

**Restrictive Relative Clauses in Maltese**

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## Abstract

This paper provides a descriptive overview of restrictive relative clauses (henceforth RRCs) in Maltese, a construction which has received little attention to date and which is poorly described in existing grammars. We outline an LFG approach to the facts we describe building on existing analyses, and notably on Asudeh 2004/to appear, as far as the treatment of resumption in RRCs is concerned. Further we explore some issues raised by Maltese for approaches to resumption.

# 1 Maltese Restrictive Relative Clauses

Maltese is 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. Our data judgements are based mainly on the Naxxari dialect, a North-Western dialectal variety spoken by native speaker author: we note where different judgements would hold in formal (high register) Maltese. We can distinguish between three broad types of RRC in Maltese (i) *li* initial RRCS, (ii) *wh*-fronted RRCS and (iii) ‘partitive’ RRCS introduced by *milli* (from.COMP). The latter category raise some interesting questions of analysis, but for reasons of space we exclude them from consideration in this paper.

## 1.1 *li* Relatives

The invariant element *li* is found introducing a range of clause types (including relative clauses) and is most likely a cognate of the element *li*, *illi*, *yalli* found in the Arabic vernaculars (which has received a range of different analyses including COMP, DET and RELPRON). We take the evidence to indicate that Maltese *li* is a COMPLEMENTISER, which may (for example) introduce an embedded complement to a verb (1), a noun complement clause (2) and a sentential subject (3).

- (1) *N(a)-ħseb li n-af-u*  
1SG-think that 1SG-know-3SGM.ACC  
I think that I know him.
- (2) *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.
- (3) *Li l-ġimgħa 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

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<sup>†</sup>We thank Doug Arnold, Ash Asudeh, Mary Dalrymple and participants at LFG 2011 for comments and feedback.

That the coming week will be a holiday is a surprising statement.

There are few restrictions on the use of *li* in RRCs: it may be used in relativization on many GF functions and co-occurs with both gaps and resumptive pronouns, with both definite and indefinite antecedents and introduces both local and long distance dependencies. In Maltese, gap and RP are not in complementary distribution and are freely interchangeable in many positions. However it shows the familiar **Highest Subject Restriction** (Borer, 1984; McCloskey, 1990) which excludes a resumptive pronoun from this position (compare (4) and (5)), and also does not permit an RP in the highest OBJ position in relatives with definite (or quantified) heads (see (6)), in contrast to embedded OBJs (7).

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

(5) *It-tifel li qal-u-l-i li (hu) kien ra-hom*  
DEF-boy COMP said-3PL-DAT-1SG COMP he was.3SGM  
saw.3SGM.3PL.ACC  
the boy who they told me that saw them

(6) *Iltqat-t mat-tifel li kellem*  
met-1SG with.DEF-boy COMP spoke.3SGM  
I met with the boy he spoke to.

(7) *Kull tifel li ħsib-t li kellim-t-(u) lbieraħ*  
All boy COMP thought-1SG COMP spoke-1SG-(3SGM.ACC) yesterday  
every boy that I thought I spoke to yesterday

(8) shows relativisation on a  $OBJ_{\theta}$  function: since the morphology does not provide an appropriate affixal resource, a gap is obligatory. There is, however, what we might call a dative pronominal affix and goal/recipient arguments may be gaps (under certain conditions) or resumptives, as shown in (9). The possibility of a gap, and the fact that the dative marker itself does not appear to share the characteristics of a typical preposition in the language, suggest to us that the affixal elements *-li*, *-lu* etc. corresponds to a direct function, and so we suggest that they mark a particular thematically restricted object, namely  $OBJ_{goal}$ .<sup>1</sup>

(8) *Il-grammatika/somma li għid-t-l-i għallim-t-hom*  
DEF-grammar/sum COMP told-1SG-DAT-2SG taught-1SG-3PL.ACC  
the grammar/ a sum that I told you I taught them

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<sup>1</sup>Note that  $OBJ_{\theta}$  is a collection of (thematically restricted) functions: Maltese is not alone in providing a morphological means of expression for just the  $OBJ_{goal}$  among these functions. In what follows we sometimes mention  $OBJ_{goal}$  explicitly (and redundantly) alongside  $OBJ]_{\theta}$  for clarity.

- (9) *Ir-raġel li bgħatt-(lu) l-ittra wegibni*  
 DEF-man COMP sent.1SG.(-DAT.3SGM) DEF-letter responded.3SGM.1SG  
 the man that I sent him the letter responded

A gap is not licensed as OBL OBJ or as POSS.

- (10) *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
- (11) *It-tarbija li n-af 'l omm-\*(ha)*  
 DEF-baby COMP 1SG-know ACC.mother-3SGF.ACC  
 the baby whose mother I know

The following summarises the distribution of RRCs introduced by *li*, a distribution which raises some interesting questions for further work. We suggest that the underlying pattern is that a resumptives and gaps are in free distribution, subject to some additional restrictions.

(12) Summary on Li Relatives

GF	IDD	LDD	
SUBJ	Gap	Gap/RP	Highest Subject Restriction
OBJ	Gap/RP	Gap/RP	Indefinite RCs
OBJ	Gap	Gap/RP	Definite/Quantified RCs
OBJ <sub>θ</sub>	Gap	Gap	
OBJ <sub>goal</sub>	Gap/RP	RP	
OBL OBJ	RP	RP	
POSS	RP	RP	

## 1.2 wh Relatives

Maltese also has *wh*-relatives, introduced by a range of *wh*- pronouns including: *min* ‘who’ (SUBJ), *l min* ‘whom’ (OBJ, OBJ<sub>goal</sub>), *fejn* ‘where’ (locative ADJ, OBL), and *xiex* ‘which’ (OBL OBJ).<sup>2</sup> The inanimate pronoun *xiex* occurs only as the complement of a preposition: its counterpart in direct function positions is *x*’ and this element is grammatical in *wh*-questions but not in RRCs. The result of this is that relativisation with the *wh*-strategy on direct (nominal) grammatical functions is only possible for animate elements. With direct functions the antecedent must also be definite. Finally, *wh*-relatives always involve a gap rather than a RP.<sup>3</sup> Examples (13) to (15) illustrate relativisation on direct functions (with definite antecedents).

<sup>2</sup>A further *wh*-pronoun, *ma*, ‘what’ exists in the dialect but is rather archaic and used only in very restricted and highly conventionalised contexts. We do not take it to be productive.

<sup>3</sup>But see below on relativization in islands.

- (13) *Ir-raġel min għid-t-l-ek fetah-l-i il-bieb*  
 DEF-man who told-1SG-DAT-2SG opened.3SGM-DAT-1SG DEF-door  
 the man who I told you opened the door for me SUBJ
- (14) *It-tifel 'l min n(a)-ħseb j-għallem-\*u*  
 DEF-boy ACC.who 1SG-think 3-teaches.3SGM-3SG.ACC  
 the boy who I think he teaches OBJ
- (15) *It-tifel 'l min għadni kemm xejjir-t-\*l-u*  
 DEF-boy ACC.who yet.1SG just waved-1SG-DAT-3SGM  
 the boy who I just waved to OBJ<sub>goal</sub>

(16) to (18) involve relativisation on non-term functions (OBL and ADJ) and permit indefinite antecedents.<sup>4</sup>

- (16) *(Ir)-raġel ma'/fejn/għand min ħsib-t li raj-t-ek*  
 (DEF)-man with/near/at who thought-1SG COMP saw.1SG-2SG.ACC  
 the/a man with/near/next to whom I thought I saw you OBL
- (17) *(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/a bucket which I usually get the water from the well with
- (18) *(It-)triq minn fejn (mnejn) n-għaddi*  
 (DEF)-street from where (from.where) 1SG-pass  
 the/a street from where I pass ADJ

(19) summarises for RRCs introduced by a wh-relative pronoun.

(19) Summary on Wh Relatives

ANT	GF		
DEF	SUBJ	Gap	<i>min</i> : Human dialect only
DEF	OBJ	Gap	<i>'l min</i> : Human dialect only
DEF	OBJ $\theta$	Gap	<i>'l min</i> : Human dialect only
DEF	DATOBJ	Gap	<i>'l min</i> : Human dialect only
	OBL	Gap	dialect + standard
	ADJ	Gap	dialect + standard

In summary, we find gaps and RP in overlapping distribution in *li* RRCs: we assume that RP is available everywhere subject to specific constraints (eg HSR). Wh-relatives involve gaps. The antecedent of a wh-RRC on a direct (term) functions is required to be both definite and human. In the following section, we outline an analysis of this data building directly on existing analyses of RRCs in LFG.

<sup>4</sup> Relativisation on POSS is not possible with the wh-strategy:

- (i) *\*It-tifel 'l min n-af lil omm-u*  
 DEF-boy ACC.who 1SG-know ACC mother-3SGM.ACC  
 The boy whom I know his mother

## 2 Basic Analysis

We start with an account of gapped RRCs, drawing on the analysis of English RRCs in Dalrymple (2001). The facts outlined above concerning the distribution of the (invariant) element *li* suggest that it is a complementiser. A RRC introduced by *li* has a null ( $\epsilon$ ) TOPIC: we assume the PSR in (20) for such relative clauses.<sup>5</sup> The annotation  $(\text{ADJ} \in \uparrow)$  places an existential constraint ensuring that the null TOPIC occurs only when the CP is a relative clause.<sup>6</sup> Subject to general syntactic constraints, a gap may correspond to any direct (that is, non-prepositional) GF of a clause. The path DIRGF is defined in (24). The TOPIC is identified with some within-clause function defined by means of the path RGAPPATH, defined in (21).

$$(20) \text{ CP} \longrightarrow \begin{array}{c} \epsilon \\ (\uparrow \text{ TOPIC PRED}) = \text{'PRO'} \\ (\text{RELADJ} \in \uparrow) \\ (\uparrow \text{ COMPFORM}) =_c \text{ LI} \\ (\uparrow \text{ TOPIC}) = (\uparrow \text{ RGAPPATH}) \end{array} \quad \begin{array}{c} \text{C}' \\ \uparrow = \downarrow \end{array}$$

$$(21) \text{ RGAPPATH} \equiv \{ \text{COMP} \} * \text{ DIRGF} \\ \text{Constraints}$$

Turning now to *wh*-relatives, in these structures a *wh*-phrases (NP or PP) appears in the specifier of CP position. If the relative dependency ends in a direct (NP) function, that is SUBJ, OBJ, OBJ <sub>$\theta$</sub>  or DATOBJ, then the antecedent is subject to the constraint that it must be [+Human] and [+Def]. The TOPIC is identified with some within-clause function defined by means of the pathname RGAPPATH, defined in (23). Finally, in the case of *wh*-relatives, the RELPRO may correspond to either the TOPIC or an OBJ function embedded within the TOPIC - the latter in the case of pied-piping in examples such as (16) and (17).

$$(22) \text{ CP} \longrightarrow \begin{array}{c} \text{XP} \\ (\uparrow \text{ TOPIC}) = \downarrow \\ (\uparrow \text{ TOPIC}) = (\uparrow \text{ RWHGAPPATH}) \\ (\uparrow \text{ RELPRO}) = (\uparrow \text{ TOPIC (OBL* OBJ)}) \end{array} \quad \begin{array}{c} \text{C}' \\ \uparrow = \downarrow \end{array}$$

$$(23) \text{ RWHGAPPATH} \equiv \begin{array}{c} \{ \text{COMP} \} * \text{ DIRGF} \quad | \text{ INDIRGF} \\ \text{Constraints} \quad @\text{DEFHUM} \end{array}$$

$$(24) \text{ DIRGF} \equiv \text{SUBJ} | \text{OBJ} | \text{OBJ}_{\text{goal}} | \text{OBJ}_{\theta}$$

$$(25) \text{ INDIRGF} \equiv \text{OBL} | \text{ADJ} \in$$

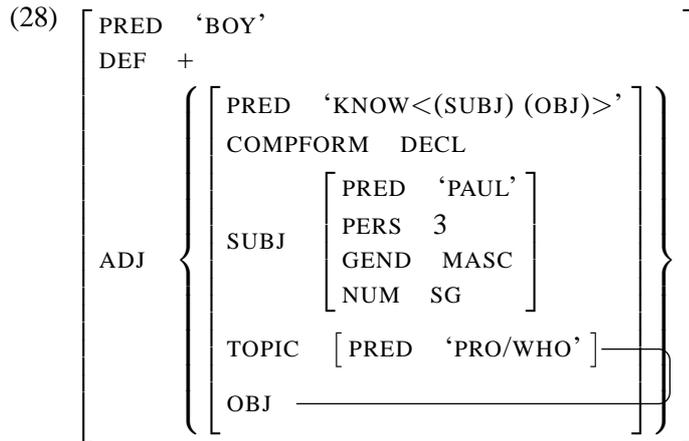
$$(26) \text{ DEFHUM} \equiv \begin{array}{c} ((\text{RELADJ} \in \text{COMP} * \uparrow) \text{ DEF}) = + \\ ((\text{RELADJ} \in \text{COMP} * \uparrow) \text{ ANIM}) = \text{HUM} \end{array}$$

<sup>5</sup>The element *li* is obligatory in null TOPIC relatives but obligatorily absent in *wh*-relatives.

<sup>6</sup>We assume for the moment that all Maltese verbal complements are COMPs.

An f-structure along the lines of (28) will result for *li* or *wh* relatives like (27) (we omit some minor morphosyntactic features here).

- (27) *Rajt lit-tifel li /'l min j-af Pawlu*  
 Saw.1SG ACC.DEF-boy COMP /who 3SGM-know Paul  
 I saw the boy that Paul knows



With this in place, we now turn to the analysis of the nature, occurrence and distribution of the resumptive pronoun in RRCs, and in particular to the questions (i) what is the correct analysis of the resumptive strategy and (ii) how is the above supplemented to account for RPs? We begin with a brief overview of key work in LFG on resumption.

### 3 Resumption in LFG

A key distinction is that made between true resumptives, which are grammatically licensed bound pronouns, and false resumptives, or intrusive pronouns, which are not grammatically licensed (but might arise in performance, sometimes due to processing constraints). A number of properties distinguish true resumptives from intrusive pronouns. Asudeh (2004) lists the following (drawing notably on Chao and Sells (1983) and using English for illustrative purposes although English in fact shows intrusive rather than resumptive behaviour): (i) true resumptives, but not intrusive pronouns, permit binding by a quantifier resisting an e-type interpretation (*every, each, no - I'd like to review every book that Mary couldn't remember if she'd read RP/\*IP before*); (ii) true resumptives, but not intrusives, support a list answer: *Which of the linguists do you think if Mary hires RP/\*IP everyone will be happy? — Chris, Daniel or Bill*; (iii) true resumptives, but not intrusives, support functional answers to questions.

As pronouns, RPs are subject to some interpretive restrictions. As noted by Doron (1982) they do not permit *de dicto* or non-specific readings, so that in *Dani*

will find the woman that he is looking for (RP), the RP would receive a *de dicto* reading; and they do not permit pair-list answers to wh-questions such as *Which woman did every man invite (RP)?* (Engdahl, 1980; Sharvit, 1999)

Asudeh (2004) develops an approach to true resumptives in LFG building on the twin insights that (i) they are syntactically pronouns and (ii) they are surplus resources which are ultimately removed from semantic composition. As syntactic pronouns, RPs are anaphorically bound elements. In his treatment of Irish, the complementisers themselves introduce the equations identifying the discourse functions involved in long distance dependencies: (29a) is the gap-binding complementiser *a* (which causes lenition of the following element) and (29b) is the (nasal mutating) *a* found in RP marked dependencies. (30) shows the manager resource which consumes a pronominal meaning and outputs an identity function on the antecedent.

$$(29) \text{ a. } aL: (\uparrow \text{UDF}) = (\uparrow \text{COMP UDF}) \mid (\uparrow \text{UDF} = (\uparrow \text{GF}) \text{ (Irish)})$$

$$\text{b. } aN: (\uparrow \text{UDF})_\sigma = (\uparrow \text{GF}_\sigma \text{ ANT}) \text{ (Irish)}$$

$$(30) \lambda P \lambda y.y: [(\uparrow \text{UDF}_\sigma \multimap ((\uparrow \text{UDF})_\sigma \otimes (\uparrow \text{GF}^+)_\sigma)] \multimap ((\uparrow \text{UDF})_\sigma \multimap (\uparrow \text{UDF})_\sigma)$$

While Asudeh (2004) argues that (true) RPs are simply pronouns at f-structure, subject to anaphoric binding, an alternative view is taken in Falk (2002), namely that pronouns may lack a PRED value just in case they are functionally identified with a discourse function: functional identification is introduced lexically (by the pronoun itself) and mediated by reference to a  $\rho$  projection containing the referential elements in the discourse as shown in (31).

$$(31) f \in \rho^1(\uparrow \rho) \wedge (\text{DF } f) \Rightarrow \uparrow = f$$

In subsequent work, and building on an insight of McCloskey (2006), Asudeh (2011, to appear) distinguishes two types of true resumptives, which he refers to as *syntactically active resumptives* (SARS) and *syntactically inactive resumptive* (SIRs). Both types of resumptive receive the same treatment in the syntax-semantics interface, that is, they are removed by a manager resource. SARS do not display gap-like properties in the syntax and are anaphorically bound pronouns in the syntax: the RPs of Hebrew and Irish are of this type. On the other hand, (SIRs) are syntactically gap-like (i.e. they are functionally controlled): the RP is treated as the bottom of a filler-gap dependency by restricting out the pronominal PRED value, as shown in footnote 7. Effectively, these RPs are aubible gaps. Asudeh (2011, to appear) takes the RPs of Swedish and Vata to be of this type.<sup>7</sup>

<sup>7</sup>The functional uncertainty statement for Swedish (with RPs only in SUBJ function), is as in (ii).

$$(ii) (\uparrow \text{UDF}) \setminus \text{PRED} = \left\{ \begin{array}{l} (\uparrow \text{CF}^* \quad \{ \quad [ \text{GF-SUBJ} ] \quad \mid \quad \text{SUBJ} \setminus \text{PRED} \quad \}) \\ \text{constraints} \quad (\rightarrow \text{PRED}) = (\uparrow \text{UDF PRED}) \quad (\uparrow \text{UDF})_\sigma = (\rightarrow_\sigma \text{ ANTEC}) \end{array} \right.$$

SAR and SIR pronouns are distinguished by their behaviour in relation to a number of syntactic diagnostics, summarised in (32). The most robust diagnostics are weak crossover (WCO) and behaviour in relation to syntactic islands; diagnostics such as whether reconstruction and parasitic gaps are licensed are less robust because it is less clear that the relevant property is entirely syntactic.

	SIR	SAR	
	Yes	Yes	
	Yes	No	
(32)	Yes	No	Asudeh (to appear)
	Yes	No	
	Yes	No	
	Yes	No	

## 4 Maltese Resumptives

In this section we consider the nature of the resumptive elements in Maltese relative clauses. We show first that these elements are indeed true resumptives and not intrusive pronouns, and then consider their status with respect to the SIR/SAR distinction.

(33) shows that a resumptive may be bound by a quantifier resisting an e-type interpretation (Maltese *kull* ‘every’ is one such element). (34) shows that the pronoun in question supports a list answer (and so is a resumptive), and (35) demonstrates that it supports a functional answer to a wh question. Together, these examples then support the conclusion that Maltese has true resumptives rather than intrusive pronouns in these contexts.

- (33) *Kull tifel li ħsib-t li kellim-t(u) lbieraħ*  
 every boy COMP thought-1SG COMP spoke-1SG-(3SGM.ACC) yesterday  
 Every boy that I thought I spoke to yesterday

- (34) *Liem mil-lingwist-i t-(a)ħseb li jekk Marija*  
 Which from.DEF-linguist-PL 3SGF-think COMP if Mary  
*jirnexxie-l-ha t-ħaddm-u kulħadd i-kun kuntent?*  
 succeed-DAT-3SGF 3SGF-employ-3SGM.ACC everyone 3-be.SGM happy  
 Which of the linguists do you think that if Mary succeeds to employ, every-  
 one will be happy?  
 ’l Mario, ’l John, jew ’l Salvu

- (35) *Liem hija l-mara li kull ragel j-af lil*  
 which COP.3SGF DEF-woman COMP every man 3-knows-SGM ACC  
*omm-\*(ha)*  
 mother-3SGF.ACC

Which is the woman whom every man knows her mother?

- 'l Marija (Maria)
- 'l **martu** (his wife)
- \*Pawlu, 'l Marija u Ganni 'l Rita

Likewise, we can show that resumptives in Maltese *do* indeed show the interpretive properties typical of pronouns. The interpretation in (36) is that there is a specific woman that Daniel will find. As indicated above, (35) shows that a pronoun (unlike a gap) fails to permit a pair-list answer.

- (36) *Daniel ghad i-sib il-mara li Marija t-(a)hseb*  
Daniel will 3-find-SGM-find DEF-woman COMP Marija 3SGF-thinks  
*li il-u j-fittix-(ha)*  
COMP long time-3SGM 3SGM-search-3SGF.ACC  
Daniel will find the woman that Maria thinks he has been looking for a long time

We conclude that Maltese has true resumptives in restrictive relative clauses, and turn to the question of whether they are syntactically active or syntactically inactive pronouns. Recall that the most robust and clear-cut diagnostics are behaviour in relation to weak crossover, and in relation to syntactic islands. Consider (37) as a case of relativisation on the object: the dependency between the antecedent (*ir-raġel*) (or the TOPIC) and the RP 'crosses over' the possessive in *martu* ('his wife'), but the sentence is perfectly well-formed. By contrast, and although both gap and RP are generally available for relativisation on the OBJ, omitting the a version of (37) with a gap rather than a RP is ungrammatical. One might object that in (37) it is possible that the position relativised on is the SUBJ POSS (compare (11) for example). Note however that the POSS function is not accessible to relativisation by the *wh*-strategy, as shown by the example in footnote 4, and thus it is clear that (38) involves relativisation on the OBJ, and therefore constitutes a case of crossover. Crucially, (38) involves a RP and would be ungrammatical with a gap, despite the fact that, as demonstrated in section 1.2, RPs are normally excluded in *wh*-relatives.

- (37) *Ir-raġel li n-af li hallie-t-u mart-\*(u)*  
DEF-man COMP 1.SG-know COMP left-3SGF-3SGM.ACC wife-3SGM.ACC  
*baqa' ma hariġ-x mid-dar*  
left.3SGM NEG go out.3SGM-NEG from.DEF-house

The man who I know that his wife left him, has not left the house since.

- (38) *Ir-raġel 'l min n-af li t-elq-it-u*  
DEF-man ACC.who 1SG-know COMP left-3SGF-3SGM.ACC  
*l-mara/mart-\*(u)*  
DEF-woman/woman-3SGM.ACC

the man who I know that his wife left him

The WCO data above indicate that Maltese RPs and gaps do not show the same syntactic behaviour, and support the conclusion that Maltese RPs in RRCs are SARs (and hence anaphorically bound pronouns in the syntax on the analysis proposed by Asudeh (to appear)). This conclusion is also supported by the island sensitivity diagnostic. For example, (39) illustrates the Complex Noun Phrase Constraint, with a (second) relative dependency into a CNP created by relativisation: although the relativised position is one which is normally accessible to the gap strategy, the resumptive is obligatory here as a gap would cause a syntactic constraint violation. The same occurs with other constraints such as the Adjunct Island Constraint and the Wh-Island Constraint, illustrated here with *wh*-relatives, which obligatorily involve RPs where a gap would violate a syntactic constraint (see (40) and (41)). These two diagnostics therefore provide strong evidence that Maltese RPs are syntactically active, that is, that they are pronouns (rather than gaps) in the syntax.

- (39) *Raj-t ir-raġel li n-af mara li*  
 saw-1SG DEF-man 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 the man who I know a woman that knows him, and told him to send  
 her my regards. CNPC

- (40) *Il-mara 'l min int rid-t t-kun t-af min (hi)<sub>i</sub>*  
 DEF-woman ACC.who you want-2SG 2SG-be 2SG-know who she  
*t(a)-ħseb li ra-ha<sub>i</sub>*  
 3SGF-think COMP saw.3SGM-3SGF.ACC  
 the woman who you wanted to know who she thinks that saw her WHIC

- (41) *Il-mara 'l min lanqas kon-t għaraf-t għajr x'hin*  
 DEF-woman ACC.who NEG was-1SG recognised-1SG except what.time  
*qbiż-t-ha vera nbidl-(e)t*  
 overtook-1SG-3SGF.ACC really changed-3SGF  
 The woman who I hadn't recognised except when I overtook her, has really  
 changed AIC

We turn now to the issue of parasitic gaps and show that Maltese gaps licence parasitic gaps while Maltese resumptives do not. As far as we are aware, there has been no previous discussion of this phenomenon in Maltese, so we first establish that gaps in Maltese may license parasitic gaps. A *wh*-relative clause with an obligatory gap (*'l min kull raġel sellem ...*) licenses the use of either a gap or an RP within the following adjunct phrase (*bla m'għaraf-(ha)*), as in (42). The set of licit continuations are as we would expect for a gap construction.

- (42) *Il-mara 'l min kull raġel sellem bla m' għaraf-(ha)*  
 DEF-woman ACC.who every man greeted-3SGM without COMP/NEG  
 recognised.3SGM-(3SGF.ACC)  
 The woman whom every man greeted without recognising  
 (a) *kien j-isim-ha Marija*  
 was named Mary (Identificational)  
 (b) *kien-et omm-u*  
 was his mother (Functional)  
 (c) *jigifieri Peter, Marija, Tony, Rita, ...*  
 that is Peter, Mary, Tony, Rita, ... (Pair-List)

On the other hand, RPs do not license parasitic gaps. Consider now (43). Since RPs are not (normally) licensed in *wh*-relatives, a potentially controlling RP will only be possible in circumstances where a gap is excluded, for example, in an island. The RP *-ha* cannot control a parasitic gap, only a pronominal.

- (43) *Kellim-t 'l mara 'l min n-(a)-hseb li l-fatt li kull raġel laqagh-ha f'dar-u mingħajr m'għaraf-ha dejjaq-ha*  
 spoke-1SG ACC.woman ACC.who 1SG-think COMP DEF-fact COMP every  
 man welcomed.3SGM-3SGF.ACC in.house-3SGM.ACC without  
 N-COMP.recognised.3SGM-3SGF.ACC displeased.3SGM-3SGF.ACC  
 I spoke to the woman who I think that the fact that every man welcomed her  
 in his house without recognising her, displeased her.

Turning now to *li* relatives, we see that the data here also supports the conclusion that RPs are syntactically active (and hence, do not share the ability to licence parasitic gaps that gaps exhibit). Similar to *wh*-relatives, in *li* relatives only gaps but not RPs may license parasitic gaps, as shown in examples (44) to (47).

- (44) *Dawn huma l-kotba li Toni s-sellef bla/mingħajr ma hallas*  
 these COP.3PL DEF-books COMP Tony PASS-borrowed.3SGM  
 without N-COMP paid.3SGM  
 These are the books that Tony borrowed without paying (for) GAP - PGAP
- (45) *Din hija l-libsa li Marija xtra-t bla/mingħajr ma garrb-it-ha*  
 this.SGF COP.3SGF DEF-dress COMP Mary bought-3SGF without  
 N-COMP tried-3SGF-3SGF.ACC  
 This is the dress that Mary bought without trying (it). GAP - RP

- (46) \**Uri-ni*                    *l-libsa*    *li*    *raj-t-ha*                    *bla*  
show.2SG-1SG.ACC DEF-dress COMP saw-1SG-3SGF.ACC without  
*ma*            *xtraj-t*  
N-COMP bought-2SG  
Show me the dress that you saw without buying.                    \*RP - PGAP
- (47) *Libsa li*    *mor-t*    *xtraj-t-ha*                    *bla*    *ma*  
dress COMP went-1SG bought-1SG-3SGF.ACC without COMP.NEG  
*ppravaj-t-ha*                    *ma*    *gie-t-ni-x*  
tried-1SG-3SGF.ACC NEG came.3SGF-1SG.ACC-NEG  
A dress that I went to buy without trying on did not fit me.                    RP - RP

We conclude, then, that the parasitic gap diagnostic is applicable in Maltese, and further supports the view that Maltese RPs are SARs, that is, are anaphoric pronouns at f-structure. Given this, we can extend the analysis of bare (*li*) relatives given above, replacing (20) above by (48) (the only change is the addition of an anaphoric dependency  $(\uparrow \text{TOPIC})_{\sigma} = ((\uparrow \text{RRPPATH}_{\sigma}) \text{ ANTECEDENT})$  to allow for the use of a resumptive), and adding the resumptive path definition in (49).

$$(48) \text{ CP} \longrightarrow \begin{array}{l} \epsilon \\ (\uparrow \text{TOPIC PRED}) = \text{'PRO'} \\ (\text{RELADJ} \in \uparrow) \\ (\uparrow \text{COMPFORM} =_c +) \\ (\uparrow \text{TOPIC}) = (\uparrow \text{RGAPPATH}) \mid \\ (\uparrow \text{TOPIC})_{\sigma} = ((\uparrow \text{RRPPATH}_{\sigma}) \text{ ANTECEDENT}) \} \end{array} \text{ C}'$$

$\uparrow = \downarrow$

$$(49) \text{ RGAPPATH} \equiv \{ \text{COMP} \} * \text{ DIRGF}$$

*Constraints*

$$\text{RRPPATH} \equiv \{ \text{ARGF} \} * [\text{ADJ} \in]^* \text{ GF}$$

$$\text{GF} \equiv \{ \text{SUBJ}, \text{OBJ}, \text{OBJ}_{\text{goal}}, \text{POSS} \}$$

$$\text{ARGF} \equiv \{ \text{SUBJ}, \text{OBJ}, \text{OBL}, \text{COMP} \}$$

The general impossibility of using a resumptive in the highest subject position may be captured by an anti-locality condition (Asudeh, 2004, to appear).

$$(50) \text{ Anti-Locality Condition: (Asudeh, 2004)}$$

$$(\uparrow_{\sigma} \text{ ANTECEDENT}) \neq ((\uparrow \text{SUBJ}) \text{ TOPIC})_{\sigma}$$

With the exception of the HSR and the highest OBJ condition, the set of environments within which the gap is permitted is a subset of those within which the RP is available. Because the distribution of gaps and RPs in *li* relatives overlap significantly, it is relatively straightforward to give an account along the lines outlined above. This closely follows the approach taken in Asudeh (2004) to Irish, Palestinian Arabic and Hebrew, languages which he argues fundamentally show

non-complementarity of gaps and RPs.<sup>8</sup> But the distributional pattern for wh-relatives in Maltese is different: RPs are systematically excluded when gaps are permitted, essentially appearing only in cases of WCO, island violations and the like. The question which arises is how best to account in the grammar for the occurrence of these RPs, for 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. Attempting to define a RWHRPPATH which would have the effect of permitting an RP just in case a gap were not possible does not seem a particularly attractive (or feasible) approach, and 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). For the moment we are inclined to think that the observed pattern of distribution of the RP in wh-relatives does in fact result from the interaction of further constraints principles with a rather permissively defined anaphoric binding constraint permitting RPs in wh-relatives, along the lines sketched above for *li* relatives. Notice however that since POSS is excluded as the bottom of the dependency for wh-relatives, it is equally excluded in such dependencies mediated by RPs, suggesting that we might want just one generalisation for the dependency, defaulting to pronominal expression when the gap is otherwise excluded, which suggests we want just one distributional statement for wh-relatives. For now, we leave this issue on this somewhat speculative note and turn in the following section to some cases where it is perhaps less clear that the RP is a SAR.

## 5 ATB

In this section we look at the distribution of gaps and RPs in across-the-board constructions. Our expectation, based on the SAR/SIR diagnostics, would be that SARs should not mix with gaps in ATB constructions. We have shown above that Maltese has SARs. However, gap and RP *do* occur together in ATB constructions in both types of relative clause (even though RPs are generally systematically excluded from wh-RRCs). The following examples involve coordination of IPs (that is, the TOPIC is outside the coordination). (51) shows coordination under *li* with a gap in the first conjunct and an optional RP in the second conjunct.

- (51) *Il-ktieb li qra-t Marija u kkritika-t-(u) Doris*  
 DEF-book COMP read-3SGF Mary and criticised-3SGF-3SGM.ACC Doris  
 the book that Mary read and Doris criticised

In similar fashion, in wh-relatives a gap is obligatory in the first conjunct but a RP appears optionally in the second conjunct.

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<sup>8</sup>Of course actually formulating all the constraints (such as WCO) would raise further non-trivial issues.

- (52) *Ir-raġel 'l min irrappurtaj-t u weħħil-t-(u) multa,*  
 DEF-man ACC.who reported-1SG and CAUSE.get-1SG-(3SGM.ACC) fine,  
*fadal-l-u sal-aħħar t-ax-xahar biex i-ħallas*  
 left.3SGM-DAT-3SGM till.DEF-end of-DEF-month in order 3SGM-pay  
 The man who I reported and caused to get a fine has till the end of the month  
 to pay *wh* GAP GAP/RP

If the approach developed in Asudeh (to appear, 2011) is correct, then the data above might suggest that Maltese also has SIRs, that is, functionally controlled RPs or audible gaps. But if this is so, then distribution is very different from Swedish and Vata, where they are limited to SUBJ function. Further, while a SIR might be expected to control a parasitic gap, we see that the RP in an ATB construction appears not to be able to do so:

- (53) *Il-libsa li raj-t fil-hanut u Marija*  
 DEF-dress COMP saw-1SG in.DEF-shop and Mary  
*xtra-t-ha bla ma ppruva-t-\*(ha)*  
 bought-3SGF-3SGF.ACC without NCOMP tried-3SGF-3SGF.ACC  
 The dress that I saw in the shop and Mary bought without trying

Of course if the RPs found in ATB constructions are SIRs then we would not expect them to occur in ATB constructions involving positions which are not accessible to gap dependencies, namely islands. (54), which involves the WHIC, shows that they do.

- (54) *l-mara 'l min t-ħassib-t jekk kull raġel*  
 DEF-woman ACC.who RECIP-thought-1SG whether every man  
*i-ħobb-ħie-x u j-irrispetta-ħie-x,*  
 3-loves.3SGM-3SGF.ACC-NEG and 3-respects.3SGM-3SGF.ACC-NEG  
*kien-et Marija.*  
 be-3SGF Marija  
 The woman whom I wondered whether every man loves and respects her,  
 was Mary

In (54) the *wh*-dependency passes across-the-board into an island and involves an RP in each conjunct, as gaps are not permitted in island constructions. Further in (55) the RP in the second conjunct is bound by a quantified NP head that resists an e-type interpretation suggesting that this is a true RP rather than an intrusive pronoun.

- (55) a. *Kull tifel li dik it-tifla t-af u n(a)-ħseb*  
 every boy COMP DEM.SGF DEF-girl 3SGF-knows and 1-think.SG  
*t(i)-xtieq t-kellm-(u) ma j-rid-x*  
 3SGF-wishes 3SGF-speak-3SGM.ACC NEG 3-wants.SGM  
*i-kellim-ha*  
 3-speak.SGM-3SGF.ACC

Every boy that this girl knows and I think wishes to speak to does not want to speak to her

At the very least, these examples indicate that we cannot simply conclude that ATB constructions involve gap-like (SIR) resumptives *tout court*: such an analysis would create a number of difficulties. The alternative is that they are SARs, that is, f-structure pronouns subject to anaphoric control. But in this case too a difficulty arises: the approach to coordination (using distribution) in LFG and the disjunction of a functional control equation and an anaphoric binding equation such as that in (48), repeated here as (56), will not predict the observed behaviour.<sup>9</sup> An inbound functional uncertainty distributed into a coordinate structure must find *some* solution in each conjunct (guaranteeing across-the-board extraction) but is free to find different solutions in each conjunct (one can think of this as distributing the functionally uncertain path, and independently finding a solution in each conjunct). The crucial problem is that the required interpretation is one in which the disjunction takes narrow scope and thus itself distributes into each conjunct, permitting the combination of gap with RP.<sup>10</sup> But contrary to this, the disjunction receives wide scope in (56), predicting that only GAP/GAP and RP/RP are grammatical.<sup>11</sup>

$$(56) \{ (\uparrow \text{TOPIC}) = (\uparrow \text{RGAPPATH}) \mid \\ (\uparrow \text{TOPIC})_{\sigma} = ((\uparrow \text{RRPPATH}_{\sigma}) \text{ ANTECEDENT}) \}$$

## 6 Reconstruction

The final data set which we will discuss concerns the phenomenon of reconstruction and the distribution of gaps and resumptives in reconstruction contexts. By reconstruction we refer to the phenomenon whereby a filler shows a range of (interpretive) behaviours appropriate for its *in situ* position or function. Of course, in LFG, because unbounded dependency constructions (with gaps) involve functional control, those “reconstruction” properties which are f-structure related are predicted as the ‘filler’ is associated with both the discourse function and the within-clause function. Two central types of reconstruction data are *binding reconstruction* (e.g. of reflexive pronouns) and *scope reconstruction*, that is, examples such as (57) in which a gap is under the scope of a quantifier.

<sup>9</sup>The notion of distribution is defined by Dalrymple and Kaplan (2000):

- (iii) For any *distributive* property  $P$  and set  $s$ ,  $P(s)$  iff  $\forall f \in s. P(f)$ .  
For any *nondistributive* property  $P$  and set  $s$ ,  $P(s)$  iff  $P$  holds of  $s$  itself.

<sup>10</sup>Note that this alone would fail to exclude an RP from the first conjunct (for example in wh-relatives) - further conditions must constrain the occurrence of the RP. It is far beyond the scope of this paper to provide a full treatment of the Maltese ATB facts and we leave these concerns for future work.

<sup>11</sup>We speculate that it may be possible to re-express the functional uncertainties using local names to achieve narrow scope for the disjunction, to allow GAP/RP combinations, but we do not pursue this possibility here, not least because we have already raised some doubts above about the use of the disjunctive equation itself.

(57) *Which book did every boy say . . . was too expensive?*

Recent work on reconstruction in RRCs in Arabic dialects includes Aoun et al. (2001); Choueiri (2002); Aoun and Li (2003) and Malkawi (2009). In the approach of Asudeh (to appear) reconstruction would be evidence for SIR status (to the extent to which reconstruction itself is an f-structure phenomenon distinguishing gaps from pronouns). Given the emerging understanding of reconstruction in (other) Arabic dialects, our major aim in this section is straightforwardly empirical, contributing a brief comparison of Maltese with its close Semitic neighbours.

Aoun et al. (2001) suggest that in Lebanese Arabic (LA), reconstruction status correlates with islandhood status. (58) illustrates reconstruction into the position of a RP in a non-island construction. On the other hand, the ungrammaticality of (59) indicates that an RP in an island resists reconstruction.

(58) *təlmiiż-a<sub>i</sub> l-kəsleen ma baddna nḡabbir wala mḡallme<sub>i</sub> ʔanno huwwe*  
 student-her the-bad NEG want.1P tell.1P no teacher that he  
*zaḡbar b-l-faḡḡ.*  
 cheated.3SM in-the-exam

Her bad student, we don't want to tell any teacher that he cheated on the exam (LA: Aoun et al 2001:381)

(59) *\*təlmiiż-a<sub>i</sub> l-kəsleen ma ḡkiina maḡ wala mḡallme<sub>i</sub> ʔabl-ma huwwe*  
 student-her the-bad NEG talked-1P with no teacher before he  
*yuuḡal.*  
 arrive.3SM

Her bad student, we didn't talk to any teacher before he arrived (LA: Aoun et al 2001:381)

Subsequently, Choueiri (2002) and Aoun and Li (2003) show that definite and indefinite RRCs actually show different patterns in contexts in which there are no island violations. (60) involves a relative clause attached to a definite head (*SSuura* 'the picture') and allows reconstruction into the RP position (as in (58) above). On the other hand, reconstruction is not possible in (61), which involves a relative clause attached to an indefinite head (*Suura* 'a picture').

(60) *chuft [SSuura tabaḡ bint-a<sub>1</sub>]<sub>2</sub> yalli [kə]ll mwazzafe]<sub>1</sub> ʔaalit*  
 saw.1SG the-picture of daughter-her that every employee said.3SGF  
*ʔanno badda tḡallcʔ-a<sub>2</sub> bi-maktab-a*  
 that wanted.3SGF hang-3SGF in-office-her

I saw the photo of her daughter that every employee said she wanted to hang in her office (LA: Malkawi 2009: 69)

(61) *\*chuft [Suura la-ʔibn-a<sub>1</sub>]<sub>2</sub> [kə]ll mwazzafe]<sub>1</sub> ʔaalit ʔanno*  
 saw.1SG picture of-son-her every employee said.3SGF that  
*badda tḡallcʔ-a<sub>2</sub> bi-maktab-a*  
 wanted.3SGF hang-3SGF in-office-her

I saw a photo of her son that every employee said she wanted to hang in her office (LA: Malkawi 2009: 70)

This provides the more complex pattern of data concerning the availability of the RP in reconstruction environments which is summarised in (62).

(62)

Lebanese Arabic	Definite Relative	Indefinite Relative
Island	No Reconstruction	No Reconstruction
Non-Island	Reconstruction	No Reconstruction

In Jordanian Arabic (JA), on the other hand, a different pattern emerges. Malkawi (2009) shows that weak (inflectional or clitic) resumptives behave differently from strong pronoun resumptives in JA. Weak resumptive elements (inflections and weak (clitic) pronoun), as used in the examples below, show reconstruction effects *irrespective of the presence of an island* for both bound variable and reflexive binding tests, in relatives as well as in other dislocation structures.<sup>12</sup>

(63)-(64) respectively contain a definite and indefinite head for the relative clause and in each case, reconstruction into the site of the (weak) resumptive is possible, giving the distributive reading, whereby each father saw a picture of his own daughter. A similar pattern is found for reflexive binding (examples omitted for lack of space).

(63) *chuft [Surit bint-uh<sub>1</sub>]<sub>2</sub> illi kul ?ab<sub>1</sub> bi-hib-ha<sub>2</sub> (hi)<sub>2</sub>*  
 saw.1SG picture daughter-his that every father IMPFV-love-3SGF (her)  
 I saw the picture of his daughter that every father loves (JA: Malkawi 2009:62)

(64) *chuft [Surah la-bint-uh<sub>1</sub>]<sub>2</sub> kul ?ab<sub>1</sub> bi-hib-ha<sub>2</sub> (hi)<sub>2</sub>*  
 saw.1SG picture of-daughter-his every father IMPFV-love-3SGF (her)  
 I saw a picture of his daughter that every father loves (JA: Malkawi 2009:62)

The examples in (65) and (66) involve RPs contained within islands, but here again we see reconstruction. Again, similar facts obtain with reflexives. (67) provides a summary.

(65) *chuft SSuura<sub>2</sub> taba?at ?ibn-ha<sub>1</sub> illi z?iltu la?annu kul*  
 saw.1SG the-photo of son-her that were.angry.2P because every  
*mwazzafah<sub>1</sub> bidha t?alli?-ha<sub>2</sub> (hi)<sub>2</sub> bi-l-maktab*  
 employee.F wants.3SGF hang-3SGF (her) in-the-office  
 I have seen the photo of her son that you are angry because every employee  
 wants to hang (it) in the office (JA: Malkawi 2009: 63)

<sup>12</sup>Glosses and translations are given in French in the original. Some minor alterations and corrections have been made in translating these to English.

- (66) *chuft Suura<sub>2</sub> la-ʔibn-ha<sub>1</sub> zçiltu laʔannu kul mwazzafah<sub>1</sub>*  
 saw.1SG photo of-son.her were.angry.2P because every employee.F  
*bidha tçalliʔ-ha<sub>2</sub> (hi)<sub>2</sub> bi-l-maktab*  
 wants.3SGF hang-3SGF (her) in-the-office

I have seen a photo of her son that you are angry because every employee wants to hang (it) in the office (JA: Malkawi 2009: 64)

	Jordanian Arabic	Definite Relative	Indefinite Relative
(67)	Island	Reconstruction	Reconstruction
	Non-Island	Reconstruction	Reconstruction

Although it would be premature to draw any firm conclusions at this stage, our preliminary investigation appears to show that Maltese patterns with JA (as described by Malkawi). (68) and (69) illustrate reconstruction (into the site of a resumptive) in non-island contexts for definite and indefinite relatives respectively.<sup>13</sup>

- (68) *Raj-t [ir-ritratt tat-tifla tagħ-ha<sub>i</sub>]<sub>j</sub> li Pawlu j-(a)ħseb*  
 saw-1SG DEF-photo of.DEF-girl of-3SGF.ACC COMP Paul 3SGM-think  
*li [kull impjegat-a]<sub>i</sub> qal-et li t-rid*  
 COMP every employee-SGF said-3SGF COMP 3SGF-want  
*id-dendl-u<sub>j</sub> fl-uffiçju tagħ-ha<sub>i</sub>*  
 3SGF-hang-3SGM.ACC in.DEF-office of-3SGF.ACC

I saw a photo of her daughter which Paul thinks that every employer wants to hang in her office.

- (69) *Ta-w-ni [ritratt tat-tifla tagħ-ha<sub>i</sub>]<sub>j</sub> li qal-u*  
 gave.3PL-1SG.ACC photo of.DEF-daughter of-3SGF.ACC COMP said.3-PL  
*li [kull waħda]<sub>i</sub> t-(i)xtieq id-dendl-u<sub>j</sub> fil-kamra*  
 COMP every one.SGF 3SGF-wishes 3SGF-hang-3SGM.ACC in.DEF-room  
*tagħ-ha*  
 of-3SGF.ACC

They gave me a photo of her daughter which they said that every woman/one wishes to hang in her room.

- (70) *Sib-t [ir-ritratt tal-ID tiegħ-u<sub>i</sub>]<sub>j</sub> li int n-(a)ħseb*  
 Found-1SG DEF-photo of.DEF-ID of-3SGM.ACC COMP you 1SG-think  
*t-ħassib-t jekk Pawlu<sub>i</sub> kien-x iddispjaçut li*  
 RECIP-wondered-2SG whether Paul was.3SGM-NEG sad.SGM COMP  
*tilf-u<sub>j</sub>*  
 lost.3SGM-3SGM.ACC

I found the photo of his ID which I think you were wondering whether Paul was upset that he lost.

<sup>13</sup>Note that we use LDD examples to enable the use of an RP.

- (71) *Iltqaj-t ma' [ħabib-a minn tiegħ-u<sub>i</sub>]j li n-(a)ħseb Pawlu<sub>i</sub>*  
 Met.1SG with friend-SGF from of-3SGM.ACC COMP 1SG-think Paul  
*kien ġa j-af-ha<sub>j</sub> qabel ma ħareg*  
 was.3SGM already 3SGM-knows-3SGF.ACC before COMP go out.3SGM  
*magħ-ha<sub>j</sub>*  
 with-3SGF.ACC  
 I met a friend of his who I think Paul already knew before going out with  
 (her)

(72)

Maltese	Definite Relative	Indefinite Relative
Island	Reconstruction	Reconstruction
Non-Island	Reconstruction	Reconstruction

What we see from these data is that it appears always to be possible to reconstruct into a resumptive in Maltese (more work is needed to establish whether we see the same pattern with reflexives). As noted above, if reconstruction is indicative of SIR status, then this data set is inconsistent with the results of other diagnostics, which support SAR status for Maltese resumptives. On the other hand, the status of the reconstruction diagnostic itself may be open to question.

## 7 Conclusion

This paper has provided a first description of Maltese RRCs showing that Maltese, unlike many Arabic dialects, has *wh*-relatives alongside non *wh*-relatives. Each type of RRCs permits a resumptive, but with a different distribution. On the basis of the major diagnostics concerning islandhood, weak crossover and control of parasitic gaps, we have argued that Maltese has syntactically active resumptives, that is, resumptives which are subject to anaphoric binding, captured by an anaphoric control equation. We have raised a number of issues concerning how the distribution of gap/RP is to be captured in the grammar. Our discussion of two further putative diagnostics raised some further questions. We argue that the interactive of RPs with ATB phenomena does not, on balance, suggest that Maltese has SIR as well as SAR (because the RP does not itself pass further SIR tests like PG) but does leave an analytic issue for further work. As for reconstruction we suggest that factors such as definiteness of the antecedent and whether or not the RP is in a SAR or a SIR- diagnosing position are not relevant to reconstruction in Maltese.

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