

A Brown-Eyed Girl

Andrew Nevins · Neil Myler

1 A Spurious Past-Tense on Body Parts

Consider the prenominal expressions in *a brown-eyed girl, a bucktoothed grin, a two-headed snake, a freckled man, a bearded lady*, or their predicative counterparts, *Sarah is brown-eyed, Freddie is bucktoothed*. All such examples seem to include a spurious past-tense morpheme, *-ed*. Although the majority of such expressions involve body-parts, we provide a broader range of examples in (1) (we would like to thank Samuel Jay Keyser and Ray Jackendoff (pers. comm.) for collectively providing us with many of these examples):

(1) a. lily-livered
   b. foul-mouthed
   c. cross-eyed
   d. two-faced
   e. down-hearted
   f. pig-headed
   g. bald-pated
   h. thick-lipped
   i. double-chinned
   j. sure-footed
   k. one-legged
   l. one-armed
   m. split-fingered
   n. six-cornered
   o. ill-fated

These formations are clearly adjectival in nature: they pass the *seem* test, and (in the cases which are semantically gradable) can take degree modification.

(2) John seems blue-eyed (in this light).
(3) John is very foul-mouthed.

These expressions are reminiscent of so-called ‘synthetic compounds’ (e.g. *John is an arriver / John is a late-arriver.*) in that modification of the body-part noun is essentially
obligatory:

(4) *an eyed man, *a legged snake

There are, however, a few exceptions to this modification requirement, such as the moneyed class, a bearded lady, a talented teacher and a storied past, to which we will return below. Note that the internal pluralization facts mirror those in synthetic compounds, too, as *brown-eyes-ed is bad, but buck-teethed is slightly more acceptable, mirroring the pattern of *rats-eater vs mice-eater. What is unusual about interpreting the putative past tense -ed as a past-tense is the fact that an active verbal form, such as *to brown-eye, doesn’t exist. We also note that the use of this -ed marker in English examples such as (4) is not found in closely related Germanic languages such as Dutch or German, which at the very least raises questions about whether the -ed in question should be taken at face value or not. The following example from Dutch was provided to us by Marcel den Dikken (pers. comm.). Note that the “counterpart” of -ed in (5) is not a cognate of the past tense morpheme, but rather of the adjectivalizing suffix -y.

(5) dik-buik-ig
   fat-belly-y
   ‘fat bellied’

An immediate possibility that comes to mind is that the English -ed in (4) is not the past-tense, but rather a passive voice marker. Given that body-part usages of this form are often taken to be an intrinsic element of the person to whom they are attributed, perhaps saying Sarah is brown-eyed is akin to saying Sarah has been endowed with brown eyes. Under this view, the past-tense in brown-eyed would in fact be a passive suffix, but on a null verb with a meaning akin to be endowed with. This verb, perhaps because it is null, would force conflation of its nominal argument into the v head, in a manner parallel to the derivation of verbs like to shelve in Hale and Keyser (1993).

An idea of this form is found in the literature in Pesetsky (1995:fn123), who argues that the null verb in question is akin to have. However, a clear advantage of the endow proposal is that the latter verb passivizes straightforwardly, which is a prerequisite to get the analysis off the ground. Possessive uses of have, on the other hand, famously do not.

(6) a. Her genes endowed Sarah with brown eyes.
   b. Sarah was endowed with brown eyes (by her genes).

(7) a. Sarah has brown eyes.
   b. *Brown eyes are had by Sarah.

In addition, the endow idea is actually quite successful at picking out the semantic class of elements that can or cannot be the possessee in this construction. Note that to be endowed with something is to have it as an inherent or inherited property. This paraphrase picks out body parts and part-whole relations (brown-eyed and six-cornered), as well as helping us understand why someone who is moneyed is not a yuppie, but rather someone with long-standing (and presumably inherited) wealth – the same restriction of this phrase to long-standing wealth is found in expressions like he is endowed with a great deal of money.

1See Tsujioka (2002), whose analysis we discuss below, for another variant of this null V approach.
Similarly, the fact that kinship terms like *three-sistered aren’t so good (at least in modern English) might go along with the fact that we can’t really speak of being #endowed with three sisters. However, we note an issue with the endow paraphrase, namely that you can use this construction with items of clothing (e.g. top-hatted), so long as the interpretation is that the items of clothing are being worn at the time (top-hatted is not felicitous if the hat is sitting on a shelf somewhere). On the other hand, endowed with a top-hat does not have the same restriction, even insofar as you can say it. Finally, expressions like bleary-eyed also comes to mind as decidedly not strictly individual-level, suggesting that a paraphrase of endowed with bleary eyes is not on the right track.

2 The little-a analysis

We propose that the morpheme -ed in this construction has the properties in (8). In the following sections, we will show how these assumptions prove sufficient to derive all of the constraints on this construction mentioned in the introduction.

(8) Claims Regarding -ed

a. Morphosyntax:-ed is a derivational little a which selects for Roots only.

b. Semantics:-ed takes a relation as its first argument, and outputs a predicate.

Amongst the consequences of (8-a) is that -ed can take complements of maximally compound size. The fact that larger modified phrases cannot be embedded under -ed is therefore accounted for.

(9) *Sarah is big brown eyed. (bad if big modifies eye)

Compounds, on the other hand, are expected to be permitted under -ed, given the analysis of compounds in Harley (2009), according to which the derivation of compounds involves the incorporation of a categorized element into a root. The structure of the sentence Sarah is brown-eyed will therefore be as follows, and we can see that (8-a) is respected.
In making this construction directly parallel to compounds, this structure also derives the fact, discussed in the introduction, that regular plural morphology is not permitted inside the brown-eyed girl construction, just as it is banned in compounds.

To flesh out ((8-b)) somewhat, we take the denotation of the a head which corresponds to -ed to be (11).

\[
\begin{align*}
\text{In making this construction directly parallel to compounds, this structure also derives the fact, discussed in the introduction, that regular plural morphology is not permitted inside the brown-eyed girl construction, just as it is banned in compounds.}
\end{align*}
\]
(12) Poss head can introduce an alienable possession relation

\[
\text{Poss head can introduce an alienable possession relation}
\]

\[
\text{DP} \quad \text{DP} \quad \text{D'}
\]

\[
\text{DP} \quad \text{PossP}
\]

\[
\text{DP} \quad \text{Poss'}
\]

\[
\text{Poss} \quad \text{P}_{(e,f)} \cdot \lambda y_e \cdot \lambda x_e \cdot P(x) \wedge \text{Poss}(y,x)
\]

\[
\text{nP} \quad \lambda x_e \cdot \text{car}(x)
\]

\[
\sqrt{\text{car}} \quad -n
\]

The cross-linguistic morphosyntactic evidence for the distinction between (12) and (13) is extremely strong. For example, in Kampan languages of the Arawak family, inalienable pos-
session involves combining the possessed noun with an agreement prefix cross-referencing the possessor, as in (14). Alienable possession, on the other hand, involves the addition of an extra suffix after the noun root, which can be identified with Barker’s (1995) Poss head (examples adapted from Michael (2012:6-9)).

(14) No-gito
    1SG-head ‘My head’

(15) No-biha-ne
    1SG-bow-POSS ‘My bow’

Notice now that this syntactic difference in where alienable vs. inalienable relations are introduced, in combination with our claims in (8), suffice to explain why -ed can convey only inalienable relations (examples (17) and (18) are from (Tsujioka 2002:163), her examples (47b) and (47a) respectively).

(16) *John is carred. (cf. John has a car)
(17) *John is white-housed.
(18) *John is big-carred.
(19) John is bearded.

By (8-b), -ed’s first argument must denote a relation semantically. Since, by (8-a), -ed selects a root syntactically, the relation that -ed needs must come from the root itself: it can never be a relation introduced by Poss, because Poss is a head in the extended projection of nP. It follows that -ed is incompatible with alienable relations—(16) is ruled out because car denotes a set of individuals, not a relation, causing a fatal type-mismatch. In contrast, (19) is grammatical because beard can introduce a body-part-of relation, which is of the right semantic type to serve as -ed’s first argument. This structural explanation for the inalienability requirement is anticipated in less explicit form in Tsujioka (2002:165).

At this point it behooves us to anticipate two potential objections to our characterization of -ed as only being compatible with inalienable relations. The first objection comes from examples that might intuitively be taken to be instances of alienable possession, such as the following.

(20) John is moneyed.
(21) Items of clothing
    a. the ragged-trousered philanthropists
    b. the top-hatted gentleman
    c. they were suited and booted.

However, recall from the introduction that (20) has a very specific meaning: it implies that John has long-standing (probably inherited) wealth. Since moneyed seems to mean that its subject is wealthy as an intrinsic property, we think it is plausible to treat (20) as a case of inalienable possession. The explanation for (21) is almost the exact opposite. Notice that all of the examples in (21) entail that the items of clothing in question are being worn; (21-c) is
false, for instance, if the suits and boots were stowed away in a closet somewhere, even if they own the suits and boots in question. It turns out that this is exactly as expected given our claim that -ed is restricted to inalienable possession: Tsunoda (1996:578), cited in Heine (1997:18), remarks that clothes that are being worn (but not ones that are hanging in a closet somewhere), are sometimes morphologically marked as inalienable cross-linguistically.

This brings us to the second potential objection that might be raised against our characterization of the semantic restrictions on -ed, namely, that it does not seem to be compatible with all of the relations that have been characterized as inalienable on the basis of cross-linguistic evidence. Take, for instance, the list of such relations provided by Heine (1997:10, 18).

(22) Inalienable relations crosslinguistically
   a. Kinship roles
   b. Body-parts
   c. Relational spatial concepts like ‘top’, ‘bottom’, ‘interior’, etc.
   d. Parts of other items, like ‘branch’, ‘handle’, etc.
   e. Physical and mental states, like ‘strength’ and ‘fear’, etc. Lichtenberk (1985:105)
   f. Nominalizations, where the ‘possessee’ is a verbal noun, for example ‘his singing’, ‘the planting of bananas’.
   g. Clothes that are being worn (as opposed to hanging in a wardrobe somewhere) are often treated as inalienable. (Tsunoda 1996:578)

We find that -ed is able to convey body-part possession (big-nosed), spatial relations (glass-bottomed), inanimate part-whole relations (five-pointed star), mental states (strong-willed), and clothing that is being worn (ragged-trouser). However, it is apparently unable to convey kinship relations (*three-sistered) or relations introduced by nominalizations (*beautiful-singing). What are we to make of this?

In fact, it is well-known that languages with special morphological marking for inalienability vary in a quasi-arbitrary fashion with respect to which subset of the relations in (22) they mark as inalienable. Here is a sampling of the sort of variation that exists, drawn from Heine (1997:11-12):

(23) Variation in which relations “count” as inalienable
   a. Paamese and Tinrin: kinship, body parts and spatial relations count as inalienable.
   b. Many Australian languages: body parts are inalienable, kinship relations are not.
   c. Ewe: kinship and spatial relations are inalienable, body parts are not.
   d. Most Athabaskan: kinship and body parts are inalienable, spatial relations are not.
   e. Saker: body parts, part-whole relations, and most kinship relations are inalienable, but ‘husband’, ‘wife’, and ‘child’ are not (Z’graggen 1973:124).
   f. The word for ‘wife’ is inalienable in Fijian, but alienable in the closely-related language Lenakel (Lynch 1973:15).

2These, however, are presumably ruled out independently by the fact that nominalizations, by definition, consist not merely of a root but also a nominalizing n head, which would prevent -ed from attaching (since -ed selects for a root).
All that needs to be said, therefore, is that English is like many Australian languages in not treating kinship relations as inalienable.

This concludes our discussion of how our account derives the inalienability restriction on -ed in the brown-eyed girl construction. In the next section, we address a further apparent restriction on the construction, as well as the exceptions to that restriction—namely, the fact that the complement of -ed not only must be maximally of compound size, but also frequently must be minimally of compound-size.

4 Informativeness and cyclic interpretation

A curious fact concerning this construction is that the possessee root often requires a modifier of some sort. This is especially true when the possessee is a ‘canonical’ body-part, one which might reasonably be expected to be obligatory.

(24) a. a green-eyed monster
    b. a three-eyed monster
    c. *an eyed monster

Other, less canonical body-parts do not seem to be subjected to the same restriction.

(25) a. a winged monster
    b. a bearded monster

A hypothesis which is sometimes considered with respect to possession constructions that require an obligatory modifier (e.g. by Tsujioka (2002:140-141; 165) who ultimately rejects it for the Japanese suru possessive construction but endorses it for the English brown-eyed girl construction) is that the modifier is required because the modifierless version is uninformative, and thus ruled out at the semantics/pragmatics interface. The idea is that (26) is bad because it couldn’t possibly tell one anything new. In contrast, (27) and (28) are well-formed because having a beard and being wealthy are not things we take as a given.

(26) *John is eyed.
(27) John is bearded.
(28) John is moneyed.

Compatible with this idea, note that we find similar patterns of deviance with possession sentences involving the verb have.

(29) ??John has eyes.
(30) John has a beard.
(31) John has money.

There are, however, two important objections to this informativeness-based approach which must be dealt with. The first objection, based on one pointed out to Tsujioka (2002:141) by Richard Larson with respect to the Japanese suru construction, is that forms like eyed are
still bad under negation.\(^3\)

(32) *John isn’t eyed.

Since it would be highly informative to learn that John does not have eyes, the badness of (32) looks like a serious problem for the informativeness idea.

A second, related objection concerns a comparison with have sentences. While we have noted that (29) is deviant, and suggested that this might well be for reasons of informativeness, notice that this deviance disappears if the rest of the have sentence is such that it makes the sentence as a whole informative. Hence, the negation of (29) is well-formed, as is a sentence like (34), in which the subject denotes something which would not normally be expected to have eyes.

(33) John doesn’t have eyes.

(34) The hills have eyes.

Of course, the fact that (33) and (34) are well-formed is expected if informativeness is at issue in (29). It thus seems that (29), (33), and (34) taken together constitute a strong argument that informativeness is relevant to the well-formedness of have sentences. If we return to the brown-eyed girl construction, however, we now find a problem: we have already seen in (32) that negation cannot save the construction in the absence of a modifier, unlike what happens with have. In addition, using a subject which would not be expected to have the body-part in question does not improve the construction either, as we see in (35).\(^4\)

(35) *The hills are eyed.

(36) *This snake is legged.

To meet these objections, we propose that informativeness is relevant in the brown-eyed girl construction, just as it is in have constructions. The explanation for the contrasts seen in (29)-(36) comes from differences in the syntactic domains over which informativeness is evaluated. In particular, we propose the following generalizations:

(37) \textbf{Informativeness: Domains of Evaluation}

\begin{enumerate}
\item Informativeness in have constructions is \textit{evaluated at the TP level}.
\item Informativeness in brown-eyed girl constructions is \textit{evaluated at the a level}.
\end{enumerate}

The generalizations in (37) will follow from the same theory of locality domains as has emerged in recent Distributed Morphology literature on morphophonology (see especially Embick (2010)). If the same syntactic locality domains are relevant at both the PF and the LF interfaces, we expect that certain aspects of semantics and pragmatics might be calculated within such locality domains upon the completion of a phase, just as conditioned allomorphy and certain cyclic morphophonological rules apparently are. Now suppose that

\(^3\)Tsujioka (2002:165) advocates an informativeness-based approach to the English brown-eyed girl construction, but she does not note that the same objection raised by Larson for such an approach in the case of the suru construction applies equally well to English -ed. While we agree with Tsujioka’s intuition that informativeness is relevant here, something more is required to make it work, and we will attempt to provide it.

\(^4\)Inanimate part-whole relations, as opposed to body-part relations, may be different in this respect—see footnote 5.
informativeness is among the semantico-pragmatic constraints which are evaluated cyclically. The badness of (32) and (35), despite the presence of negation or a typically eyeless subject, would then follow if informativeness is evaluated for things like *eyed once the little-a phase is complete, because this is before sentential negation or the subject of predication is present in the derivation. The fact that negation or a typically eyeless subject can save the day in (33) and (35) follows because *have is not embedded under a derivational little-x. IP-domain material is therefore visible at the point of the derivation at which informativeness is evaluated in *have sentences. This is directly analogous to the fact that IP-domain heads are able to trigger suppletion on verb roots in morphophonology, but cannot condition such suppletion across derivational morphemes (Embick 2010). The relevant locality domains are depicted in (38) and (39).

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5Tsuijoka (2002:165, her (52b-e)) cites the following contrasts as indicating that material external to the -ed formation can count for the calculation of informativeness after all.

(i)  *eyed man
(ii)  *legged man
(iii) an eyed needle
(iv)  legged furniture

However, Tsuijoka’s formulation of the generalization leads us to expect that negation or the subject of the sentence should be able to make such constructions well-formed too, and we have already seen in (32) and (35) that this is false. It seems to us that the real contrast here is between body-part readings and inanimate part-whole readings—apparently, the latter are not subject to the same conditions of informativeness as body-parts are. The reasons for this must be left for future research.
Before concluding, we will point out a further prediction made by our approach. Since we are proposing that \textit{-ed} formations are a closed locality domain for the purposes of the interfaces, it is expected that these formations could be a suitable domain for idiosyncratic, special meanings (Marantz 1997). We therefore predict that there should be formations like \textit{brown-eyed} which have an idiomatic interpretation. This prediction is correct, as the following examples from Tsujioka (2002:164, her (49)) demonstrate:

\begin{quote}
(40) a. blue-blooded = noble
\end{quote}
b. white-livered = timid

c. close-fisted = stingy

d. hard-headed = stubborn

To summarize this section, we have seen that the brown-eyed girl construction has a tendency to require a branching compound inside it, although there are some exceptions to this tendency. We proposed that this tendency, and the exceptions to it, are to be explained in terms of a pragmatic requirement that the construction be informative. Since this informativeness requirement is evaluated at the phase level, brown-eyed girl constructions are evaluated with respect to a smaller domain than are possessive have sentences—this is because the former involve a phase-defining little-a head, whereas the latter do not. This difference in domain size, between main verbs on the one hand and forms built with derivational morphology on the other, coincides exactly with observations on locality domains in the literature on morphophonology (Embick 2010). We take it that this convergence is a strong argument for the relevance of phases as locality domains at the interfaces.

5 Conclusion

In this paper, we have examined the brown-eyed girl construction and identified a number of restrictions on it:

(41) **Restrictions on the brown-eyed girl construction**

a. Regular plural morphology is disallowed (*brown-eye-s-ed children), but irregular plurals are more acceptable ((?)buck-teeth-ed children)

b. No verbal counterpart (*to brown-eye)

c. The construction is restricted to a subset of inalienable possession relations

d. The construction generally requires a modifier (brown-eyed vs. *eyed), except in the case of items of clothing and certain canonical body parts (booted, bearded)

We proposed that (41-a)-(41-c) are to be accounted for by a single syntactic assumption regarding -ed’s selection requirements, and a single assumption regarding its semantics, repeated here as (42):

(42) **Claims Regarding -ed**

a. **Morphosyntax:**-ed is a derivational little a which selects for Roots only.

b. **Semantics:**-ed takes a relation as its first argument, and outputs a predicate.

The restriction in (41-d) was accounted for by the proposal, partly following Tsujioka (2002:140-141; 165), that possession constructions must be informative if they are to be semantically/pragmatically well-formed. An innovation of ours is to point out that this informativeness requirement must be evaluated over a small domain if it is to account for the fact that neither negation nor the choice of subject is able to “rescue” the brown-eyed girl construction from uninformativeness. Strikingly, the relevant locality domain (a phase created by a derivational little-x head) has also been shown to be relevant in recent literature on morphophonology—an intriguing convergence between the syntax-semantics/pragmatics
interface on the one hand, and the syntax/morphophonology interface on the other hand. Future research might address whether this locality-restricted informativeness requirement might have an even wider explanatory reach than possession constructions; a particularly promising avenue might be apparent modification requirements in other cases of derivational morphology (compare *arriver with late-arriver).

We will close by noting a few questions which our analysis leaves open. The first concerns the use of formations like brown-eyed as attributive modifiers. As shown in (43), these are subject to the informativeness requirement even when the modified nP is one which would make the construction as a whole informative:

(43)  *a legged snake

What we want is to be able to say that snake in (43) is outside of the locality domain over which the informativeness of legged is evaluated. It is not immediately clear whether this is, in fact, the case. The final answer will depend upon the resolution of various debates in the semantics and syntax of attributive adjectives which are way beyond the scope of this paper. Nonetheless, there are at least two reasonable sets of assumptions concerning attributive adjectives which will yield the correct result. One is to assume that attributive adjectives, by virtue of being adjuncts, are constructed in a separate workspace before being placed in the numeration for nP. The aP would then have been “renumerated” in the sense of Johnson (2002), triggering a cycle of spell-out which will force the informativeness requirement to be evaluated before the aP is adjoined to its nP. The idea here is illustrated in (44).

(44)

An alternative would be to follow Cinque (2010) and Leu (2008), who argue (reviving an old analysis) that at least some attributive adjectives are derived from reduced relative clauses. If formations like brown-eyed are always reduced relative clauses when they appear in attributive position, then our analysis of the informativeness constraint in predicative contexts will extend to the attributive cases automatically. We will leave the viability of these alternatives, as well as the choice between them, as open questions here.

The second question that we will leave as an open puzzle concerns data of the following sort, which seem intuitively to be related to the brown-eyed girl construction:

(45)  a. Hey {buck-teeth/four-eyes/barrel-chest/pigeon-toes/top-hat/big-nose}!
     b. Look out, here comes {buck-teeth/four-eyes/barrel-chest/pigeon-toes/top-hat/big-nose}!

These formations have in common with the brown-eyed girl construction that they have compound stress and often involve either a body-part or an item of clothing. They can be used
either vocatively (as in (45-a)) or in argument position (as in (45-b)). The latter fact suggests a difference of grammatical category with respect to the brown-eyed girl construction—while the latter are clearly adjectival, cases like (45) are nominal in nature. Furthermore, and most unlike the brown-eyed girl construction, the formations in (45) require the possessee to bear plural marking if it is semantically plural (although singular morphology is somewhat better if the plural marking for the noun in question is irregular). Compare (45-a) with (46):

(46) Hey {?buck-tooth/*four-eye/*pigeon-toe}!

A further peculiarity of these formations is that, when they contain body-parts, they must be interpreted exocentrically as denoting someone who has a body-part of the relevant sort: the compound big-nose cannot refer to a nose of the large variety, but has to mean someone who has one. Items of clothing, on the other hand, are ambiguous between endocentric and exocentric interpretations: top-hat, alongside its exocentric use in (45), can certainly also denote a kind of hat. We will leave the development of an account of (45), its peculiarities, and its exact relation to the brown-eyed girl construction, as interesting puzzles for the future.

Acknowledgements

We thank Karlos Arregi, Marcel Den Dikken, Jay Keyser, Alec Marantz, Cilene Rodrigues, Carson Schütze, and Linnaea Stockall for discussion and data, and Salvador Mascarenhas for LATEX support.

References


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