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## **An LFG Approach to Non-Restrictive Relative Clauses in Maltese**

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### **1 Introduction**

Rather little attention has been focussed to date on the analysis of non-restrictive or appositive relative clauses (henceforth ARCs), either in Modern Standard Arabic (MSA) or in the various Arabic vernaculars. This paper focuses on Maltese, a mixed language belonging to the South Arabic branch of Central Semitic, with a Maghrebi/Siculo-Arabic stratum, a Romance (Sicilian, Italian) superstratum and an English adstratum. We present an overview of the syntax of ARCs in Maltese and an analysis of some types of Maltese ARCs in the framework of Lexical Functional Grammar (LFG), building on previous LFG work on relative clauses in LFG.

We present arguments that ARCs in Maltese are syntactically integrated (see Arnold (2007) and Arnold and Sadler (2010) for a parallel argument that English ARCs are also syntactically integrated), and show how the approach to RRCs of Dalrymple (2001) may be developed to afford an analysis of Maltese relative clauses (here we concentrate only on the analysis of Maltese ARCs but our approach extends straightforwardly to provide an analysis of RRCs as well). Our account of the occurrence of resumptive pronouns in Maltese relative clauses builds on the approach to resumption developed in Asudeh (2004).<sup>1</sup> We are aware of no existing analysis or detailed description of the syntax of ARCs in Maltese. We hope our contribution will also lay the groundwork for a comparison to ARCs in the contemporary Arabic vernaculars.

This paper is organised as follows. Section 2 provides a brief survey of the general characteristics of non-restrictive or appositive relative clauses in Maltese, pointing out those which distinguish ARCs from RRCs. Section 3 discusses the formation of non-wh ARCs in Maltese while section 4 illustrates the range of ARCs with fronted wh-pronouns. Section 5 provides a brief introduction to work on relative clauses in LFG which we build on. In section 6 we present an LFG analysis of non-wh and wh-ARCs. Section 7 then provides some additional discussion of some very interesting cases of epithetic or internally-headed ARCs in Maltese and indicates

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<sup>1</sup>The semantics of Maltese ARCs is not our primary concern here, but we believe that the Potts-style semantics adopted in Arnold and Sadler (2010)'s LFG account of English ARCs will largely carry over to the Maltese data.

how our analysis of wh-ARCs may be extended to accommodate some of these cases.

## 2 General Properties of Maltese ARCs

We begin by outlining and illustrating the basic characteristics of ARCs in Maltese. As one might expect, ARCs are prosodically distinct from RRCs in Maltese in obligatorily forming a separate intonational unit (represented here by commas in the written form). While RRCs act as intersective modifiers functioning to identify the reference of the head, ARCs function simply to provide additional information on the anchor or head, hence the infelicity of the continuation in (1). This contrasts with a RRC as in (2), in which the continuation is perfectly felicitous because the relative clause functions to delimit or define the (first) set of books.

- (1) *Il-kotba, li xtraj-t-hom ilbieraħ, tajbin ħafna.*  
 DEF-books COMP bought-1SG-3PL.ACC yesterday good.PL a lot  
*#L-oħrajn mhux ħażin.*  
 DEF-others COP.NEG bad

The books, which I bought yesterday are very good. #The others are not bad.

- (2) *Il-kotba li xtraj-t ilbieraħ, tajbin ħafna. L-oħrajn*  
 DEF-books COMP bought-1SG yesterday good.PL a lot DEF-others  
*mhux ħażin.*  
 COP.NEG bad

The books which I bought yesterday are very good. The others are not bad.

One can also show that these constructions exhibit the wide scope effects typical of ARCs. In the case of the RRC (3a) the relative clause is understood as forming part of the elided material and hence the pronoun *-ha* can be understood as either *Marija* or *Rita*. This ambiguity does not occur in (3b).

- (3) a. *Marija għarf-it-u r-raġel li*  
 Mary recognized-3SGF-3SGM.ACC DEF-man COMP  
*serq(i)-l-ha l-portmoni, u anke Rita*  
 stole.3SGM-DAT-3SGF DEF-purse and even Rita  
 Mary recognised the man who stole her purse and so did Rita.

- b. *Marija għarf-it-u* *r-raġel, li*  
 Mary recognized-3SGF-3SGM.ACC DEF-man COMP  
*serqilha* *l-portmoni, u anke Rita*  
 stole.3SGM-DAT-3SGF DEF-purse and even Rita  
 Mary recognised the man, who stole her purse, and so did Rita.

Because an ARC does not function to restrict the denotation of a head noun, it may take a wide range of antecedents including proper nouns (4), pronouns (5)-(6) and temporal DP heads (7).

- (4) *Pawlu, li n(i)-xtri l-ħobż mingħand-u*  
 Paul COMP 1SG-buy DEF-bread from-3SGM.ACC  
 Paul, who I buy the bread from
- (5) *Lilha, li n-af-ha sew, ma n(a)-għmil-hie-x*  
 Her COMP 1SG-know-3SGF.ACC well not 1SG-do-3SGF.ACC-NEG  
*t'hekk*  
 of.this  
 As for her, who I know very well, I do not associate her with doing this.
- (6) *Lili, li n-af x'ir-rid*  
 Me COMP 1SG-know what.1SG-want  
 As for me, who knows what I want
- (7) *Il-gimgha d-diehl-a, li se t-kun vaganza*  
 DEF-week DEF-enter.ACT.PART-SG.F COMP FUT 3SGF-be holiday  
 The next week, which will be a holiday

Since the head or host of a ARC must be referential, quantifiers are not permitted as heads, although they do occur as the head of restrictive relative clauses in Maltese:

- (8) *\*M'hemm ħadd, li n-af jien*  
 NEG.exist no one COMP 1SG-know I  
 \*There is no one, who I know

If an ARC and a RRC co-occur modifying the same head, the RRC is obligatorily positioned closer to the head than the ARC - the permissible order is shown in (9).

- (9) *It-tifel li n-af jien, li j(o)-qgħod fejn-i, ...*  
 DEF-boy COMP 1SG-know I COMP 3SGM-live near-1SG  
 The boy who I know, beside whom I live...

ARCs (unlike RRCs) can be stacked:

- (10) *It-tifel, li soltu n(a)-ra-h l-iskola, li j-kun*  
 DEF-boy COMP usually 1SG-see-3SGM.ACC DEF-school COMP 3SGM-is  
*liebes dejjem sabiħ, li n-af-u*  
 wear.ACT.PART always nice.SGM COMP 1-know-PL  
*'l omm-u*  
 ACC.mother-3SGM.ACC  
 The boy, who I usually see at school, who always dresses nicely, whose mother we know.....

Finally, these constructions show the syntactic characteristics of embedded, integrated clauses in Maltese. One such characteristic is that a bound pronoun can be final in an independent clause (as in (11a)) but not in an embedded clause. As (11b) shows, ARCs are subject to this restriction, suggesting that they are syntactically embedded and hence integrated.

- (11) a. *Raj-t-u*  
 saw-1SG-3SGM.ACC  
 I saw him.
- b. *It-tifel, li raj-t-u \*(lbieraħ/int)*  
 DEF-boy that saw-2SG-3SGM.ACC yesterday/you  
 The boy, who you saw yesterday

In this section we have suggested that there is evidence that Maltese ARCs are syntactically integrated elements which are semantically independent or non-integrated. Their special semantic status is typically signalled by prosodic clues. If this is right, then we expect that ARCs and RRCs will share essentially the same syntax, and hence that it should be relatively straightforward to extend an analysis

of RRCs to ARCs. In the following sections we show that the syntax of ARCS is fundamentally similar to that of RRCs in Maltese: they can be introduced by *li* and a restricted set of wh-pronouns *min* ‘who’, *l min*, ‘whom’, *xiex* ‘which’, *fejn* ‘where, and may involve a gap or a (true) resumptive pronoun. Additional structures are possible (those containing epithetic relative NPs (or additional internal heads), which follows from the different semantic status of ARCs).

We now turn to a discussion of the relativisation strategies which are used in ARCS in Maltese. Maltese permits both ARCs which are introduced by a wh-relative pronoun and ARCs which are introduced by a complementiser, unlike English, in which only the wh-pronoun strategy is permitted in ARCs.

### 3 *li* Relatives

Non-wh ARCs are introduced by the element *li*, or its more formal variant *illi* (which occurs in a high variety of Standard Maltese). It is reasonable to assume that the element *li* is a relative of the form *alli/illi* found in modern Arabic dialects, although of course the syntactic behaviour of these elements is not identical. Diachronically, *li* may be derived from the relative pronoun which persists as *allađi* in MSA, but the evidence is strong that *li* is simply a complementiser (and not a pronominal) in Maltese. As the examples below show, it serves to introduce embedded complements to verbs of thinking and telling (12), noun complement and factive clauses (13), and in the cleft or focus construction (14).<sup>2</sup>

- (12) a. *N(a)-ħseb li n-af-u*  
 1SG-think that 1SG-know-3SGM.ACC  
 I think that I know him.
- b. *Qal-u-l-i li wasl-u*  
 said-3PL-DAT-1SG that arrived-3PL  
 They told me that they arrived.

<sup>2</sup>Maltese also has a variant of *li* which we call the partitive complementiser *milli*, which comes about through the fusion of *min* and *li*, which may also introduce ARCs. We do not discuss this form here.

- (i) *Fadal-l-ek past-i, milli sajjar-t-l-ek jien?*  
 left.3.SG.M-DAT-2.SG bun-PL from.that baked-1.SG-DAT-2.SG I  
 Do you still have (some) buns, from those I baked?

- (13) *Il-fatt li wasal-na tard ma j-ħabbat-ni-x*  
 DEF-fact that arrived-1PL late NOT 3SGM-bother-1SG.ACC-NEG  
 The fact that we arrived late does not bother me.
- (14) *Li l-gimġha d-dieħla se t-kun vaganza*  
 That DEF-week DEF-entering.PROG.SGF FUT.part 3SGF-be holiday  
*hija stqarrija sorprendenti*  
 COP.3SGF statement surprising  
 That the coming week will be a holiday is a surprising statement.

*li* may be used in relativization on all clause internal grammatical functions. It occurs in combination with both gaps and resumptive pronouns, and may introduce both local and long distance dependencies. The combination of *li* and a gap is found only in cases of relativization on SUBJ and OBJ position.

Both gap and RP are possible in long distance subject relativisation, but *only* a gap is permitted in the highest subject position, suggesting that Maltese is subject to the familiar Highest Subject Restriction (HSR) (Borer, 1984; McCloskey, 1990).

- (15) *Carl, li j-igi ħi-ja*  
 Carl, COMP 3SGM-comes brother-1SG.ACC  
 Carl, who is my brother
- (16) *It-tifel, li (\*hu) ra-ni lbieraħ*  
 DEF-boy COMP (\*he) saw.3SGM-1SG.ACC yesterday  
 The boy, who saw me yesterday
- (17) *It-tifel, li qal-u-l-i li Ø/hu kien*  
 DEF-boy COMP said.3-PL- DAT-1SG COMP he was.3SGM  
*ra-hom*  
 saw.3SGM-3PL.ACC  
 The boy, whom they told me that saw them

The distribution of a gap in OBJ function in *li* ARCs is slightly complex. If the antecedent is a proper noun (referring to a human) then a gap appears to be excluded in highest object position and an RP is required as in (18). In other cases, including long distance object relativisation with a proper name, (19), both gap and



resumptive pronoun strategies are available. Other definite animate antecedents, inanimate antecedents and indefinite animate antecedents ((20), (21) and (22) respectively) take an optional gap or RP.<sup>3</sup>

(18) *Marija, li n-af-\*(ha) sew*  
 Mary COMP 1SG-know-3SGF.ACC well  
 Mary, whom I know very well

(19) *Marija, li għid-t-l-ek li n-af(-ha) sew*  
 Mary, COMP told-1SG-DAT-2SG COMP 1SG-know-3SGF.ACC well  
 Mary, whom I told you that I know very well

(20) *It-tifel, li raj-t-(u) ilbieraħ*  
 DEF-boy COMP saw-1SG-3SGM.ACC yesterday  
 The boy, who I saw yesterday

(21) *Il-frott, li xtraj-nie-(h) mingħand tal-ħaxix*  
 DEF-fruit COMP bought-1PL-3SGM.ACC from of.DEF-vegetables  
 The fruit, which we bought from the vegetable vendor

(22) *Qed n(i)-stenna tifel, li dari n(a)-ra-(h)*  
 PROG.PART.SG 1SG-wait boy COMP often 1SG-see-3SGM.ACC  
*dan-naħat*  
 DEM.DEF-area.PL  
 I am waiting for a boy, whom I frequently see in these areas

In all remaining cases, only the RP strategy is found within *li* ARCs - these include relativisation on the dative OBJ (23),<sup>4</sup> on the OBL OBJ (24) and on the possessor

<sup>3</sup>There are several open questions here concerning this pattern of acceptability and in particular the observation that a proper noun antecedent such as *Marija* as OBJ excludes a gap but a definite animate antecedent such as *it-tifel* permits both gap and RP. Further work is necessary to understand the nature of this constraint, and in the current analysis we do not encode it as a strictly grammatical fact.

<sup>4</sup>We associate the recipient in an example such as (i) with a DAT-OBJ function.

(ii) *Aħna bgħatna ittra 'l Pawlu*  
 We sent.1PL.ACC letter DAT.Paul

or POSS function (25). Of course only NP positions are relativisable with the bare or *li* strategy. The overall distribution of gap and RP is shown in (26).<sup>5</sup>

(23) *Pawlu, li bgħatt-nie\*(-l-u) l-ittra*  
 Paul COMP sent-1PL-DAT-3SGM DEF-letter  
 Paul, who we sent the letter to

(24) *Il-forn, li ħmej-na l-ħobż fi\*(-h)*  
 DEF-oven COMP baked-1PL DEF-bread in-3SGM.ACC  
 The oven, in which we baked the bread

(25) *It-tarbija, li n-af 'l omm-\*(ha)*  
 DEF-baby COMP 1SG-know ACC.mother-3SGF  
 The baby, whose mother I know

GF	IDD Strategy	LDD Strategy
(26) SUBJ	Gap	Gap/RP
OBJ	Gap/RP	Gap/RP
DAT OBJ	RP	RP
OBL OBJ	RP	RP
POSS	RP	RP

#### 4 wh Relatives

A further relativisation strategy, also available in ARCs, involves a fronted wh-element associated with a gap (and never with a resumptive pronoun) corresponding to the within clause function, in both IDs and long-distance dependencies. The fronted element may be either a wh-NP or a PP containing a wh-NP. Four pronouns occur in wh-introduced ARCs: *min* ‘who’ (SUBJ), *'l min* ‘whom’ (OBJ, DAT OBJ), *fejn* ‘where’ (locative ADJ), and *xiex* ‘which’ (OBL OBJ).

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We sent a letter to Paul

Evidence for distinguishing between the dative object function and both OBJ on the one hand and OBL on the other is that it shows a different pattern of gap/RP distribution in restrictive relative clauses, *inter alia*.

<sup>5</sup>Of course, within an island only the RP will be available, see section 6.1 below.

The following examples involve a fronted NP with the gap corresponding to a range of clause internal grammatical functions. Relativisation using the wh-strategy on direct (NP) functions is only possible when the antecedent is definite.<sup>6</sup> The construction is also subject to an additional restriction, in that the antecedent must also be [+Human]: the [-Human] wh-pronoun *xiex* is only used in pied-piping contexts. There are some interesting restrictions on the distribution of the element *xiex*, which is substituted in several environments by its reduced counterpart *x'*, raising the possibility that what we have here is simply a lexical restriction associated with a particular lexical item. However given that *x'* is also not available in this context, we are inclined to the analysis whereby such wh-relatives are subject to a general restriction limiting them to human antecedents.<sup>7</sup>

- (27) *Ir-raġel, min għid-t-l-i li fetaħ il-bieb*  
 DEF-man who told-2SG-DAT-1 SG COMP opened.3SGM DEF-door  
 The man, who you told me opened the door SUBJ
- (28) *Pawlu, 'l min kellim-t*  
 Paul, ACC.who spoke-1 SG  
 Paul, who I spoke to OBJ
- (29) *Pawlu, 'l min għid-t-l-i li kellim-t*  
 Paul, ACC.who told-2SG-DAT-1 SG COMP spoke-2SG  
 Paul, who you told me that you spoke to OBJ
- (30) *It-tifel, 'l min bgħat-t l-ittra*  
 DEF-boy ACC.who sent-1 SG DEF-letter  
 The boy, who I sent the letter to DAT OBJ

<sup>6</sup>As we will see below, wh-relatives involving pied-piping do not seem to be subject to this definiteness restriction on the antecedent.

<sup>7</sup>This means that there is basically no wh-strategy available for ARCs on direct NP functions (SUBJ, OBJ, DAT OBJ) when the antecedent is non-human. The (non-human) wh-pronoun *ma* 'which' is somewhat archaic and is restricted to the antecedent *hekk* as in (iii):

- (iii) *Hekk ma gara / qal-l-i*  
 This which happened.3SGM / said.3SGM-DAT-1 SG  
 (It is like this) that happened/that he said to me

- (31) *It-tifel, 'l min n(a)-ħseb li bgħat-t l-ittra*  
 DEF-boy ACC.who 1SG-think COMP sent-1SG DEF-letter  
 The boy, who I think I sent the letter to DAT OBJ

An example such as (32) involves a direct wh-relative (that is, the fronted wh-phrase is not a PP) and a (definite) non-human antecedent. Note however that in cases such as this, the within clause function is an indirect function (here ADJ).

- (32) *Il-Mosta, fejn n(o)-qgħod jien*  
 DEF-Mosta where 1SG-stay I  
 Mosta, where I live ADJ

In cases of pied-piping, the fronted wh-NP will be contained within a larger PP, as in the following examples illustrating ARCs on both OBL and ADJ functions. (33)-(36) are basic examples, (37) illustrates a more complex case of pied piping in which the wh-NP is the complement of the preposition *ħdejn* which is itself the complement of *ta'*, and (38)-(39) provide long-distance examples of the strategy. As noted above, in all these cases the antecedent is not required to be animate. Example (40) also shows wh-relatives involving pied-piping are also exempt from the definiteness restriction.

- (33) *Franco u Carl, ħdejn min poġġej-t huma ħut-i*  
 Franco and Carl near who sat-1SG COP.PL siblings-1SG.ACC  
 Franco and Carl, next to whom I sat, are my brothers. OBL
- (34) *Marija, ma' min n(o)-qgħod fil-brejk*  
 Mary, with who 1SG-stay in.DEF-break  
 Mary, with whom I stay during breaktime OBL
- (35) *It-triq, minn fejn n-għaddi għax-xogħol*  
 DEF-road, from where 1SG-pass for.DEF-work  
 The road, from where I pass to go to work OBL
- (36) *Il-barmil, b'xiex soltu n-tella l-ilma mill-bir*  
 DEF-bucket with.what usually 1SG-get.up DEF-water from.DEF-well  
 The bucket, with which I usually get the water from the well ADJ

- (37) *Il-ġnien, ta' hdejn fejn n(o)-qgħod*  
 DEF-garden of near where 1SG-stay  
 The garden, next to which I live OBL
- (38) *Franco u Carl, hdejn min spjegaj-t-l-i li poġġej-t*  
 Franco and Carl near who explained-2SG-DAT-1SG COMP sat-2SG  
 Franco and Carl, next to whom you explained to me that you sat OBL
- (39) *Il-barmil, b'xiex soltu j(i)-dhir-l-i t-tella*  
 DEF-bucket with.what usually 3SGM-seem-DAT-1SG 2SG-get.up  
*l-ilma*  
 DEF-water  
 The bucket, which it seems to me that you usually get the water with ADJ
- (40) *Tifla, ma' min soltu n(o)-qgħod fil-brejk, kien-(e)t ma*  
 girl with who usually 1SG-stay in.DEF-break was-3SGF not  
*t(i)-flaħ-x illum*  
 3SGF-able-NEG today  
 A girl, with whom I usually stay during the break, was sick today

Accessing the POSS within a fronted element appears to be very unnatural and we take this to be ungrammatical.

- (41) *\*Marija ma omm min qgħad-t*  
 Mary with mother who stayed-1SG  
 Marija, with the mother of who /with whose mother I stayed,

To summarise, the wh-strategy involves a gap (and never a resumptive pronoun) in a wide variety of clause internal functions, and involves the fronting of a wh-NP or a PP containing the wh-NP.

Ant	GF	IDD Strategy	LDD Strategy
(42) DEF, HUM	SUBJ	Gap	Gap
DEF, HUM	OBJ	Gap	Gap
DEF, HUM	DAT OBJ	Gap	Gap
	OBL	Gap	Gap
	ADJ	Gap	Gap

This completes our presentation of the basic facts concerning *li* and *wh* non-restrictive relative clauses. We have so far had nothing to say about the behaviour of gaps and resumptives in relation to syntactic island constraints, a matter which we will discuss below.

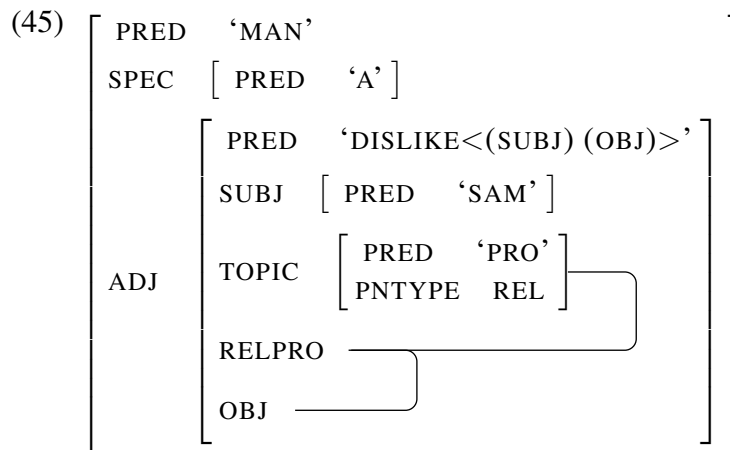
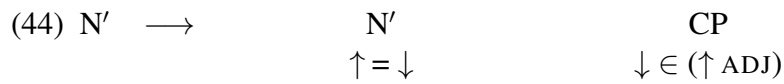
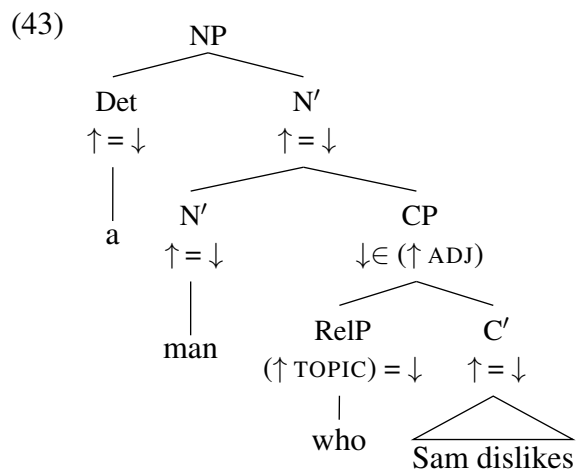
## 5 LFG Analysis of ARCs

We build our analysis on the analysis of English restrictive relative clauses provided in Dalrymple (2001) (see also Asudeh (2004) and Chatsiou (2009) for analyses in the same spirit. A different approach to *wh*-less relative clauses is taken in Falk (2010)). (43) shows Dalrymple's c-structure for an English *wh*-relative: the relative clause is sister to  $N'$ , and treated as a *ADJunct* to the *NP* in f-structure, with the relative pronoun (or larger, fronted constituent), associated with the discourse function *TOPIC*.<sup>8</sup>

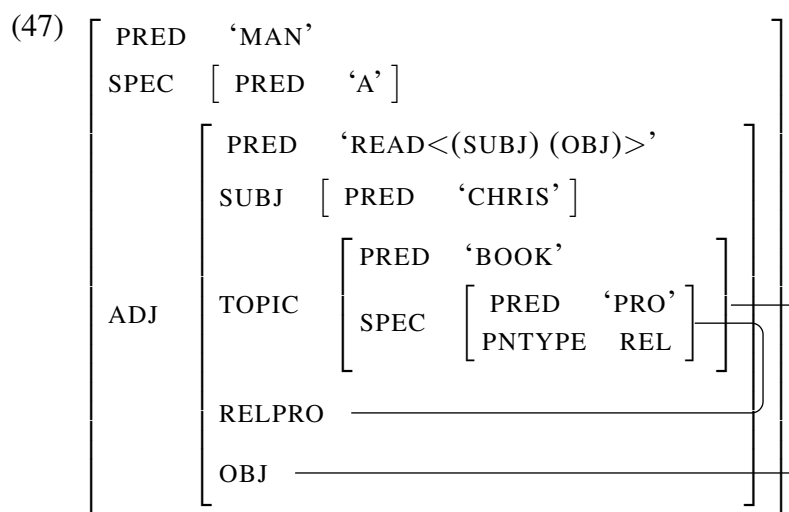
The corresponding f-structure is shown in (45), in which the value of the *TOPIC* attribute (the f-structure of the relative pronoun) is also the value of a within-clause function, here an *OBJ*. This re-entrancy or token-identity results from a functional uncertainty statement, which we will discuss below: note that in this approach there is no c-structure corresponding to the gap as the analysis adopts a traceless approach to unbounded dependencies. There is a second dependency between the *TOPIC* and the *wh*-item: in this simple case (without pied piping) the *wh*-element heads the *TOPIC* and thus *TOPIC* and *RELPRO* are identified. Note the contrast with an example with pied-piping, such as (46) : in (47) it is the *SPEC* of the *TOPIC* which is the value of *RELPRO*.

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<sup>8</sup>For an introduction to LFG see Bresnan (2001); Dalrymple (2001).



(46) a man whose book Chris read



The equations associated with the RelP node in (48) specify that the fronted element maps to the TOPIC function and additionally specify the two further dependencies, between TOPIC and some within-clause function, and between (sub-part of) TOPIC and RELPRO. The final equation checks for a particular feature value on the relative pronoun. (48) uses several abbreviations, which are defined in (49)-(51). (49) states that fronted phrase may be an NP, PP, AP or AdvP. (50) specifies the set of possible within RC grammatical functions which the TOPIC may be associated with in English relative clauses (Dalrymple, 2001, 404): in LFG the 'extraction' path is specified by means of a functional uncertainty statement (see Dalrymple (2001, 143) for further information about functional uncertainty statements).<sup>9</sup> Finally in (51) RELPATH specifies where *within* the TOPIC the relative pronoun may be situated.

$$\begin{aligned}
 (48) \text{ CP} &\longrightarrow ( \text{ RelP } ) && ( \text{ C' } ) \\
 &(\uparrow \text{ TOPIC}) = \downarrow && \uparrow = \downarrow \\
 &(\uparrow \text{ TOPIC}) = (\uparrow \text{ RTOPICPATH}) \\
 &(\uparrow \text{ RELPRO}) = (\uparrow \text{ TOPIC RELPATH}) \\
 &(\uparrow \text{ RELPRO PRNTYPE}) =_c \text{ REL}
 \end{aligned}$$

<sup>9</sup>The expression in (50) defines which within-clause functions the TOPIC may correspond to. Such functions may be (arbitrarily) deeply embedded within COMP, XCOMP, OBJ functions, subject to certain constraints as expressed in the off-path constraints in (50) (for example any OBJ containing the within-clause function so linked must be tenseless). A further option is to be an untensed member of the ADJ set (within such a function) or an argument of an ADJ. See Dalrymple (2001, 396) for discussion of this uncertainty statement for English.



(49) RelP  $\equiv$  { NP | PP | AP | AdvP }

(50) RTOPICPATH  $\equiv$   
 { XCOMP | COMP | OBJ }\* { (ADJ  $\in$  ) (GF) | GF }  
 ( $\rightarrow$  LDD  $\neq$  - ( $\rightarrow$  TNS)  $\neg(\rightarrow$  TNS)

(51) RELPATH  $\equiv$   
 { SPEC\* | [(OBL <sub>$\theta$</sub> ) OBJ]\* }

Non-wh relative clauses involve a (null) pronominal TOPIC associated with the *absence* of a fronted constituent: note that the  $\epsilon$  in (53) does not introduce a null string, but associates functional structure information with the absence of a string.

(52) The man Chris saw

(53) CP  $\rightarrow$  { RelP |  $\epsilon$  } C'  
 ( $\uparrow$  TOPIC) =  $\downarrow$  ( $\uparrow$  TOPIC PRED) = 'PRO'  $\uparrow = \downarrow$   
 ( $\uparrow$  TOPIC) = ( $\uparrow$  RTOPICPATH) ( $\uparrow$  TOPIC) = ( $\uparrow$  RTOPICPATH)  
 ( $\uparrow$  RELPRO) = ( $\uparrow$  TOPIC RELPATH) ( $\uparrow$  RELPRO) = ( $\uparrow$  TOPIC)  
 ( $\uparrow$  RELPRO PRNTYPE) =<sub>c</sub> REL

Extending the essence of this RRC analysis to ARCs is straightforward as discussed in Arnold and Sadler (2010) (see also Chatsiou (2009)), given the evidence that ARCs are syntactically integrated. They propose (54) for English (nominal) ARCs, taking the ARC to be a sister of NP in the c-structure. The meaning constructor **rel**, which assembles the meaning of an RC, whether it be restrictive or non-restrictive, is associated with the CP node. Following Potts (2005), Arnold and Sadler (2010) define a further meaning constructor, **[comma]**, which contributes the propositional content of the relative clause to the *ci* (or conventional implicature) domain. Since an account of the semantic contribution of Maltese ARCs is beyond the scope of this paper, we shall have nothing more to say here about how an account along these lines can be developed to capture the semantic contribution of Maltese ARCs.

(54) NP  $\rightarrow$  NP CP  
 $\uparrow = \downarrow$   $\downarrow \in$  ( $\uparrow$  ADJ)  
**[rel]**  
**[comma]**

A final component which we require is a treatment of resumptive pronouns as they occur in Maltese relative clauses. We adopt the approach to resumption outlined in Asudeh (2004, to appear). (True) resumptive pronouns are to be distinguished from gaps and from ‘false’ resumptives (that is, intrusive pronouns). Resumptive pronouns are grammatically licensed while intrusive pronouns are not - they are a processing or performance phenomenon. RPs are bound pronouns whereas gaps are bound variables: both are bound elements. Asudeh (to appear) (building on a distinction made in McCloskey (2006)) postulates an important distinction between so-called *syntactically active resumptives* (SARs), which are anaphorically bound, and *syntactically inactive resumptives*, (SIRs), which are syntactically gap-like (ie absent in f-structure) and hence not anaphorically bound. Asudeh shows that Hebrew and Irish have SARs that is, anaphoric resumptives.<sup>10,11</sup>

Crucial diagnostics distinguishing between these two types of true resumptive are that SARs are not island sensitive and are not subject to weak crossover effects, while SIRs (like gaps) are island sensitive and subject to weak crossover effects.<sup>12</sup> Below we will present evidence that the RPs in Maltese are syntactically active. In the approach of Asudeh (2004, to appear), SARs are treated as pronouns at f-structure, anaphorically bound to a UDF, as in the equation shown in (55). This equation states an identity between the semantics of the discourse function (i.e. the TOPIC), that is, its value in the  $\sigma$  projection, and the value of the ANTECEDENT attribute in the semantics of the RP (in f-structure, the RP itself is at the bottom of the uncertainty path).

In the resource sensitive approach to semantics in LFG using linear logic, they are removed from semantic composition by a manager resource, also shown in (55). Since the focus of this paper is purely syntactic, we will have nothing more to say

<sup>10</sup>In a SIR language, the RP is treated as the bottom of a filler-gap dependency by restricting out the relevant PRED values as in (iv) (Asudeh to appear:56). We shall have no more to say about SIRs.

$$(iv) (\uparrow \text{UDF}) \setminus \text{PRED} = \left( \uparrow \text{CF}^* \left\{ \begin{array}{l} [\text{GF-SUBJ}] \\ \text{SUBJ} \setminus \text{PRED} \end{array} \right\} \right)$$

*constraints*       $(\rightarrow \text{PRED}) = (\uparrow \text{UDF} \text{ PRED})$        $(\uparrow \text{UDF})_{\sigma} = (\rightarrow_{\sigma} \text{ANTEC})$

<sup>11</sup>We take it that Maltese has true RPs (i.e. bound pronominals) rather than intrusive pronouns. Some evidence comes from their ability (in the appropriate construction) to be bound by a quantifier which rejects an e-type interpretation, and they also have pronominal interpretations, for example in the complement of an opaque verb.

<sup>12</sup>Further properties which may be used in distinguishing between these types are reconstruction, ATB extraction and the licensing of parasitic gaps. For some discussion of these tests and their application to Maltese RRCs, see Camilleri and Sadler (to appear).

on the semantics of RPs, other than to note that the approach of Asudeh (2004, to appear) should extend straightforwardly to the cases of resumption in Maltese.

$$(55) (\uparrow \text{UDF})_{\sigma} = ((\uparrow \text{GF}+)_{\sigma} \text{ ANTECEDENT}) \\ \lambda P \lambda y.y: [(\uparrow \text{UDF}_{\sigma} \multimap ((\uparrow \text{UDF})_{\sigma} \otimes (\uparrow \text{GF}+)_{\sigma}))] \multimap ((\uparrow \text{UDF})_{\sigma} \multimap (\uparrow \text{UDF})_{\sigma})$$

With this background concerning the treatment of RRCs and ARCs in LFG in place, we now turn to the analysis of the Maltese data.

## 6 Analysis of Maltese ARCs

### 6.1 *li* Relatives

As noted above, the evidence supports the view that *li* is a complementiser, and hence that an ARC introduced by *li* has a null ( $\epsilon$ ) TOPIC. The TOPIC can be functionally identified with the within clause function (the gap strategy), or it may be associated with a resumptive pronoun (RP). The question remains as to whether the RP is syntactically active or inactive, which amounts to determining whether it shows gap like distribution with respect to the major diagnostics, weak crossover (WCO) and island sensitivity. As the following example shows, a RP (but not a gap) is possible in a WCO context.<sup>13</sup>

- (56) *Pawlu, li n-af li ħallie-t-u mart-u*  
 Paul COMP 1.SG-know COMP left-3SGF-3SGM.ACC wife-3SGM.ACC  
*baqa' ma ħariġ-x mid-dar*  
 left.3SGM.ACC NEG go out.3SGM-NEG from.DEF-house  
 Paul, whom I know that his wife left him, has not left the house since

Similarly, RPs (unlike gaps) are felicitous within syntactic islands: (57) shows an RP within a Complex NP, (58) illustrates a (grammatical) violation of the Adjunct Island Constraint, and (59) concerns the Wh-Island Constraint. This data suggests, therefore, that Maltese has *syntactically active* resumptives, in the terminology of Asudeh (to appear).

<sup>13</sup>Given that the *li* strategy permits a RP in both POSS and OBJ functions, it is theoretically possible that in this example, it is the (more deeply embedded) POSS function which corresponds to the resumptive. In this case, (56) would not constitute a case of WCO. This theoretical ambiguity does not occur in wh-relatives, which we discuss below.

- (57) *Raj-t 'l Pawlu, li n-af mara li*  
 saw-1SG ACC.Paul COMP 1SG-know woman COMP  
*t-af-u, u għid-t-l-u*  
 3SGF-know-3SGM.ACC and told-1SG-DAT-3SGM  
*j-selli-l-i għali-ha*  
 3SGM-send regards-DAT-1SG for-3SGF.ACC  
 I saw Paul, whom I know a woman that knows him, and told him to send her my regards.
- (58) *Anna, li n(ie)-ħu gost ħafna meta n(a)-ra-ha,*  
 Ann COMP 1SG-take pleasure a lot when 1SG-see-3SGF.ACC  
*mhix se t(i)-gi illum*  
 NEG.3SGF FUT 3SGF-comes today  
 Ann, whom I really enjoy when I see her, is not coming today.
- (59) *Interrogaj-t lil dak ir-raġel, li int rid-t*  
 interrogated-1SG ACC that.SGM DEF-man COMP you wanted-2SG  
*t-af min j(a)-ħseb li ra-h ħalli*  
 2SG-know who 3SGM-think COMP saw.3SGM-3SGM.ACC FUT  
*n-tellgħ-u-h xhud*  
 1-raise-PL-3SGM.ACC witness.SGM  
 I interrogated that man, whom you wanted to know whom does he think that saw him, so that we can take him (to Court) as a witness.

For ARCS in general, we assume the rule in (60). For *li* ARCS, we postulate the rule in (61), in which a TOPIC with PRED ‘PRO’ is introduced. The annotation (RELADJ  $\in \uparrow$ ) places an existential constraint, and ensures that the null TOPIC occurs only when the CP is a relative clause.

- (60) NP  $\rightarrow$  NP CP  
 $\uparrow = \downarrow$   $\downarrow \in (\uparrow \text{RELADJ})$   
 [rel]  
 [comma]

$$\begin{array}{l}
 (61) \text{ CP} \longrightarrow \begin{array}{c} \epsilon \\ (\uparrow \text{ TOPIC PRED}) = \text{'PRO'} \\ (\text{RELADJ} \in \uparrow) \\ \{(\uparrow \text{ TOPIC}) = (\uparrow \text{ RGAPPATH}) \mid \\ (\uparrow \text{ TOPIC})_{\sigma} = ((\uparrow \text{ RRPPATH}_{\sigma}) \text{ ANTECEDENT}) \} \end{array} \quad \begin{array}{c} \text{C}' \\ \uparrow = \downarrow \end{array}
 \end{array}$$

The final disjunctive functional annotation relates the TOPIC to a within clause function. Recall that a gap dependency may terminate in either a SUBJ or OBJ function in the case of *li* relatives. This is captured by defining RGAPPATH as shown in (62a). Subject to one additional constraint, which we formulate below, a RP is available in all functions, and RRPPATH is defined as in (62b), where the abbreviations ARGF and GF are defined in (62c). In (62a), *Constraints* stands for a collection of off-path conditions which capture certain island conditions - others follow from the definition of the path itself (for example, this excludes ADJ and so captures the Adjunct Island Constraint).

- (62) a.  $\text{RGAPPATH} \equiv \{ \text{COMP} \} * \text{SUBJ} \mid \text{OBJ} \text{ Constraints}$
- b.  $\text{RRPPATH} \equiv \{ \text{ARGF} \} * [\text{ADJ} \in] * \text{GF}$
- c.  $\text{GF} \equiv \{ \text{SUBJ}, \text{OBJ}, \text{DATOBJ}, \text{POSS} \}$   
 $\text{ARGF} \equiv \{ \text{COMP}, \text{SUBJ}, \text{OBJ}, \text{OBL} \}$

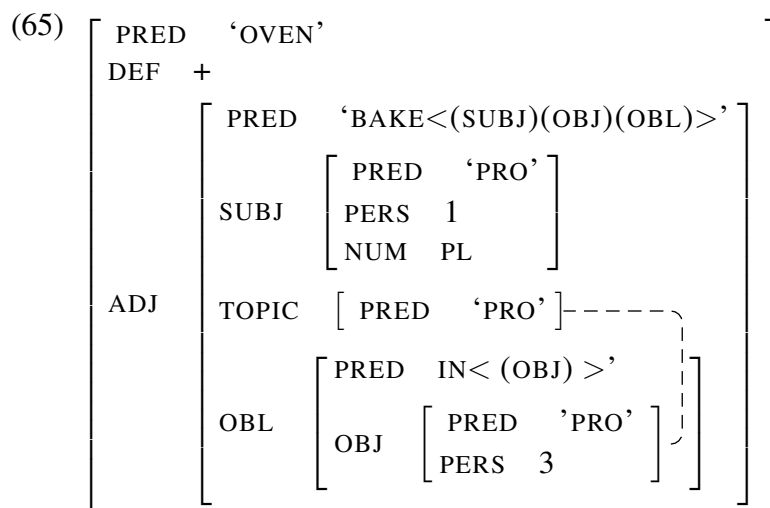
A restriction on the occurrence of an RP is that it is subject to the Highest Subject Position Restriction: this can be formulated as (63), following Asudeh (2004): this excludes a resumptive in highest subject position. Additionally, we noted above that a gap appears to be infelicitous in highest OBJ position when the head noun is a proper noun. Given that further research is required to determine the status of this restriction, we assume for the moment that it is not a narrowly syntactic restriction, and permit both gap and RP for OBJs in general.

- (63) Anti-Locality Condition:  
 $(\uparrow_{\sigma} \text{ ANTECEDENT}) \neq ((\uparrow \text{ SUBJ}) \text{ TOPIC})_{\sigma}$

Under this analysis, a *li* ARC such as (24), repeated here as (64), will receive the analysis shown in (65). The RP is simply a pronominal at f-structure which

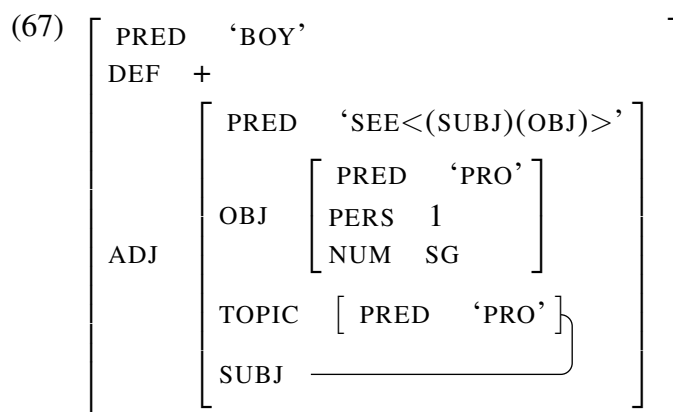
is anaphorically related to the TOPIC. The establishment of this anaphoric linkage (through the semantic structure) ensures that the structure satisfies the *Extended Coherence Condition* which requires that the discourse functions TOPIC and FOCUS be linked to the predicate argument structure of the sentence in which they occur, either by anaphorically binding an argument or by being functionally identified with an argument. Here we informally represent this relationship of anaphoric control (which is not itself properly part of the f-structure representation) by means of a dotted line linking the TOPIC and the RP.

- (64) *Il-forn, li ħmej-na l-ħobž fi-h*  
 DEF-oven COMP baked-1PL DEF-bread in-3SGM.ACC  
 The oven, in which we baked the bread



A *li* ARC such as (16) repeated here as (66), involves a gap, and will be analysed as in (67), the reentrancy between the TOPIC and the within clause function being established by the uncertainty equation ( $\uparrow$  TOPIC) = ( $\uparrow$  RGAPPATH) in (61) above.

- (66) *It-tifel, li (\*hu) ra-ni lbieraħ*  
 DEF-boy COMP (\*he) saw.3SGM-1SG.ACC yesterday  
 The boy, who saw me yesterday



## 6.2 Wh Relatives

We now consider the wh-relatives introduced in section 4. To summarize, wh-relative ARCs involve a fronted wh-element in the TOPIC position, and always contain gaps rather than RPs. As gap relatives, they are subject to island constraints. As the data presented in section 4 indicate, the wh-pronoun may be embedded within a PP. When the dependency ends in SUBJ|OBJ|DATOBJ then the antecedent must be [+Human] and [+Def]. In other cases (that is, in cases of pied-piping), the antecedent is not required (by virtue of the construction itself) to be definite or human, although of course the choice of relative pronoun will be determined by the nature of the antecedent. These data observations suggest the following annotated rule:<sup>14</sup>

$$(68) \text{ CP} \longrightarrow \begin{array}{c} \text{XP} \\ (\uparrow \text{ TOPIC}) = \downarrow \\ (\uparrow \text{ TOPIC}) = (\uparrow \text{ RWHGAPPATH}) \\ (\uparrow \text{ RELPRO}) = (\uparrow \text{ TOPIC (OBL* OBJ)}) \end{array} \quad \begin{array}{c} \text{C}' \\ \uparrow = \downarrow \end{array}$$

The last annotation above covers the cases of pied piping with PP TOPICS, as in examples (33)-(39), in which the RELPRO is embedded within the TOPIC, as OBJ (of the P), or more deeply as OBL\* OBJ, and NP TOPICS in which the RELPRO is the TOPIC. It remains to define RWHGAPPATH, taking account of the restriction that relativisation on the term functions SUBJ, OBJ and DAT OBJ require the antecedent to be human and definite. There are several different ways in which this constraint may be expressed. One possibility is to associate an inside-out statement with

<sup>14</sup>We take cases in which *fejn* occurs as TOPIC to be ADJ relatives.

the bottom of the dependency (in NP gap cases), requiring the antecedent to be ANIM = HUM and DEF = +. In PP gap cases, the function at the bottom of the dependency (INDIRGF, that is, OBL or ADJ ∈), is not subject to this constraint.

$$(69) \text{ RWHGAPPATH} \equiv \left\{ \text{COMP} \right\}^* \text{ DIRGF} \mid \text{INDIRGF} \\ \text{Constraints} \quad @\text{DEFHUM}$$

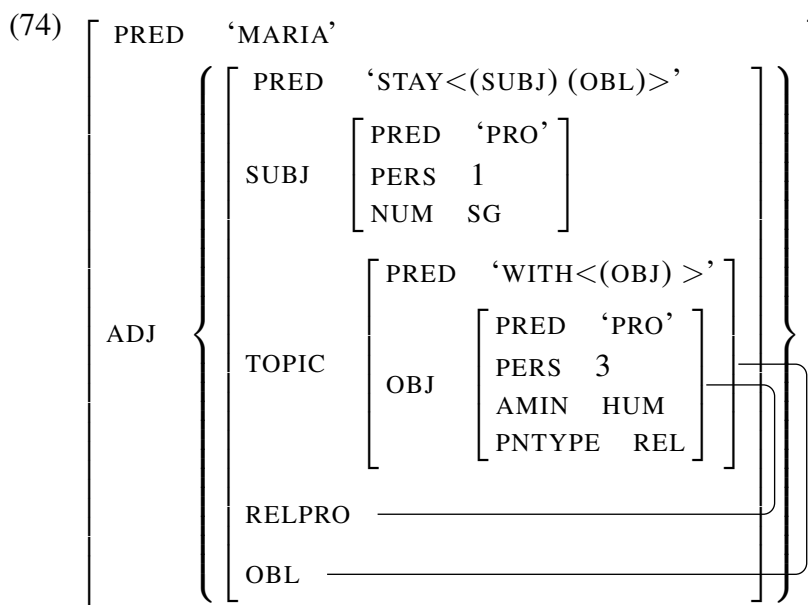
$$(70) \text{ DIRGF} \equiv \text{SUBJ} \mid \text{OBJ} \mid \text{DATOBJ}$$

$$(71) \text{ INDIRGF} \equiv \text{OBL} \mid \text{ADJ} \in$$

$$(72) \text{ DEFHUM} \equiv \left( (\text{RELADJ} \in \text{COMP}^* \uparrow) \text{DEF} \right) = + \\ \left( (\text{RELADJ} \in \text{COMP}^* \uparrow) \text{ANIM} \right) = \text{HUM}$$

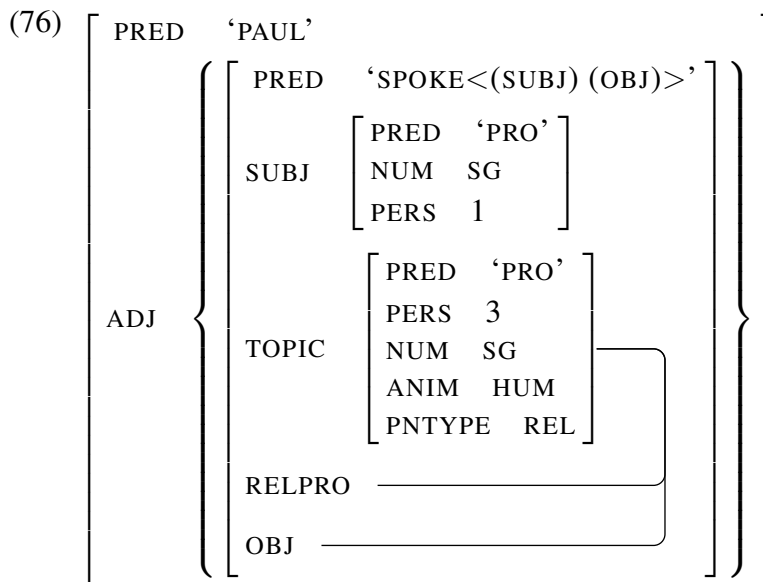
Under this analysis, wh-relatives such as (73) and (75) will be associated with the f-structures shown in (74) and (76) respectively (irrelevant attributes are suppressed for clarity in these f-structures).

- (73) *Marija, ma' min n(o)-qghod fil-brejk*  
 Mary, with who 1SG-stay in.DEF-break  
 Mary, with whom I stay during breaktime





- (75) *Pawlu, 'l min kellim-t*  
 Paul, ACC.who spoke-1SG  
 Paul, whom I spoke to



In both (74) and (76) there is a dependency between TOPIC and an argument (or adjunct) GF. This is established by the functional uncertainty equation ( $\uparrow$  TOPIC) = ( $\uparrow$  RWHGAPPTH) in (68) and essentially serves to integrate or 'license' the discourse function as required by the Extended Coherence Condition (Bresnan and Mchombo, 1987) which stipulates that a discourse function must be anaphorically or functionally associated with an argument (or adjunct) function. A second re-entrancy associates the RELPRO with the TOPIC in (76) and with the TOPIC OBJ in the case of pied piping in (74): this dependency is established by the equation ( $\uparrow$  RELPRO) = ( $\uparrow$  TOPIC (OBL\* OBJ)) in (68).

Finally, note that while RPs are completely and systematically excluded from those wh-ARC constructions which permit gaps, they are found in wh-relatives involving island violations (and in cases of weak crossover). The following examples illustrate the grammatical use of RPs in wh-islands and ADJ islands respectively.

(77) *Marija, 'l min int rid-t t-kun t-af min (hi)<sub>i</sub> t-aħseb*  
 Maria, ACC.who you want-2SG 2SG-be 2SG-know who she 3SGF-think  
*li ra-ha<sub>i</sub>*  
 COMP saw.3SGM-3SGF.ACC

Mary, who you wanted to know who she thinks that saw her...

(78) *Anna, 'l min lanqas kon-t għaraf-t għajr x'hin*  
 Ann, ACC.who NEG was-1SG recognised-1SG except what.time  
*qbiż-t-ha, vera nbidl-(e)t*  
 overtook-1SG-3SGF.ACC really changed-3SGF

Ann, who I hadn't recognised except when I overtook her, has really changed

The question which arises is how best to account in the grammar for the occurrence of these RPs. If we are correct in our claim that Maltese RPs in relative clause constructions are syntactically active, then they must be associated with an anaphoric binding constraint, and hence we should specify the appropriate anaphoric dependency, as we did in the case of *li* relatives. But unlike the case of *li* relatives, where both gap and RP are permitted in a range of positions, in wh-relatives, RPs are *only* permitted in cases such as island violations. This means that the RWHRPPATH would have to be specified as essentially the complement of the RWHGAPPATH. This raises a number of interesting theoretical issues for future work, in particular about the analysis of RPs in language which show both free variation and complementary distribution (in different constructions) (see Falk (2002) for some discussion in the context of Modern Hebrew). Moreover, as we will see in the following section, the distribution of gap and RP is different again in cases of internally headed wh-relatives. It seems likely, therefore, that the observed patterns of distribution of RPs in wh-relatives result from the interaction of further principles with a completely permissively defined anaphoric binding constraint such as that shown in (79b), in which GF stands for any grammatical function.

(79) a.  $(\uparrow \text{TOPIC})_{\sigma} = ((\text{RWHRPPATH})_{\sigma} \text{ ANTECEDENT})$

b.  $\text{RWHRPPATH} \equiv [ \text{GF} (\in) ]^* \text{SUBJ} | \text{OBJ} | \text{DATOBJ}$

$$\begin{array}{lcl}
 (80) \text{ CP} & \longrightarrow & \text{XP} & \text{C}' \\
 & & (\uparrow \text{ TOPIC}) = \downarrow & \uparrow = \downarrow \\
 & & \{(\uparrow \text{ TOPIC}) = (\uparrow \text{ RWHGAPPATH}) \mid \\
 & & (\uparrow \text{ TOPIC})_{\sigma} = ((\text{RWHRPPATH})_{\sigma} \text{ ANTECEDENT}) \} \\
 & & (\uparrow \text{ RELPRO}) = (\uparrow \text{ TOPIC (OBL* OBJ)})
 \end{array}$$

## 7 Internally Headed ARCs

In addition to the wh and non-wh ARCs discussed in the previous section, Maltese makes use of a range of other clause types in its non-restrictive relative clauses. These additional clause types differ in several particulars from each other, and raise many interesting issues for analysis, but they share the characteristic of appearing to contain an additional internal or epithetic head. Two such further structures involve a fronted phrase immediately following *li*, and thus are instances of non-wh ARCs. The fronted phrase is either a pronominal (associated with a clause internal RP or a (fixed) epithetic phrase associated with a clause internal RP or gap.

- (81) *It-tifel, li lilu raj-t-u lbieraħ,*  
 DEF-boy COMP him saw-1SG-3SGM.ACC yesterday  
*n-af-u*  
 1SG-know-3SGM.ACC  
 Lit: The boy, who I saw saw yesterday, I know him

- (82) *L-mewt tat-tifel, li ħaġa bħal din ma*  
 DEF-death of.DEF-boy COMP thing.SGF like this.SGF not  
*stennej-ni-ha qatt*  
 wait-1PL-3SGF.ACC never

Lit: The death of the boy, which something like this we never expected

In the current paper, we shall have nothing further to say about these types, providing only a brief discussion and analysis of one further subtype, a type containing an epithetic relative phrase (or an ‘additional internal head’ in the terminology of de Vries (2006)), containing the wh-word *liema* ‘which’, similar to the English *Kim refused a drink of beer, which beverage she never touches*. (Arnold, 2007, 277).

### 7.1 Internally Headed Wh-Relatives

The following exemplifies a further construction which has an epithetic wh-phrase:

- (83) *Pawlu u Salvu, liema rġiel it-tellgħ-u l-Qorti*  
 Paul and Salvu which men PASS-raised.3-PL DEF-court  
 Paul and Salvu, which men were taken to Court

The filler-gap dependency may be short distance, as in (83) or long distance, as shown in (84).

- (84) *Pawlu u Salvu, liema rġiel qal-u li t-tellgħ-u l-Qorti*  
 Paul and Salvu which men said-3PL COMP PASS-raised.3-PL DEF-Court  
 Paul and Salvu, which men they said that were taken to Court

Epithetic wh-relative ARCs involve an element such as *liema* ‘which’ within the TOPIC: we view *liema* as some sort of wh-relative pronoun in specifier position. The TOPIC may be a NP: in this case the factors governing the obligatory (or optional) presence of an RP appear to be quite complex (see (85)-(87)), or a PP containing *liema*: in the latter case, the TOPIC is obligatorily associated with a gap (as with wh-relatives in general). The distribution of gap and RP is summarised in (92).

- (85) *Pawlu u Salvu, liema rġiel raj-t\*(-hom) ilbieraħ*  
 Paul and Salvu which men saw-1SG-3PL.ACC yesterday  
 Paul and Salvu, which men I saw yesterday
- (86) *Pawlu u Salvu, liema rġiel xi nies ra-w(-hom) ilbieraħ*  
 Paul and Salvu which men some people saw-3PL-3PL.ACC yesterday  
 Paul and Salvu, which men some people saw yesterday
- (87) *Pawlu, liema mistieden ma bgħatt-nie-l-u-x invit formali*  
 Paul which guest.SGM NEG sent-1PL-DAT-3SGM-NEG invitation formal  
 Paul, which guest we did not send a formal invitation

- (88) *Il-martell, b'liema biċċa għodda irnexxie-l-i*  
 DEF-hammer with.which piece tool succeeded.3SG-DAT-1SG  
 The hammer, with which piece of tool I managed (ADJ)
- (89) *Il-Palazz, f'liema post t-laqqgħ-u l-mistednin*  
 DEF-palace in.which place PASS-gathered-3PL DEF-guests  
 The palace, in which place the guests were gathered
- (90) *Il-palazz, f'liem post beħsieb-hom ilaqqgħ-u l-mistednin*  
 DEF-palace in.which place think-3PL gather.3-PL DEF-guest.PL  
 The palace, in which place they are thinking of gathering the guests
- (91) *It-triq, minn liem (waħda) n-għaddi kuljum*  
 DEF-road from which one 1SG-pass everyday  
 The road, along which I pass everyday

(92) **Summary on Internally Headed wh-relatives**

GF	Strategy
SUBJ	Gap
OBJ	Gap/RP
DAT OBJ	Gap/RP
OBL	Gap
ADJ	Gap

The starting point for an analysis of these epithetic wh-relatives is the analysis of wh-relatives in general, essentially that given in (80). In the case of epithetic relatives, the relative pronoun corresponds to a SPEC function (within the TOPIC). The additional specification in (93) permits the wh-pronoun to appear as a specifier within a fronted NP or PP. The RP strategy is available on direct (NP) functions, and the previously defined RWHRPPATH already covers these cases.

(93) ( $\uparrow$  RELPRO) = ( $\uparrow$  TOPIC (OBJ) SPEC)

The account of wh-relatives can then be extended to include internally headed wh-ARCs as follows.

$$\begin{array}{lcl}
 (94) \text{ CP} & \longrightarrow & \text{XP} & \text{C}' \\
 & & (\uparrow \text{TOPIC}) = \downarrow & \uparrow = \downarrow \\
 & & \{ (\uparrow \text{TOPIC}) = (\uparrow \text{RWHGAPPATH}) \mid \\
 & & (\uparrow \text{TOPIC})_{\sigma} = ((\text{RWHRPPATH})_{\sigma} \text{ ANT}) \} \\
 & & (\uparrow \text{RELPRO}) = (\uparrow \text{TOPIC} [(\text{OBL})^* \text{OBJ}] \mid [(\text{OBJ}) \text{SPEC}])
 \end{array}$$

While this is technically feasible, the need to attach a condition to the additional RPPATH specifying that the relative clause is epithetic is clumsy and itself raises a number of interesting further questions concerning the nature of resumption in this construction.

## 8 Conclusion

In this paper we have presented an overview of the syntax of ARCs in Maltese, an area of Maltese grammar which has received very little attention to date. We have shown how an analysis of the major types of Maltese ARCs can be given in the framework of Lexical Functional Grammar (LFG), building on previous LFG work on relative clauses in LFG. We argued that Maltese ARCs are syntactically integrated rather than syntactically orphaned. An important issue in the analysis of any relative clauses involving resumptive pronouns concerns the status of those pronouns, and we have presented arguments that RPs in Maltese ARCs are syntactically integrated, following an approach to such RPs developed in Asudeh (2004 and to appear). Finally, we have provided a very preliminary sketch of some epithetic ARCs in the language, and shown how an analysis might be extended to these further sets of data.

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