are morphological, syntactic, and phonological "words", and

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30 A reviewer questions the validity of Bruening's argument that *likelihood* is derived from *likely* in examples like (i.a).

(i) a. Sadly, a species' name affects its likelihood to survive.
b. *Sadly, a species' name affects its likelihood.
c. *its to survive likelihood c.f. its survival likelihood

However, (i.b) shows that *likelihood* must take an infinitival clausal complement while (i.c) shows that *to survive* (as opposed to *survival*) cannot adjectivally modify *likelihood*. It then follows that *likelihood to survive* is really derived from *likely to survive* (itself a TP) with subsequent raising of *likely* to a position where it merges with *-hood* to form *likelihood*. Note further that such examples were proposed by Chomsky to argue that nominalization is different from syntactic processes in disallowing raising to subject or object positions.

31 Bruening, "Adjectival Passives in English," 373.

32 Lieber and Scalise (2006) considers similar examples involving prefixes in English, ultimately concluding that they are clear violations of LIH.

33 John Xiang-Ling Dai, "Syntactic, Phonological, and Morphological Words in Chinese," in *New Approaches to Chinese Word Formation: Morphology, Phonology and the Lexicon in Modern and Ancient Chinese*, ed. Jarome L. Packard (Berlin: de Gruyter, 1998).

that (at least certain) prefixes are treated as phonological words[34] while suffixes are not, such a contrast can potentially be explained by appealing to phonological processes.

In any case, morphosyntactic distinction is blurred, and even the weakest interpretation of the above data requires a revision of LIH.

2.3. Coordination and Ellipsis

NPC prohibits morphology from taking coordination as input, while LIH prohibits syntax from eliding parts of morphological objects. Both are violated in a number of cases. Consider coordination first.

(22) a. [Şoför-ler ve Otomobilci-ler] Federasyon-u
driver-PL and motorist-PL federation-COMP
'Federation of Drivers and Motorists'

b. [ya sev ya terket]-çi-lik
either love or leave-ist-ness
'[love or leave]-ism'

Clearly, coordination can apply to the non-head of both compounds (22a) and derivations (22b).

Next, consider cases of ellipsis.

(23) a. [süt] ve [~~süt~~ ürün-ler-i]
milk and milk product-PL-COMP
'milk and dairy products'

b. iki boynuz-~~lu~~ ve bir kuyruk-lu
two horn and a tail-with
'with [two horns and a tail]'

In (23a), part of the second conjunct is elided under identity with the first conjunct. This example is particularly telling since it shows that syntax can access and delete part of a compound, contra LIH. In (23b), part of a derived word is elided, again in violation of LIH. The fact that *iki boynuz* and *bir kuyruklu* can be coordinated establishes that both must be APs, ruling out the possibility that the first conjunct is an NP. If so, the first conjunct must be *iki boynuzlu* 'with

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34 Spencer (*Morphological Theory*) actually calls such prefixes "prefixoids", referring to their "word-like" character.

two horns', with the suffix undergoing ellipsis, conclusively proving that ellipsis can target part of a morphological object.[35]

2.4. Binding and Co-reference

In rare cases, a sub-lexical component can function as an antecedent for a pronoun, in violation of LIH.

(24) a. ?Putin$_i$-ci-ler bile artık on-a$_i$ / kendisin-e$_i$ inan-ma-makta-dır.[36]
Putin-pro-PL even anymore he-DAT self-DAT believe-NEG-PROG-COP
'Even Putin$_i$-ists do not believe him$_i$ anymore.'

b. Ben-siz git-me-yin.
I-without go-NEG-2PL.IMP
'Do not go without me.'

In (24a), the pronoun *kendisine* 'him' references the root of a derived word while in (24b), the pronoun *ben* 'I' is used as a base. Bresnan and Mchombo[37] argue that such pronouns must lack referential power, but *ben* 'I' in (24b) does indeed refer to

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35 Whether these are outputs of Suspended Affixation is not clear. Even so, LIH loses ground if derivational affixation can "wait".

36 Note that, idiolectally, the base of the antecedent must be a proper noun; common nouns can never do so.

(i) *Rektör$_i$-cü-ler on-u$_i$/ kendisin-i$_i$ çok defa uyar-dı
rector-pro-PL he-ACC self-ACC multiple time warn-PST
'The rector$_i$-ists warned him$_i$ multiple times.'

One potential explanation is that proper nouns are DP objects in morphology while this is not possible with common names since they assume referential power after N-to-D raising. But this, too, is a problem for NPC given that DP is a functional projection introduced in syntax.

A reviewer raises the possibility that (24) and (i) above involve not binding but coreference with a discourse-salient entity, *Putin* and *the rector* respectively. Indeed, a proposal along these lines have already been made in Fábregas ("Lexical Integrity Effects," 11) regarding [*Reagan*]$_i$*ites no longer agree with him*$_i$. arguing, with Montermini ("word-internal anaphora") that this sort of coreference is motivated pragmatically. Nevertheless, given that these are out-of-the-blue sentences without a context, the discourse-salience of *Putin* or *the rector* is dubious. At best, then, they must have been made salient by the derived words themselves. This time, however, we have the problem of why the structurally identical (i) idiolectally contrasts in grammaticality with (24). The contrast seems to be best captured by arguing that only the bases of derived words involving proper nouns can participate in this sort of binding.

37 Bresnan and Mchombo, "Lexical Integrity Principle," 194.

the speaker, undermining their argument. The conclusion, then, is that binding into and co-reference with part of morphological objects are not excluded in principle.

2.5. Bracketing Paradoxes

Perhaps the most commonly studied set of data against LIH and/or NPC comes from bracketing paradoxes, where conflicting demands are put on the derivation.

(25) a. unhappier
b. transformational grammarian

In (25a), morphological constraints require that the comparative *-er* attaches to *happy* first (*-er* can only attach to maximally two-syllable words) while semantics dictates that *un-* attaches to *happy* before *-er* (*unhappier* means "more unhappy" not "not more happy"). Similarly, stress placement requires that *-ian* attaches to *grammar* before *transformational* while the expression as a whole means "someone studying *transformational grammar*", not "a transformational person who studies grammar".[38]

(26)	Morphology	Semantics
	a. un-[happi-er]	[un-happi]-er[39]
	b. transformational [grammar-ian]	[transformational grammar]-ian

Of particular interest is (26b), in which, by semantics, the modifier *transformational* is targeting the sub-lexical component *grammar* of the derived word *grammarian*.

Counter-examples abound in Turkish.

(27) a. Yeni Türkiye-ci
new Turkey-pro
'pro-New Turkey / *new pro-Turkey'
b. altı parmak-lı çocuk
six finger-with boy
'a boy with six fingers / ??six boys with fingers'
c. görsel program-cı
visual program-er
'a visual programmer / *a programmer who is visual'

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38 Beard, "Decompositional Composition"; Andrew Carstairs-McCarthy, *Current Morphology* (London: Routledge, 1992), 93.

39 Carstairs-McCarthy, *Current Morphology*, 136

In these examples, the first word semantically targets a sub-lexical constituent, in violation of LIH. In (27a) for example, *Türkiyeci* denotes a person, but *yeni* does not modify the person but rather the base *Türkiye* 'Turkey'. Similarly, in (27b), we are not talking about six boys with fingers, but a boy with six fingers.

As they stand, these examples constitute a challenge to LIH and/or NPC.

2.6. Root Modification

One last piece of evidence challenging LIH/NPC that has not been noticed in the relevant literature comes from cases where a syntactic constituent modifies the root of the verb.[40] Consider (28).

(28) a. Mert ayakkabı-lar-ın-ı sıkı bağla-dı.
Mert shoe-PL-3SG.POSS-ACC tight tie-PST
'Mert tied his shoes tight.'

b. Cam-ı on dakika aç-abilir mi-yim?
window-ACC ten minute open-ABIL QUES-1SG
'Can I open the window for ten minutes?'

The first thing to note is that (28a) is not a resultative, as the entailment contrast below shows.

(29) a. Mert masa-yı ter-temiz sil-di. (resultative)
Mert table-ACC RED-clean wipe-PST
'Mert wiped the table clean'
⇒ The table became clean as a result.

b. Mert ayakkabı-lar-ın-ı sıkı bağla-dı. (non-resultative)
Mert shoe-PL-3SG.POSS-ACC tight tie-PST
'Mert tied his shoes tight.'
⇏ Mert's shoes became tight as a result.[41]

The only interpretation of (28a) is that *tight ties*, but crucially not *tight shoes*, were created as a result of the event. In other words, *sıkı* 'tight' modifies *bağ* 'tie'. But interestingly, *bağ* does not exist in the syntax for modification. Levinson[42]

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40 Tacettin Turgay, "Resultative Constructions in Turkish" (MA Thesis, Boğaziçi University, Istanbul, 2013).

41 Turgay, "Resultative Constructions in Turkish."

42 Lisa Levinson, "Arguments for Pseudo-Resultative Predicates," *Natural Language & Linguistic Theory* 28, no. 1 (2010), 156.

calls these "Root Modification Constructions" in which the verbal root √BAĞ is targeted by a syntactic modifier.

Similarly, in (28b), the temporal modifier *on dakika* '(for) ten minutes' does not modify the event of opening, but rather the resultant state of being 'open'. Thus, it is equivalent to "*Can I keep the window [open for ten minutes]?*" Again, since the stative adjective *açık* 'open' is not available in syntax, the inevitable conclusion is that the root √AÇ is being modified, constituting a very strong challenge for LIH and/or NPC.

We have seen cases which pose some sort of a challenge for LIH and/or NPC. Before closing off this section, I would like to point out that, for some cases, whether the data violates LIH or NPC *per se* is a matter of one's assumption concerning the direction of derivation. Let me illustrate this.

Take bracketing paradoxes, illustrated in (30).

(30)	görsel	programcı
	visual	programmer
	a. [görsel program]-cı	(semantically-motivated)
	b. görsel [program-cı]	(morphologically-motivated)

Here, we can theoretically assume two distinct derivational routes: (i) semantically-motivated phrasal derivation, and (ii) morphologically-motivated sub-lexical modification, exemplified by (30a) and (30b) respectively. Recall, further, that LIH prohibits syntax from accessing word-internal structure while NPC prohibits morphology from borrowing syntactic phrases. Thus, if we assume (30a) as the derivation, the data ends up violating NPC since a syntactic phrase feeds morphological derivation. On the other hand, if we go for (30b), the data ends up violating LIH since the modifier will have operated on a sub-lexical constituent.

The same reasoning also applies to some of the other data.

(31)	eş-	ve	art-zaman-lı
	syn	and	dia-chron-ic
	'synchronic and diachronic'		
	a. [eş- ve art-] zamanlı		(coordination)
	b. eş-~~zamanlı~~ ve art-zamanlı		(ellipsis)

Here, it is not entirely clear whether we have a coordination or ellipsis, not to mention whether all coordination constructions involve some sort of ellipsis. Nevertheless, we have the same problem in hand: if (31) involves coordination, NPC is violated; and if it involves ellipsis, LIH is violated, undermining the lexicalist argument.

Root modification cases can also be argued to involve the same "directionality-of-derivation" issue. But the problem is, to a large extent, irrelevant for the present discussion because either way, the morpho-syntactic firewall is breached. This is because both coordination and ellipsis are syntactic processes, and they seem to "have access to" morphological structure. Nevertheless, to the extent that LIH and NPC can be reduced to a single principle, leaving us with only LIH or only NPC, such a discussion may be worth undertaking.

3. Previous Accounts

Faced with the challenging data presented in the previous section, a number of proposals have been advanced. Some have proposed to abandon LIH and NPC entirely,[43] while others have proposed modifications or attempted to account for the problematic data through other means.

The most influential argument for total rejection of LIH and NPC come from DM. Halle and Marantz[44] assume a post-syntactic morphology and propose that word formation takes place in syntax. Since word formation is syntactic, there is no need to build a barrier between syntax and morphology. In DM, lexical roots lack categorial features and meaning; and functional projections, like nP, take roots as complements. Once this is done, the resulting structure, i.e. nP, is assigned a category and meaning. At that point, the nP becomes inert for further operations and undergoes Spellout. In other words, "words" in the traditional sense are considered syntactic phases, giving the

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43 Morris Halle and Alec Marantz, "Distributed Morphology and Pieces of Inflection," in *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, ed. Ken Hale and Samuel Jay Keyser (Cambridge, MA: MIT Press, 1993); Embick and Halle, "Status of 'Stems';" Embick and Noyer, "Distributed Morphology;" Heinz J. Giegerich, "Compounding and Lexicalism," in *The Oxford Handbook of Compounding*, ed. Rochelle Lieber and Pavol Štekauer (Oxford: Oxford University Press, 2009); Bruening, "The Lexicalist Hypothesis."

44 Halle and Marantz, "Distributed Morphology."

illusion of Lexical Integrity Effect. Thus, followers of DM deny the relevance of LIH and NPC for grammar. Fábregas,[45] however, presents various pieces of evidence indicating that the words-as-phases hypothesis is problematic and cannot substitute for LIH.

Another account totally rejecting LIH/NPC comes from Bruening.[46] Addressing the ungrammaticality of constructions like *[how complete]-ness*, Bruening[47] argues that this follows from two independently established factors: (i) that *how* cannot modify nouns, ruling out [how [completeness]], and (ii) that *how* must modify phrases, not heads, ruling out [[how complete]-ness]. Thus, Bruening[48] attempts to dispense with LIH and/or NPC. For reasons of space, I will not go into details here.

Several linguists including Ackema and Neeleman,[49] Booij,[50] Bosque,[51] Fábregas,[52] and Lieber and Scalise[53] have noticed the problematic data and concluded that LIH must be revised, though they did not propose an exact mechanism as to how this should be done. Others have proposed mechanisms to account for the data. In the rest of this section, I will discuss some of these proposals.

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45 Antonio Fábregas, "On Why Word Phases Cannot Account for Lexical Integrity Effects," *Lingue e Linguaggio* 10, no. 1 (2011).

46 Bruening, "The Lexicalist Hypothesis."

47 Bruening, "The Lexicalist Hypothesis," 32.

48 Bruening, "The Lexicalist Hypothesis."

49 Peter Ackema and Ad Neeleman, "Syntactic Atomicity," *Journal of Comparative Germanic Syntax* 6, no. 2 (2002).

50 Geert Booij, "Lexical Integrity as a Formal Universal: A Constructionist View," in *Universals of Language Today*, ed. Sergio Scalise, Antonietta Bisetto and Elisabetta Magni (Dordrecht: Springer, 2009).

51 Ignacio Bosque, "On the Lexical Integrity Hypothesis and Its (In)accurate Predictions," *Iberia: An International Journal of Theoretical Linguistics* 4, no. 1 (2012).

52 Fábregas, "Lexical Integrity Effects."

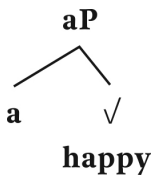
53 Lieber and Scalise, "Lexical Integrity Hypothesis."

3.1. Newell[54]

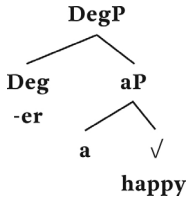
Newell specifically addressed bracketing paradoxes and verbs whose particle can be extracted away from the verb. Assuming a DM-style word derivation, Newell proposes that Late Adjunction also applies in Narrow Syntax to X^0 categories. More specifically, Newell proposes that there are morphological adjuncts on a par with syntactic adjuncts[55] which can be adjoined late and that all apparent bracketing paradoxes contain morphological adjuncts. In this system, the *un-happier* paradox is resolved as follows:

(32) Derivation of *unhappier*

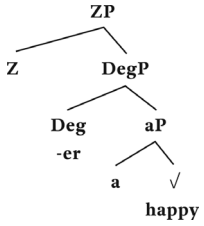
a. Merge √HAPPY with aP and Spellout √HAPPY Output: *happy*



b. Merge DegP (DegP is not a phase)



c. Merge ZP[56] and Spell out DegP Output: *happier*



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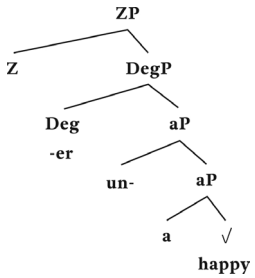
54 Heather Newell, "Bracketing Paradoxes and Particle Verbs: A Late Adjunction Analysis," in *Proceedings of ConSOLE XIII*, ed. Sylvia Blaho, Luis Vicente and Erik Schoorlemmer (Leiden: Leiden University Press, 2005).

55 This is not a problem given that there is no generative word formation component in DM.

56 Newell proposes that ZP can be VoiceP.

d. Tuck-in the adjunct *un-* above aP and Spell out DegP Output: *unhappier*



Thus, Newell introduces two syntactic notions to word formation: (i) late adjunction, which was originally proposed to account for some argument-adjunct asymmetries in wh-movement, and (ii) tucking-in, which was proposed by Rudin[57] to account for superiority effects in multiple wh-fronting languages. Nevertheless, unless properly restricted, Newell's account raises more issues than it attempts to resolve.

3.2. Hulst and Putten[58]

Dealing with bracketing paradoxes, Hulst and Putten observe that they are not restricted to the morphological domain. We can also find them in syntactic phrases.

(33) John's coming

In (33), *'s* forms a syntactic constituent with *coming* but a phonological constituent with *John*. In fact, we are dealing with two modules of grammar with their own manipulative power: syntax and phonology. Though the way syntax sees constituency largely parallels that of phonology, it need not be; and when it is not, we have apparent bracketing paradoxes.

In Hulst and Putten's model, the *unhappier* paradox is resolved as follows:

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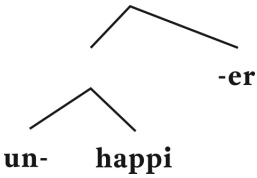
57 Catherine Rudin, "On Multiple Questions and Multiple Wh-Fronting," *Natural Language & Linguistic Theory* 6 (1988).

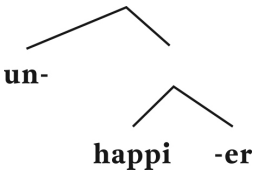
58 Harry van der Hulst and Frans van der Putten, "Bracketing Paradoxes do not Exist," in *Arguments and Structure: Studies on the Architecture of the Sentence*, ed. Teun Hoekstra (Berlin: de Gruyter, 2004).

(34) Derivation of *unhappier*

a. Morpho-syntactic module



b. Phonological module



At this point, it is not clear how this mechanism can be constrained in order not to over-generate, though.

3.3. Den Dikken[59]

Den Dikken, too, specifically addresses bracketing paradoxes and argues that the syntactic approach to word formation can actually be reconciled with Strong Lexicalism by proposing to extend yet another syntactic process to word formation: checking. In this system, words are built in the lexicon and come into syntax with potentially uninterpretable features that need to be checked against matching functional projections, like inflectional features. As in the case of inflection, the features are "scanned" and turned into a linear sequence of feature bundles, per Baker's[60] Mirror Principle. The features are typically scanned "inside out" and sequenced accordingly; but theoretically, the scan can also be "outside in", giving rise to a Reverse Mirror. Den Dikken argues that this is precisely what happens in bracketing paradoxes.

In den Dikken's account, the *unhappier* paradox is resolved as follows:

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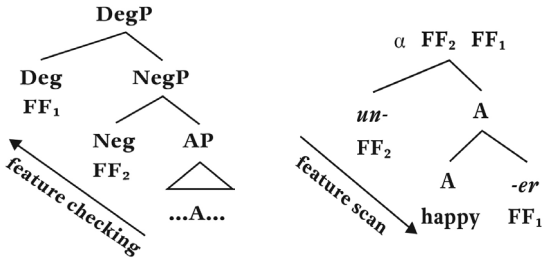
59 Marcel den Dikken, "Lexical Integrity, Checking, and the Mirror: A Checking Approach to Syntactic Word Formation," *Journal of Comparative Germanic Linguistics* 6, no. 2 (2002).

60 Mark Baker, "The Mirror Principle and Morphosyntactic Explanation," *Linguistic Inquiry* 16 (1985).

(35) Derivation of *unhappier*

a. Morpho-syntactic module



Here, *un-* and *-er* have uninterpretable Neg and Deg features, respectively. These features are scanned outside in, yielding the sequence [Neg, Deg]. However, syntax checks them in reverse order since DegP c-commands NegP. If phonology is read off the lexical item, i.e., the lower part of the representation, and semantics is read off the syntactic structure, the Reverse Mirror gives the apparent bracketing paradox. Once again, den Dikken's account seems to lack motivation and runs the risk of over-generating unless highly restricted to cases of bracketing paradoxes.

3.4. Bresnan and Mchombo[61]

Bresnan and Mchombo address phrasal compounds and phrasal derivations, arguing that the non-head in these constructions is lexicalized and thus available for morphological processes.

(36) [transformational grammar]ian

(36) is possible because *transformation grammar* is lexicalized, being treated like a "word" rather than a true "syntactic phrase". Besides, they argue that *I* in *I told you so attitude* lacks the capacity to refer, further strengthening their lexicalization argument. Bresnan and Mchombo also assume that such lexicalization can be innovative and context dependent.

This analysis is partially correct in that at least certain syntactic phrases appearing in compounds/derivations must refer to X^0 categories.

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61 Bresnan and Mchombo, "Lexical Integrity Principle."

(37) a. [I don't care] attitude
c.f. *[I didn't care] / *[I won't care] / *[I should have cared more than I did] attitude
b. [I don't care]-ism
c.f. *[I didn't care] / *[I won't care] / *[I should have cared more than I did]-ism

In (37) for instance, the phrasal non-head actually refers to the concept of "*indifference*", as evidenced by its resistance to temporal/modal modification. This is because, in order for something to have conceptual salience at all, it must have some sort of permanence. This may be why such phrases almost always appear in Present Tense (or aorist in Turkish). Thus, (37) is semantically equivalent to (38).

(38) a. indifferent attitude
b. indifferent-ism = indifference

If this reasoning is on the right track, this means that (simple and complex) concepts can be expressed in words as well as phrases and sentences, further blurring the distinction between morphology and syntax. Further research is needed to see where this analysis leads to.

Details aside, we have seen in Section 2, however, that sub-lexical components can, under restricted circumstances, function as antecedents for pronouns and that even pronouns themselves can be used as bases for morphological derivation. In the face of such data, Bresnan and Mchombo's argument that all non-head phrases in derivation/compounding must be lexicalized is problematic. Further, Bresnan and Mchombo's assumption that lexicalization can be innovative and context dependent is rather controversial. This is tantamount to saying that any syntactically created phrase can be lexicalized on the fly and used in morphological processes. This essentially means that morphology does not really precede syntax is a sensible way, not to mention that this theory makes no prediction as to what can be lexicalized. If lexicalization requires some sort of conceptual salience, not everything should be lexicalizable; otherwise, there would be no point in giving lexicalization a privileged status.

In this regard, consider the following conversation:

(39) A: Mert iyi bir sürücü ol-duğ-un-u iddia ed-iyor.
Mert good a driver be-NOML-3SG.POSS-ACC claim-IMPF
'Mert claims that he is a good driver.'

B: O iyi bir sürücü değil; iyi bir [[düz yol]-cu].
he good a driver not good a flat road-ist
'He is not a good driver; he is a good [[flat road]-ist]'

This is not an isolated case. A Google search returns many such examples.

(40) a. [Erkek arkadaş-ım]-sız yap-a-m-ıyor-um.
boy friend-1SG.POSS-without do-ABIL-NEG-IMPF-1SG
'I cannot do [my boyfriend]-less.'

b. [[Sen]-siz]-lik can-ım-a tak et-ti.
you-without-ness life-1SG.POSS-DAT hit-PST
'I am hit by [[[you]less]ness.'

Obviously, it is not the case that *düz yol* 'flat road' has some conceptual salience to be lexicalized. Even more telling is the pronoun in (40b) functioning as a derivational base while retaining its referential index. If so, these phrases must have been created on the dot and subsequently used in derivation. Such phrases, as well as the data presented in Section 2, require LIH and NPC to be reformulated so as to allow for some degree of inter-modular interaction.

4. Concept Modification

In this section, I discuss several pieces of data that, while seemingly at odds with LIH and/or NPC, can receive an easy explanation under the semantic account of Beard.[62]

(41) a. dikkatsiz {sür-ücü / şoför}
careless drive-r driver
'careless driver'

b. özgür {düşün-ür / mütefekkir}
free think-er thinker
'free thinker'

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62 Beard, "Decompositional Composition."

c. faşist {yönet-im / idare}
fascist administer-ation administration
'fascist administration'

d. öğrenci merkezli {öğret-men / hoca}
student centered teach-er teacher
'student-centered teacher'

(42) a. orta öğretmen
secondary teacher
'secondary teacher'

b. yüksek mühendis
certified engineer
'certificated engineer'

c. diyalektik materyalist
dialectic materialist
'dialectic materialist'

d. teknik ressam
technical drawer
'draftsman'

For a starter, consider the phrases in (41). In these examples, the adjective seems to modify the root of the first (morphologically derived) word in curly braces. But this word can also be replaced with an unanalyzable synonym. Here is the paradox: if the adjective modifies the root of the derived word, what does it modify in its non-derived synonym? Consider, for instance, (41a). The adjective *dikkatsiz* 'careless' semantically modifies the root *sür-* 'drive' rather than *sür-ücü* 'drive-r'. After all, we are talking about "a person who drives carelessly", not about "a careless person who drives". Thus, we have either an LIH violation, if we represent the construction as [dikkatsiz [sür-ücü] or an NPC violation if we represent it as [[dikkatsiz sür]ücü].

What happens when we replace *sürücü* with its morphologically simplex (near) synonym *şoför*? Surely, we cannot talk about an NPC violation since there is no way for *dikkatsiz* to combine with the drive-related "root" of *şoför*; there simply is no root. On the other hand, we cannot talk about an LIH violation, as there is no morphological "root" that syntax can modify. But clearly, both *dikkatsiz sür-ücü* and *dikkatiz şoför* have identical semantics.

Next, consider (42). In these examples, what does the adjective modify? It is clear in (42b) that *yüksek* 'certificated' modifies not *mühendis* 'engineer' but *mühendislik* 'engineering'. Yet, there simply is no such "word/base" in the construction. Bresnan and Mchombo's[63] analysis does not help either because the allegedly lexicalized phrase for, say, (42a) would presumably be *orta öğretim* 'secondary education', which is also missing.

Beard[64] proposes an insightful analysis. He argues that in these constructions, the adjective actually modifies a salient semantic component, i.e., a feature, that is available in the lexical semantic representation of the head-word. This analysis, Beard[65] argues, explains a number of wide and narrow scope readings of modifiers in bracketing paradoxes. Depending on the feature that gets modified, we have wide or narrow readings, giving rise to apparent paradoxes.

Beard[66] bases his analysis on Jackendoff's[67] work on lexical semantics. According to Jackendoff,[68] semantic categories are conceptual categories represented in language as lexical features. Certain features are "obligatory" in the sense that the word cannot be defined without reference to them. In Beard's account, the problem of bracketing paradoxes reduces to which of these semantic features is targeted by the modifier. Details aside, the word *physicist* (meaning a person who studies physics), for instance, is featurally represented in this model as in (43).

(43) $[\text{ACTOR}_{X}\ \text{STUDY(XY)}\ \text{PHYSICS}_{Y}]$

With that in place, we can account for the bracketing paradox involved in "nuclear physicist" as fallows: *nuclear* modifies the feature/concept *physics* that is semantically salient in the definition of *physicist*. Note crucially that we do not need to refer to LIH or NPC to account for such data. All we need is, Beard argues, "a more refined notion of attribute composition".[69]

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63 Bresnan and Mchombo, "Lexical Integrity Principle."

64 Beard, "Decompositional Composition."

65 Beard, "Decompositional Composition."

66 Beard, "Decompositional Composition."

67 Ray Jackendoff, *Semantics and Cognition* (Cambridge, MA: MIT Press, 1983); Ray Jackendoff, "The Status of Thematic Relations in Linguistic Theory," *Linguistic Inquiry* 18, no. 3 (1987).

68 Jackendoff, *Semantics and Cognition*; Jackendoff, "Thematic Relations."

69 Beard, "Decompositional Composition," 205.

Turning to the Turkish data, it must have been clear by now how the interpretation of (42a) is derived. Since the lexical item *öğretmen* 'teacher' necessarily involves the concept of *öğretim* 'teaching' in its conceptual structure (a teacher is "a person who does/engages in teaching"), the adjective *orta* 'secondary' can compose with this lexical feature, yielding the correct interpretation. In Beard's[70] model, (42a) would have the semantic representation in (44).

(44) *orta öğretmen*
orta = [SECONDARY{Z}]
öğretmen = [ACTOR_X TEACH(XY)]
orta öğretmen = [ACTOR_X SECONDARY{TEACH}]
= a person who teaches at secondary school

As for the sentences in (41), we need to recall that, as far as (41a) goes, *sür-ücü* and *şoför* have identical lexical semantics, represented as [ACTOR_X DRIVE(XY) VEHICLE_Y]. The attributive adjective composes with DRIVE, as schematically represented below.

(45) *dikkatsiz sür-ücü/şoför*
dikkatsiz = [CARELESS{Z}]
sürücü/şoför = [ACTOR_X DRIVE(XY) VEHICLE_Y]
dikkatsiz sürücü/şoför = [ACTOR_X CARELESS{DRIVE(XY)} VEHICLE_Y]

The nature of Beard's[71] model is such that, unless blocked by some other mechanism, it can give rise to multiply ambiguous constructions, like (46).

(46) Mert'-in eski araba-sı
Mert-GEN old car-2SG.POSS
i. 'the car that Mert owned previously'
ii. 'the old car that Mert owns'

The interpretation in (46) is impossible to derive using traditional mechanisms of modification (unless an intensional semantics is assumed), but it follows naturally from Beard's[72] Decompositional Composition if we assume the lexical representations *-ın* = [POSESS(XY)], *eski* = [OLD{Z}], and *araba* = [THING_Y].

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70 Beard, "Decompositional Composition."

71 Beard, "Decompositional Composition."

72 Beard, "Decompositional Composition."

(47) a. the car that Mert owned previously
[THING$_Y$ MERT$_X$ OLD{POSESS(XY)}]

b. the old car that Mert owns
[OLD{THING$_Y$} MERT$_X$ POSESS(XY)]

Beard[73] also introduces mechanisms like the Abstractness Criterion to prevent his model from overgeneration, which I do not discuss here for reasons of space.

Beard's[74] account, to the best of my knowledge, is the only proposal to handle cases in which a morphologically non-existent constituent is being modified. As such, Levinson's[75] Root Modification cases can potentially be subsumed under the Beard's[76] Decompositional Composition. This is particularly relevant since Root Modification (and restitutive readings associated with some stative verbs) is typically taken to support DM-style syntax-precedes-morphology theories. Beard's[77] model does not require the rejection of LIH based on bracketing paradoxes and the observation that syntax can modify sub-lexical constituents. This is because syntax is not actually modifying "word-parts" but "semantic features". Nevertheless, it does not help with cases of NPC violation, since the analysis cannot be extended to them. Thus, Decompositional Composition clearly demonstrates that the syntax-precedes-morphology assumption is unnecessary, if not undesired. But on the flip side of the coin, Beard's[78] model means that "semantic compositionality cannot be defined as a mapping preserving syntactic operations in semantics" because "the semantic primitives on which they operate are not represented in syntax in any way". It thus requires a great deal of dissociation between syntactic structure and semantic interpretation, calling for a syntax-independent nonconfigurational attribute semantics.

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73 Beard, "Decompositional Composition."

74 Beard, "Decompositional Composition."

75 Levinson, Pseudo-Resultative Predicates."

76 Beard, "Decompositional Composition."

77 Beard, "Decompositional Composition."

78 Beard, "Decompositional Composition."

Conclusion

The main purpose of this work was to brief the interested reader on lexicalism in general and two of its embodying constraints, the Lexical Integrity Hypothesis and the No Phrase Constraint, in particular as well as to test their predictions against a body of Turkish data. We saw in Section 3 that, over the past few decades, the relevant literature has collected a vast body of data that apparently runs in violation of LIH and NPC. Section 4 discussed some of the proposals designed primarily to account for bracketing paradoxes while keeping lexicalism intact. We saw that these proposals come at the expense of introducing unwarranted operations, which, when not properly constrained, runs the risk of unnecessarily complicating the combinatorial systems of language. In particular, Bresnan and Mchombo's[79] position, based on higher order constituents that lexicalization can be innovative and context dependent, is particularly hard to constrain so as not to over-generate.

I thus take it safe to conclude that, given abundant contradictory data, LIH and NPC cannot easily be maintained in their current formulations and that as such, revision is needed for them to have some hope. Note in particular that, given that NPC is intended to rule out cases where the non-head of a compound is phrasal, the constraint is violated by its very name (c.f. [[No Phrase] Constraint]). I also discussed in Section 5 a possible extension of Beard's[80] semantically motivated Decompositional Composition account to (some of) the problematic data and demonstrated how it might help account for a specific set of data that is left unaccounted for under any other mechanism, providing partial support for LIH. I highlighted, however, that this analysis requires non-trivial revisions (which Beard himself is aware of) in our current assumptions regarding syntax-semantics interface in general and attribute composition in specific.

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79 Bresnan and Mchombo, "Lexical Integrity Principle."

80 Beard, "Decompositional Composition."

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