Arabic adjective words and classes and their complexity at the interfaces

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Introduction: empirical, theoretical and architectural challenges

- *What is an adjective in Arabic, its features and classes, in both descriptive and theoretical terms, but also cross-linguistically?*
- Empirically, I will explore a four-way classification, whereby Arabic adjectives fall into four formal morphosyntactic (and semantic) classes:

  (a) QA (quality),

  (b) RA (relational),

  (c) CA (comparative, elative/superlative), and

  (d) PA ('participial' adjectives).

- In theoretical and design terms, I will explore how these divisions relate to essential questions, such as,

  (a) the root/template debate, particularly in DM and Semitic or Germanic/Romance;

  (b) the identify of the adjective as word and as root,

  (c) the argument/valence of the adjective and its extended projections

  (d) the aspectuo-semantics.

1. Arabic adjective words and classes

1.1. Deriving adjectives

• Basic Arabic adjective words are built through using two main distinct derivational processes:

(a) a *root* base, involving an acategorial ('unvocalized') item, in addition to an adjective/substantive pattern, which may categorize the root;

(b) a *stem (or word)* base, which is already categorized as a *noun*, in addition to an 'adjectivizer' suffix *-ii*.

• The template/affix divide correlates in (a) with the main semantic division into *property concept* or *quality* adjectives (Dixon 1982; = QA), and in (b) with *relational* adjectives (= RA; Bally 1944; Gunkel & Zifonun 2008; Fabregas 2007).

• In traditional Arabic grammars, these two classes are already distinguished

(a) *hilyat* 'ornament; inherent property', or more commonly *sifat* 'quality' (Ibn Sarraj 10th c. [1985]), (= QA);

(b) *nisbat* 'relationship' (related to tribes, cities, persons, entities, etc.), (= RA).

- *QA*'s, which represent prototypical adjectives, have two main root/template skeletons, which are most salient and productive:

  (a) CaCiiC, and (b) CaCCaC,

  as represented in (1) and (2), respectively:

  (1) a. *rajul-un* *ṭawiil-un* */baʔiis-un* */baliid-un*

  man-NOM tall-NOM /miserable-NOM /stupid-NOM

  'A tall/miserable/stupid man'.

  b. *l-jundiyy-at-u* *s-sajiin-at-u* *l-jariiḥ-at-u*

  the soldier-F-NOM the-imprisoned-F-NOM the-wounded-F-NOM

  'The imprisoned wounded female soldier'.

- (2) a. *yawm-un ʔaswad-u*
- day-NOM black-NOM
- ‘A black day’
- b. *rajul-un ʔahmaq-u ʔahdab-u*
- man-NOM crazy-NOM hunchbacked-NOM
- ‘A crazy hunchbacked man’

- The two skeletons or patterns point in fact to two distinct subclasses of QAs, with distinct semantics:

  (a) CaCiiC is dedicated to *dimension*, *age*, *value*, *physical*, *speed*, *or human properties* (or states),

  (b) CaCCaC is dedicated to *colors* and (human) *defects* or *sicknesses*.

  Note that the form in (2) is homonymous with that of the elative comparative (or superlative), to which I return later.

1.2. Relational adjectives

- *RA's* have a distinct derivational route from QAs, and a distinct semantics. Their source is a noun (a *category*), which designates a *thing* or an entity as in (3), or an *event*(uality), as in (4):

(3) a. *l-xatam-u* *d̲-d̲ahab-ii* ; b. *t̲-t̲awb-u* *l-bunn-ii*
the-ring-NOM the-gold-EN the-tissue-NOM the-'coffee'-EN
'The golden ring'; 'The brown tissue.'

(4) a. *l-hujuum-u* *l-ʔamiriik-ii* *ʕalaa* *l-yaman-i*
the-attack-NOM the-American-EN on the-Yemen-GEN
'The American attack of Yemen'.

b. *l-xuṭṭa-t-u* *t-tanfiid̲iyy-at-u*
the-plan-F.PL-NOM the-executive-F-NOM
'The executive plans'.

Note that (3b) the color is non-basic, whereas in (3a) the color is basic.

- Subclasses of QA's or RA's can be distinguished in terms of their internal syntax and their argument or aspectual structure, making use of one of the basic tenets of neo-constructional grammars, and more specifically Distributed Morphology, which separate Root Syntax and Category Syntax.
- In (1a), the adjective modifies the ergative subject, and in (1b) the object of the transitive (with and absence of the external subject). I argue that these adjectives, being *permanent* (Jurjaanii 14th c. [1978]) or *non-episodic* (Fabregas (2019), project no (Davidsonian) event, in comparison to agent or patient participles (PA) which do (Fassi Fehri 2012, and below).

1.3. A third derivational class: the elative comparative

• The two most representative constructions of elative comparatives are illustrated in (11) and (12):

(11) *Badr-un ʔaṭwṭal-u/ʔablad-u min Hind-in*

Badr-NOM taller-NOM/more.stupid-NOM than Hind-GEN

'Badr is taller /more.stupid than Hind'

(12) *Badr-un ʔaktar-u tuul-an/balaadat-an min Hind-in*

Badr-NOM more-NOM tallness-ACC-stupidity-ACC than Hind-GEN

Literally: 'Badr is more tallness/stupidity than Hind'.

• In (11), the elative comparative word is *templatic*, in the sense that it is formed through conflation of a consonantal root *ṭwl* (meaning 'height' or 'length'), representing the parameter of comparison, and the elative template *ʔafʕal* introducing the degree quantifier (roughly equivalent to English *more*).

• In (12), the standard of comparison surfaces in the form of a bare noun phrase, which is not conflated in the template with the degree quantifier. The two synthetic and periphrastic constructions are distinguished morphologically, whereby the parameter of comparison is a root or a category. Note that the category is not an adjective, but a *n*, or eventually a *p*, as in the lower comparative in (13):

(13) *Hind-un ʔaqall-u fii ṭ-ṭuul-i min Badr-in*

Hind-NOM more-NOM in the-tallness-GEN than Badr-GEN

'Hind is less tall than Badr'. Literally: 'Hind is less in tallness than Badr'.

- Three points of clarification are in order here.
- First, these constructions are called *elative* comparatives, to distinguish them from *equative* comparatives as in (14):

(14) *Hind-un* *dakiyy-at-un* *dakaaʔ-a* *Badr-in*

Hind-NOM intelligent-F-NOM intelligence-ACC Badr-GEN

'Hind is as intelligent as Badr.'

Literally: 'Hind is intelligent like Badr's intelligence'.

- In (14), an overt adjective is used in addition to an overt event noun denoting the standard of comparison. But in both (11) and (12), no adjective is used.
- Second, the degree operator in (12) also involves a templatic form which conflates the root of the quantity *katiir* 'much' with the elative template, yielding the elative *ʔaktar*.
- Third, the elative synthetic comparative in (11) can be shown to have a more complex derivation than its QA counterpart given in (2).
- For some morphosyntactic properties see Fassi Fehri (1978, 1981), and Davis (2006), for semantics, see Hallman (2022). None of these studies, however, the root/category characterization motivated here.

1.4. A fourth derivation class: participial adjectives

- 'Participial' adjective words (= PA) differ from QA's with respect to their argument structure and aspectual properties.
- The question often arises as to whether their derivation involves a *v* category, and also a *voi* (Voice) projection (see Fassi Fehri 1993, 2012 for detail), these properties being irrelevant to QA's.
- There is no morphological derivation evidence in Arabic to establish the existence of a distinction between a 'verbal'participles (= PV), as opposed to 'adjectival' participles (PA), as found in English (Wasow 1977, Embick 2004). All Arabic participles can be shown to be PA, rather than PV. In contrast to RA's which can be shown to be'denominal', no PA adjectives can be shown to be 'deverbal', at least as far as morphology is concerned. The essential distinction is captured in terms of argument and aspectual structure. Both Agent PAs and Patient PAs in (15) or (16) are arguably dyadic (or transitives):
  - (15) *r-rajul-u* *kaarih-un/maaqit-un* *l-ʕamal-a;* *li-l-ʕamal-i*
  - the-man-NOM hating-nom/despising-NOM the-work-ACC; of-the-work-GEN
  - 'The man is hating/despising the work'.

(16) *l-ʕamal-u* *makruuh-un* *(mina r-rajul-i)*

the-work-NOM hated-NOM (from the-man-GEN)

'The work is hated/despised by the man'.

- But the QA *sifa mushabbaha* in (17) is only monadic (or intransitive), where the externalized role is interpreted only as a Patient (the internal argument in (15)):

(17) *r-rajul-u* *kariih-un/maqiit-un* *(*li-l-ʕamal-i)*

the-man-NOM hated/despised-NOM (of-the-work-GEN)

'The man is hated/despised'.

- If the distinction between prototypical adjectives (namely QA) and PA adjectives can hardly be stated in terms of their category base (verb vs. adjective), since none of them is morphologically derived from the verb, then the reasonable left option is to opt for argumental and aspectual structure properties, as I will explain.

1.5. Some unifying formal syntactic features of word adjectives

- Descriptively, the folllowing statements hold:

(18) Arabic adjectives have (a) definiteness, (b) case, and (c) number and gender as ((un)interpretable features.

(19) Arabic adjectives as either (a) modifiers, or (b) precidates.

(20) Modifying adjectives are normally placed postnominally, although some specific adjectives are placed prenominally. (Fassi Fehri 1981, 1999; Kachakeche & Scontras 2020 for detail).

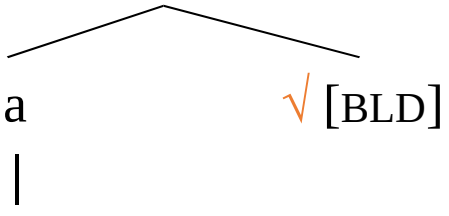
(21) In superlatives, adjectives are placed/move into D, which makes the structure definite.

These statements although unifying the adjective category, may lead to distinct structures and extended projections.

2. Argument structure distinctions for adjective words

2.1. QA

(22) a. QA human



as in (1a) *baliid* ‘silly’;

b. QA color

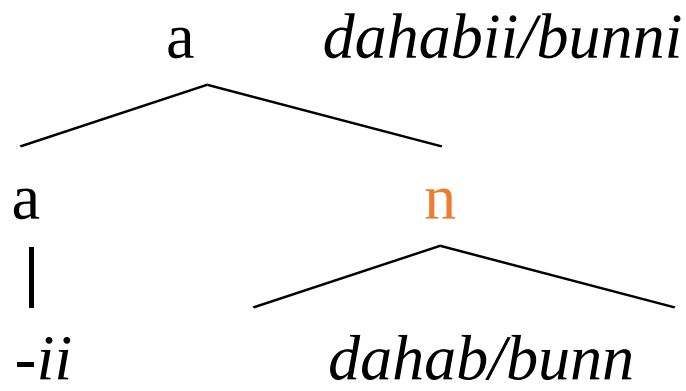
as in (2) ʔ*aswad* ‘black’

- Here the pattern is an ‘adjectivizer’; although it could be a nominalizer (*naziif* ‘bledding, hemorrhage’; *bariiq* ‘glitter, shine’; *ḥariim* ‘sanctum, harem’; *ḥariiq* ‘fire, conflagration’, *baʕiir* ‘camel’, etc.); or a collective/plural noun (*ḥamiir* ‘donkeys, *baʕiir* ‘camels’)’ for CaCiiC; or comparative with the CaCCaC pattern or a glottal causative (*ʔaʕḍam* is either ‘greater’ or ‘make someone great’), hence subject to a template homonymy (or polysemy).
- The affix is then not strictly categorizing (unlike McCarthy 2001, Arad 2005, Borer 2014). It is just a ‘promise’ for a category.

2.2. RA

The pure stative RA is derived as follows:

(23)



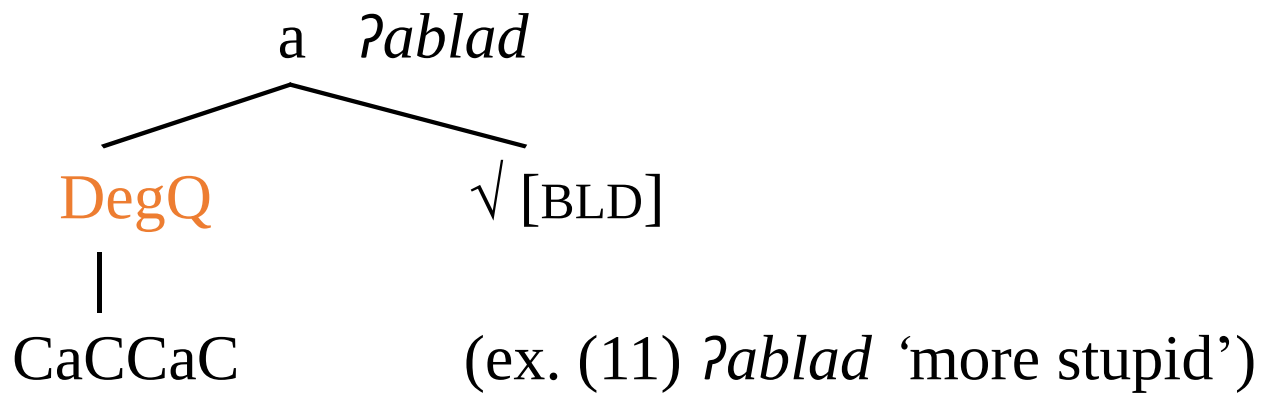
dahabii ‘golden’, *bunnii* ‘brown’ in (3)

- Here the pattern is an ‘adjectivizer’, although it could be singulative in nominals (*yahuud* ‘jews’: *yahuud-ii* ‘a jew’), etc. exhibiting also a templatic homonymy (or polysemy).

2.3. EC

• When templatic (or synthetic) the elative comparative has basically the following structure:

(24)

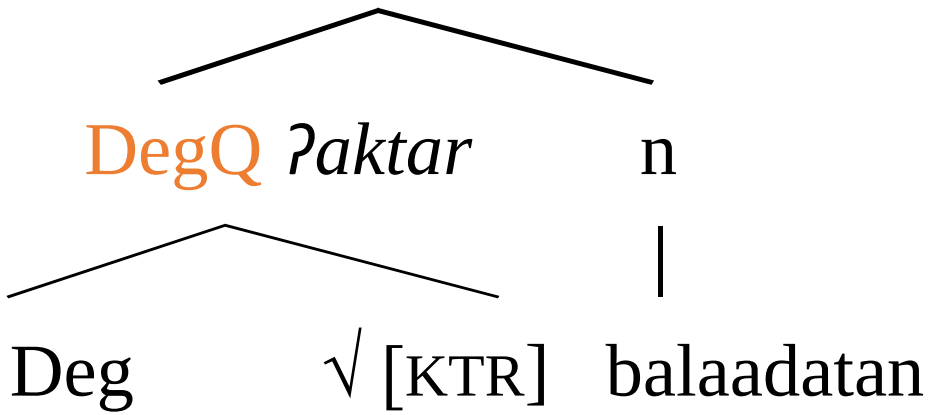


• Note that the pattern CaCCaC can also be forming the QA color adjective, the glottal causative (*ʔaʕḍam* is either ‘greater’ or causative ‘make someone great’, etc.), thus exhibiting *template homonymy* (or polysemy).

• It is just a ‘promise’ for a category.

- EC can also be periphrastic (or analytic) with an overt noun as a *standard of comparison* (as in (12) above), which is not incorporated, unlike the morphological comparative:

(25)



2.4. PA

Participle adjectives (= PA) have more argument structure than QA, RA, or even templatic EC (as will be shown later). While the former have only a single argument that must be external (or externalized), according to (25), PA can be dyadic as in (26), replicating (18), or triadic as in (27), in addition to being monadic. The dyadic PA has basically the structure in (28).

(26) The sole argument of the QA adjective is external/externalized.

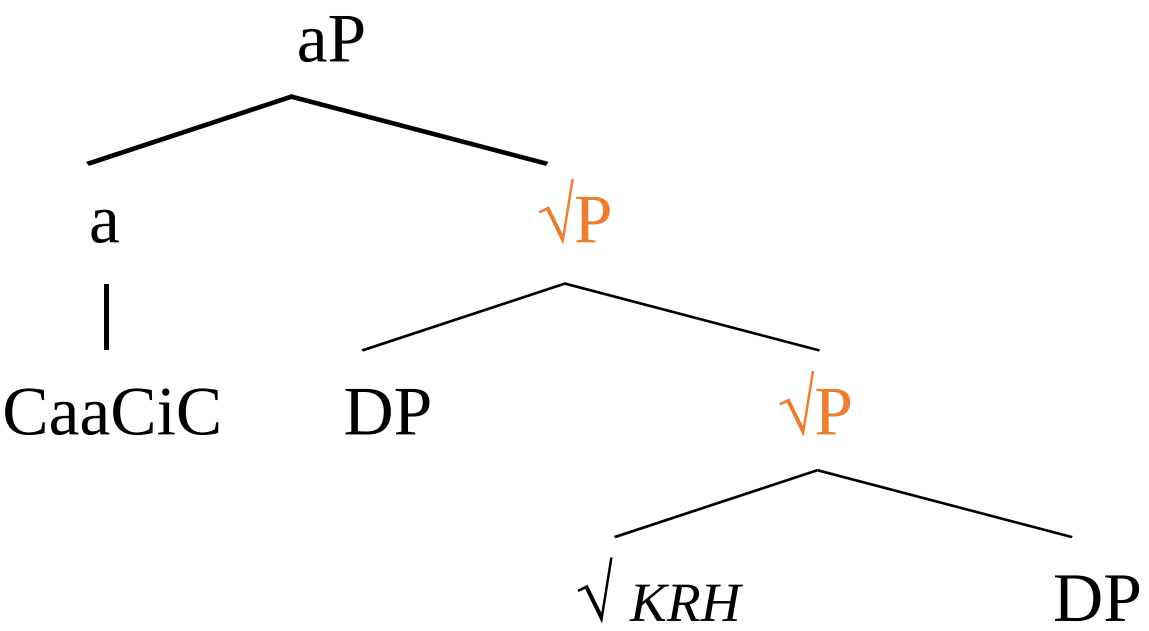
See Hale & Keyser (1998, 2002), Arche et al. (2014), Meltzer-Asscher (2012).

(27) *r-rajul-u* *kaarih-un/maaqit-un* *l-ʕamal-a*
the-man-NOM hating-nom/despising-NOM the-work-ACC
'The man is hating/despising the work'.

(28) *r-rajul-u* *maanih-un* *l-walad-a* *l-hadiyat-a*
the-man-NOM giving-NOM the-child-ACC the-gift-ACC
'The man is giving the child the gift'.

- So with the template PA CaaCiC for (27), the structure can be sketched as (27’), where I assume that the root of the SExp event is dyadic:

- (27’)



2.5 More on QA

Thus, in terms of argument or thematic roles of QA, the situation differs with respect to 'verbally' flavored PA's, in that they are solely monadic, with the unique argument externalized.

2.5.1 Intransitives

With intransitive (inchoative states) such as (29a), doublets with QA and PA are found in (29b &c), respectively:

(29) a. *fasiḥa/ḍaaqa* *l-makaan-u*
widened/narrowed the place-NOM
'The place became wide/narrow'.

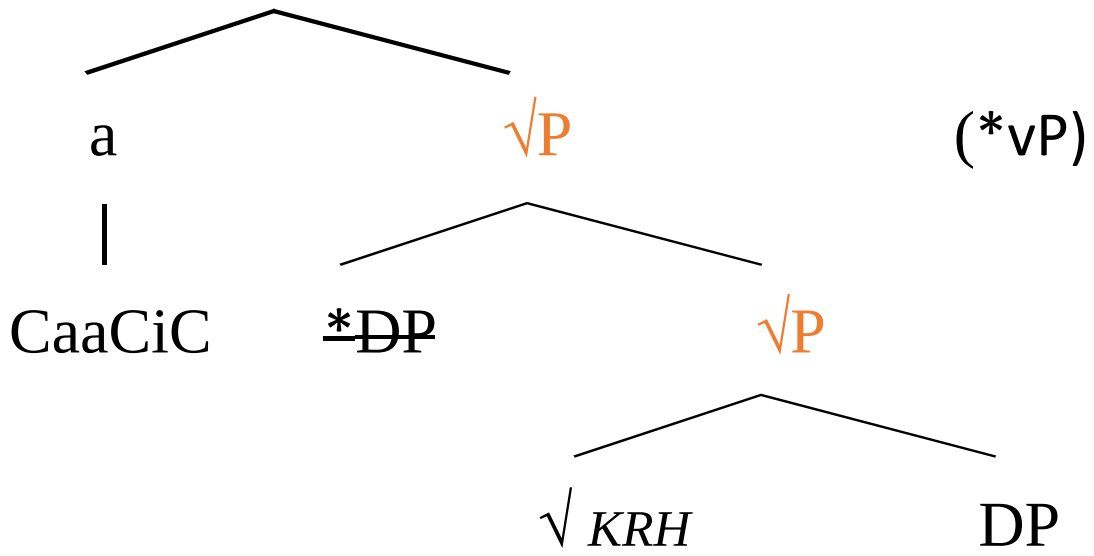
b. *l-makaan-u* *fasiiḥ-un/ḍayyiq-un*
the place-NOM wide-NOM/narrow-NOM
'The place is wide/narrow'.

c. *l-makaan-u* *faasih-un/ḍaaʔiq-un*
the place-NOM widening-NOM/narrowing--NOM
'The place widens/narrows'.

The difference between the two adjectives is subtle, and they are often interchangeable in use.

2.5.2. Transitives

- QA's contrast with PAs, in which either the internal or the external argument are targeted; contrast QA (21) with PA (27) and (28). The latter is not an option for QA, hence the infelicity of (17') as a potential structure of *kariih* in (16):
  - (17')



2.5.3. Unergatives

• Unergative events do not provide felicitous QA's either, hence the ungrammaticality of (30), compared to the felicitous PA's in (31):

(30) *l-fataat-u* **raqiis-at-un/ *dahiik-at-un*
the-girl-NOM dancing-NOM/laughing-NOM
Intended to mean: 'The girl has the inherent property of being dancing/laughing'.

(31) *l-fataat-u* *raaqis-at-un/daahik-at-un*
the-girl-NOM dancing-NOM/laughing-NOM
'The girl is dancing/laughing'.

If unergatives are complex events, as in Hale & Keyser (1998), then the ungrammaticality of (30) may follow from (26) as well.

2.5.4. An apparent counterexample

• There is a list of apparent QA's which seem to derive from a transitive or unergative, and externalize the external argument, as illustrated in (32):

(32) *ʕaliim* 'knowing a lot', *samiiʕ* 'hearing a lot', *qadiir* 'very powerful', *našiit* 'very active'.

But in fact, these words are cases of 'intensive' PA adjectives, which involve pluractionality, as their interpretation indicates.

Furthermore, the transitives can take an internal argument:

(33) *l-mudiir-u* *ʕaliim-un* *bi-maa* *y-ajrii*
the-director-NOM very.knowing-NOM of-what 3-happen
'The director knows a lot about what happens'.

(34) kaana l-mudiir-u samiiʕ-an li-maa y-aquuluuna
was the-director-NOM very.hearing-NOM of-what 3-say-PL-INDIC
'The director whas hearing a lot to what they say'.

Thus, these forms are in fact only heading intensive PA's, not QA's.

2.6 More on RA

• RA's derive either from object/entity nouns (thing or stuff), as exemplified in (3), or from event nouns as in (4), repeated here as (35):

(35) a. *l-hujuum-u* *l-ʔamiriik-ii* *ʕalaa* *l-yaman-i*
the-attack-NOM the-American-EN on the-Yemen-GEN
'The American invasion of Yemen

b. *l-xuṭṭa-t-u* *t-tanfiiḏiyy-at-u*
the-plan-F.PL-NOM the-executive-F-NOM
'The executive plans'.

We can see from these examples that the the adjective is modifying the Agent role, contrary to what happens with QA's, and in line with PA's. Note also that the RA can be modifying the patient role, as in (36):

(36) *l-haziimat-u* *l-ʔamiriikiyat-u* *fii* *fyitnam-i*
the-defeat-NOM the-American-NOM in Vietnam-GEN
'The American defeat in Vietnam'.

2.7 More on EC

• Templatic or synthetic elative comparatives differ also from periphrastic EC with respect to the argument which is externalized. Consider the contrast:

(37) *r-rajul-u* *ʔakrah-u* *li-nnaas-i*

the man-NOM more.hateful-NOM of-the-people-GEN

'The man is more hated the-people'.

(38) *r-rajul-u* *ʔaktar-u* *kurh-an* *li-nnaas-i*

the man--NOM more -NOM hatred-ACC of-the-people-GEN

'The man has more hate to the-people'.

In (37) the man is 'hated', while in (38) it is 'hating'. The linking in (37) seems to be aligning with QA in (21), while that in (38) it is aligning with PA in (26), or more closely with linking in the transitive event noun:

(39) *kurh-u* *r-rajul-i* *li-l-ʕamal-i*

hate-NOM the-man-GEN of-the-work-GEN

'The man's hate of the work'.

Both the PA and the event noun are eventive, and support a dyadic argument structure, which introduces both the subject and object roles in the standard alighnment. But the QA does not do so. Hence the synthetic EC aligns with QA, while the periphrastic EC aligns with PA of the event noun.

To conclude

- I have proposed a quadripartite division of adjectives on the bases of their morphosyntactic and aspectuo-semantic properties: (a) QA; (b) RA; (c) CA; (d) PA; with important distinctions between morphological CA and periphrastic CA.
- Both QA and synthetic CA are root-based and they share the common feature of having only one argument, which is externalized from the most internal position in the aspectual base of the root.
- Both PA and analytic CA can have more than one argument, and the external argument depends on higher extended projections.

- English and Arabic differ in various ways:
- English QA roots are not templatic, and they are ready to be categorized (*hateful vs kariih/kaarih*);
- English CA roots are not templatic, but categorized (*tall-er*);
- English PA words are not templatic, but categorized as *v* or *a* (as in Wasow (1977); Arabic PA words are.
- The study of EC morphosyntax and semantics is of particular importance for testing the PP analysis of aPs in Fabregas (2020), regarding in particular the form of the parameter (property) of comparison.
- Etc.
- The picture that emerges is that categorization plays a rather minor role in Arabic, compared to English.

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