Aspectual object marking in Libyan Arabic

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Abstract

In Libyan Arabic, the preposition *fi* 'in' has developed into a marker of continuous or habitual aspect. While structurally remaining a preposition which marks the objects of the non-tensed forms of dynamic transitive verbs, it serves to attribute an aspectual interpretation to the clause as a whole. We argue that this aspectual object marking is naturally modeled by an inside-out functional designator, and provide arguments that the aspectual value contributed by aspectual *fi* is best treated as an f-structure feature.

1 Introduction*

In Libyan Arabic, direct objects can be either plain or preceded by *fi*, which we will refer to as an aspectual object marker, as illustrated in (1):[1]

(1) a. Aħmed kle el-kosksi
Ahmed eat.PST.3MSG DEF-couscous
'Ahmed ate couscous.'

b. Aħmed yākil fi el-kosksi
Ahmed eat.NONT.3MSG FI DEF-couscous
'Ahmed eats/is eating couscous.'

The presence of *fi* is excluded when the object is governed by a tensed verb-form such as the past form, as in (2):[2]

* We are grateful to the audience at HEADLEX and to two anonymous referees for their comments, which have improved this paper and will also be helpful for further work on this topic.

[1] A similar use of *fi* has been noted in Cairo Arabic (Woidich 2006) and in Tunisian Arabic (Pallottino & Askri 2015). The analysis presented here is unrelated to earlier analyses. We will gloss *fi* in this use as FI throughout since its precise function is the focus of our investigation.

[2] Our glossing follows the Leipzig guidelines. Note that we use PST for the form frequently referred to in the literature on Modern Standard Arabic as 'perfective' and NONT 'non-tensed' for the form referred to as 'imperfective' (compare Ryding 2005). The designation 'non-tensed' for this latter form is intended to reflect the fact that it is not an absolute tense like the past form, but rather indicates temporal identity to some reference time. It occurs not only in main clauses, where it implicates a non-past reading through identity to the time of

(2) * Aħmed kle fi el-kosksi
Ahmed eat.PST.3MSG FI DEF-couscous
'Ahmed ate couscous.'

In a non-tensed environment, *fi* is obligatory if the governing verb is dynamic, as in (1b) above, but disallowed if the governing verb is stative, as in (3):

(3) a. Aħmed yħib (*fi) el-kosksi
Ahmed like.NONT.3MSG FI DEF-couscous
'Ahmed likes couscous.'

b. Aħmed yibbi (*fi) el-kosksi
Ahmed want.NONT.3MSG FI DEF-couscous
'Ahmed wants couscous.'

The aspectual interpretation of a clause containing a dynamic governing verb with a *fi*-marked object is either continuous, as in (1b) above and (4a), where the adverb *tawwa* 'now' forces the actual present reading, or habitual, as in (4b):

(4) a. Aħmed yākil fi el-kosksi tawwa
Ahmed eat.NONT.3MSG FI DEF-couscous now
'Ahmed is eating couscous now.'

b. Aħmed yākil fi el-kosksi kol youm
Ahmed eat.NONT.3MSG FI DEF-couscous every day
'Ahmed eats couscous every day.'

When, however, the interpretation is neither continuous nor habitual, *fi* is excluded. Two of the interpretations permitted in the event of a non-*fi*-marked object are either generic, as in (5a), or a scheduled future, as in (5b):

(5) a. Aħmed yākil kosksi
Ahmed eat.NONT.3MSG couscous
'Ahmed eats couscous.' (i.e. he is a couscous-eater)

---

utterance, but also in COMP clauses dependent on a past-tense matrix verb, where it indicates past time. Both forms have a full paradigm of subject-agreement affixes and involve pronoun incorporation. We consider them both to be finite.

b. fi rijīmī ġoḍwa nākil kosksi
in diet.1SG.GEN tomorrow eat.NONT.1SG couscous
'In my diet, tomorrow I eat couscous.'

A third type of interpretation in which *fi* is omitted involves universal quantification over event tokens, as in (6):

(6) lamma nākil kosksi netfakker
when eat.NONT.1SG couscous remember. NONT.1SG

ħinn-āi
grandmother-1SG.GEN
'When I eat couscous, I remember my grandmother.'

To sum up, a *fi*-marked object occurs when the governing verb is dynamic, non-tensed, and has either a continuous or habitual interpretation. In all other cases, *fi* is excluded. In non-tensed clauses with transitive verbs, it is therefore solely the presence of a *fi*-marked object which indicates that the interpretation is habitual or continuous.[3] In section 2 below, we demonstrate that *fi* is best analysed as a preposition heading a PP which contains the object. Since the aspectual information which *fi*-marked objects contribute to the clause is structurally internal to the object, an analysis involving inside-out functional designators is proposed in section 3. An interesting complication is that the occurrence of aspectual *fi* is blocked in a clause in which a dynamic verb in the non-tensed form is subordinated to a verb which is itself stative. There is no apparent semantic reason why the presence of *fi* in such a clause should not be able to signal a continuous or habitual interpretation. In section 4, we discuss the relevant data and claim that this fact provides additional justification for the treatment provided, which invokes f-structural features rather than a direct mapping to semantic form.

2 Structural properties of Libyan *fi*

Other than as an aspect marker internal to the object, the form *fi* has two further functions in Libyan Arabic. These are both illustrated in (7):

[3] In a clause headed by a dynamic intransitive verb, therefore, there is no grammatical marking of aspect, and any of the aspectual interpretations are possible (depending on context).

(7) fi ʕasīr fi eṯ-ṯalāja
exist juice in DEF-fridge
'There is juice in the fridge.'

The first *fi* is as an invariant form which introduces existential sentences, parallel to English 'there is'. The second *fi* is a locative preposition meaning 'in'. It is well-known that there may be a diachronic relation between predicates meaning 'live, exist' and the continuous, and secondly that continuous forms may develop into habituals (see Bybee at al 1994:158 and Heine & Kuteva 2002:127). Many languages also show a historical connection between the locative 'in' and the continuous (Heine & Kuteva 2002:178–9), although in this development, unlike in Libyan Arabic, the locative marker typically becomes a continuous marker of the whole predication including the verb, rather than a marker of just the object. We will not here provide historical data to trace the details of the historical relationship between the three *fi* elements in Libyan Arabic. Our goal is rather to demonstrate the conceptual and structural similarity between the locative preposition and the one which we refer to as the aspectual object marker. We hypothesise that the second developed from the first.

Our claim then is that locative *fi* and aspectual *fi* are conceptually similar, sharing the notion "interior". The observation that the continuous and the habitual might both be construed as "internal" aspects is due to Stassen (1997: 252): essentially continuous aspect portrays an activity as ongoing within a relatively short timespan, while habitual aspect portrays an activity as ongoing within a relatively long timespan.[4] Not only does aspectual *fi* have this semantic link with locative *fi,* however, it also shares the structural characteristics of a preposition.

Firstly, both locative *fi* and aspectual *fi* can be fronted together with their noun-phrase complements:

(8) a. fi London Aħmed yoskun
in London Ahmed live.NONT.3MSG
'It is in London that Ahmed lives.'

b. fi el-kosksi Aħmed yākil kol youm
FI DEF-couscous Ahmed eat.NONT.3MSG every day
'It is couscous that Ahmed eats every day.'

[4] The continuous and the habitual are not typically grouped together in formal semantic analyses of aspect, since the first reports a particular event while the second reports a generalization over events, and is therefore treated as a kind of generic (see Krifka et al. 1995:12). The conceptual similarity between continuous and habitual that Stassen identifies does, however, appear to be reflected in the historical development of habitual interpretations from continuous forms, and is further supported by the analysis presented here.

Or, alternatively, just the noun-phrase complement can be fronted, in which case both locative *fi* and aspectual *fi* take an oblique resumptive pronoun:

(9) a. London Aħmed yoskun fi-ha
London Ahmed live.NONT.3MSG in-3FSG.OBL
'It is London where Ahmed lives.'

b. el-kosksi Aħmed yākil fi-h kol youm
DEF-couscous Ahmed eat.NONT.3MSG FI-3MSG.OBL every day
'It is couscous that Ahmed eats every day.'

Secondly, as prepositions both locative *fi* and aspectual *fi* can take scope over co-ordinated noun phrases, as in (10):

(10) a. Aħmed yexdim fi Paris w London
Ahmed work.NONT.3MSG in Paris and London
'Ahmed works in Paris and London.'

b. Aħmed yākil fi el-kosksi w eṣ-ṣlāṭa
Ahmed eat.NONT.3MSG FI DEF-couscous and DEF-salad
'Ahmed eats/is eating couscous and salad.'

Or, alternatively, both locative *fi* and aspectual *fi* can be repeated before each noun phrase:

(11) a. Aħmed yexdim fi Paris w fi London
Ahmed work.NONT.3MSG in Paris and in London
'Ahmed works in Paris and in London.'

b. Aħmed yākil fi el-kosksi w fi eṣ-ṣlāṭa
Ahmed eat.NONT.3MSG FI DEF-couscous and FI DEF-salad
'Ahmed eats/is eating couscous and salad.'

These data suggest that, from a structural point of view, aspectual *fi* is analogous to locative *fi* and has the properties of a preposition heading a PP.

3 Analysis

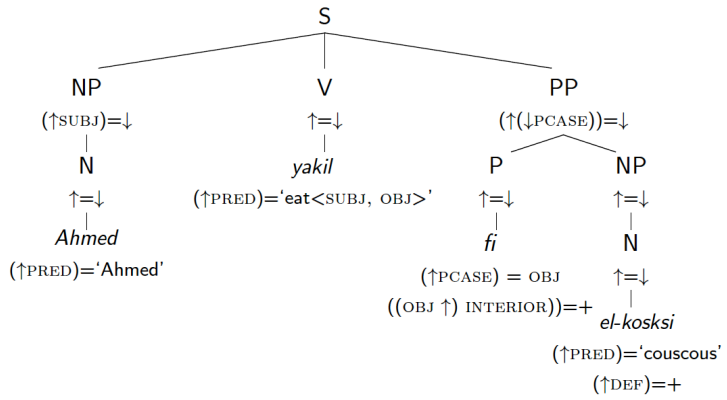
As the basis for the analysis, we take it that continuous and habitual aspect cannot be distinguished grammatically in Libyan Arabic, and are represented as a single f-structure aspectual feature INTERIOR with value +. Non-tensed verb-forms will not carry any tense or aspect feature, and non-tensed forms of

dynamic verbs are therefore compatible with any aspect including the continuous and habitual. On the other hand, tensed verb-forms of dynamic verbs such as the past are valued as INTERIOR with value −, and stative verbs, which are inherently incompatible with interior aspect, will be blocked from bearing any value of the feature INTERIOR at all. These assignments will account for the inability of aspectual *fi* to co-occur with past verb-forms of dynamic verbs, as shown in (2), and with stative verbs in general, as shown in (3).

Importantly, then, the information that a clause containing a non-tensed dynamic verb must have a continuous or habitual interpretation is contributed by aspectual *fi*, which heads a PP mapping to the object function. Inside-out functional designators (Nordlinger 1998, Dalrymple 2001: 143-146) are an ideal tool to allow *fi* to contribute the aspectual information contained in the object to the f-structure of the clause which dominates it. Note that this use of inside-out designators does not involve any uncertainty: it simply attributes the aspectual information within the object to the f-structure of the immediately dominating clause.

An annotated c-structure representation of (1b) is given in (12).[5]

(12)



As can be seen, we assume that Libyan Arabic has a flat clause structure in which clauses are represented as S. There are no special features that could be associated with an I projection, and no separate set of auxiliary verbs. The non-tensed verb-form *yākil* 'eat' has no features apart from its semantic PRED

[5] In (12), we use the approach to prepositions found in Dalrymple (2001:151–153); for an alternative approach, see Butt et al (1999:125–131). Note that we assume that the *fi*-marked NP does not change its status from OBJ to OBL simply by virtue of occurring within a PP. That is, we assume that *fi*-marking does not have a sufficient detransitivising effect for a change of function to be implicated.

feature, which contains inter alia the information that it requires an object, and its agreement features, which we omit here for simplicity.

The annotations on the PP do the work. In itself, the PP will be associated with the object function by virtue of the PCASE feature: that is, aspectual *fi* is lexically specified as creating an object. Most importantly, however, aspectual *fi* also contains the inside-out designator ((OBJ ↑) INTERIOR))=+, which will attribute the + value of the feature INTERIOR to the f-structure containing the OBJ function, i.e. to the f-structure corresponding to S. The resulting f-structure is as in (13):

(13)

$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Ahmed'} \end{bmatrix} \\ \text{PRED} & \text{'eat} < \text{SUBJ , OBJ} > \text{'} \\ \text{INTERIOR} & + \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'couscous} \\ \text{PCASE} & \text{OBJ} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix}$$

Crucially, the grammatical aspect value of the clause comes from aspectual *fi*, and not from the verb.

4. Aspectual *fi* in complement clauses

We distinguish two cases when the clause containing aspectual *fi* is itself the complement of a higher lexical verb. Firstly, if the complement clause can in principle take a complementiser, the verb in the complement clause determines the presence or absence of *fi*. This is illustrated in (14):

(14) a. ʔaʕtaqid (ennah) yākil fi el-kosksi
think.NONT.1SG that eat.NONT.3MSG FI DEF-couscous
'I think that he is eating couscous.'

b. ʔaʕtaqid (ennah) yḥib el-kosksi
think.NONT.1SG that like.NONT.3MSG DEF-couscous
'I think that he likes couscous.'

Note that the complementiser is optional. In (14a), we have a dynamic verb in the subordinate clause, which we take to be a COMP, and the interior aspectual interpretation of the subordinate clause derives from the presence of aspectual *fi*. In (14b), the verb in the subordinate clause is stative, and aspectual *fi* is predictably absent.

By contrast, if the interpretation of the subject of a complement clause is identified by what we take to be an anaphoric control mechanism, the control verb determines the presence or absence of *fi*. In this case, the complement clause, which we again take to be a COMP rather than an XCOMP because of the presence of the finite verb-form, cannot take a complementizer,

(15) a. yibbi yākil el-kosksi
want.NONT.3MSG eat.NONT.3MSG DEF-couscous
'He wants to eat couscous.'

b. *yibbi yākil fi el-kosksi
want.NONT.3MSG eat.NONT.3MSG FI DEF-couscous
Intended: 'He wants to be eating couscous.'

In (15), the matrix verb is stative, and this prevents the subordinate clause from containing *fi*, even though the dynamic verb *yākil* 'eat' in its non-tensed form in principle allows *fi*.

The lexical entry we propose for the matrix verb *yibbi* 'want' in its control use is given in (16):

(16) *yibbi* V (↑PRED) = 'want <SUBJ, COMP>'
(↑COMP SUBJ) = 'PRO'
$((\uparrow \text{COMP SUBJ})_{\sigma}$ ANTECEDENT) = $(\uparrow \text{SUBJ})_{\sigma}$
¬(↑COMP COMPFORM)
¬(↑INTERIOR)
¬(↑COMP INTERIOR)

The equations (↑COMP SUBJ) = 'PRO' and $((\uparrow \text{COMP SUBJ})_{\sigma}$ ANTECEDENT) = $(\uparrow \text{SUBJ})_{\sigma}$ require the subject of the complement clause to be a pronominal, and for its antecedent to be identified as the subject of the matrix clause.[6] In this case, the complement clause cannot contain any form of complementizer.[7] As a stative verb itself, *yibbi* is not permitted to have a value for the aspectual feature INTERIOR. The crucial work is however done by the final equation ¬(↑COMP INTERIOR). As a stative verb taking a COMP with an obligatorily anaphorically

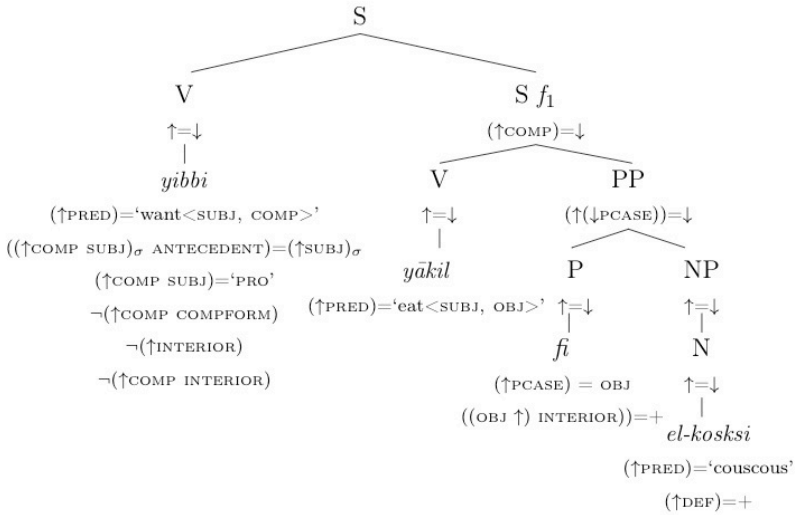
[6] We assume here the basic approach to obligatory anaphoric control constructions provided by Dalrymple (2001:323-338). The lexical entry provided is consistent with an analysis of the COMP clause either as a proposition or as a property. See Ash & Mortazavinia (2011) for a recent discussion of the status of finite COMPs in control constructions.

[7] The verb *yibbi*, just like English *want*, also occurs in a construction where there is no control, i.e. where its COMP contains a disjoint subject. In this case a complementizer can be inserted.

controlled subject, *yibbi* will be specified as also not permitting its COMP to have a value for INTERIOR. Since the COMP cannot have a value for the feature for INTERIOR, the value + assigned to it by aspectual *fi* in (15b) will result in the required ungrammaticality.

The annotated c-structure corresponding to the ungrammatical (15b) will then be (17a):

(17) a.



b. $(f_1$ INTERIOR) = +

c. ¬$(f_1$ INTERIOR)

If we set the f-structure of the complement clause to be f_1, the inside-out designator on *fi* will result in the f-description equation (17b). The substitution by f_1 of (↑COMP) in the annotation ¬(↑COMP INTERIOR) on the control verb *yibbi* will result in the contradictory equation (17c). Since no f-structure can satisfy these equations, (15b) will be ungrammatical.

We emphasize that this is indeed an ungrammaticality, and not something which can be enforced simply by semantic principles. There is nothing semantically amiss with the interpretation which would be expected if *fi* were permitted, namely 'He wants to be eating couscous'. This interpretation simply cannot be achieved by (17b). We take this ungrammaticality to represent an argument in favour of the adoption of a featural approach to the role of aspectual *fi*.

In order to express the continuous or habitual past, a clause containing a non-tensed verb-form must be used as a complement of the verb *kān* 'be.PST'. In this case, however, the distribution of aspectual *fi* is unaffected by the presence of the matrix verb:

(18) a. kān yākil fi el-kosksi amis
be.PST.3MSG eat.NONT.3MSG FI DEF-couscous yesterday
'He was eating couscous yesterday.'

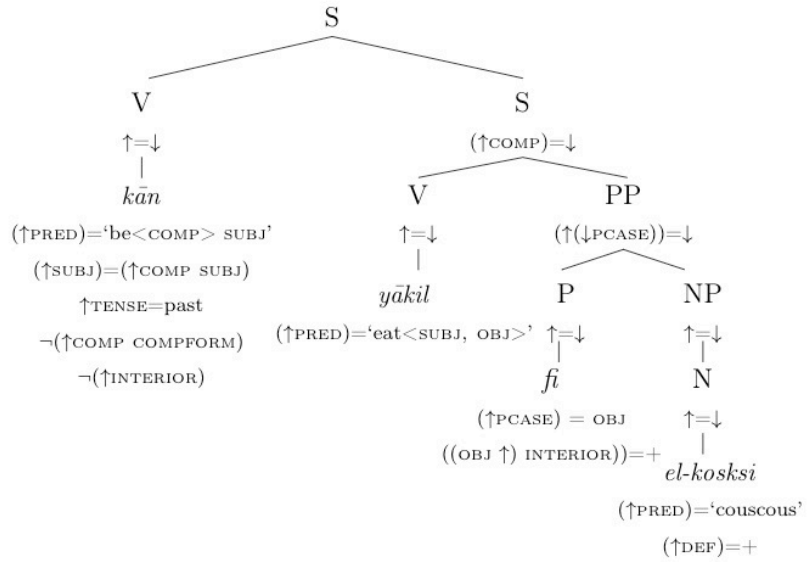
b. kān yākil fi el-kosksi kol youm
be.PST.3MSG eat.NONT.3MSG FI DEF-couscous every day
'He used to eat couscous every day.'

We take *kān* itself to be a stative verb, and hence specified as ¬(↑INTERIOR). In this case, analysing *kān* as a functional co-head would clearly conflict with the presence of aspectual *fi* in the complement (this means that we follow the approach taken by Dyvik (1999) rather than Butt et al (1999)). Instead, we take *kān* to be a raising verb taking a complementizer-less COMP, though unlike *yibbi* 'want' it will not enforce the absence of the feature INTERIOR on its complement. The lexical entry for *kān* in this function is then as in (19):

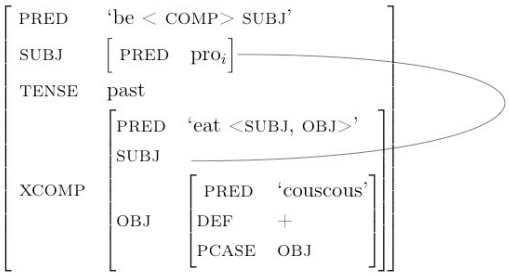
(19) *kān* V (↑PRED) = 'be <COMP> SUBJ'
(↑SUBJ) = (↑COMP SUBJ)
(↑TENSE) = past
¬(↑COMP COMPFORM)
¬(↑INTERIOR)

This lexical entry results in the tree (20a) and the f-structure in (20b) for the sentence in (18):

(20) a.



b.



The role of *kān* in (20) is essentially to add past tense, and it does this without affecting the licensing of aspectual *fi* in its complement.

The treatment of *kān* as a matrix verb is supported by examples in which a clause containing aspectual *fi* is the complement of the non-tensed counterpart to *kān*, i.e. *ykūn* 'be.NONT', which in its turn is the complement of a higher stative verb. This non-tensed form only occurs in complement clauses, and it has the effect of "blocking" the reach of the higher stative verb into the complement clause which it governs. This effect can be seen in (21):

(21) yibbi ykūn yākil fi el-kosksi
want NONT.3MSG be.NONT.3MSG eat. NONT.3MSG FI DEF-couscous
'He would like to be eating couscous.'

The lexical entry for *ykūn* is given in (22):[8]

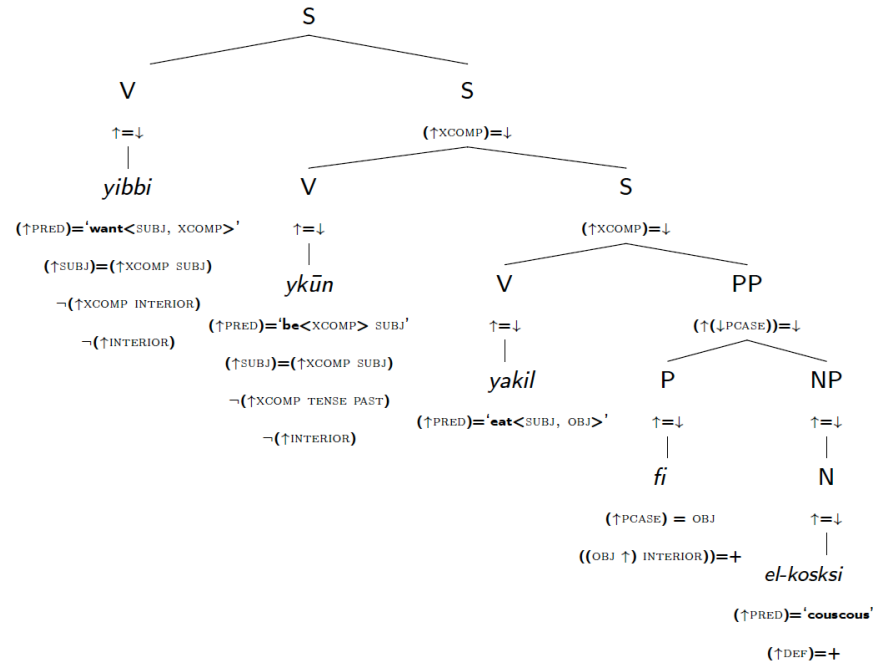
(22) *ykūn* V (↑PRED) = 'be <COMP> SUBJ'
(↑SUBJ) = (↑COMP SUBJ)
(COMP↑)
¬(↑COMP COMPFORM)
(↑INTERIOR)

As a non-tensed form *ykūn* lacks any specification for tense, but just like *kān* it does not bear an annotation enforcing the absence of any value for the INTERIOR feature within its subordinate clause.

The tree corresponding to (21) is given in (23):

[8] The form *ykūn* only occurs as a subordinate verb, and a restriction will need to be added to the lexical entry to enforce this. Assuming that *ykūn* must head a COMP, this could be done, as here, by the addition of the annotation (COMP↑).

(23)



The stative lexical verb *yibbi* 'want' requires its complement not to have a value for the feature INTERIOR, but *ykūn* as a stative verb satisfies this requirement. In its turn, *ykūn* itself imposes no requirement on the value INTERIOR of its complement, and this is compatible with the presence of aspectual *fi*. Crucially, this blocking effect is predicted by the analysis of *kān* /*ykūn* as a raising verb.

5 Conclusion

In this paper, we have argued for an analysis in which the aspectual object marker *fi* in Libyan Arabic is responsible for contributing an aspectual feature +INTERIOR to the f-structure of a clause headed by a non-tensed dynamic verb which contains it. The feature arises solely from the presence of aspectual *fi*, and not from the verb itself, which is compatible with other aspectual interpretations. The role of aspectual *fi* is naturally modelled by an inside-out functional designator.

Because of the inability of *fi* to occur in complement clauses subordinate to COMP-taking stative verbs, it is further argued that there are compelling reasons to analyse the contribution of aspectual *fi* in f-structure terms. There is no semantic incompatibility between a stative matrix verb and a complement which has interior aspect. Stative matrix verbs rather impose a grammatical requirement that their complements should not be marked by *fi*.

This grammatical requirement can be subverted by the intervention of the verb *ykūn* 'be.NONT', which, as long as it itself is syntactically analysed as a raising verb heading a separate clause, has a blocking effect.

The aspectual marking of objects that we see in Libyan Arabic has close affinities to the aspectual function of the partitive case in languages such as Finnish (Kiparsky 1998) or Estonian (Tamm 2006). Tamm indeed provides an analogous LFG analysis of the aspectual function of the partitive using inside-out functional designators. The aspectual object marking that is seen in Finnic appears, however, to indicate the non-boundedness of an event, that is imperfectivity more generally (including generic utterances). This contrasts quite strikingly with the narrow limitation to continuous and habitual aspect in Libyan Arabic. Equally, aspectual object marking in Finnic does not appear to be restricted to particular grammatical contexts (such as co-ocurrence with particular tenses), and is arguably therefore more semantically and less grammatically constrained than the aspectual object marking of Libyan Arabic. We leave a more detailed discussion of these comparisons for future research.

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