The syntax and semantics of Modern Standard Arabic resumptive tough-constructions

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Abstract: This paper is concerned with a hitherto undiscussed type of *tough*-construction in Modern Standard Arabic (MSA). Our starting point is the observation that the *tough*-adjective in this construction invariably displays nominative masculine singular morphology, a pattern of 'default' agreement which does not seem to occur elsewhere in the grammar of MSA. At a semantic level, the relevant adjective is argued to form a complex predicate with a deverbal nominalization that acts as its complement: together, these two elements indirectly modify the subject noun phrase. To explain the default agreement pattern, we propose that MSA *tough*-constructions involve two distinct subjects, viz. a phonologically null expletive subject which controls agreement on the *tough*-adjective, and a Broad Subject which acts as the semantic subject of the whole construction. We show that there is independent evidence for the existence of both null expletives and Broad Subjects in MSA.

Keywords: *tough*-construction, Modern Standard Arabic, Broad Subject, agreement, modification

1 Introduction

Ever since the seminal study of Lees (1960), the syntax of English *tough*-constructions (henceforth TCs) has received a considerable amount of attention. However, given that research on TCs has mainly focused on English ([1a], see e. g. the recent overview in Hicks 2017), it is at this point not well established

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whether TCs can be said to form a natural class cross-linguistically, and if so, what the properties of structures are that can be subsumed under this label. Superficially speaking, TCs seem to be clearly available in languages other than English, such as French (1b), Hebrew (1c) and Romanian (1d):

(1) a. [*These books*] *are hard to read*. English
b. [*Ces livres*] *sont difficiles à lire*. French
those books be.PRS.3PL difficult.M.PL to read.INF
'Those books are difficult to read.'
c. [*Ha-sefer*] *kase / nitan le-kria'a*. Hebrew
the-book difficult / possible for-reading
'The book is difficult/possible to read.'
(Engelhardt 2002: 189)
d. [*Chestiunile astea*] *sunt greu de înţeles*. Romanian
matters.the these be.3PL hard.M.SG of understand.SUP
'These matters are hard to understand.'
(Giurgea and Soare 2010: 208)

The examples in (1) all contain a verbal core, which is variably realized as an infinitive (English, French), a deverbal nominalization (Hebrew), or a supine (Romanian). In addition, they also feature a nominal subject (a full noun phrase or a pronoun, bracketed), which is interpreted as being co-referential with the internal argument of the verb. In (1), this internal argument is always implicit, but in some languages it can be lexicalized overtly; for example, as discussed in Bosque and Gallego (2011: 39) ([2] is their [51]), in certain varieties of Spanish an enclitic pronoun co-referential with the clause-initial subject can be attached to the infinitive:[1]

(2) *Eso$_i$ es muy difícil de solucionar=**lo$_i$*** . (dialectal) Spanish
that be.3SG very hard of solve=**it**
'That is very hard to solve.'

Another feature of the examples in (1) which does not remain constant is the agreement morphology of the *tough*-adjective: in French, the adjective agrees in gender and number with the subject noun phrase (1b), whereas in the otherwise very similar Romanian example, the adjective displays masculine singular agreement. As shown in (3), the variant of (1d), in which the adjective agrees with the subject (which is feminine plural), is ungrammatical (Giurgea and Soare 2010: 208):

1 Clitic resumption in TCs is also available in Welsh, at least in some syntactic environments (Borsley et al. 2007: 135).

(3) *[*Chestiunile astea*] *sunt grele de înţeles*
matters.the these be.PRS.3PL hard.F.PL to understand

A first question that we will address is whether TCs exist in Modern Standard Arabic (MSA): we will argue that this question can be answered affirmatively, but that one has to be careful to distinguish genuine TCs from related constructions which are at first glance quite similar. In particular, we will suggest that the structure in (4) qualifies as a *bona fide* TC in MSA:

(4) [*hāḏā l-kitāb-u*]$_i$ *mumtiʿ-un qirāʾat-u*(=**hu**$_i$)*
this the-book(M).SG-NOM pleasant.M.SG-NOM read(F).SG-NOM=**RP.M.SG**
'This book is pleasant to read.'

In the remainder of this introduction we will give a succinct descriptive overview of the main properties of this MSA construction, which to our knowledge has not previously received any attention in the literature.

Structures like (4) obligatorily contain four elements, namely an initial noun phrase (bracketed in [4]), followed by an adjective (or a participle used adjectivally), and a deverbal noun to which a resumptive pronoun (RP, in boldface) is attached; the latter is co-referential with the clause-initial noun phrase.[2] As indicated, absence of a resumptive results in ungrammaticality. This structure

2 The presence of a deverbal noun rather than a finite complement clause distinguishes the pattern in (4) from those in (i), which convey approximately the same meaning as (4):

(i) a. *hāḏā l-kitāb-u mumtiʿ-un* [*ʾan naqraʾa=hu*]
this the-book(M).SG-NOM pleasant.M.SG-NOM that read.1PL=RP.M.SG
'This book is pleasant, so we read it.'
b. *hāḏā l-kitāb-u mina l-mumtiʿ-i* [*ʾan naqraʾa=hu*]
this the-book(M).SG-NOM PREP the-pleasure(M).SG-GEN that read.1PL=RP.M.SG
'This book is pleasant, so we read it.'
c. *mina l-mumtiʿ-i* [*ʾan naqraʾa hāḏā l-kitāb-u*]
PREP the-pleasure(M).SG-GEN that read.1PL this the-book(M).SG-NOM
'(approx.) It is out of pleasure that we read this book.'

The examples in (i[b–c]) also feature a PP (with a preposition and a deadjectival noun) instead of a bare adjective. Furthermore, constructions like (4) also differ from the so-called adjectival or false construct illustrated in (ii) (on which see Kremers 2003, Kremers 2005, and Section 3.1 below). In a nutshell, adjectival constructs consist of an adjective complemented by an NP (which can, but certainly need not be, a deverbal one). There are at least three major differences between adjectival constructs and the pattern in (4). First, in (ii) no resumptive pronoun is attached to the postadjectival noun, but the latter obligatorily appears with a determiner. Second, the adjective in (ii) is morphophonologically reduced, its case ending being *-u* rather

can schematically be represented as in (5), where the abbreviation DP stands for Determiner Phrase, which can be defined as a noun phrase (NP) with all of its functional superstructure (i. e. a noun together with modifiers like articles, demonstratives, numerals and adjectives). In what follows, we will refer to the leftmost nominal constituent as DP1, and to the rightmost one as DP2. Given the obligatory presence of a resumptive pronoun, we will call the entire structure a 'resumptive *tough*-construction', RTC for short.

(5) $DP1_i$ AP $DP2+RP_i$

RTCs can either be used predicatively or attributively. In the former case, MSA RTCs can either appear as independent root clauses (4), or are embedded under a *believe*-type predicate. This second pattern is illustrated in (6): as can be observed, in this case DP1 receives accusative case from the matrix verb, in what is arguably an Exceptional Case Marking (ECM) configuration.

(6) *ẓanantu* [[*l-ʿimārat-a*]$_i$ [*sahl-un*
believed.1SG the-building(F).SG-ACC easy.M.SG-NOM
bayʿ-u=hā$_i$]]
sale(M).SG-NOM=RP.F.SG
'I believed that the building was easy to sell.'

When used attributively, the adjective (together with DP2) acts as a nominal modifier (7): this pattern only differs from the predicative construals in (4) and (6) in that the [AP + DP] constituent is introduced by a definite article (i. e. the element *ṣ-* in [7]):

(7) [[*al-ʿimārat-u*]$_i$ [***ṣ*-*ṣaʿb-u*** *bayʿ-u=*(hā*$_i$*)*]]
the-building(F).SG-NOM **the**-difficult.M.SG-NOM sale(M).SG-NOM=RP.F.SG
bīʿat ʾaḫīran
was.sold finally
'[The building <which is> difficult to sell] was finally sold.'

than *-un* (as in [4]). Third, the postadjectival noun in (ii) is marked for genitive, not nominative case.

(ii) *hāḏā l-kitāb-u* *mumtiʿ-**u*** ***l**-qirāʾat-i*
this the-book(M).SG-NOM pleasant.M.SG-NOM the-reading(F).SG-GEN
'This book is pleasant to read.'

Importantly, as can be deduced from the glosses of the above examples, the adjective in MSA RTCs always displays 'default' nominative masculine singular agreement and it never agrees with DP1 (or with DP2, for that matter). For example, DP1 is masculine dual in (8a) and feminine plural in (8b), but this does not influence the shape of the *tough*-adjective; nor does the fact that DP2 in (8a) is feminine. Similarly, the fact that DP1 in (6) bears accusative case does not have consequences for the case marking of the *tough*-adjective.

(8) a. *hāḏāni l-kitāb-āni$_i$ mumtiʿ-un*
those.M.DU the-book(M).DU-NOM pleasant.M.SG-NOM
qirāʾat-u=humā$_i$
read(F).SG-NOM=RP.M.DU
'Those two books are pleasant to read.'

b. *hāʾulāʾi n-nisāʾ-u ḍarūriyy-un*
those.F.PL the-woman(F).PL-NOM necessary.M.SG-NOM
ʾiqnāʿu=hunna
convince(M).SG-NOM=RP.F.PL
'Those two women are necessary to convince.'

An informal survey with 11 MSA speakers from Morocco confirms that the agreement morphology of the adjective is insensitive to the gender and number specifications of DP1 and DP2: our informants universally reject any inflectional morphology on the *tough*-adjective other than nominative masculine singular. To the best of our knowledge, this property of MSA RTCs has not received any attention in the literature, but it is one of the major *explananda* of the present paper.

The discussion below is organized as follows. In Section 2, we start by listing the most important (and cross-linguistically stable) properties of TCs. We then show that the structure in (4) is indeed characterized by all these properties, in contrast with a number of apparently similar constructions that are also available in MSA. Next, we argue that MSA RTCs instantiate a type of adjectival modification known as 'indirect attribute' (Section 3), despite the fact that *tough*-adjectives in RTCs do not have the same morphosyntactic properties as adjectives in *bona fide* indirect attribute constructions (Section 4). In Section 5, elaborating on proposals from Mohammad (1990, 2000) we argue that the default agreement pattern in RTCs can be explained in terms of a covert expletive pronoun. In Section 6, we show that DP1 is best analysed as a Broad Subject (in the sense of Doron and Heycock 1999) located in the high TP-domain, rather than as a left-dislocated constituent situated in the CP-layer. A unified analysis of predicative and adnominal RTCs in MSA is offered in Section 7, which is followed by a brief conclusion.

2 Looking for *tough*-constructions in Modern Standard Arabic

2.1 General properties of *tough*-constructions

Although comparative studies of TCs are few and far between (see e. g. Comrie and Matthews 1990), it does seem warranted to say that cross-linguistically, TCs minimally contain an adjectival predicate and a (de)verbal category which serves as the argument of the former; in addition, they also feature a subject DP. The syntactic status of the latter is notoriously difficult to pin down, revealing a tension between syntactic and semantic notions of subjecthood, to which we will come back repeatedly in the course of this paper. In particular, the initial DP, on the one hand, typically acts as the syntactic subject of the adjective (or, more accurately, of the complex predicate headed by the adjective, see Section 3.1); on the other, it is thematically associated with the (de)verbal category, usually fulfilling the thematic role of theme or patient. Put differently, *tough*-predicates do not assign a thematic role to their syntactic subject, which is evidenced by the fact that they can quite generally also occur in an impersonal construction featuring an expletive – i. e. unambiguously non-thematic – subject. In (9), this impersonal construal is illustrated for French and English (cf. [1a–b]):

(9) a. *It's hard to understand those books.*
b. *Il est difficile de lire ces livres.*
it be.PRS.3SG difficult.M.SG to read.INF those books
'It is difficult to read those books.'

This property sets *tough*-adjectives apart from various other adjectives which can also be complemented by an infinitive (or comparable verbal category), such as *eager*, *ready* or *beautiful*, but which cannot be used impersonally (cf. [10–11]). These adjectives qualify as two-place predicates, which take a (de)verbal category as their internal argument and a DP as their external argument.

(10) a. *He is ready/eager to leave.*
b. **It's ready/eager to leave.* (with *it* = non-referential)

(11) a. *Notre voisine est belle à regarder.*
our neighbour(F).SG be.PRS.3SG beautiful.F.SG to look.at.INF
'Our neighbour is beautiful to look at.'

b. **Il est beau à/de regarder notre voisine.*
it be.PRS.3SG beautiful.M.SG to look.at.INF our neighbour(F).SG

The above observation should not immediately lead to the conclusion that *tough*-predicates are strictly monovalent, as they can occur with what looks like an (optional) experiencer argument. As argued in Kim (1995), the experiencer is obligatorily co-referential with the (implied) agent or experiencer of the event expressed by the (de)verbal category. If realized overtly, the experiencer is often introduced by a preposition, such as English *for* (12a) or French *pour* (12b).[3]

(12) a. *The book is hard [for us] to understand.*
b. *une unité confuse, mais difficile* [*pour nous*] *à dénouer*
a.F whole confused.F but difficult.F for us to unravel.INF
'a whole which is confused, but difficult for us to unravel'
(Michel Foucault, *Folie et déraison: Histoire de la folie à l'âge classique* (1972), Paris: Gallimard, p. 149)

According to Akatsuka (1979), the presence of such a subjective evaluator is actually what defines the class of *tough*-predicates cross-linguistically. For example, an adjective like *difficult* is always interpreted as relativized to an experiencer, even if the latter is not expressed overtly (compare Koster 1984: 429). For example, in the French example in (13), a given problem is perceived by a group of students as difficult, but this does not preclude that other people may find the exact same problem quite easy to solve.

(13) [*Pour les étudiants*], *le problème est difficile à*
for the students the problem be.PRS.3SG difficult.M.SG to
comprendre.
understand.INF
'The problem is difficult for the students to understand.'

As suggested by Engelhardt (2002: 211), these observations can help us understand why it is generally the case that one-place verbs (unaccusatives [14a] and unergatives [14b] alike) are excluded in TCs, whereas the same verbs are not

3 It needs to be added that examples such as (12b) are not very common: in fact, in the literature it has been claimed that in French TCs, an experiencer PP cannot intervene between the *tough*-adjective and an '*à* + infinitive' sequence (see e. g. Guérin 2006: 1–2), but given that there are attested examples of this pattern, that generalization seems too strong.

intrinsically incompatible with *tough*-predicates, witness the fact that they can occur in the impersonal construal (15) (cf. Guérin 2006: 1).

(14) a. **Mary is easy to run/arrive on time.*
b. **John is easy to laugh/cough.*

(15) *It is easy (for Mary) to run/arrive on time/laugh/cough.*

The requirement that TCs have a transitive verbal core can informally be understood as follows. Given that *tough*-predicates have limited argument structure (selecting only one argument, viz. the (de)verbal category acting as its complement), their syntactic subject (DP1) and experiencer argument can be said to be not fully licensed. This situation can be remedied if the two arguments involved end up being associated with two properly selected argument slots (in whatever syntactic way this 'association' comes about), whence the need for the (de)verbal category in TCs to have both an internal and an external argument.

The upshot is that even in cases where the complement of the *tough*-adjective is formally a DP, as in Hebrew and MSA, the verbal core of this category still has argument structure. In particular, the relevant nominalizations behave like what Grimshaw (1990) identified as Complex Event Nominals (CENs), as evidenced by the fact that when expressed overtly, the agent of a TC event takes the shape of a *by*-phrase, just as in *bona fide* nominalizations. Below, we illustrate this point with examples from French (16a), Romanian (16b), and Hebrew (16c):

(16) a. *bien_que ce saut soit difficile à*
even.though this jump be.PRS.SBJV.3SG difficult.M.SG to
exécuter (par un débutant)
execute.INF by a beginner
'even though this jump is difficult to execute for a beginner'
(Authier and Reed 2009: 12)

b. *Cărţile sunt greu de citit (de_către copii)*
books.the are hard of read.SUP by children
'The books are hard to read (for children).'
(Giurgea 2016: 126)

c. *ha-xoze nitan le-bitul (al_yedey ha-cdadim).*
DEF-contract possible for-cancellation by DEF-parties
'The contract can be canceled by the parties.'
(Engelhardt 2002: 210)

We can conclude that given the compatibility of the (de)verbal category with an agent argument, the complement clause in a TC denotes an event regardless of its categorial realization.

Having listed some of the key properties of TCs cross-linguistically, let us now verify whether these properties are also present in the MSA construction introduced in Section 1.

2.2 A *tough*-construction in MSA

A first indication that MSA RTCs are a species of TC is the fact that the adjectives allowed in them also allow for an impersonal construal. In (17), which can be said to be the impersonal counterpart of (4), the constituent *hāḍā l-kitāb-u* 'this book' appears at the right edge of the structure as the complement of the deverbal noun. As can be observed, the internal argument of the nominalization bears genitive case:

(17) *mumtiʿ-un* *qirāʾat-u* *hāḍā* *l-kitāb-**i***
pleasant.M.SG-NOM read(F).SG-NOM this the-book(M).SG-**GEN**
'It is pleasant to read this book.'

Importantly, the fact that *mumtiʿun* 'pleasant' can be used in both impersonal and *tough*-constructions is not an idiosyncratic property of this particular lexical item; rather, it is systematically the case that whenever a given adjective can be used impersonally, it can also appear in RTCs. Additional examples with modal (*mumkinun* 'possible')[4] and evaluative (*mufīdun* 'beneficial') adjectives are given in (18) (impersonal usage) and (19) (RTC):

4 MSA is not the only language in which *possible* (alongside *impossible*) can appear in TCs; Hebrew allows for this option as well:

(i) *ha-sefer* *kaše* / *nitan* *le-kria.*
DEF-book difficult / possible for-reading
'The book is difficult/possible to read.'
(Engelhardt 2002: 189)

In order to determine whether Akatsuka's (1979) proposal can ultimately be maintained as a cross-linguistically valid generalization, a rigorous semantic analysis would be needed to elucidate whether the MSA (cf. [18–19]) and Hebrew (cf. [ii]) adjectives we translated as 'possible' are indeed semantically equivalent to e. g. English *possible*.

(18) *mumkin-un* / *mufīd-un* *ziyārat-u*
possible.M.SG-NOM / beneficial.M.SG-NOM visit(F).SG-NOM
l-maʿlamat-i *l-ʾaṯ̱ariyyat-i*
the-monument(F).SG-GEN the-historical.F.SG-GEN
'It is possible/beneficial to visit the historical monument.'

(19) *ʾal-maʿlamat-u* *l-ʾaṯ̱ariyyat-u* *mumkin-un* /
the-monument(F).SG-NOM the-historical.F.SG-NOM possible.M.SG-NOM /
mufīd-un *ziyārat-u=hā*
beneficial.M.SG-NOM visit(F).SG-NOM=RP.F.SG
'(lit.) The historical monument is possible/beneficial to visit.'

Conversely, an adjective like *ǧāhiz* 'ready' can neither be used in impersonal contexts (20a), nor in RTCs (20b). The intended meaning 'the house is ready to be sold' can only be expressed if the deverbal noun appears in a PP, and without a resumptive pronoun (20c):

(20) a. **ǧāhiz-un* *bayʿ-u* *l-bayt-i*
ready.M.SG-NOM sale(M).SG-NOM the-house(M).SG-GEN
'(intended) The house is ready to be sold.' (lit. 'It is ready to sell the house.')
b. **ʾal-bayt-u* *ǧāhiz-un* *bayʿ-u=hu*
the-house(M).SG-NOM ready.M.SG-NOM sale(M).SG-NOM=RP.M.SG
'(intended) The house is ready to be sold.'
c. *ʾal-bayt-u* *ǧāhiz-un* *li-l-bayʿ-i*
the-house(M).SG-NOM ready.M.SG-NOM for-the-sale(M).SG-GEN
'The house is ready for sale.'

In addition, as expected, MSA RTCs are only felicitous if they contain a deverbal noun derived from a transitive verb; we will elaborate on this point in the remainder of this section. Concretely, we will show that the obligatory presence of both an internal and an external argument is related to the possibility for the adjective to appear with a co-referential experiencer, along lines explained above.

As to the argument structure of the nominalizations allowed in RTCs, we can first of all say that DP2 cannot be a plural (as shown in [21]), which one would have expected if it were indeed a purely nominal category. Second, the (obligatory, see below) internal argument of DP2 can either take the shape of a bare pronoun (21a), or it can be a pronoun selected by a preposition (21b). In the examples below, the internal arguments are underscored:

(21) a. *hāḏa l-kitāb-u ṣaʿb-un*
this the-book(M).SG-NOM difficult.M.SG-NOM
<***tarğamat-u***=*hu*> / <**tarğamāt-u=hu*>
translation(F).SG-NOM=RP.M.SG/ translation(F).PL-NOM=RP.M.SG
'This book is difficult to translate.'

b. *qābaltu mutadayyin-a-n mumkin-un*
met.1SG religious.person(M).SG-ACC-INDF possible.M.SG-NOM
<***t-taʿāmul-u***> / <* *t-taʿāmulāt-u*> *maʿa=hu*
the-deal(M).SG-NOM / the-deal(F).PL-NOM with=RP.M.SG
bi-hudūʾ-i-n
with-calm(M).SG-GEN-INDF
'I met a religious person who it is possible to deal with calmly.'

Third, there is evidence that in examples like (21), the DPs in boldface are Complex Event Nominals, i. e. descriptions of an event.[5] The noun *taʿāmul-u* 'deal' in (21b) can only be interpreted in this way. In contrast, *tarğama* 'translation' in (21a) is in principle ambiguous between a resultative (concrete) and an eventive reading, but in an RTC only the latter reading is possible. This point is illustrated below: when modified by expressions forcing a concrete interpretation, *tarğama* cannot be used in RTCs (22),[6] but nothing is intrinsically wrong with the same noun being modified by these elements as long as a resultative interpretation is available (23):

(22) *hāḏa l-kitāb-u ṣaʿb-un*
this the-book(M).SG-NOM difficult.M.SG-NOM
[*tarğamat-u=hu* ([****hāḏihi llatī fī yad-ī***)]]
translation(F).SG-NOM=RP.M.SG this.F.SG which in hand(M).SG-POSS
(lit.): 'This book is difficult to translate < which I am holding > in my hand.'

(23) [***hāḏihi*** *t-tarğamat-u* [***llatī fī yad-ī***]]
this.F.SG the-translation(F).SG-NOM which in hand(M).SG-POSS
sa-tusḥab-u mina l-maktabāt-i
FUT-be.removed-NOM from the-bookstore(F).PL-GEN
'This translation <which I am holding> in my hand will be removed from bookstores.'

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5 On Arabic deverbal nominalizations, see Fassi Fehri (1993), Kremers (2003, 2007), and Tayalati (2014).

6 The literal English translation of (22) also indicates that this example is semantically ill-formed.

Related to the obligatory process interpretation is the requirement that DP2's internal argument be syntactically projected (Grimshaw 1990, and much subsequent literature). As we saw earlier, RTCs obligatorily feature a resumptive pronoun attached to DP2 (or to the preposition in cases where DP2 takes a PP internal argument). This pronoun can be taken to saturate the internal argument slot of DP2, which in turn indicates that DP2 has argument structure much like *bona fide* verbs (at least as far as internal arguments are concerned).

A third argument in favour of a characterization of DP2 as a Complex Event Nominal comes from adverbial modification. As noted by Fassi Fehri (1993: 234), Complex but not Simple Event Nominals can combine with an aspectual modifier, or with one specifying the manner in which a given event took place. Such modifiers obligatorily take the shape of adverbs rather than adjectives (24a), as is the case with genuine verbs (24b):

(24) a. *tarğamtu=hu* *bi-surʿat-i-n* /
translated.1SG=RP.M.SG with-speed(F).SG-GEN-INDF /
(**sarīʿ-a-n*)
speed(M).SG-ACC-INDF
'I translated it quickly.'

b. *hāḏa l-kitāb-u* *ṣaʿb-un* *tarğamat-u=hu*
this the-book(M)-NOM difficult.M.SG-NOM translation(F).SG-NOM=RP.M.SG
bi-surʿat-i-n / (**sarīʿat-u-n*)
with-speed(F).SG-GEN-INDF / speed(F).SG-NOM-INDF
'This book is difficult to translate quickly.'

Finally, the external argument of DP2 can be left unexpressed, but it is always 'semantically active', witness the fact that it can appear with an experiencer argument (introduced by the prepositions *ʿalā* or *li* 'for'), whose referent has to be identical to the agent or experiencer of the event expressed by DP2:

(25) a. *māddat-u-n* *mufīd-un*
subject(F).SG-NOM-INDF beneficial.M.SG-NOM
li-ṭ-ṭullāb-i *dirāsat-u=hā*
for-the-student(M).PL-GEN study(F).SG-NOM=RP.F.SG
'a subject beneficial for students to study'

b. *hāḏa l-kitāb-u* *sahl-un* *ʿalā ʾayy-i*
this the-book(M).SG-NOM easy.M.SG-NOM for every.SG-GEN
šaḫṣ-i-n *fahm-u=hu*
person(M).SG-GEN-INDF understand(M).SG-NOM=RP.M.SG
'This book is easy for anyone to understand.'

As shown in (26a), the agent of the event expressed by DP2 can be made explicit by means of a PP headed by the complex preposition *min ṭarafi* (lit.) 'on behalf of' (even if such examples are perhaps slightly marginal), which can also be used to express agent arguments in passive clauses (26b):

(26) a. *tuʿaddu* *ka-ḥall-i-n* *li-muškil-i-n*
condidered as-solution(M).SG-GEN-INDF to-problem(M).SG-GEN-INDF
saʿb-un *fahm-u=hu* [*min* *ṭarafi*
difficult.M.SG-NOM understand(M).SG-NOM=RP.M.SG on behalf_of
t-talāmīḏ-i]
the-student(M).PL-GEN
'... considered as a solution to a problem hard to solve by the students'
https://www.maghress.com/tazatoday/21881 (retrieved via Google, 15.08.2018)

b. *quṣifati* *l-madīnat-u* [*min* *ṭarafi*
was.bombed the-city(F).SG-NOM on behalf_of
l-murtaziqat-i]
the-mercenary(M).PL-GEN
'The city was bombed by the mercenaries.'

We can conclude that DP2 in MSA TCs qualifies as a Complex Event Nominal, i. e. a type of noun which retains a considerable amount of properties of the verb it is derived from. More generally, MSA RTCs seem to be endowed with very much the same properties as structures that have been identified as TCs in other languages.

2.3 Distinguishing RTCs from similar constructions

Before we can proceed, it is important to point out that MSA RTCs are different from structures like (27):

(27) *hāḏihi* *s-sayyarat-u* *ǧaḏḏāb-un* *šakl-u=hā*
this the-car(F).SG-NOM attractive.M.SG-NOM shape(M).SG-NOM=RP.F.SG
'This car has an attractive shape.'

As the reader can observe, (27) looks quite similar to RTCs, in that it also features the word order $DP1_i$ AP DP2+RP_i, but on closer inspection, it can be shown to be underlyingly very different. In particular, we submit that (27) is more similar to an example like (28), which only differs from the previous example in that it has

the constituent order $DP1_i$ DP2 AP + RP_i: the latter order can be said to be the default one, from which the former is derived through predicate inversion.

(28) *hāḏihi s-sayyarat-u šakl-u=hā ǧaḍḍāb-un*
this the-car(F).SG-NOM shape(M).SG-NOM=RP.F.SG attractive.M.SG-NOM
'This car has an attractive shape.'

In the literature, structures such as (28) have been analysed as involving a Broad Subject (BS), a type of 'subject-predicate' relation which is fully productive in MSA (and in other Semitic languages: see Doron and Heycock 1999; Alexopoulou et al. 2004). Since we will come back to the syntax and interpretation of BSs in Section 6, at this stage we will only highlight a number of differences between cases of BSs in MSA like (27)–(28), and the RTCs which we are primarily concerned with.

First, in clauses with a BS there is always full gender and number agreement between the adjective and DP2. For example, whenever DP2 is feminine singular, so is the agreement morphology on the adjective, any other gender and/or number specification being completely ungrammatical. In (29), we show that this holds in both the canonical (29a) and the inverted structure (29b):

(29) a. *ʾal-ǧārat-u basmat-u=hā ǧaḍḍābat-un*
the-neighbour(F).SG-NOM smile(F).SG-NOM=RP.F.SG attractive.F.SG-NOM
/ **ǧaḍḍāb-un*
/ attractive.M.SG-NOM
'the neighbour has an attractive smile'
b. *ʾummat-u-n mutawaqqaʿat-un / *mutawaqqaʿ-un*
nation(F).SG-NOM-INDF expected.F.SG-NOM / expected.M.SG-NOM
ṯawrat-u=hā
revolt(F).SG-NOM=RP.F.SG
'a nation expected to revolt'

Second, the range of DPs and APs that are allowed in BS constructions (again with or without predicate inversion) is much broader than is the case for RTCs. For one thing, not all adjectives that can take a BS are allowed in an impersonal construction (not illustrated here for reasons of space). Relatedly, the adjectival predicate associated with a BS does not need to have the 'subjective evaluation' semantics that characterizes *tough*-adjectives, and constructions with a BS are not generally compatible with an experiencer (bracketed in [30]):

(30) a. *ʾ*al-ğārat-u* *ğaḍḍābat-un* [*la=nā*]
the-neighbour(F).SG-NOM attractive.F.SG-NOM for=us
basmat-u=hā
smile(F).SG-NOM=RP.F.SG
intended: 'the neighbour whose smile is attractive to us'

b. *ʾ*ummat-u-n* *mutawaqqaʿat-un* [*ʿalā* *ʾayy-i*
nation(F).SG-NOM-INDF expected.F.SG-NOM for any-GEN
šaḫṣ-i-n] *ṯawrat-u=hā*
person(M).SG-GEN-INDF revolt(F).SG-NOM=RP.F.SG
intended: 'a nation which is expected by all to revolt'

Similarly, DP2 does not have to be a nominalization of a transitive verb, which, as we saw, is required in RTCs; instead, it can be a noun devoid of any verbal core, such as *basma* 'smile' (29a), or when it is a nominalization, it can be derived from an unaccusative verb like *intašāra* 'spread' (31a) or an unergative like *ḍaḥika* 'smile' (31b):

(31) a. *ʾal-kūlīrā* *sarīʿ-un* *intišār-u=hā*
the-cholera(F).SG fast.M.SG-NOM spread(M).SG-NOM=RP.F.SG
'Cholera spreads quickly.'

b. *fatāt-u-n* *ḍiḥkat-u-hā* *muʿdiyat-un*
girl(F).SG-NOM-INDF smile(F).SG-NOM=RP.F.SG contagious.F.SG-NOM
'(lit.) a girl with a contagious smile'

A reviewer points out the following examples which appear to contradict this generalization:

(32) a. %*ʾummat-u-n* *mutawaqqaʿ-un* *ṯawrat-u=hā*
nation(F).SG-NOM-INDF expected.M.SG-NOM revolt(F).SG-NOM=RP.F.SG
intended: 'a nation expected to revolt'

b. *ʾišāʿat-u-n* *sahl-u-n* *ʾintišār-u=hā*
rumor(F).SG-NOM-INDF easy-M.SG-NOM spread(M).SG-NOM=RP.F.SG
'a rumor easy to spread'

(32a) is not judged grammatical by the native speakers we have consulted, who only accept the example if the adjective agrees in gender with the feminine DP2, yielding a BS construction with predicate inversion. In the acceptable example (32b), the deverbal noun is indeed derived from the unaccusative verb *ʾintašāra* 'spread' (and not from the transitive verb *našāra* 'spread something'). However,

given that DP2 in this example is masculine singular, it cannot be concluded that the masculine singular morphology of the *tough*-adjective instantiates the type of default agreement characteristic of RTCs: rather, an analysis of (32b) as involving a BS and predicate inversion, and therefore also genuine agreement between the adjective and DP2, is also available. That the latter analysis is on the right track is further suggested by the fact that neither example in (32) is compatible with an experiencer PP, which we saw earlier can appear with unambiguous RTCs (cf. [25]):

(33) a. *ʾ*ummat-u-n* *mutawaqqaʿ-un* *li-l-muḥallil-īna*
nation(F).SG-NOM-INDF expected.M.SG-NOM for-the-analyst(M).PL-GEN
ṯawrat-u=hā
revolt(F).SG-NOM=RP.F.SG
intended: 'a nation expected by analysts to revolt'

b. *ʾ*išāʿat-u-n* *sahl-u-n* *ʿalā* *ʾayy-i*
rumor(F).SG-NOM-INDF easy-M.SG-NOM for every.GEN
šaḫṣ-i-n *ʾintišār-u=hā*
person(M).SG-GEN-INDF spread(M).SG-NOM=RP.F.SG
intended: 'a rumour easy for anyone to spread'

We can at this point conclude that the RTCs discussed above are not derived from a BS construction (with the constituent order DP1 DP2 AP) through fronting of the adjective (or through extraposition of DP2, for that matter). After this short excursion, we can now turn to the semantics of RTCs.

3 The semantics of MSA *tough*-constructions

The aim of this section is to offer a semantic characterization of the string AP – DP2 in MSA *tough*-constructions. We propose that this unit acts as a complex predicate, which takes DP1 as its thematic subject. The structure thus instantiates a subject-predicate configuration which belongs to the class of 'indirect attributes', to use a term from Polotsky (1978). We will first approach the argument structure of a number of predicative constructions in MSA from a purely semantic point of view. Later we will see that there are non-trivial mismatches between semantic (i. e. thematic) and syntactic notions of subjecthood as revealed by the agreement data mentioned in the previous section. We start by introducing the notions of direct and indirect attribute, after which we proceed to discuss the status of RTCs.

3.1 Direct and indirect attributes

In MSA, nouns and adjectives can be combined in essentially two ways, depending on whether a given adjective appears with one or two DPs. The relevant construals are referred to as the direct and the indirect attribute, which can both be used attributively (adnominally) and predicatively.

We start with the direct attribute pattern, for which the traditional literature uses the term *naʿt ḥaqīqī*. In this structure, exemplified in (34a), an adjective appears to the right of a single DP, which we can call its subject. Semantically, the adjective *ẓarīf* 'nice' is a one-place predicate: it has one empty argument slot (x in [34b]), which needs to be saturated by a referential expression (its 'subject'), typically a DP.

(34) a. [*hāḏāni l-waladāni*] *ẓarīfāni*
these the-children(M).DU.NOM nice.M.DU.NOM
'These two children are nice.'
b. *ẓarīf* (x)

In contrast, the indirect attribute pattern (traditional term: *na't sababī*) is more complex both structurally and interpretively. Its defining feature is that it always involves an adjective flanked by two nominal constituents yielding a basic DP1 – AP – DP2 schema. Two examples are given in (35), where DP2 is followed by a resumptive pronoun coreferent with DP1. Observe that in (35b), the adjective appears with a definite article of its own:

(35) a. [*hāda l-walad-u*]$_i$ *faqīrat-u-n* (*ǧiddan*)
this the-boy(M).SG-NOM poor.F.SG-NOM-INDF (too)
ʾumm-u=hu$_i$
mother(F).SG-NOM=RP.M.SG
'This boy's mother is (too) poor.'
b. [*l-walad-u*]$_i$ *l-faqīrat-u* (*ǧiddan*)
the-boy(M).SG-NOM the-poor.F.SG-NOM (too)
ʾumm-u=hu$_i$ *ġāʾib-un*
mother(F).SG-NOM=RP.M.SG absent.M.SG-NOM
'The boy whose mother is (too) poor is absent.'

In this configuration, the property expressed by the adjective ('poor' in [35]) is attributed directly to the noun to its right (DP2, *ʾumm* 'mother'), rather than to the one to its left (DP1, *l-walad* 'the boy'), as would be the case in the direct attribute. Together, the adjective and DP2 form a complex constituent, which

itself acts as a predicate that takes DP1 as its subject (in a way that will be clarified shortly). Note first that in structures like (35), DP2 can be separated from the adjective by an intensifier such as *ǧiddan* 'too'. This property distinguishes this construction from a second type of indirect attribute which is illustrated in (36):

(36) *hāḍihi l-fatāt-u ṭawilat-u (*ǧiddan) š-šaʿr-i*
this the-girl(F).SG-NOM long.F.SG-NOM (too) the-hair(M).PL-GEN
'this girl has long hair (lit. is long-haired)'

Arabic grammarians refer to this pattern as *ʾiḍāfa ġayr-u haqīqiyya*, which can be translated as 'false construct' (sometimes also called 'adjectival construct'; see Hazout 2000; Siloni 2002; Kremers 2005; Al Sharifi and Sadler 2009). Here the adjective needs to be string-adjacent to DP2, witness the ungrammaticality of post-adjectival degree modifiers such as *ǧiddan* 'too'. In addition, contrary to what is the case in genuine construct states, the adjectival construct also does not 'inherit' the definiteness of DP2 but agrees with DP1 (cf. [37]), witness the fact that it can be marked with a definite article of its own:

(37) *ʾal-fatāt-u* ***ṭ*-ṭawilat-u** *š-šaʿr-i*
the-girl(F).SG-NOM.INDF **the**-long.F.SG-NOM the-hair(M).PL-GEN
'the long-haired girl'

In sum, there are two types of indirect attribute constructions in which the adjective does not inherit the definiteness of DP2. Their properties are summarized in Table 1.

Table 1: Two types of indirect attributes in MSA.

	Indirect attribute	
	of the type *na't sababī* (cf. [35])	**of the type *ʾiḍāfa ġayr-u haqīqiyya* (cf. [36–37])**
Article-AP allowed?	+	+
Obligatory resumptive pronoun?	+	–
Case of DP2	nominative	genitive
Obligatory adjacency AP-DP2?	–	+

In order to understand the semantics of indirect attributes, we would like to follow up on an analysis proposed by Siloni (2002), who argues that in the adjectival construct DP2 is always (the projection of) a relational noun. Simply put, the difference between a relational and a non-relational noun is that the former but not the latter can be characterized as a two-place predicate.[7] In particular, an NP like *woman* is a simple one-place predicate, which denotes the property of 'being a woman' (cf. [38a]). This predicate can take a subject DP (as in *Mary is a woman*) or it can be turned into an argument when combined with a (strong) determiner (as in *the woman*), following Longobardi's (1994) suggestion that determiners such as definite articles are operators that bind an empty argument slot associated with a given noun. Relational nouns are different, in that they have an additional argument position, namely for a possessor. For example, the noun *mother* does not simply mean 'being a mother' but rather something like 'being someone's mother'. The additional possessor argument is represented as y in (38b):

(38) a. *woman* (x)
b. *mother* (x,y)

Consider then how the distinction between relational and non-relational nouns can shed light on the semantics of the complex AP-DP predicate in the MSA indirect attribute pattern. In an example like (35), the DP *ʾumm* 'mother' acts as the subject of the adjective *faqīrat* 'poor', thus saturating the sole argument slot of this predicate (x in [39a]). Next, the NP *ʾumm* 'mother' is a relational noun and thus a two-place predicate (39b). We can assume that one argument slot (y) is saturated by an element of category D (as above), but the other slot (z) still remains empty. We would like to propose that this argument position is so to speak 'inherited' by the complex unit AP-DP2, which thus becomes a (one-place) predicate (39c). In (35), this unit takes the DP *l-walad* 'the boy' as its subject, yielding a complete indirect attribute configuration.

(39) a. *faqīra* (x)
b. *ʾummu* (y,z)
c. *faqīrat-ʾummu* (z)

7 At this stage the above-mentioned distinction between NPs and DPs becomes important: following Longobardi (1994), we assume that only DPs can be arguments, whereas NPs are predicates.

3.2 RTCs as indirect attributes

Given that MSA RTCs always conform to the schema DP1 – AP – DP2, they can be expected to belong to the semantic class of indirect attributes. Such an approach does indeed yield the desired semantics. Consider (40):

(40) *hāḏihi* *s-sayyārat-u* *sahl-un* *qiyādat-u=hā*
this the-car(F).SG-NOM easy.M.SG-NOM drive(F).SG-NOM=RP.F.SG
'This car is easy to drive'

In this example, the property of 'easiness' is attributed to the deverbal noun *qiyādatu* 'driving'; as we will argue, the syntactic correlate of this subject-predicate relation is the fact that the unit AP + DP2 forms a constituent (cf. Section 5.2). This internally complex entity is then predicated of the referent of DP1 to the effect that the property of 'easy driving' becomes a quality of 'this car'.

Building on ideas from Van de Velde (2017), we would like to submit that the argument structure of the complex AP-DP2 predicate (as well as of its component parts) can be analysed in the same way as adjectival constructs, despite the fact that Complex Event Nominals and relational nouns seem at first sight quite different. Recall however that the nominalizations found in (R)TCs always have a transitive verbal base. As argued in Grimshaw (1990), whereas a transitive verb like *examine* has both an external and an internal argument, the corresponding Complex Event Nominal *examination* only has an internal argument. As a result, despite being associated with fewer argument roles than its verbal base, the Complex Event Nominal *examination* still has one argument more than a non-deverbal and non-relational noun like *exam*.

(41) a. *examination* (x,y)
b. *exam* (x)

We can then offer a precise characterization of MSA indirect attributes involving a *tough*-predicate, such as (4), repeated here for convenience:

(42) [*hāḏā* *l-kitāb-u*]$_i$ *mumtiʿ-un* *qirāʾat-u=hu*$_i$
this the-book(M).SG-NOM pleasant.M.SG-NOM read(F).SG-NOM=RP.M.SG
'This book is pleasant to read.'

First, as above, the adjective in the structure is a one-place predicate (cf. [43a]), which takes the DP to its right as its subject, yielding an interpretation where a reading activity is characterized as pleasant. As shown in (43b), the subject DP

in this structure is itself a projection of a noun with two argument slots, one (y) which we can take to be saturated by D, and another one (z), which encodes the internal argument. At the point where the complex predicate 'pleasant to read' is formed, this thematic slot is still not saturated (cf. [43c]). The obvious candidate to fill this remaining void is DP1 (*hāḏā lkitābu* 'this book'), which is of course the theme argument of the reading event expressed by DP2. Importantly, however, DP1 only acts as an argument of the complex predicate in an indirect fashion, via mediation of the resumptive pronoun attached to DP2 (for full discussion of this last point, see Section 7).

(43) a. *mumtiʿun* (x)
b. *qirāʾatu* (y,z)
c. *mumtiʿun qirāʾatu* (z)

In other words, our analysis entails that at some level of abstraction, the ontological status of Complex Event Nominals of the type that can appear in MSA RTCs is similar to the one of kinship terms or of nouns denoting body parts (Van de Velde 2017).

3.3 Interim conclusion

We can conclude that from a semantic point of view, MSA RTCs qualify as *bona fide* indirect attributes. However, what remains to be explained is the default agreement morphology on the *tough*-adjective: if DP2 qualifies as the thematic subject of this adjective, the fact that there is no – not even partial – morphological agreement between these two categories is indeed surprising. In addition, as we shall now show, the phenomenon of default agreement is not a canonical property of indirect attributes in MSA.

4 A closer look at agreement in MSA adjectival constructions

Recall that in the direct attribute pattern an adjective appears alongside a single DP. In its predicative use, the adjective always agrees with its subject in both gender and number. For example, in (44a) a subject DP and a predicative adjective appear with masculine dual morphology; in (44b) both take feminine plural endings:

(44) a. [*hāḏāni l-walad-**ā**ni*] *ẓarīf-**ā**ni*
these the-children**(M)-DU**.NOM nice.**M-DU**.NOM
'These two children are nice.'
b. *hāʾulāʾi nisāʾ-u-n* *mutaqaddim**āt**-u-n* *fi*
these woman**(F).PL**-NOM-INDF advanced.**F.PL**-NOM-INDF in
s-sinn-i
the-age(M).SG-GEN
'These women are of advanced age.'

As illustrated in (45), in the attributive construal adjectives also agree in case (in addition to gender and number) and sometimes also (in)definiteness (cf. [45b]).

(45) a. *qābaltu* [*l-fatāt-**a*** *l-ǧamīlat-**a***]
met.1SG.M the-girl(F).SG-**ACC** the-beautiful.F.SG-**ACC**
'I met the beautiful girl.'
b. *qābaltu* [*fatāt-**a-n*** *ǧamīlat-**a-n***]
met.1SG.M girl(F).SG-**ACC-INDF** beautiful.F.SG-**ACC-INDF**
'I met a beautiful girl.'

Adjectival agreement is more complex in the indirect attribute as the adjective can agree with both DP1 and DP2. When used as a predicate (in a full clause, cf. [46]), the adjective bears nominative case. The main thing to note is that it displays gender agreement with DP2:

(46) [*hāda l-walad-u*] *faqīr**at**-un* *ʾumm-u=huʾ*
this the-boy(M).SG-NOM poor.**F**.SG-NOM mother**(F)**.SG-NOM=RP.M.SG
'This boy's mother is poor.'

In the attributive construal, adjectives agree in case and (in)definiteness with DP1: for example, in (47a) both DP1 and the adjective are definite and bear accusative case; in (47b) both are indefinite and marked for genitive case. Importantly, at all times gender agreement on the adjective is controlled by DP2.

(47) a. *sāʿadtu* ***t**-tilmīd-**a**$_i$* ***l**-faqīrat-**a***
helped.1SG.M **the**-student(M).SG-**ACC** **the**-poor.F.SG-**ACC**
ʾumm-u=huʾ$_i$
mother(F).SG.-NOM=RP.M.SG
'I helped the student whose mother is poor.'

b. *ʾilā talāmīd-**i-n**$_i$ ʿāqilāt-**i-n***
to student(M).PL-**GEN-INDF** wise.F.SG-**GEN-INDF**
ʾummahātu=hum$_i$
mother(F).PL.NOM=RP.M.PL
'to students whose mothers are wise'

Finally, adjectival agreement in the indirect attribute is always singular (so no number agreement, cf. [47b]). All this is summarized in Table 2.

Table 2: Adjectival agreement in the direct and indirect attribute.

	Direct attribute		Indirect attribute			
	Predicative	Attributive	Predicative		Attributive	
			DP1	DP2	DP1	DP2
Case	–[8]	+	–	–	+	–
Number	+	+	–	–	–	–
Gender	+	+	–	+	–	+
(In)definitiness	–	+	–	–	+	–

Recall that what distinguishes adjectives in RTCs from those appearing in other types of indirect attribute configurations is that they invariably appear with nominative masculine singular morphology, not agreeing with DP1 in case and gender (cf. [48a]), nor with DP2 in gender. They only agree with DP1 in (in)definiteness (48b) (in the attributive construal):

(48) a. *ẓanantu [[l-ʿimārat-a]$_i$ sahl-un*
believed.1SG.M the-building(F).SG-ACC easy.M.SG-NOM
bayʿ-u=hā$_i$]
sale(M).SG-NOM=RP.F.SG
'I believed that the building is easy to sell.'

8 In the predicative direct attribute, adjectives do not inherit case from their subject; rather, they receive nominative case by default even when appearing with a DP that is assigned accusative case by the particle *ʾinna* (on which see Ryding 2005: 176–179):

(i) *ʾinna t-tilmīḏat-a ʿāqilat-un*
PRT the-student(F).SG-ACC wise.F.SG-NOM
'Indeed, the student is wise.'

b. *ʾari=ni* [***l***-*qiṣṣat-a*]$_i$ ***ḍ***-*ḍarūriyy-u*
show.2SG.IMP=me **the**-novel(F).SG-ACC **the**-necessary.M.SG-NOM
qirāʾat-u=hā$_i$
read(F).SG-NOM=RP.F.SG
'Show me the novel which is necessary to read.'

This defective agreement pattern clearly calls for an explanation. The hypothesis that we will pursue is that MSA RTCs contain a phonologically null expletive subject pronoun which agrees with the adjectival predicate.

5 Subject-predicate agreement and the expletive hypothesis

5.1 Evidence for a null expletive in MSA

As is well known, MSA shows different patterns of subject-verb agreement in clauses with a pre- and with a postverbal subject (for general discussion in the generative framework, see Aoun et al. 2010: 75–85). In SV-clauses, the verb obligatorily agrees with the subject DP in all φ-features, while in VS-clauses there is only gender agreement (number agreement being singular by default, see below). The basic paradigm is shown in (49) (examples from Aoun et al. 2010: 59, their [31–32]):

(49) a. *ṭ-ṭālibāt-u* ***ya****-drus-****na*** SV
the-student(F).PL-NOM **3**-study-**F.PL**
b. *ṭ-ṭulāb-u* ***ya****-drus-****ūn*** SV
the-student(M).PL-NOM **3**-study-**M.PL**
c. ***ya****-drusu* *ṭ-ṭulāb-u* VS
3-study.**SG** the-student(M).PL-NOM
d. ***ta****-drusu* *ṭ-ṭālibāt-u* VS
3F-study.**SG** the-student(F).PL-NOM
'The students study.'

Mohammad (1990, 2000) proposes that even in cases like (49c, d) there is in fact agreement with a preverbal subject, namely a phonologically null pronoun which agrees with the finite verb. Following this author we will refer to this idea as the 'expletive hypothesis'. What defines an expletive pronoun and

what sets it apart from its referential counterpart (overt or otherwise) is that it can only occur in the presence of a clause-mate subject lower down in the structure or, in the absence thereof, in impersonal contexts (see below). In the former case, agreement is not altogether absent, but only partial (cf. the paradigm in [49]). Here we will not be concerned any further with the technical details of this particular proposal nor with its theoretical implications, focusing instead on the empirical evidence in favour of the existence of expletive subjects in MSA.

Mohammad (2000) discusses one particularly interesting set of data which suggests that the expletive hypothesis is on the right track. The crucial observation is that whenever a postverbal subject occurs in an embedded clause introduced by the complementizer *ʾanna*, the relevant subject has to co-occur with a (co-referential) preverbal pronoun. According to Mohammad (2000: 136), the expletive pronoun in MSA is always singular regardless of whether it appears with a verbal or with an adjectival predicate. It can only take the feminine form if the postverbal subject is feminine too, as in (50):

(50) *qultu ʾinna=hā ǧāʾat l-banāt-u*
said.1SG that=3SG.F came.3SG.F the-girl(F).PL-NOM
'I said that the girls came.'

Mohammad (2000: 95–107) further proposes that MSA also has a non-referential expletive subject pronoun, which is always masculine singular and which occurs in a number of impersonal contexts, such as with *seem*-type verbs (51), modals (52), in what Mohammad (2000: 102) calls *tough*-movement environments (53), and in what is known as the 'subjectless passive' (54):

(51) pro *yabdū ʾanna l-ʾawlād-a ǧāʾū*
seem.3SG.M that the-boy(M).PL-ACC arrived.3PL.M
'It seems that the boys arrived.'

(52) pro *yaǧibu ʾan yadrusa l-ʾawlād-u*
must.3SG.M that study.3SG.M the-boy(M).PL-NOM
'The boys must study.'

(53) pro *sahl-un ʾan tanǧaḥa l-banāt-u*
easy.M.SG-NOM that succeed.3SG.F the-girl(F).PL-NOM
'It is easy for the girls to succeed.'

(54) pro *nīma* *fi* *s-sarīr-i*
slept.3SG.M in the-bed(M).SG-GEN
'The bed was slept in.'

As expected, the presence of a complementizer like *'anna* forces the lexicalization of the hypothesized expletive (Mohammad 2000: 99–107). In (55) to (58) this is illustrated for the same four impersonal environments:

(55) *ʾiddaʿā* *r-rağul-u* *ʾanna=**hu*** *yabdū* *ʾanna*
claimed.3SG.M the-man(M).SG-NOM that=3SG.M seem.3SG.M that
l-ʾawlāda *ğāʾū*
the-boy(M).ACC.PL arrived.3PL.M
'The man claimed that it seems that the boys arrived.'

(56) *ʾiddaʿā* *r-rağul-u* *ʾanna=**hu*** *yağibu* *ʾan*
claimed.3SG.M the-man(M).SG-NOM that=3SG.M must.3SG.M that
yadrusa *l-'awlād-u*
study.3SG.M the-boy(M).PL-NOM
'The man claimed that the boys must study.'

(57) *ʾiddaʿā* *r-rağul-u* *ʾanna=**hu*** *sahl-un* *ʾan*
claimed.3SG.M the-man(M).SG-NOM that=3SG.M easy.M.SG-NOM that
tanğaḥa *l-banāt-u*
succeed.3SG.F the-girl(F).PL-NOM
'The man claimed that it is easy for the girls to succeed.'

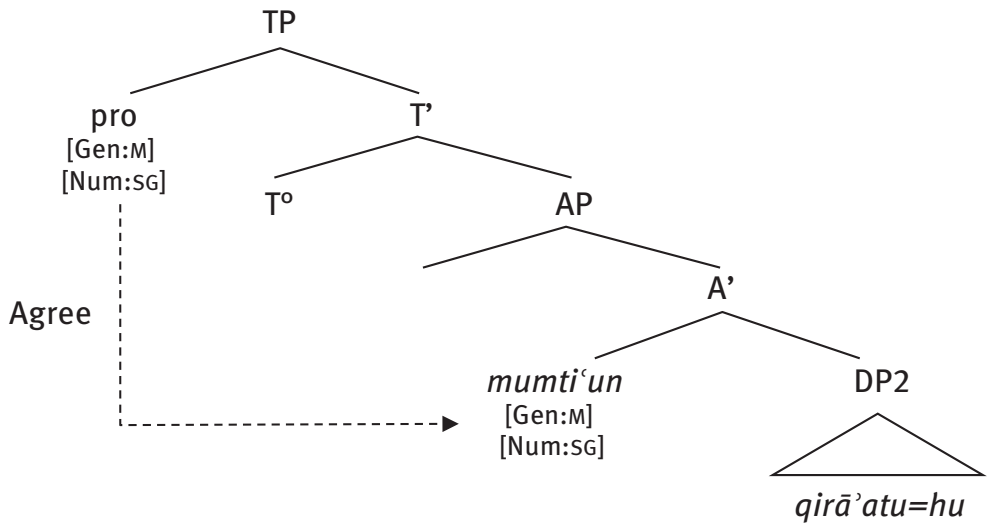
(58) *ʾiddaʿā* *r-rağul-u* *ʾanna=**hu*** *nīma* *fi*
claimed.3SG.M the-man(M).SG-NOM that=3SG.M slept.3SG.M in
s-sarīr-i
the-bed-GEN
'The man claimed that the bed was slept in.'

Here we do not take a stance as to what governs the distribution of the overt and the covert preverbal subject pronouns. Note in any event that the overt subject pronouns are clitics and therefore probably syntactic heads (X°), whereas *pro* is typically analysed as a (reduced) phrasal category (XP) (see e. g. Cardinaletti and Starke 1999).

5.2 The structure of the complex predicate in MSA RTCs

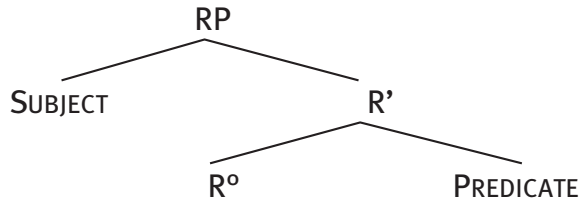
As a natural extension of Mohammad's (1990, 2000) expletive hypothesis, we propose that MSA RTCs also involve a null expletive subject. Postponing our analysis of DP1 (as well as that of the resumptive pronoun) until Section 7, the basic structure of an example like (4) would look as in (59):

(59)



Let us have a look at the main properties of this representation. First of all, with den Dikken (2006) we assume that all predicative configurations are modelled on the abstract scheme in (60), according to which a subject is connected to a predicate through mediation of a Relator Phrase:

(60)



As stressed by den Dikken (2006), the RELATOR is not itself a functional category, but rather it can variously be realized by a number of functional – and never lexical – heads. In (59), the RELATOR is T, which takes a pronominal subject and an AP predicate. In other words, the AP-layer is directly dominated by 'clausal' functional superstructure such as a TP (yielding a categorially 'mixed' extended projection) without the mediation of a specialized predication projection (such as Bowers' 1993 PredP). In any event, given that A is a lexical category, SpecAP is not a possible site for the subject expletive to be merged.

Second, and most importantly, the structure in (59) allows us to understand why agreement on the adjective is exhaustively controlled by *pro*, without DP2 playing any role, not even for gender agreement. Especially this last fact is surprising, because DP2 qualifies as the thematic subject of the *tough*-predicate (as we concluded earlier), and given that in canonical indirect attributes the adjective always agrees in gender with DP2. The key to understanding why it is the expletive subject which 'absorbs' all the agreement is the observation that the relevant pattern exemplifies the classical separation between semantic (thematic) and syntactic subjecthood found in impersonal expletive constructions (see Rothstein 1995 for detailed discussion). For instance, in MSA impersonal constructions with an adjectival predicate (an example is repeated here for convenience, cf. [18]), the feminine DP headed by the deverbal noun *ziyāratu* 'visit(ing)' is the semantic subject of the predicate *mumkinun* 'possible' but not its syntactic subject, which is the null expletive triggering agreement on the adjective.

(61) pro *mumkin-un* [*ziyārat-u* *l-maʿlamat-i*
possible.M.SG-NOM visit(F).SG-NOM the-monument(F).SG-GEN
l-ʾaṯariyyat-i]
the-historical.F.SG-GEN
'It is possible to visit the historical monument.'

Very much the same thing happens in RTCs: the *tough*-adjective simply ends up with masculine singular morphology because it agrees with its syntactic subject. Given a configuration like (59), the null expletive is the closest c-commanding antecedent which can (and has to) provide the predicative adjective with the φ-features it needs, plausibly via the operation Agree.[9]

Furthermore, with Fassi Fehri (1993: chapter 2) we can assume that both expletive *pro* and the adjective receive nominative case by default.[10] Finally, as expected the expletive pronoun in TCs has to be lexicalized overtly when the structure is embedded under the complementizer *ʾanna*:[11]

9 A reviewer remarks that such an Agree-relation is a-typical, in the sense that a c-commanding phrase controls agreement on a lower head whereas it is usually the other way round. Note, however, that this must quite generally be the case with subject XPs and predicative adjectives (whose core has X°-status), whether or not the two are in a local Spec-Head configuration. Note also that in the case of MSA RTCs, agreement morphology sits at the right edge of the adjective (A°), not of its phrasal projection (AP, which includes DP2).

10 Compare footnote 8.

11 As is well known, *ʾanna* 'that' assigns accusative case to the DP (whether subject or topic) that follows it (see e. g. Mohammad 2000: 92–93). By analogy with full noun phrases, subject

(62) *ʾari=ni* *l-ʿimārat-a*$_i$ *llatī*$_i$ *taddaʿī*
show.2SG.IMP=me the-building(F).SG-ACC that claim.2SG.M
*ʾanna=**hu*** *mustaḥīl-un* *bayʿ-u=hā*$_i$
that=3SG.M impossible.M.SG-NOM sale(M).SG-NOM=RP.F.SG
'Show me the building which you claim is impossible to sell.'

In the remainder of this paper we will turn to the status of DP1 in TCs. In Section 3.2, we claimed that this element qualifies as the semantic subject of the complex predicate AP – DP2. However, this idea is potentially at odds with our suggestion that the syntactic subject of the very same predicate is an empty (and non-referential) subject pronoun. At first blush, two possibilities as to the correct structural analysis of DP1 come to mind: it could be left-peripheral (say a topic) or it could sit lower in the structure, in a canonical argument position in the TP-domain.

6 DP1 as a Broad Subject

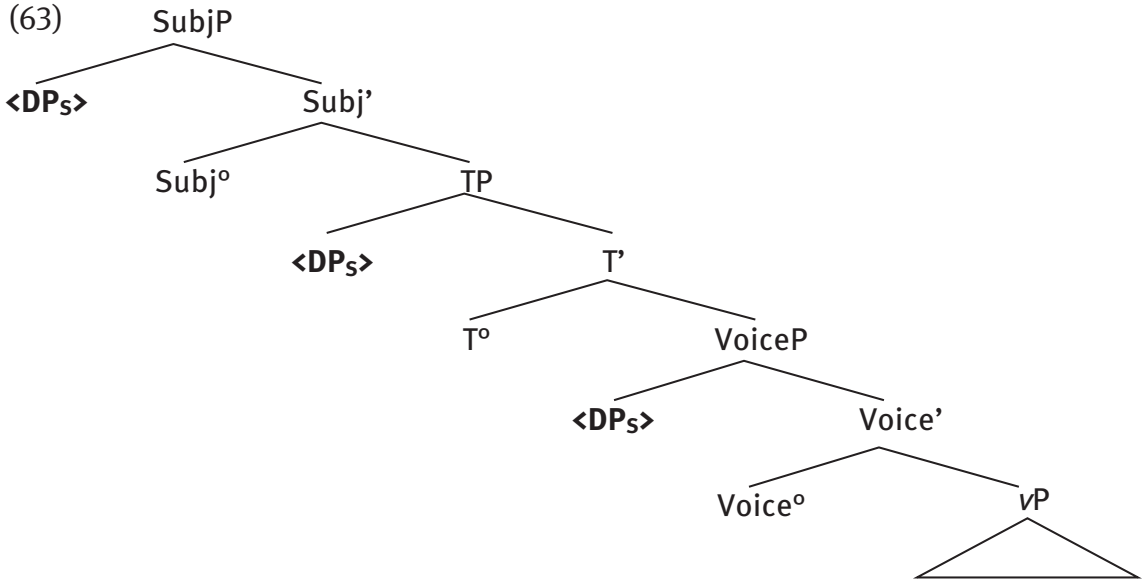
6.1 Subject positions and the phenomenon of Broad Subjects

Following among others Cardinaletti (1997, 2004) and McCloskey (1997), there is now a consensus that in a given extended projection there is more than one position for subjects. Above the first merge position where a given subject receives its theta-role, say VoiceP (Kratzer 1996), there is first of all TP, which is where subject-verb agreement is configured. According to Cardinaletti (2004), this second subject position (which she actually calls AgrSP) can be occupied by overt weak pronouns (such as the French personal pronouns *je* 'I', *tu* 'you' etc.), or by the covert weak pronoun *pro* (on which, see Cardinaletti and Starke 1999: 175–176). Furthermore, there is also a higher projection SubjP, in whose specifier subjects are hosted which receive an 'aboutness' interpretation (without qualifying as syntactic topics). In particular, Cardinaletti (2004) assumes XPs in SpecSubjP to be 'subjects of predication' in categorical (rather than thetic) statements. This higher position can be occupied by strong pronouns or full DPs, which crucially need not enter in an Agree-relation with a finite verb; rather, they can also be experiencers (datives) or locatives. The basic picture

expletive pronouns should also receive accusative case in this environment. However, the *hu*-form in (62) does not appear with any overt (and unambiguous) morphological case marker, making it difficult to draw any conclusions about the case properties of this element.

we thus arrive at is summarized in (63) (see Cardinaletti 2004 for further discussion):

(63)



The hypothesis that we will pursue is that DP1 in MSA RTCs is located in Cardinaletti's (2004) SubjP and that it co-occurs with an expletive *pro* in SpecTP (with which it is, of course, not co-referential). We take it that this configuration instantiates the phenomenon of Broad Subject (BS), which is quite generally available in Semitic languages (see Doron and Heycock 1999; Alexopoulou et al. 2004). An example of a BS is given in (64) (from Doron and Heycock 1999: 70; cf. also our earlier examples [27] and [28], which illustrate the same phenomenon, modulo the different constituent order of [27]):

(64) *al-bayt-u* *ʾalwān-ū=hu* *zāhiyat-un*
the-house(M).SG-NOM colours(M).SG-NOM=RP.M.SG bright.F.SG-NOM
'The house is brightly coloured.'

In (64), both the BS and the 'regular' subject are full DPs, which in this case stand in a 'part-whole' relation (the colours being a part of the house).[12] The structure is characterized by a type of recursive subject-predicate articulation,

12 Note that it would have to be further clarified how a structure with two DP subjects can be made compatible with Cardinaletti's (2004) original proposal according to which TP(/AgrSP) can only host weak pronouns.

whereby the predicate of the BS can itself be decomposed into a subject ('the colours') and a predicate ('bright').

Based on Levantine Arabic data (the MSA facts are parallel), Alexopoulou et al. (2004) provide evidence that BSs are regular A-subjects, not located in the clausal left periphery. Relatedly, BSs are also not associated with a special information status (say 'topic' or 'focus'). In both respects, DP1 in RTCs can be shown to pattern like BSs.

6.2 Against a left-peripheral analysis of DP1

6.2.1 DP1 as an A-subject

First, as shown in Alexopoulou et al. (2004), BSs can be shared by two conjoined predicates. Interestingly, as illustrated in (65), such a shared subject can act as a BS for the first, and as an ordinary subject for the second predicate:

(65) *sayyārt-i*$_i$ *lawn-u=hā*$_i$ *fātiḥ-un* *wa*
car(F).SG-my colour(M).SG-NOM=RP.F.SG bright.M.SG-NOM and
maftūḥat-un *min* *fawq*
open.F.SG-NOM from above
'My car has a bright colour and is convertible.' (based on Alexopoulou et al. 2004: 336)

As shown in (66), on a par with BSs, DP1 in RTCs can also fulfil two different subject roles for two coordinated predicates:

(66) *hāḏā* *kitāb-u-n*$_i$ *darūriyy-un*
this book(M).SG-NOM-INDF necessary.M.SG-NOM
širāʾ-u=hu$_i$ *wa* *mawǧūd-un* *fī* *kulli*
purchase(M).SG-NOM=RP.M.SG and is.found.M.SG-NOM in all
l-maktabāt-i
the-library(F).PL-GEN
'This book is necessary to buy and is found in all libraries.'

Second, BSs (67a) and initial DPs in RTCs (67b) can appear to the right of a clause-mate finite verb, just like ordinary subjects. Given that it is generally impossible for head movement to cross left-peripheral XPs (see e. g. Rizzi 1997: 303–304), but that no such restrictions holds for head movement and TP-internal phrases, we can conclude that in both examples in (67) the verb *kāna* did not head-move past

a left-peripheral topic, which again suggests that BSs in MSA occupy a regular argument position.

(67) a. *kāna l-bayt-u$_i$ ʾalwān-u=hu$_i$*
was.3SG.M the-house(M).SG-NOM colour(M).PL-NOM=RP.M.SG
fātiḥat-un
bright.F.SG-NOM
'The house was brightly coloured.'
(based on Alexopoulou et al. 2004: 335)

b. *kāna hāḏā l-kitāb-u$_i$, li-ʾasbab-i-n*
was.3SG.M this the-book(M).SG-NOM for-reason(F).PL-GEN-INDF
taʿrifūna=hā, mamnuʿ-un qirāʾat-u=hu$_i$
you.know=RP.F.SG forbidden.M.SG-NOM read(F).SG-NOM=RP.M.SG
'This book was for reasons that you know forbidden to read.'

In certain contexts, the distribution of BSs, DP1 in RTCs and Clitic Left-Dislocated (ClLD) constituents is at first glance similar. For example, all three can precede an interrogative *wh*-word (68), unlike left-peripheral foci which are generally incompatible with questions (69) (regardless of linear word order):

(68) a. *nādya hal šaʿr-u=hā ṭawīl-un?*
Nadia Q hair(M).PL-NOM=her long.M.SG-NOM
'As to Nadia, does she have long hair?'

b. *hāḏihi l-ʿimārat-u hal sahl-un (ḥaqqan)*
this the-building(F).SG-NOM Q easy.M.SG-NOM (really)
bayʿu=hā ?
sale(M).SG.NOM=RP.F.SG
'This building, is it (really) easy to sell?'

c. *zayd-un hal qābalta=hu?*
Zayd-NOM Q meet.2SG.M=RP.M.SG
'Zayd, did you meet him?'
(Aoun et al. 2010: 191)

(69) **salīm-an ʾayna qābala ḫālid-un*
Salim-ACC where meet.3SG.M Khalid-NOM
'intended: Where did Khalid meet Salim?'
(Aoun et al. 2010: 204)

However, in contrast with ClLDed elements (71), both BSs (70a) and DP1 in TCs (70b) can follow a question word:

(70) a. *hal nādya šaʿr-u=hā ṭawīl-un?*
Q Nadia hair(M).PL-NOM=RP.F.SG long.M.SG-NOM
'Does Nadia have long hair?'
b. *hal hāḏihi l-ʿimārat-u sahl-un (ḥaqqan)*
Q this the-building(F).SG-NOM easy.M.SG-NOM (really)
bayʿu=hā ?
sale(M).SG.NOM=RP.F.SG
'Is this building (really) easy to sell?'

(71) **hal zayd-un qābalta=hu?*
Q Zayd-NOM meet.2SG.M=RP.M.SG
'Zayd, did you meet him ?'
(Aoun et al. 2010: 192)

We can conclude that DP1 in MSA RTCs displays the syntactic behaviour of a subject in an A-position and more particularly of a BS. As noted in Alexopoulou et al. (2004: 338), it is predicted that a BS (or for our purposes, a constituent located in SubjP) "is not expected to have a specific import for the Information Structure of the sentence." In the following section, we will show that there is indeed good evidence that this holds for both BSs and DP1 in RTCs.

6.2.2 Information structure: BS ≠ ClLD

Note first that DP1 in MSA RTCs is not to be characterized as a left-peripheral focus. As discussed by many authors, in languages such as Italian ([72], Cinque 1990: 63; Rizzi 1997: 289), Greek ([73], Alexopoulou and Kolliakou 2002: 2–3) and MSA ([74], Aoun et al. 2010: 203) left-peripheral foci do not co-occur with a TP-internal clitic.

(72) *GIANNI, (*l')ho cercato, no Piero.*
Gianni him=have.PRS.1SG sought not Piero
'I looked for Gianni, not Piero.'

(73) *TO YANI, (*ton)=apelise i Maria.*
the.ACC Yanis.ACC *him.ACC=fired the.NOM Maria.NOM
'It was Yanis that Maria fired.'

(74) *AL-KITĀB-A* *waǧadā=(*hu)* *muhammad-u*
the-book(M).SG-ACC found.M.3SG=RP.M.SG Mohamad-NOM
'It was the book that Mohamad found.'

Second, despite pronominal resumption being obligatory, DP1 can also not plausibly be analysed as a type of topic, on a par with ClLD constituents in Romance, Greek, and indeed also Arabic (see e. g. Aoun et al. 2010: 190–201). More generally, DP1 does not seem to be associated with any specific pragmatic interpretation, in line with Alexopoulou et al. (2004: 338), who show that BSs in (Levantine) Arabic can freely refer to either (brand) new or given/familiar information.

For example, DP1 in RTCs can express old information: in B's reply in (75), the phrase *hāḏihi l-ʿimāratu* 'this building' is repeated literally from A's question:

(75) A: *māḏā* *yumkinu* *l-qawl-u* *bi-ḫuṣūṣ-i* *hāḏihi*
what can.be.3SG.M the-said-NOM with-about-GEN this
l-ʿimārat-i?
the-building(F).SG-GEN
'What can be said about this building?'
B: *hāḏihi* *l-ʿimārat-u$_i$* *mustaḥīl-un*
this the-building(F).SG-NOM impossible.F.SG-NOM
bayʿ-u=hā$_i$
sale(M).SG-NOM=RP.F.SG
'This building is impossible to sell.'

On the other hand, both regular BSs (76) and DP1 in RTCs (77) can also freely express new and/or focal information. For example, in (76) *Rana* qualifies as a new-information focus, given that this constituent is the answer to a *wh*-question:

(76) A: *man* *šaʿr-u=hā* *ṭwīl-un?*
who hair(M).SG-NOM=RP.F.SG long.M.SG-NOM
'Who has long hair?'
B: *rānā$_i$* *šaʿr-u=hā$_i$* *ṭwīl-un*
Rana hair(M).SG-NOM=RP.F.SG long.M.SG-NOM
'Rana has long hair.'
(based on Alexopoulou et al. 2004: 347)

Similarly, in B's reply in (77) the constituent *ʾal-qurʾānu* 'the Quran' is the (BS of an) exhaustive answer to a disjunctive question: despite being discourse-given, this element too can be considered focal.

(77) A: *ʾayy-hum ṣaʿb-un tarğamat-u=hu*$_i$
which.of-them difficult.M.SG-NOM translation(F).SG-NOM=RP.F.SG
kitāb-u l-manfalūṭī$_i$ *ʾami l-qurʾān-u*$_i$*?*
book(M).SG-NOM Al-Manfalouti or the-Quran(M).SG-NOM
'Which one is difficult to translate: Al Manfalouti's book or the Quran?'
B: *ʾal-qurʾān-u*$_i$ *ṣaʿb-un*
the-Quran(M).SG-NOM difficult.M.SG-NOM
tarğamat-u=hu$_i$
translation(F).SG-NOM=RP.F.SG
'The Quran is difficult to translate.'

Finally, bare quantifiers provide another diagnostic to distinguish ClLDed elements and BSs (Alexopoulou et al. 2004: 341). Elements such as It. *nessuno* 'nobody' and MGr. *kanena* 'nobody' cannot appear as ClLD-topics (Cinque 1990; Anagnostopoulou 1994) as shown in (78a) and (78b) respectively:

(78) a. **Nessuno, l'=ho visto.* Italian
no.one him=I.have seen
b. **Kanena den ton=ida.* Modern Greek
nobody.ACC not him.ACC=saw.1SG
'Nobody I saw him.'

In contrast, bare quantifiers are accepted both as BSs (79) and as initial elements in RTCs (80):

(79) *wala hāḥde*$_i$ *šaʿr=ha*$_i$ *ṭwīl* Levantine Arabic
no one.F.SG hair=RP.F.SG long
'No one has long hair.'
(Alexopoulou et al. 2004: 345)

(80) *lā ʾaḥad-a*$_i$ *mufīd-un* / *mumtiʿ-un*
no one.M.SG-NOM.INDF beneficial.M.SG-NOM / pleasant.M.SG-NOM
l-ḥadīṯ-u maʿa=hu$_i$
the-discuss(M).SG-NOM with=RP.M.SG
'None is beneficial/pleasant to discuss with.'

We conclude that there is good evidence that DP1 in MSA RTCs does indeed qualify as a type of BS. Before we proceed, we will discuss one final piece of evidence that suggests that DP1 is not left-peripheral.

6.3 DP1 is base-generated in SubjP

To summarize a very complex set of data, we can say that Arabic has two types of A-bar dependencies, one with a filler and a gap, and one with a resumptive pronoun instead of a gap. On the whole, A-bar constructions involving a gap are more likely to be sensitive to islands (see Aoun and Benmamoun 1998, and in particular; Aoun et al. 2010: 144–147; 173–184 for detailed discussion and further references). The structure of the argument that we would like to develop is as follows: taking into account the fact that MSA RTCs obligatorily feature a resumptive pronoun, we will discuss one particular case of a *bona fide* A-bar dependency where resumption does not alleviate island effects. Next, we will show that even in this environment, RTCs are fully well-formed, suggesting that RTCs do not involve any A-bar movement. This in turn is convergent with our earlier conclusion that DP1 is not left-peripheral.

As discussed in Aoun et al. (2010: 175–179), one context in which resumption does not rescue island violations involves relativization of an abstract noun selected by a preposition. The baseline pattern is illustrated in (81), where the P + abstract NP unit is used as a manner adverbial:

(81) *muḥammad-u* *yaʿmalu* *bi-surʿat-in*
Mohamad-NOM is.working.3SG with-high.speed(F).SG-GEN
'Mohamad works/is working quickly.'

Relativization of these elements obligatorily involves pronominal resumption. Still, we observe that a resumptive pronoun cannot be related to its PP-antecedent if the former is inside a syntactic island. For instance, extraction out of a *wh*-clause (indirect question) results in ungrammaticality despite the presence of the resumptive:

(82) **s-surʿat-u*$_i$ *llatī* *taʿrifūna* [*man* *yaštaġilu* *bi=**hā***$_i$]
the-speed(F).SG-NOM that wonder.2PL who.REL works with=**RP.F.SG**
hiya *l-maṭlūbat-u*
COP the-needed.F.SG-NOM
intended: 'The speed that you are wondering who is working with is what is requested.'
(modelled on Aoun et al. 2010: 177)

Interestingly, no island sensitivity can be detected in RTCs, not even in cases involving relativization out of a preposition + abstract NP complex. In (83), the relevant PP is the complement of a deverbal noun in an RTC: the relevant examples show that the abstract noun functioning as the complement of the (stranded) preposition can be the head of an A-bar dependency which crosses the boundary of a *wh*-island:

(83) a. *ʾarfuḍu ʾan ʾafriḍa ʿala l-ʿummāl-i*
refuse.1SG PRT impose.1SG on the-worker(M).PL-GEN
surʿat-a-n lā ʾaḥada yaʿrifu [*hal*
speed(F).SG-NOM-INDF no one.M.SG.ACC knows.3SG if
mumkin-un l-ʿamal-u bi=hā$_i$]
possible.M.SG-NOM the-work(M).SG-NOM with=RP.F.SG
(lit.) 'I refuse to impose on the workers a speed that no one knows if it is possible to work with it.'

b. *s-surʿat-u$_i$ llatī tatasāʾalūna* [*hal mumkin-un*
the-speed(F).SG-NOM that wonder.2PL if possible.M.SG-NOM
l-ʿamal-u bi=hā$_i$] *lā ʾinsāniyyat-un*
the-work(M).SG-NOM with=RP.F.SG not human.F.SG-NOM
(lit.) 'The speed which you wonder at which it is possible to work is inhumane.'

If insensitivity to islands is taken to indicate absence of movement, we can conclude that DP1 is base-generated *in situ*, and that there is also no movement of a null operator.[13] With all this in place, we can now proceed to offer a fully explicit phrase structure analysis of MSA *tough*-constructions.

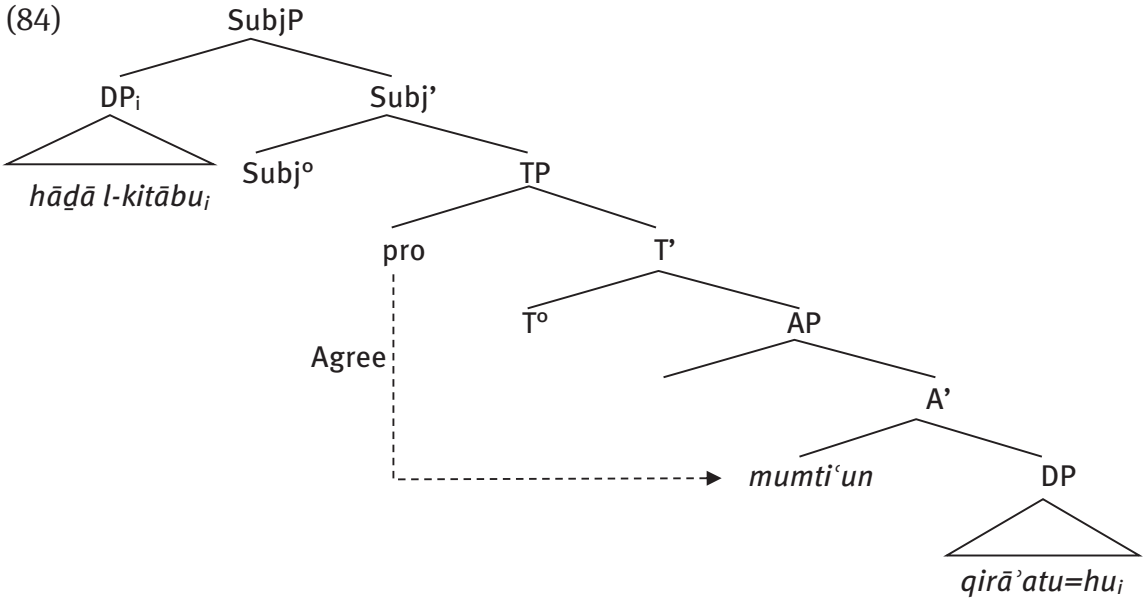
7 The syntax of MSA *tough*-constructions: A synthesis

Having argued that two syntactic subjects are present in MSA RTCs, we propose that the basic structure of an example like (4) is as in (84), which is basically

13 Another potential test to determine whether DP1 in MSA RTCs has undergone movement would be to check whether one can detect 'defective intervention' effects in clauses with an experiencer PP (see Hartmann 2011). However, it is doubtful whether this diagnostic is indeed a reliable indicator of the presence or otherwise of (A-)movement (Keine and Poole 2017).

identical to the structure given earlier in (59), modulo the fact that an additional projection SubjP is represented, in whose specifier DP1 is generated. In this structure, Subj is another instance of a RELATOR, this time one combining the subject DP1 with the predicate TP:

(84)



We can now also clarify why in RTCs DP1 is obligatorily resumed by a clitic pronoun (whose reference it determines, under c-command). We would like to submit that this resumptive is there to formally satisfy a thematic requirement of DP2. As discussed at length, DP2 in RTCs always has a transitive core: it therefore has an internal argument slot to be saturated. As shown in (85), in Complex Event Nominals it is indeed necessary that the internal argument be spelled out overtly either by a pronoun (85a) or by a full DP (85b).[14]

(85) a. *kulliftu* *bi-tarğamat-i=*(hi)* *ʾila*
was.in.charge.1SG of-translation(F).SG-GEN=RP.F.SG to
l-ʿarabiyyat-i
the-Arabic.F.SG-GEN
'I was in charge of its translation to Arabic.'
b. *kulliftu* *bi-tarğamat-i* **(l-kitāb-i)*

14 As noted by a reviewer, a corollary of the obligatory presence of an internal argument with the nominalizations in (85) is the fact that the relevant DPs appear in a nominal construct state, which is by definition transitive. The two phenomena can be considered two sides of the same coin.

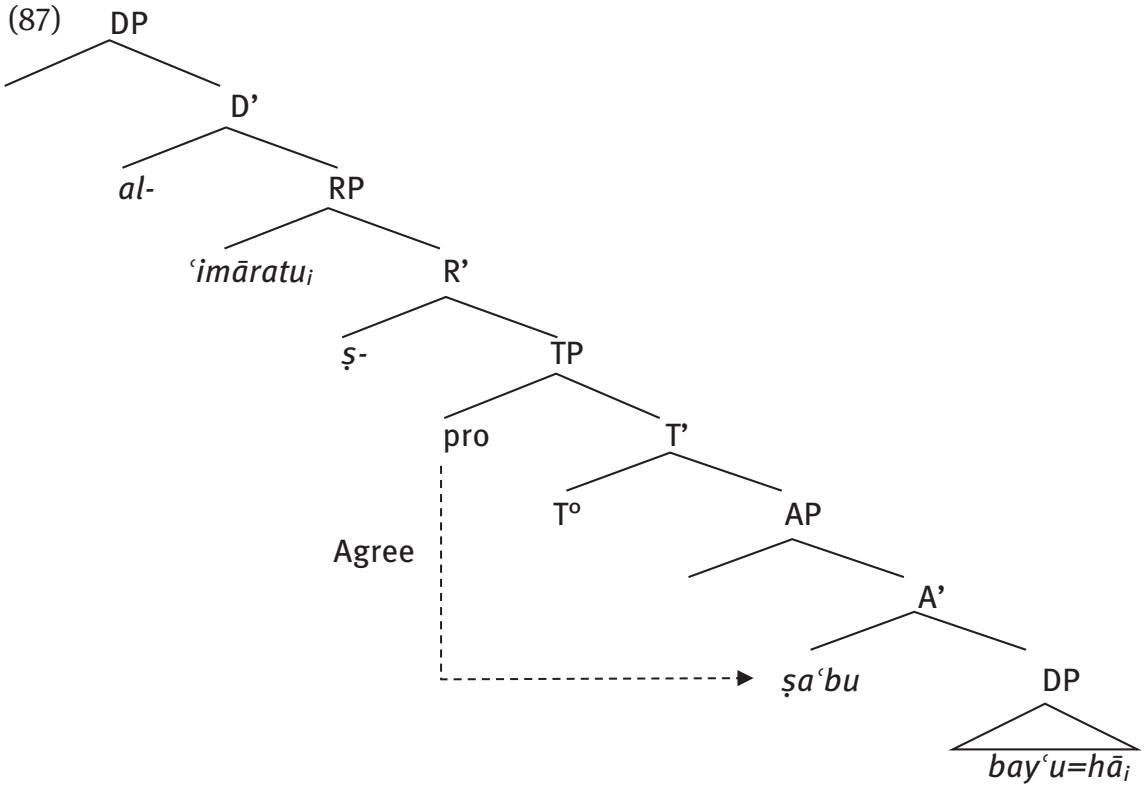
was.in.charge.1SG of-translation(F).SG-GEN the-book(M).SG-GEN
ʾila l-ʿarabiyyat-i
to the-Arabic.F.SG-GEN
'I was in charge of the translation of the book to Arabic.'

As we have seen in Section 6, DP1 in MSA RTCs does not show any traces of being moved to its surface position; put differently, it cannot be the case that DP1 is first merged in the thematic position associated with (the verbal core of) DP2 and later moved to SpecSubjP. Consequently, the only way to provide the complex AP-DP predicate with a syntactic subject co-referential with the overt internal argument of DP2 is base-generating both categories (DP1 and the resumptive) in the required positions, as in (84).

A final question concerns the analysis of adnominal RTCs: can the double subject analysis be extended to attributive usages such as (7) (repeated here for convenience)?

(86) [[*al-ʿimārat-u*]$_i$ [*ṣ-ṣaʿb-u* *bayʿ-u=hā*$_i$]]
the-building(M).SG-NOM the-difficult.M.SG-NOM sale(M).SG-NOM=RP.F.SG
bīʿat *ʾaḫīran*
was.sold finally
'[The building which is difficult to sell] was finally sold.'

We would like to follow a suggestion by den Dikken (2006: 242) to the effect that (headed) relative clauses are predicates which are combined with a nominal subject (the 'head' or 'antecedent' of the relative clause). Without committing ourselves to the exact nature of the RELATOR connecting the nominal head to its relative clause, we assume that its head position is lexicalized by the determiner introducing the [AP + DP] constituent. A possible structure for attributive RTCs would be as in (87):



The gross constituency of predicative and attributive RTCs would be nearly identical, both involving multiple subjects in one and the same (mixed) extended projection. The main difference resides in the fact that in an attributive RTC, the higher subject position is filled by an NP rather than a DP, in accordance with the observation that determiners in 'noun + relative clause' constructions do not take narrow scope over just the noun but rather over the entire complex noun phrase (see e. g. Kayne 1994). Nevertheless, despite the different categorial status of parts of these two extended projections, the distribution of subjects is very much the same.

8 Conclusion

We have offered a first syntactic analysis of a particular class of MSA *tough*-constructions. One crucial ingredient of the proposal is that within one and the same extended projection, more than one subject position is available (as proposed earlier by among others McCloskey 1997; Cardinaletti 2004) and, by this token, that multiple subject-predicate relations can be established in a given clause. In future research, it would be interesting to compare the data from MSA with similar constructions from other languages, particularly with data from languages in which TCs also involve invariant agreement morphology on the adjective (e. g. Romanian, see Giurgea and Soare 2010; Giurgea 2016).

References

Akatsuka, Noriko. 1979. Why tough-movement is impossible with *possible*. *Chicago Linguistic Society* (*CLS*) 15. 1–8.

Al Sharifi, Budour & Louisa Sadler. 2009. The adjectival construct in Arabic. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of LFG09*, 26–43. Stanford: CSLI Publications.

Alexopoulou, Theodora, Edit Doron & Caroline Heycock. 2004. Broad subjects and Clitic Left Dislocation. In David Adger, Cécile De Cat & George Tsoulas (eds.), *Peripheries: Syntactic edges and their effects*, 329–358. Dordrecht: Kluwer.

Alexopoulou, Theodora & Dimitra Kolliakou. 2002. On linkhood, topicalization and Clitic Left Dislocation. *Journal of Linguistics* 38. 193–245.

Anagnostopoulou, Elena. 1994. *Clitic dependencies in Modern Greek*. Salzburg: University of Salzburg dissertation.

Aoun, Joseph & Elabbas Benmamoun. 1998. Minimality, reconstruction and PF movement. *Linguistic Inquiry* 29. 569–597.

Aoun, Joseph, Elabbas Benmamoun & Lina Choueiri. 2010. *The syntax of Arabic*. Cambridge: Cambridge University Press.

Authier, Jean-Marc & Lisa Reed. 2009. French *tough*-movement revisited. *Probus* 21. 1–21.

Borsley, Robert, Maggie Tallerman & David Willis. 2007. *The syntax of Welsh*. Cambridge: Cambridge University Press.

Bosque, Ignacio & Ángel Gallego. 2011. Spanish double passives and related structures. *Linguística* 6. 9–50.

Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24. 591–656.

Cardinaletti, Anna. 1997. Subjects and clause structure. In Liliane Haegeman (ed.), *The new comparative syntax*, 33–63. London: Longman.

Cardinaletti, Anna. 2004. Towards a cartography of subject positions. In Luigi Rizzi (ed.), *The cartography of CP and IP*, 115–165. Oxford: Oxford University Press.

Cardinaletti, Anna & Michal Starke. 1999. The typology of structural deficiency. In Henk van Riemsdijk (ed.), *Clitics in the languages of Europe*, 145–233. Berlin: Mouton de Gruyter.

Cinque, Guglielmo. 1990. *Types of Ā-dependencies*. Cambridge, MA: The MIT Press.

Comrie, Bernard & Stephen Matthews. 1990. Prolegomena to a typology of *tough* movement. In William Croft, Suzanne Kemmer & Keith Denning (eds.), *Studies in typology and diachrony*, 43–58. Amsterdam: Benjamins.

Dikken, Marcel den. 2006. *Relators and linkers*. Cambridge, MA: The MIT Press.

Doron, Edit & Caroline Heycock. 1999. Filling and licensing multiple specifiers. In David Adger, Susan Pintzuk, Bernadette Plunkett & George Tsoulas (eds.), *Specifiers: Minimalist approaches*, 69–89. Oxford: Oxford University Press.

Engelhardt, Miriam. 2002. Nominal *tough*-constructions. In Jamal Ouhalla & Ur Shlonsky (eds.), *Themes in Arabic and Hebrew syntax*, 189–215. Dordrecht: Kluwer.

Fassi Fehri, Abdelkader. 1993. *Issues in the structure of Arabic clauses and words*. Dordrecht: Kluwer.

Giurgea, Ion. 2016. Romanian *tough*-constructions and multi-headed constituents. In Christina Tortora, Marcel den Dikken, Ignacio Montoya & Teresa O'Neill (eds.), *Romance linguistics 2013*, 119–138. Amsterdam: Benjamins.

Giurgea, Ion & Elena Soare. 2010. Predication and the nature of non-finite relatives in Romance. In Ana Maria Di Sciullo & Virginia Hill (eds.), *Edges, heads, and projections*, 191–214. Amsterdam: Benjamins.

Grimshaw, Jane. 1990. *Argument structure*. Cambridge, MA: The MIT Press.

Guérin, Valérie. 2006. On *tough* constructions in French. *University of Hawaï at Manoa Working Papers in Linguistics* 37. 1–21.

Hartman, Jeremy. 2011. (Non-)intervention in A-movement. *Linguistic Variation* 11. 121–148.

Hazout, Ilan. 2000. Adjectival genitive constructions in Modern Hebrew. *The Linguistic Review* 17. 29–52.

Hicks, Glyn. 2017. *Tough*-movement. In Martin Everaert & Henk van Riemsdijk (eds.), *The Wiley Blackwell companion to syntax*, 2nd edn. doi:10.1002/9781118358733.wbsyncom035.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: The MIT Press.

Keine, Stefan & Ethan Poole. 2017. Intervention in *tough*-constructions revisited. *The Linguistic Review* 34. 295–329.

Kim, Boomee. 1995. Predication in *tough* constructions. *West Coast Conference on Formal Linguistics* (*WCCFL*) 14. 271–285.

Koster, Jan. 1984. On binding and control. *Linguistic Inquiry* 15. 417–459.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*, 109–137. Dordrecht: Kluwer.

Kremers, Joost 2003. *The noun phrase in Arabic: A minimalist approach*. Nijmegen: University of Nijmegen dissertation.

Kremers, Joost. 2005. Adjectival constructs in Arabic. *Linguistische Berichte* 203. 331–348.

Kremers, Joost. 2007. Masdar formation. In Harald Motzki & Everhard Ditters (eds.), *Approaches to Arabic linguistics*, 475–499. Leiden: Brill.

Lees, Robert. 1960. A multiply ambiguous adjectival construction in English. *Language* 36. 207–221.

Longobardi, Giuseppe. 1994. Reference and proper names: A theory of N-movement in syntax and LF. *Linguistic Inquiry* 25. 609–665.

McCloskey, James. 1997. Subjecthood and subject positions. In Liliane Haegeman (ed.), *Elements of grammar*, 197–235. Dordrecht: Kluwer.

Mohammad, Mohammad. 1990. The problem of subject-verb agreement in Arabic. In Mushira Eid (ed.), *Perspectives on Arabic linguistics I*, 95–125. Amsterdam: Benjamins.

Mohammad, Mohammad. 2000. *Word order, agreement and pronominalization in Standard and Palestinian Arabic*. Amsterdam: Benjamins.

Polotsky, Hans Jacob. 1978. A point of Arabic syntax: The indirect attribute. *Israel Oriental Studies* 8. 159–174.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar*, 281–337. Dordrecht: Kluwer.

Rothstein, Susan. 1995. Pleonastics and the interpretation of pronouns. *Linguistic Inquiry* 26. 499–529.

Ryding, Karin. 2005. *A reference grammar of Modern Standard Arabic*. Cambridge: Cambridge University Press.

Siloni, Tal. 2002. Adjectival constructs and inalienable constructions. In Jamal Ouhalla & Ur Shlonsky (eds.), *Themes in Arabic and Hebrew syntax*, 161–187. Dordrecht: Kluwer.

Tayalati, Fayssal. 2014. Nominalisations événementielles et alternance causative/non-causative en arabe standard. *Langue et Linguistique* 33/34. 21–57.

Van de Velde, Danièle. 2017. *Tough*-adjectives. Unpublished manuscript, University of Lille.