Adjectives exist, the adjective category does not: a bicategorial approach♠

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Preamble

"Adjectives are frequently the greatest enemy of the substantive." *Voltaire*

"[I was taught] to distrust adjectives as I would later learn to distrust certain people in certain situations." *Ernest Hemingway*

"The road to hell is paved with adjectives." *Stephen King*

"The adjective has not been built that can pull a weak or inaccurate noun out of a tight place." *E.B. White*

"[Whoever writes in English] is struggling against vagueness, against obscurity, against the lure of the decorative adjective." *George Orwell*

"The adjective is the banana peel of the parts of speech." *Clifton Paul Fadiman*

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1. Intro: The trouble with adjectives (and adverbs)

Assumptions

Lexical categories are about interpretation, they are not shallow taxonomic categories: Déchaine (1993), Baker (2003) – contra Pesetsky & Torrego (2004), who consider the verb-noun contrast a morphological reflex of T features.

Lexical categories must reflect a profound fact about language, as they are both prominent and universal (Baker 2003).

Panagiotidis (2011, 2015) argues that categorial features [N] and [V] encode "fundamental interpretive perspectives":

- [N] encodes a sortal perspective, hence nouns are "kinds". Alternatively, they lack temporal parts (Acquaviva 2014);
- [V] encodes an extending-into-time perspective, hence verbs are "sub-events" – alternatively it encodes abstract causation (Ilkhanipour 2013; cf. Darteni 2017, chap. 7)

Categorisation is a necessary process (Embick and Marantz 2008, 6) and it is a *syntactic* process (Marantz 1997, 2000, 2006). [N] is encoded on a *nominaliser* (an *n* head) and [V] is encoded on a *verbaliser* (a *v* head).

Syntactic categorisation is necessary

a. because it renders roots readable at the interface with Conceptual-Intentional systems(Panagiotidis 2011), or
b. because it enables visibility and the onset of a derivational procedure (Mitrović and Panagiotidis 2018; after Chomsky 2013),
c. or maybe both.

What about adjectives? No categorial perspective

Adjectives are different because no unitary characterisation in terms of an interpretive perspective is possible for them. Consider the very simple distinction between predicative (*blue*, *beautiful*) and non-predicative (*alleged*, *former*) adjectives (pace Francez and Koontz-Garboden 2015).

Fábregas και Marín (2017, 3) put it *very* nicely (emphasis mine):

> *It seems extremely difficult to identify positive properties that characterise the category called 'adjective', even in one single language*. Consider, for instance, Bhat's (1994) wide-ranging typological study. Bhat identified a number of negative properties in adjectives (properties that they lack with

respect to nouns or verbs): Inability to identify participants (Bhat 1994, 18; see also Wierzbicka 1980), inability to denote events (Bhat 1994, 19), vagueness (Bhat 1994, 28; see also Kamp 1975), inability to behave as predicates by themselves (Bhat 1994, 48), inability to denote changes across time (Bhat 1994, 63), etc.

Of course, adjectives are usually understood as "properties" – cf. the completely throwaway classification of nominalisers, verbalisers and adjectivisers as "introduc[ing] entities/stuff, events, or properties" respectively (Marantz 2012).

This is wrong. Nouns like *misery* or *hue* are properties; verbs like *exist* also describe properties. More generally, Mitrović & Panagiotidis (2018, 2–3) point out that all properties are conceived as one-place predicates, with their extensions being sets. Therefore, nouns, verbs, and adjectives, in a general set-theoretic sense, can be equivalent.

> *There is no single interpretive perspective that can be associated with adjectives.*

On top of the theoretical issue above, *many* adjectives that are ambiguous between 'properties' and masked referential genitives. Consider Spanish *almodovariano* (ambiguous) vs. *almodovaresco* (unambiguous), English *papal* or

Slavic *possessive adjectives* as extensively discussed in Corbett (1987). Let's consider Russian possessive adjectives, in lieu of simple genitives.

These are "typically, possessive adjectives are formed from animate nouns, with the help of the suffixes *–in, –nin, –n-ij, –ov, –ev, –sk-ij*" (Valgina, Rosental, and Fomina 2002, sec. 145):

(1) *Some Russian possessive adjectives*

noun	possessive adjective	meaning
Liza	lizin	Liza's
brat	bratnin	brother's
doch	dochernin	daughter's
otec	otcov	father's
Vladislav	vladislavlev	Vladislav's

These adjectives indicate *referential possessors*, not properties.

'Ljuba's book' can be expressed either as
   kniga Ljubij (book Ljuba.GEN), or as
   ljubina kniga (Karpava, p.c.).

Russian possessive adjectives "that are formed from inanimate nouns are very rare" (Valgina, Rosental, and Fomina 2002, sec. 145); they are better with some first names, odd or awkward with others, impossible with non-Russian names or surnames – and so on (S. Karpava, p.c.; O. Kvasova, p.c.).

These adjectives can also be ambiguous between a possessive and an attributive reading (like Spanish *almodovariano*).

(2) *Ambiguous interpretation*

volchij   hvost
wolf.ADJ   tail
'The/a wolf's tail'

volchij   appetit
wolf.ADJ   appetite
'Wolfish appetite.' (cf. 'Hungry like a wolf')

If there is no 'adjectival' categorial perspective, then *there is no need for a categorial* [A] *feature.*

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2. Adjectives are special

Dixon (2004, 9–12) points out that adjectives are typologically the *marked* lexical category:

a. they have *fewer* members than both noun and verb classes and
b. "a higher proportion of adjectives than of nouns and verbs will be *derived* forms".

Adjectives also are categorially ambivalent. So, there appear to exist

- languages with adjectives behaving as a subclass of verbs, like Korean (Haspelmath 2001, 16542; Kim 2002);
- languages that split the adjective class between noun-like adjectives and verb-like adjectives, like Japanese (Miyagawa 1987; Iwasaki 1999, chap. 4)
- languages where adjectives look very much like nouns: grammatical tradition in Indo-European lumps adjectives together with nouns as *ονόματα*.

No adjectivisers?

Being committed to syntactic categorisation, we should ask ourselves if we have <u>systematic</u> evidence for the existence of adjectivisers. We have detected and identified the morphological exponence of *nominalisers* (Lowenstamm 2008; Kramer 2009); we have even detected *verbalisers* distinct from causativisation, Voice and

applicatives (Spyropoulos, Revithiadou, and Panagiotidis 2015; Panagiotidis, Revithiadou, and Spyropoulos 2017).

Where are adjectivisers?

Apparently adjectivisers do not exist because an [A] feature that would encode an interpretive perspective for the adjective category does not exist because no such perspective exists!

So,

> ➢ There is evidence for *n* and *v* – but not for *a* and
> ➢ There is no interpretive perspective for a categorial feature [A] on *a*.

Therefore, there is no adjectiviser.

Adjectives without adjectivisers?

This is not news for everyone. Categorially adjectives have already been assumed to fit into one of the following scenarios, both of which involve no [A] feature and no adjectivising category:

- Adjectives are a [+V +N] lexical category, combining both nominal and verbal properties (Chomsky 1970; Jackendoff 1977; Stowell 1981).
- Adjectives are an unmarked lexical category, lacking *any* categorial features: "a kind of default category, a category with no positive defining essence" (Baker 2003, 270).

According to Baker (2003, chap. 4) adjectives are the *default* lexical category. He calls them the 'elsewhere case' among lexical categories (Baker 2003, 230). If he were correct, then
    a. adjectives would be the unmarked lexical category and
    b. they would be identical to roots.

Dixon's observations cited above or even the mere existence of derived adjectives are enough to refute this.

The [+V +N] scenario presents a different kind of difficulty: what kind of interpretation at the C-I interface would a [+V +N] feature specification encode?

> Baker (2003, 165–69) explicitly bars this option via his Reference-Predication Constraint, which amounts to banning a syntactic node from bearing both an [N] and a [V] feature.

Panagiotidis (2015, 119) simply stipulates that "lexical heads bear interpretable categorial features, *either* [N] *or* [V] (emphasis mine)"; still, given his system of interpretable categorial features, it is hard to see how both [N] and [V] could co-exist on a single lexical head, a categoriser.

Let's be more explicit about this (Mitrović and Panagiotidis 2018, 5): the coexistence of [N] and [V] on a single head, say an adjectiviser *a*, would be problematic on three counts:

- The sortal perspective of [N] and that of extending-into-time of [V] would probably contradict each other;
- The [+N +V] coexistence in all probability cannot yield a single categorial *label*;
- The [+N +V] coexistence would also create a type/sort-theoretic clash.

Typologically speaking, adjectives are categorially ambivalent. How can we derive this varied picture (sketched earlier) if two categorial features are encoded together either on the adjective itself or on an adjectiviser *a*?

More specifically, if adjectivisers (*a* heads) universally bear both [N] and [V], then it would be expected that adjectives would behave as both nouns and verbs cross-linguistically *in equal measure*, i.e. they would be 50% noun 50% verb – whatever this would mean. This is clearly not the case.

So: *adjectives exist but adjectivisers (and* [A] *features) cannot.*

3. Adjectives are categorially composite

Recall that there are languages with adjectives behaving as a subclass of verbs (Korean), languages splitting the adjective class between noun-like and verb-like ones (Japanese), and languages where adjectives look very much like nouns (Indo-European).

Let's focus on Indo-European adjectives. From 'below', they behave like nominals in that they show concord, say φ-agreement. From 'above', a modified adjective also displays verbal behaviour, since only *adverbs* modify adjectives.

<u>Proposal</u>: there is no adjectiviser *a* with an [N][V] specification; rather adjectivisation results from a structure where a root (or an already categorized element *n*P or *v*P) is selected by an *n* which is c-commanded by a *v*.

However, adjectives cannot be just [*v* [*n*P]]:

- They are not denominal verbs – assuming of course that [*v* [*n*P]] is the/a structure for denominal verbs (pace Alexiadou 2001; Alexiadou and Schäfer 2010; Alexiadou, Iordăchioaia, and Schäfer 2011).
- They are not (necessarily) bimorphemic, as expected from [*v* [*n*P]] structures.
- They may bear concord-triggering unvalued grammatical gender on their *n* – unlike nouns (Lowenstamm 2008; Kramer 2015, 2009);
- They tolerate no verbal functional superstructure ('Extended Projection'), not even Voice.

The derivation of adjectives

So let's see how adjectives are derived. Assume a root-derived adjective – although this derivation is of course possible with already categorised nouns and verbs.

Step 1: The root and a composite head comprising {n,v} categorisers, qua bearers of the [N] and [V] features, enter the derivation.

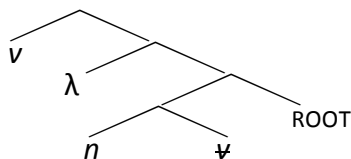$$\begin{array}{cc} n & v \end{array}$$
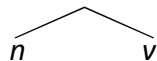
Step 2: The composite head and the root merge to form a syntactic object (SO).

$$[[n\ v]\ \text{ROOT}]$$
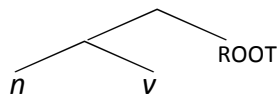
Step 3: The SO contains a clash and is unlabellable (Chomsky 2013), halting the derivation. The composite head also yields type mismatch (Baker 2003, 165–69).

$$[[n\ v]?\ \text{ROOT}]$$
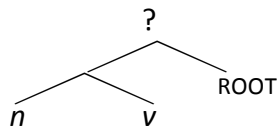
Step 4: Labelling is resolved via excorporation of *v* triggered by a category provisionally identified as lambda (Mitrović and Panagiotidis 2018, 5–9).

$$[v\ [\lambda\ [[n\ \not{v}]\ \text{ROOT}]]]$$

Step 5: The resulting SO is type-compatible and labellable.

$$[vP\ v\ [\lambda\ [[n\ \not{v}]\ \text{ROOT}]]]$$
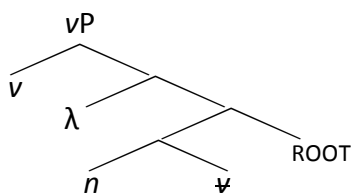
Consequences and insights

The analysis makes adjectives look like verbs on the outside and like nouns on the inside. Moreover, *v* could be responsible for the inherently relational character of adjectives (Larson 1999, 2014, chap. 7; Struckmeier and Kremers 2014).

Addressing earlier concerns:

What would prevent agreement of the second-order modifier (the adverb modifying the adjective) with the head noun? The Phase Interpretability Condition: categorisers are phase heads (Marantz 2000, 2006; Embick and Marantz 2008, 6; Harley 2014). Hence, adverbs can generally be understood as non-agreeing adjectives in Indo-European.

Adjectives are not (like) denominal verbs because

1. they are monophasal (as a result of the fact that)
2. the *n* involved in adjectival derivations is defective: its gender is unvalued; this is unlike the picture with nouns (Lowenstamm 2008; Kramer 2015, 2009)

The difference between adjectival structures and denominal verbs like *fantasise* provide us with a sort of structural minimal pair: although both involve a verbal layer embedding a nominal one, in the case of the verb *fantasise* we have recategorisation through the merger of two independent categorisers.

Recategorisation happens in two (phasal) steps: first a root merges with *n*, an *n*P is projected, then the resulting *n*P merges with a *v*, projecting a *v*P (cf. Fu, Roeper, and Borer 2001).

$$[_{vP} [_{nP} \text{fantas y}] \text{ise}]]$$

Adjectivisation happens in one phasal step, with the merger of a root with a composite head comprising {n,v} categorisers.

Adjectives are not (necessarily) bimorphemic because they are monophasal.

Adjectives do not tolerate a verbal functional superstructure ('Extended Projection'), not even Voice, because the *v* involved in adjectival derivations is defective: they cannot assign accusative Case and they do not support true external arguments.

The typological picture

So, we saw how we can derive of a nominal flavour. How would we derive verbal flavour adjectives, e.g. like Korean ones? Let's retrace the steps:
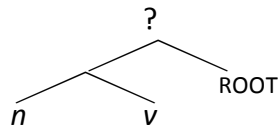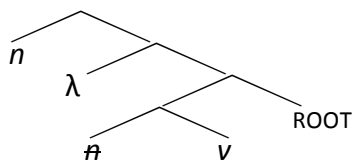
Step 3 (the same): The SO contains a clash and is unlabellable (Chomsky 2013), halting the derivation. The composite head also yields type mismatch (Baker 2003, 165–69).

```
            ?
          /   \
        /       \
      /           ROOT
    /   \
   n     v
```

Step 4: In Korean-style cases, labelling is resolved via excorporation of n triggered by a category provisionally identified as lambda (Mitrović and Panagiotidis 2018, 5–9).

```
   n
    \
     λ
      \   /   \
       \ /     ROOT
       n̶   v
```

Step 5: The resulting SO is type-compatible and labellable.

```
      vP
   n
    \
     λ
      \   /   \
       \ /     ROOT
       n̶   v
```
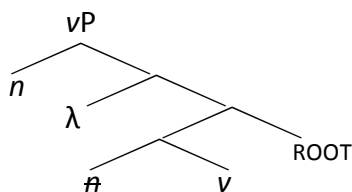
So, Korean (and similar adjectives) are predicted to be verbal on the inside and nominal on the outside – the mirror image of Indo-European ones.

Internal	*External*	*Which head excorporates?*	*example*
nominal	verbal	*v*	Indo-European
verbal	nominal	*n*	Korean
neither	*neither*	both *n* and *v*	?

Apparently in Japanese both *n*- and *v*-excorporation options are available, yielding verbal adjectives and nominal adjectives respectively.

Next question: what decides which (defective) categoriser excorporates?

Defectivity and excorporation

What grammar-internal reason would be responsible for deciding which categoriser excorporates? Look-ahead to the interfaces is out of the question, so:

> When an element is categorised by n and v in tandem, the symmetry is broken via the excorporation of the most featurally defective categoriser.

This bears out in Indo-European:

> Defective *n* in adjectives bears an [N] and a [gender:] feature
> Defective *v* in adjectives bears a [V] feature

More work on Korean-style adjectives is under way.

Ideally, monophasality, bicategoriality and categorial defectivity could be synthesised in one coherent explanation.

4. Conclusion

Adjectives are the category resulting from simultaneously merging *n* and *v* with a root or an already categorised verb (*deverbal adjectives*) or a noun *(denominal adjectives)*.

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