

## On the distribution of resumptive pronouns and *wh*-trace in Welsh<sup>1</sup>

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Welsh has generally been analyzed as allowing two types of relative clauses and other A'-constructions, one involving movement leaving a *wh*-trace, the other involving a resumptive pronoun in situ. In this paper, I argue that, despite the appearance of agreement, which seems to license a null resumptive pronoun, relative clauses formed on a number of syntactic positions (object of periphrastic verb, object of preposition, embedded subject) may involve movement. Both movement and non-movement strategies are argued to be available for some syntactic positions (object of preposition, embedded subject), and separate constraints must therefore be established for the distribution of each. Resumptive pronouns are argued to be subject to a variant of the A'-Disjointness Requirement. For *wh*-trace, the Welsh evidence is compatible only with an account involving multiple cyclic movement via a VP-external position (SpecAgrOP) as well as SpecCP.

### I. INTRODUCTION

Relative clauses in literary Welsh have traditionally been divided into two types, the direct (also 'proper') relative clause (*cymal perthynol rhywiog*) and the indirect (also 'oblique' or 'improper') relative clause (*cymal perthynol afrywiog*) (Richards 1938: 66; Williams 1980: 166; Thomas 1996: 495). The direct type in (1) uses the marker *a* followed by soft mutation (henceforth *a*<sup>s</sup>) of the initial consonant of the following verb in a verb-initial (VSO) structure, that is, *welai* in place of the radical (unmutated) form *gwelai*.<sup>2</sup> The indirect type uses the relative marker *y(r)* followed by the radical

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[2] Mutations are a regular feature of Celtic languages. Changes in word-initial consonants are triggered by certain (mostly lexically conditioned) environments. In Welsh, there are three mutations, soft, aspirate and nasal. In the main, only soft mutation is relevant in this paper. Soft mutation causes voiceless stops and continuants to become voiced (/p/ → /b/, /t/ → /d/, /k/ (orthographic <c>) → /g/, /tʰ/ (orthographic <ll>) → /l/, /rʰ/ (orthographic <rh>) → /r/), voiced stops become fricatives (/b/ → /v/ (orthographic <f>), /d/ → /ð/

form of the verb. An example is given in (2). Relativization sites are marked as \_\_\_\_ throughout.

- (1) yr olygfa a welai \_\_\_\_ o ben y mynydd  
 the view REL saw-IMPF \_\_\_\_ from top the mountain  
 ‘the view that he had from the top of the mountain’  
 (Richards 1938: 66)
- (2) yr ysgol yr âi Deian a Loli iddi \_\_\_\_  
 the school REL went-IMPF Deian and Loli to-3SF \_\_\_\_  
 ‘the school that Deian and Loli went to’  
 (Richards 1938: 92)

These two markers are found across a whole range of A'-binding environments in addition to relative clauses: in (root and embedded) *wh*-questions, equative and comparative constructions and in fronting (topicalization) structures. Standard analyses view them as reflections of a distinction between movement and non-movement strategies. That is, whereas the object gap in (1) is occupied by a *wh*-trace, the gap in the object position of the preposition in (2) is a null pronoun (*pro*) licensed by the rich (third person feminine singular) agreement morphology of the preposition *iddi* ‘to (it, fem.)’. A cluster of other properties seem to follow from the same distinction.

In this paper I argue on the basis of evidence from colloquial Welsh that the distribution of movement and non-movement relativization strategies needs to be revised. I claim that in colloquial varieties there is no direct mapping between the presence or absence of movement and the form of the relative marker. Constraints on the distribution of *wh*-traces and resumptive pronouns are independent of one another, and the two strategies coexist in some syntactic environments. Specifically, I suggest that the movement strategy is permitted in a wider range of positions than generally assumed, and that some apparent resumptive pronouns are in fact reflexes of agreement triggered by movement. The result confirms many aspects of Rouveret’s recent analysis of relative clauses (Rouveret 1994) in literary Welsh.

Widening the range of syntactic positions from which movement is possible necessitates a change in the mechanism for licensing agreement. I argue that Welsh provides strong support for the view that *wh*-movement proceeds via an object agreement projection (AgrOP) (Kayne 1989, Bošković 1997) and, where necessary, other agreement projections (for instance, AgrPP). In addition to being theoretically necessary, postulation of cyclic A'-

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(orthographic <dd>)) or disappear (/g/ → ø), and /m/ becomes /v/ (orthographic <f>). Henceforth soft mutation triggers are marked with a superscript ‘S’, and items that leave the initial radical consonant unchanged are marked with a superscript ‘R’.

movement via SpecAgrOP and SpecCP provides a natural account of certain mutation effects.

Data are taken from two twentieth-century novels written by speakers of the north-western (Gwynedd) dialect, namely *Traed mewn cyffion* ('Feet in chains', 1936) by Kate Roberts and *William Jones* (1944) by T. Rowland Hughes. The narrative sections of these novels are taken as broadly representative of literary Welsh, and the dialogue as representative of varieties of colloquial Welsh. Additional data come from native speaker judgments and published sources.

## 2. STANDARD ANALYSES OF WELSH RELATIVES

The distinction between direct and indirect relative clauses has been judged central both in treatments by descriptive grammarians (Richards 1938: 65–98; Williams 1980: 166–167; Thorne 1993: 171–186; Thomas 1996: 494–500) and in theoretical analyses (Awbery 1977, Sadler 1988). The direct class is identified as a movement strategy and the indirect class as a resumptive (non-movement) strategy. The focus in what follows is on literary Welsh, although any major differences between literary and colloquial Welsh will be signalled briefly, since these will become more important in the latter part of this paper.

### 2.1 *The syntactic properties of the two relative types*

The two types of relative appear to correlate with a number of other properties. Consider first the class of direct relatives. Direct relatives are defined as those using the relative marker *a<sup>s</sup>*, which is used with relatives formed on (unembedded) subject positions and on the object positions of (unembedded) synthetic (finite, non-periphrastic) verbs. Example are given in (3) (subject position), and (4) (object position).

- (3) *y gwragedd a welodd/\*welasant* \_\_\_ *y ddamwain*  
 the women REL saw-3S/\*saw-3P \_\_\_ the accident  
 'the women who saw the accident'
- (4) *y car a werthodd Gareth* \_\_\_  
 the car REL sold Gareth \_\_\_  
 'the car that Gareth sold'

Direct relatives manifest three common features. First, they are characterized by 'weak' (default) agreement patterns ('antiagreement', Ouhalla 1993). Thus, if the relative is formed on the subject position, the verb does not agree with that subject but instead appears in a default third person singular form: in (3), the verb *welodd* 'saw' is singular despite the fact that the antecedent

of the relative *y gwagedd* ‘the women’ is plural. The equivalent with ‘rich’ third person plural agreement *welasant* is not possible.

Secondly, overt pronouns in place of the gap are ungrammatical:

- (5) (a) \**y gwagedd a welodd/welasant hwy* ’r ddamwain  
the women REL saw-3S/saw-3P they the accident  
‘the women who (they) saw the accident’  
(b) \**y car a (i g-) werthodd Gareth ef*  
the car REL (3S-ACC) sold-3S Gareth it  
‘the car that Gareth sold (it)’

A third feature claimed for this strategy is that there is a strict restriction on the distance between the front of the relative clause and the gap. For literary Welsh, generative linguists have claimed that the gap may not be in an embedded position (Awbery 1977: 172–173; Rouveret 1994: 378), and traditional linguists do not address the question (there is no mention of embedded relatives in Williams 1980, King 1993, Thorne 1993 or Thomas 1996). This restriction is illustrated in (6). However, although (6) is ungrammatical in literary Welsh, similar phrases are acceptable in colloquial Welsh (see section 5.2). Even in literary Welsh, long-distance extraction of adjuncts using movement seems to be entirely acceptable too (see section 5.4 below).

- (6) (a) \**y gwagedd a wn y bydd \_\_\_ yn gweld y sioe*  
the women REL know-IS that will-be \_\_\_ PROG see-VN the show  
‘the women who I know will see the show’  
(b) \**y car a wn y gwerthai Gareth \_\_\_*  
the car REL know-IS that would-sell Gareth \_\_\_  
‘the car that I know Gareth would sell’

These characteristics contrast with those of indirect relatives, which use the marker *y(r)*+radical consonant. The indirect pattern appears in relatives formed on positions other than subject or direct object of a finite verb, typically the object of a preposition (7), a possessor noun phrase (8), or the object of a nonfinite verb (verbnoun) in a periphrastic construction (9):

- (7) *y dynion y soniais amdanynt \_\_\_*  
the men REL talked-IS about-3P \_\_\_  
‘the men I talked about’  
(8) *y dynion y prynais eu car \_\_\_*  
the men REL bought-IS 3P-GEN car \_\_\_  
‘the men whose car I bought’

- (9) *y dynion y byddwch yn eu cwrdd* \_\_\_\_  
 the men REL will-be-2P PROG 3P-GEN meet-VN \_\_\_\_  
 ‘the men that you’ll be meeting’

These exhibit inverse properties. In (7) the preposition must agree with the antecedent of the relative, and we find *amdanynt* in the third person plural, agreeing with the plural noun phrase *y dynion* ‘the men’. Absence of this agreement leads to ungrammaticality in (10). The same is true with possessive relatives in (8) versus (11). A contrast between literary Welsh and colloquial Welsh is observed with relatives formed on the objects of periphrastic verbs. In literary Welsh, these must observe the same pattern, (9) versus (12), although sentences equivalent to (12) are grammatical in colloquial Welsh (see sections 6.1, 6.3 and 7).

- (10) \**y dynion y soniais amdano* \_\_\_\_  
 the men REL talked-IS about-3S \_\_\_\_
- (11) \**y dynion y prynais ei gar* \_\_\_\_  
 the men REL bought-IS 3SM-GEN car \_\_\_\_
- (12) \**y dynion y byddwch yn ei gwrdd* \_\_\_\_  
 the men REL will-be-2P PROG 3SM-GEN meet-VN \_\_\_\_

Finally, indirect relatives place no restrictions on the distance between the head of the relative clause and the extraction site (Awbery 1977: 172–173). The gap may be in an embedded clause as in (13) and may violate island constraints as in (14).<sup>3</sup>

- (13) *y gwagedd y gwn y gwelasant* \_\_\_\_/(hwy) *y ddamwain*  
 the women REL know-IS that saw-3P \_\_\_\_/(they) the accident  
 ‘the women that I know saw the accident’
- (14) (a) *yr un y buasai pob athro Ysgol Sul a gawsai*  
 the one REL had-been every teacher school Sunday REL had-had  
*yn hollti blew wrth chwilio am ystyr ei eiriau* \_\_\_\_  
 PROG split-VN hairs in look-VN for meaning 3SM-GEN words \_\_\_\_  
 ‘... the one whose words every Sunday School teacher that he had  
 had had split hairs looking for the meaning of’ (WJ 66)
- (b) *Y mae gan bob un ohonom ei feddyliau cudd, y*  
 PRT is with every one of-1P 3SM-GEN thoughts hidden the

[3] There is considerable variation between speakers with regard to the acceptability of island violations, although for some speakers at least they are fully grammatical. Tallerman (1983) gives some cases where island violations may be disallowed.

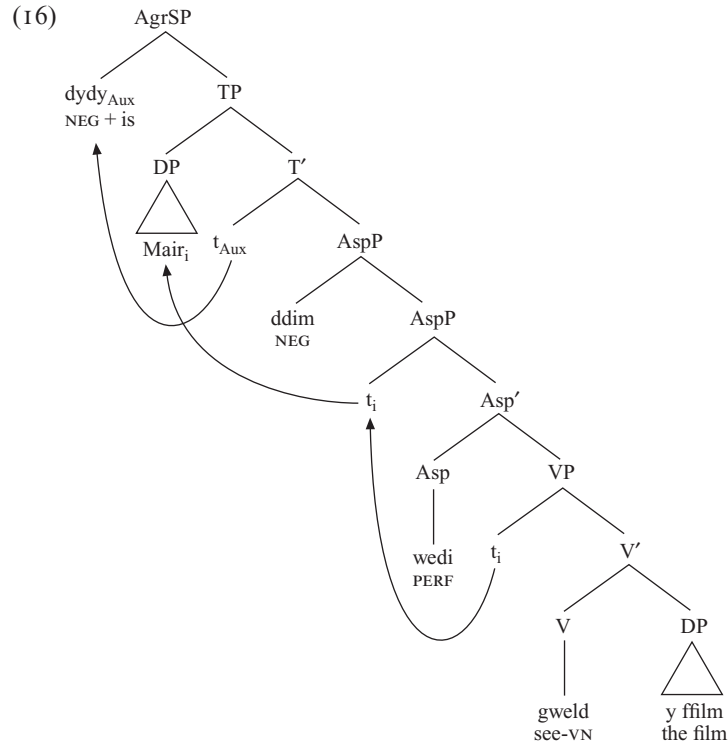
rhai hynny y gwnawn ymdrech deg i 'w cuddio \_\_\_\_  
 ones those REL make-IP effort fair to 3P-GEN hide-VN \_\_\_\_  
 â gwên-wneud wrth sôn am rywun neu rywbeth  
 with smile-make-VN by talk-VN about someone or something  
 diflas.  
 boring  
 'Every one of us has his secret thoughts, those that we make a fair  
 attempt to hide with a put-on smile by talking about someone or  
 something boring.' (WJ 36)

2.2 *The 'standard' generative analysis*

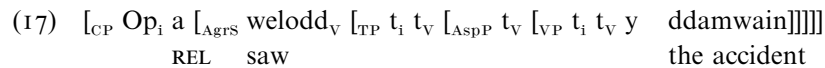
These clusters of properties are interpreted in the standard analysis, which goes back in essence to Awbery (1977), as a reflection of a single difference between a movement strategy for forming relative clauses (the direct strategy) and a non-movement strategy (the indirect strategy). This analysis claims a one-to-one correspondence between the relativization strategy, the type of marker used, the availability of an overt pronoun, and the presence or absence of rich agreement.

I present this account updated to current theoretical assumptions (Chomsky 1995) in the light of McCloskey's (1990) analysis of Irish relative clauses. I assume that the normal VSO order of Welsh is derived by successive raising of the verb to AgrS, and short movement of the subject from SpecVP beyond aspect markers and negation to SpecTP. Objects remain in their merged position at Spell-Out. A standard VSO main clause like (15) is assigned a structure of the form in (16).

- (15) Dydy Mair ddim wedi gweld y ffilm.  
 NEG+is Mair not PERF see-VN the film  
 'Mair has not seen the film.'



In the direct strategy a non-overt operator is generated in subject or object position and moves to SpecCP. The structure in (17) is that assigned to the relative clause in (3).



The variable trace of this operator is specified as an R-expression and not a pronoun, in accordance with the fact that it is subject to Condition C of the Binding Theory (Chomsky 1982: 23–24). Its agreement behaviour then follows from the rest of the agreement system. Agreement is manifested overtly in Welsh only between a head and a pronoun, never between a head and a lexical nominal element. For instance, in (18) the subject, *y cŵn* ‘the dogs’, is plural, but the verb must be in its default third person singular form. Only if the subject is a pronoun, as in (19), does the verb appear in its third person plural form.

- (18) Fe welodd/\*welasant y cŵn yr esgryn.  
 PRT saw-3S/\*saw-3P the dogs the bones  
 ‘The dogs saw the bones.’

- (19) Fe \*welodd/welasant hwy `r esgyrn.  
 PRT \*saw-3S/saw-3P they the bones  
 ‘They saw the bones.’

Similar behaviour is observed with the agreement clitics that precede noun phrases and verbs. *Wh*-trace in the direct strategy therefore behaves like other full lexical noun phrases in not triggering agreement.

Secondly, the presence of *wh*-trace at the relativization site in subject or object position prevents insertion of a resumptive pronoun. In any case, if a pronoun were to occupy the gap, there would be an agreement clash. Poor default agreement would be required by the operator, but rich agreement would be required by the pronoun that had been inserted.

Finally, the fact that this is a movement strategy leads us to expect restrictions typical of movement strategies. The ungrammaticality of relativization by movement from within an embedded clause, illustrated above in (6), is such a restriction. Clearly this encompasses also a restriction disallowing extraction from an island, since the relevant island constraints involve extraction from embedded clauses, and can therefore never arise.

The contrasting behaviour of indirect relatives can then be accounted for by claiming that they involve no movement and no trace. Instead, a null pronominal, *pro*, appears at the relativization site. This pronoun is licensed and identified by agreement morphology on verbs or other heads. For instance, in (20) a clitic shows agreement with the possessor noun phrases, and allows this possessor noun phrase to be either null (*pro*) or overt (*nhw*).

- (20) eu car nhw/*pro*  
 3P-GEN car them/*pro*  
 ‘their car’

Therefore a relative clause formed on a possessor noun phrase may be analyzed as involving a gap filled by resumptive *pro*.

- (21) y dynion y prynais eu car \_\_\_\_  
 the men REL bought-IS 3P-GEN car \_\_\_\_  
 ‘the men whose car I bought’

This null resumptive would be expected to alternate with an overt pronoun in such positions, as, for instance, in (22) and (23). Relatives like these are, however, rare in literary Welsh, a fact which causes a problem, and in earlier analyses (Awbery 1977) led to the postulation of special rules.

- (22) y dynion y prynais eu car nhw  
 the men REL bought-IS 3P-GEN car them  
 ‘the men whose car I bought’



- (23) *y dyn y soniais amdano ef*  
 the man REL talked-IS about-3SM him  
 ‘the man that I talked about’ (Awbery 1977: 182)

If the gap in the relative clause is occupied either by an overt resumptive pronoun or by resumptive *pro*, then the rich agreement patterns observed are accounted for. Resumptive *pro* behaves like a pronoun and triggers rich agreement.

The fact that indirect relative clauses in Welsh can be formed on positions that violate island constraints in (14) follows too, assuming that subjacency is a restriction on movement rather than representations (see Georgopoulos 1991: 83). Since indirect relatives do not involve movement, there is no reason to expect them to respect island constraints.

A few basic features and assumptions of this account are worth noting. First, it offers a straightforward statement of the difference between the two relative markers. The marker  $a^s$  licenses a chain of the form  $(Op_i \dots t_i)$ , whereas  $y(r)$  licenses a chain of the form  $(Op_i \dots pro_i)$  (see McCloskey 1990: 220–221 on this in Irish).

Secondly, it assumes that relativization from any given syntactic position is accomplished using only one of the strategies available, by using the movement strategy in all cases where that is available, and the resumptive strategy in cases of ‘last resort’. Furthermore, it is assumed that the presence of agreement is indicative of the presence of a resumptive pronoun, whether or not that pronoun is overt. There is no mechanism for agreement to co-occur with a gap left by movement: representations may involve an operator binding a trace in the absence of agreement morphology  $(Op_i \dots t_i)$ , or an operator binding a covert or overt pronominal accompanied by agreement morphology  $(Op_i \dots agr_i \dots pro_i)$  or  $(Op_i \dots agr_i \dots pronoun_i)$ , but not an operator binding a trace licensed by rich agreement  $(*Op_i \dots agr_i \dots t_i)$ . In essence, agreement that COULD license resumptive *pro* is always seen as indicative of the actual presence of *pro*.

### 2.3 *Problems and a solution*

We have seen one empirical difficulty involving examples like (22) and (23). A further empirical problem arises when relatives formed on the position of a temporal or locative adjunct, like that in (24), are considered.

- (24) *y dydd y daeth y frenhines*  
 the day REL came the queen  
 ‘the day that the queen came’

These always use the marker  $y(r)$  in literary Welsh (Richards 1938: 96–98)

and should therefore act like indirect relatives, showing no evidence of movement. However, there is no pronoun at the extraction site in (24), hence it is not clear why the clause is possible (see Rouveret 1994: 380). This suggests that sentences like (24) must belong to a class involving a trace and the marker  $y(r)$ . However, this destroys the simple rule regulating the distribution of the two markers.

Such difficulties suggest that we should question the simple correlation between the presence of a resumptive pronoun or rich agreement and the absence of movement. In some languages, resumptive pronouns show effects characteristic of *wh*-trace. For instance, in Hebrew, resumptive pronouns show strong crossover effects (Shlonsky 1992, Pesetsky 1998: 362–365); in Vata, resumptive pronouns show weak crossover effects (Koopman & Sportiche 1982: 142–147); and in Swedish, resumptive pronouns license parasitic gaps (Engdahl 1985: 6–11) and clauses containing resumptive pronouns may freely coordinate with clauses containing *wh*-trace (Zaenen, Engdahl & Maling 1981: 681–682). This leads Engdahl (1985) and Aoun & Benmamoun (1998), amongst others, to suggest that in some languages resumptive elements can be the phonetic realization of *wh*-trace.

In such an approach, resumptive clitics and rich agreement are linked not to resumptive *pro*, but are left behind by movement of an operator (Hendrick 1991, De Freitas & Noonan 1993, Rouveret 1994). For Welsh, Rouveret (1994: 381) proposes that there are four classes of relative. A similar typology is developed in Manning (1996).

1.  $a^S$  + gap (traditional direct)
2.  $y(r)$  + gap (adjunct relatives, (24))
3.  $y(r)$  + rich inflection/clitic (indirect relatives that resist an overt pronoun, (22))
4.  $y(r)$  + independent pronoun (remaining indirect relatives)

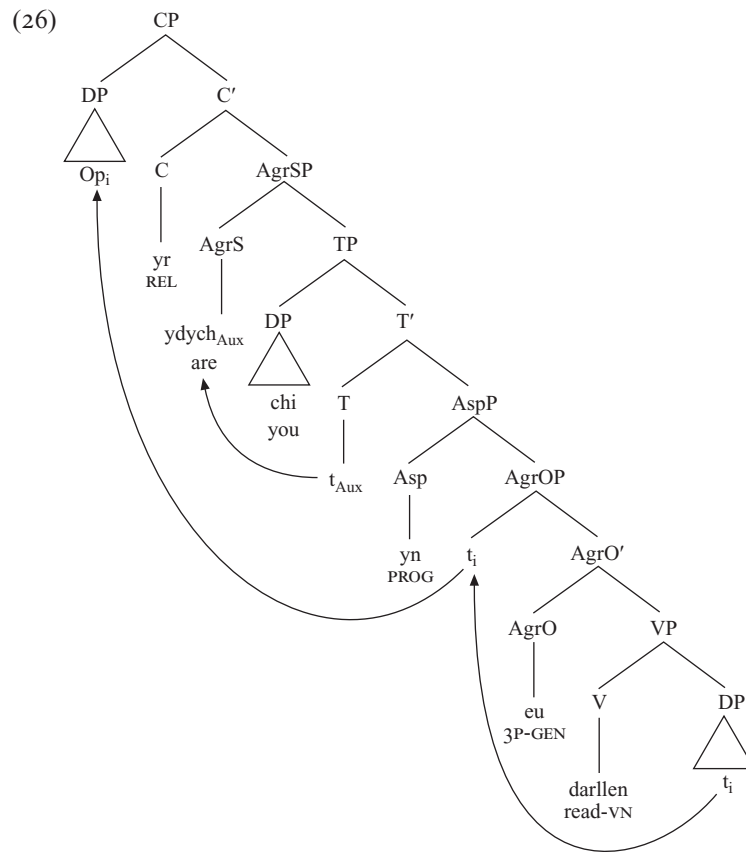
In Rouveret's analysis, the first three types involve movement and only the fourth is a truly resumptive strategy. All types that involve movement (direct relatives (type 1), adjunct relatives (type 2) and oblique relatives (type 3)) obey island constraints (see section 5.4 for tests of this); and the presence of a *wh*-trace at the relativization site prevents the appearance of a pronoun. The link between movement and the marker  $a^S$  is given up: types 2 and 3 involve movement but not  $a^S$ .

Since this analysis maintains that some relatives with rich agreement patterns, specifically those of type 3, involve movement, a mechanism is required to allow this agreement without positing a (null) pronoun. This can be achieved by extending Kayne's (1989) analysis of past participle agreement in French *wh*-extractions to Welsh (cf. Hendrick 1991; Tallerman 1993). In oblique relatives, movement of the null operator to SpecCP is forced via an agreement projection. In the case of extraction from the object of a nonfinite

verb, movement is via SpecAgrOP. In prepositional and possessive relatives, movement might be via the specifier of a functional projection mediating prepositional agreement (SpecAgrPP) and SpecDP respectively.

The structure of a relative formed on the object position of a nonfinite verb according to this view is given in (26), representing the clause in (25). Subject traces are omitted for simplicity.

- (25) *y llyfrau yr ydych chi 'n eu darllen* \_\_\_\_  
 the books REL are you PROG 3P-GEN read-VN \_\_\_\_  
 'the books that you are reading'



This position has a number of empirical advantages which are developed in the following sections. It is supported by a number of cases where agreement and the licensing of A'-relations interact in revealing ways that allow us to establish that movement is involved.

## 3. LITERARY AND COLLOQUIAL WELSH

From now on, I concentrate on colloquial Welsh data in an effort to avoid the prescriptive pressures which prejudge the correct grammatical description of literary Welsh. It is worth highlighting the relationship between literary and colloquial Welsh, and developments within the literary language itself, since both have important repercussions. The differences between literary and colloquial varieties of Welsh are extensive (see Fife 1986, Ball 1988 and D. G. Jones 1988). Although most descriptions of Welsh relative clauses have been based on the literary variety, the native language of all speakers is one of various regional dialects, 'colloquial Welsh'. In many areas of grammar literary Welsh is effectively a conservative variety of colloquial Welsh, manifesting features that are present either in some living dialect or that were once present in the colloquial language. The prescriptive rules for forming relative clauses in literary Welsh are different, however, having been formed in the course of the twentieth century (see Manning 1996). Early twentieth century grammars make no connection between the two strategies and the form of the particles. Richards (1938: 66–67), for instance, defines direct relatives as those formed on the subject or the direct object of a synthetic verb, not as those which use the relative marker *a<sup>s</sup>*. He gives additional environments where the marker *a<sup>s</sup>* may occur in free variation with *y(r)*, namely, in relatives formed on the objects of prepositions, the objects of nonfinite verbs, and possessor noun phrases. The texts examined here use *a<sup>s</sup>* to mark some cases of relative clauses formed on the object position of a nonfinite verb:

- (27) A dyna 'r cwbl a allai Owen ei ddweud \_\_\_\_.  
 and that's the all REL could Owen 3SM-GEN say-VN \_\_\_\_  
 'And that's all that Owen could say.' (TMC 68)

Richards (1938: 87, 96) provides examples like this, and, additionally, of relative clauses using *a<sup>s</sup>* formed on the object position of a preposition. An example of the latter from the 1930s is given in (28).

- (28) Y cwbl a fedrai feddwl amdano \_\_\_\_ oedd blinder  
 the all REL could think about-3SM \_\_\_\_ was tiredness  
 ei chorff.  
 3SF-GEN body  
 'All that she could think about was the tiredness of her body.'  
 (Jane Ann Jones, *Storiâu hen ferch*, 139)

The variability inherent in Richards' rules corresponds to the usage of medieval texts (see Manning 1996, Willis 1998: 82) and is based upon observation of the usage of the Bible and nineteenth- and early twentieth-

century literature. Other early twentieth-century Welsh grammarians took a similar approach, for instance, Morris-Jones (1913: 284–285). Fairly recently, then, the direct correspondence between the position of relativization and the form of the marker would not have held. Later in the twentieth century, however, a direct correlation between relativization strategy and particle began to be stated as the rule for literary Welsh, for instance in Watkins (1961: 202–203), and has become the unquestioned rule for literary Welsh today as described in current grammars, such as Williams (1980: 51–54), Thorne (1993: 171, 177) and Thomas (1996: 496–499).<sup>4</sup>

The important point is that the direct correlation that now holds between the form of the particle and the type of extraction site is based neither on the historical tradition of the literary language, which until recently was more permissive, nor on the usage of the colloquial language (see also section 5.1 below).

Furthermore, not every aspect of the literary system has been influenced by prescriptive grammarians. The prescriptive rules cover the choice of relative marker only in core cases: they have nothing to say about extraction from embedded clauses or about minor types of relative (for instance, those formed on predicative adjective or noun phrases).

This suggests two things: first, the direct correlation between relative marker and extraction site is a less impressive feature of the standard analysis since it is based on recent prescriptivism, and secondly, more attention needs to be paid to the fully productive system of the colloquial language.

#### 4. RESUMPTIVE *PRO*

##### 4.1 *Establishing the distribution of the resumptive strategy*

As mentioned briefly above, a difficulty for the standard analysis is that overt resumptive pronouns (excluding agreement morphemes and clitics) are rare in literary Welsh in certain positions. The issue is clouded by the fact that literary Welsh is a null subject language in which one would expect overt resumptive pronouns to be rare. Traditional grammarians (Richards 1938) make no pronouncement on the matter but recent linguists, Awbery (1977) and, following her, Harlow (1981, 1983), Sadler (1988: 112), De Freitas & Noonan (1993) and Rouveret (1994), have claimed that resumptive pronouns are not possible with relatives formed on the objects of prepositions (29),

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[4] Williams (1980: 53–54) and Thorne (1993: 178, 180), however, do mention the possibility of using *a<sup>s</sup>* with a relative formed on the object of a nonfinite verb; on the other hand, use of *a<sup>s</sup>* with a relative formed on the object of a preposition or possessor noun phrase is said to be obsolete and characteristic of biblical prose.

possessor noun phrases (30) and the objects of nonfinite verbs (31). The judgments follow Awbery 1977.<sup>5</sup>

- (29) \*y dyn y soniais amdano ef  
the man REL talked-IS about-3SM him  
‘the man that I talked about’ (Awbery 1977: 182)
- (30) \*y dyn y prynais ei dŷ ef  
the man REL bought-IS 3SM-GEN house him  
‘the man whose house I bought’ (Awbery 1977: 180)
- (31) \*y dyn y mae Wyn wedi ei weld ef  
the man REL is Wyn PERF 3SM-GEN see-VN him  
‘the man that Wyn has seen’ (De Freitas & Noonan 1993: 55)

However, these judgments hold only for literary Welsh. Tallerman (1990a: 306, 310) cites examples from colloquial Welsh where relatives formed on positions such as these involve overt resumptive pronouns. Attested examples in (32) confirm this more permissive use of resumptive pronouns. Example (32a) shows a resumptive pronoun as the object of a preposition, (32b) a resumptive pronoun as a possessor noun phrase, and (32c) a resumptive pronoun in an embedded clause.

- (32) (a) Y ferf llais yr wy’ i ’n while amdano fa.  
the very voice REL am I PROG look-VN for-3SM it  
‘The very voice that I’m looking for.’ (WJ 160)
- (b) ... ond nid presanta’ ydyn’ nhw mewn gwirionadd ond  
but not presents are they in truth but  
petha’ y mae ’u hangen nhw ...  
things REL is 3P-GEN need them  
‘... but they’re not really presents, rather things that are needed (lit.  
that there is their need)’ (WJ 114)
- (c) ’Oes gynnoch chi ryw ddarna’ arbennig yr  
is with-2P you any pieces particular REL  
hoffech chi inni wrando arnyn’ nhw?  
would-like-2P you to-us listen-VN to-3P them  
‘Do you have any particular pieces that you would like us to listen  
to?’ (WJ 159)

If overt resumptives are grammatical in colloquial Welsh, then the resumptive strategy is self-evidently available for these positions. The fact that

[5] Rouveret (1994) goes even further in claiming that resumptive pronouns are not possible even in certain relative clauses formed on embedded positions (those not violating island constraints).

resumptive pronouns are generally null in literary Welsh means that it is very difficult to tell whether a given relative contains a true gap or a resumptive pronoun. However, the absence of resumptive pronouns in these positions in literary Welsh can be attributed to the general avoidance of unstressed (non-emphatic) overt pronouns in this variety.

There is one very revealing exception to this, even in colloquial Welsh. Overt resumptives, as in the example in (33), are never possible in the direct object position of a nonfinite verb (verbnoun). There are no examples of full resumptive pronouns in this position in the texts examined; and this fact has been pointed out by several traditional linguists, for instance Watkins (1977b: 359–360), from whose work the example in (33) is adapted, and, on the basis of children’s Welsh, B. M. Jones (1990a: 59–60).

- (33) \*Gwelais i ’r ferch roeddet ti ’n ei hoffi hi.  
 saw-1S I the girl REL + was-2S you PROG 3SF-GEN like-VN her  
 ‘I saw the girl that you liked.’ (adapted from Watkins 1977b: 359)

This suggests that in colloquial Welsh the non-movement strategy is not available for the subject position or for any direct object position, regardless of whether the verb is synthetic or periphrastic. This conclusion permits a unified treatment of the objects of both finite and nonfinite verbs.

#### 4.2 *Deriving the distribution of resumptive pro*

We therefore need to account for the fact that the non-movement strategy is disallowed in colloquial Welsh in subject and all object positions. In this section, I do this using the A’-Disjointness Requirement (McCloskey 1990, Aoun & Hornstein 1992), comparing it with related accounts set out for Welsh by Ouhalla (1993) and Rouveret (1994).

McCloskey (1990) and Aoun & Hornstein (1992) derive restrictions on the distribution of pronouns bound by operators by requiring pronouns to be A’-free within a particular domain. In Irish (McCloskey 1990), resumptive pronouns are ungrammatical in unembedded subject position (34a), but are permitted in object position (34b).

- (34) (a) \*an fear a raibh sé breoite  
 the man REL was he ill  
 ‘the man that (he) was ill’ (McCloskey 1990: 210)  
 (b) an fear ar bhuaill tú é  
 the man REL struck you him  
 ‘the man that you struck (him)’ (McCloskey 1990: 206)

To account for this, McCloskey assumes that, in addition to the requirement that they be A-free within their governing category (Binding

Condition B), pronouns are subject to an additional constraint, the A'-Disjointness Requirement. This requires pronouns to be A'-free within a certain domain, defined in (35). The relevant domain will henceforth be referred to as the A'-governing category.<sup>6</sup>

(35) *The A'-Disjointness Requirement*

A pronoun has to be A'-free in the least Complete Functional Complex containing the pronoun, its governor and a (distinct) c-commanding subject.

A Complete Functional Complex for a given head is the domain within which all grammatical functions compatible with its head are realized (Chomsky 1986: 169). For a predicational structure, this includes the subject (Aoun & Hornstein 1992: 10). Thus, the CFC for an object pronoun is IP or VP, on the grounds that this domain contains either the subject itself or the trace of the subject, as well as the verb and any complements. For non-predicational structures, the CFC does not need to include a subject, hence for a pronoun within a noun phrase, it will be DP, and for the object of a preposition it will be PP.

In (34a), represented in (36a), the A'-governing category for *sé* 'he' includes the whole relative clause plus the IP of the clause containing it. Only this domain will contain a subject distinct from *sé*, but it also contains the operator that A'-binds *sé*. The sentence is therefore ungrammatical. No such problem arises in (36b), representing (34b), since there the relative clause contains a subject *tú* 'you', hence the A'-governing category is the lowest IP, within which the pronoun is A'-free.

- (36) (a) \*<sub>[GC]</sub> subject... an fear Op<sub>i</sub> a raibh sé<sub>i</sub> breoite]  
           the man REL was he ill  
       (b) an fear Op<sub>i</sub> ar <sub>[GC]</sub> bhuail tú é<sub>i</sub>]  
           the man REL struck you him

Given the formulation in (35), the A'-Disjointness Requirement allows resumptive pronouns in the object position of relative clauses. Irish is not alone in disallowing resumptive pronouns in subject position but nowhere else. The same distribution holds in Slovene (Priestley 1993) and Serbo-Croat (Van der Auwera & Kučanda 1985). In Welsh, however, we are faced with a problem, since resumptive pronouns are ungrammatical in direct object positions, (33), as well as in subject position. The contrast between Welsh and

[6] This formulation of the A'-disjointness requirement differs slightly from other formulations, such as that of Aoun & Hornstein (1992), in requiring the presence of a subject rather than a SUBJECT (i.e. a subject or Agr).



Irish in this respect is one that needs to be accounted for. Two possible approaches spring to mind. On one, the differences are reduced to other differences in the phrase structure of the two languages; on the other, the A'-Disjointness Requirement is subject to parametrization.

Ouhalla (1993) pursues an account of the first kind. He considers the unmarked case to be a language which disallows resumptive pronouns in subject and object position, such as Breton or Welsh (Ouhalla 1993: 491–494). This requires a different version of the A'-Disjointness Requirement:

(37) *The A'-Disjointness Requirement*

A pronoun must be free in the smallest Complete Functional Complex (CFC) which contains it.

Ouhalla takes the 'smallest CFC' to refer to the minimal CP which contains the pronoun (Ouhalla 1993: 490). Therefore, a resumptive pronoun in subject or object position will be A'-bound within its CP and hence excluded. The CFC for a preposition is the PP itself, and for a noun it is the DP that contains it. Consequently, resumptive pronouns within PPs and DPs will be amenable to A'-binding by an operator outside these domains.

The definition in (37) is taken to be basic in Ouhalla's account. Therefore the unmarked language is one in which resumptive pronouns are disallowed in object position. When cross-linguistic differences are encountered, appeal is made to other syntactic factors which alter the A'-governing category of the pronoun. For the case of Irish, where resumptive pronouns are licensed in direct object position, Ouhalla adopts a proposal made in Déprez & Hale (1981) that Irish object pronouns extrapose from the VP, and are thereby exempted from the A'-Disjointness Requirement (Ouhalla 1993: 492 n. 9).

There are a number of difficulties with this view. First of all, it is by no means clear that Welsh represents the unmarked case and Irish the marked case. While it is true that the Irish pattern is isolated within Ouhalla's data, as we have seen, there are other languages which pattern like Irish, and the special pleading for Irish will not carry over easily to these languages. Secondly, postposing Irish object pronouns is optional, but even when the pronoun does not postpose, it may still act resumptively:<sup>7</sup>

- (38) an seanfhear ar chuala mé é ag scéalaíocht  
 the old-man REL heard I him PROG tell-stories-VN  
 'the old man that I heard telling stories'

This suggests that postposing is not responsible for the availability of resumptive object pronouns in Irish.

[7] My thanks to an anonymous *JL* referee for pointing this out to me, and for providing the example in (38).

This leaves us with the possibility that the A'-Disjointness Requirement is simply subject to parametric cross-linguistic variation, as suggested by Rouveret (1994: 408). Rouveret adopts the form of the A'-Disjointness Requirement in (39) for Welsh (translation mine):

- (39) *A'-Disjointness Requirement (Welsh)*  
 A pronoun must be A'-free in the functional projection, or, if it exists, in the extended projection, of the head L to which the site of the pronoun is lexically linked.

The relevant functional projection for extraction from a prepositional phrase or a noun phrase is the agreement projection associated with that phrase (AgrPP and AgrDP respectively). For subject and object position, reference needs to be made to the extended projection, which Rouveret defines as CP (Rouveret 1994: 407). This rules out resumptive pronouns in subject position and in the object position of a synthetic verb. It does not prevent resumptive pronouns from appearing in the object position of a periphrastic verb, because periphrastic verbs contain a nonfinite verb (verbnoun), and Rouveret analyzes such periphrases as containing a DP at their core, an analysis which is itself far from secure (see Borsley 1997). This DP forms an A'-governing category in its own right and so allows a resumptive pronoun to appear within it.

Rejecting the assumption that verbnouns are contained within DPs allows us to prevent resumptive pronouns from occurring in any object position, as required by our conclusions above about the distribution of resumptive pronouns. We therefore extend the A'-Disjointness Requirement to cover the object position of periphrastic verbs.

Rouveret's analysis requires resumptive pronouns to be ungrammatical in a number of positions that do not fall foul of the A'-Disjointness Requirement. Consider again (30), repeated here as (40), which Rouveret treats as ungrammatical, but which we treat as grammatical, parallel to (32b).

- (40) y dyn y prynais ei dŷ ef  
 the man REL bought-IS 3SM-GEN house him  
 'the man whose house I bought' (Awbery 1977: 180)

It should be possible to assign this a representation like (41), that is, treat it as a truly resumptive strategy. Note that Rouveret assumes that nouns raise to the head of a functional projection NumP, so that possessors, in SpecNP, follow them.

- (41) [<sub>CP</sub> Op<sub>i</sub> [<sub>C</sub> y]... prynais... [<sub>DP</sub> [<sub>D</sub> ei] [<sub>NumP</sub> dŷ<sub>N</sub> [<sub>NP</sub> ef<sub>i</sub> t<sub>N</sub>]]]]  
 REL bought-IS 3SM-GEN house him  
 (adapted from Rouveret 1994: 383)

Rouveret states explicitly that this (his option (i)) is not the correct representation (Rouveret 1994: 386). The correct representation involves movement, as in (42) (his option (iii)). The same applies to the other relatives that show rich agreement.

- (42)  $[_{CP} Op_i [_C y] \dots prynais \dots [_{DP} [_D ei] [_{N_{ump}} d\hat{y}_N [_{NP} t_i t_N]]]]]$   
 REL bought-IS 3SM-GEN house

The A'-Disjointness Requirement does not rule out the representation in (41), since the relevant A'-binding domain for the resumptive pronoun *ef* is DP, and the pronoun is A'-free within this domain. In fact, representations like this must in principle be available. Some Welsh prepositions lack conjugated forms and relatives formed on the object position of these prepositions obligatorily have overt resumptive pronouns, which instantiate the same sort of configuration as (41):

- (43) (a) *y gŵr y cytunais ag ef*  
 the man REL agreed-IS with him  
 'the man with whom I agreed'  
 (b)  $[_{CP} Op_i [_C y] \dots cytunais \dots [_{PP} [_P ag] [_{N_{ump}} ef_i]]]$   
 (structure adapted from Rouveret 1994: 414)

For Rouveret, the unavailability of (41) is due to a version of the 'last resort' principle, recast in minimalist terms. Movement is taken to be less costly than base-generation of an operator-pronoun chain (Rouveret 1994: 421). In effect, resumptive pronouns are last resort operations and movement must be chosen wherever possible.

The present analysis uses only the A'-Disjointness Requirement as a constraint on the distribution of resumptive pronouns, hence nothing rules out base-generation of an operator-pronoun chain, and a representation similar to (41) is legitimate. This type of representation is that assigned to such sentences as (40), which are treated as grammatical on this approach.

To sum up, the difference between the two analyses is as follows. The present analysis allows resumptive pronouns in the object position of a preposition and as the possessor of a noun phrase, since no last resort or relative cost constraint rules them out. Rouveret on the other hand uses a last resort constraint to exclude them. Resumptive pronouns are disallowed in the object position of periphrastic verbs in both analyses, but for different reasons. For the present analysis, they are A'-Disjointness Requirement violations; for Rouveret, they are in principle legitimate but more costly than movement in the same environment, and are in fact entirely parallel to resumptive pronouns in possessor positions.

For Irish, Rouveret adopts a different formulation of the A'-Disjointness Requirement, essentially following McCloskey 1990:

(44) *A'-Disjointness Requirement (Irish)*

A pronoun must be A'-free in the functional projection minimally containing the pronoun and a subject distinct from the pronoun.

This makes the A'-governing category the IP of the higher clause for subjects, the lower IP for objects, and PP or DP for oblique relatives (assuming both to contain a subject or agreement element of an acceptable type). Fundamentally, however, we must parametrize the A'-Disjointness Requirement and state that in some languages (Welsh) the A'-governing category for an argument of the verb is CP, whereas in others (Irish) it is an IP containing a distinct subject.

## 5. THE DISTRIBUTION OF *WH*-TRACE

I now return to examine the evidence for the distribution of *wh*-trace in Welsh. In this section it is argued that movement is licensed in a wider range of A'-constructions in colloquial Welsh than has generally been suggested. Consequently, the distinction between the two relative markers  $a^s$  and  $y(r)$  cannot be maintained even at an underlying level. I suggest that the distinction is an artificial one imposed in the literary language and subject to a rule entirely independent of the syntactic structure of the relative clause. Extending the domain in which *wh*-trace is licensed leads to the conclusion that there is some overlap in use between resumptive pronouns and *wh*-traces. Therefore the constraints on their use must be stated independently of one another, rather than using a 'last resort' principle for resumptives.

This conclusion is reached on the basis of cases where agreement cannot license resumptive *pro*, but where A'-constructions are nevertheless grammatical. In this section I discuss two such cases, namely agreement in constructions formed on embedded subjects, and preposition stranding. Arguments in favour of cyclic movement via SpecAgrOP are naturally also arguments in favour of movement in general. However, discussion of these cases is postponed until section 6 (especially section 6.3). Finally, evidence of respect for island constraints is evidence in favour of a movement analysis. Such evidence will be presented for adjunct A'-constructions.

### 5.1 *The marker $\emptyset^s$*

The markers  $a^s$  and  $y(r)$  are rare in colloquial Welsh. Instead the verb appears at the start of a relative clause or immediately after a *wh*-element in a *wh*-question as in (45) (subject A'-dependency) and (46) (object A'-

dependency). Verbs in this position undergo soft mutation (*gwetws* becomes *wetws* and *cawn* becomes *gawn*).

- (45) Pwy 'wetws wrthot ti na allet ti ddim acto?  
 who said to-2S you COMP could-2S you not act-VN  
 'who told you you couldn't act?' (WJ 131)
- (46) 'Falla' mai dyma 'r siawns ora' gawn ni.  
 perhaps that that's the chance best get-1P we  
 'Perhaps that's the best chance we'll get.' (WJ 62)

In these cases, it could be claimed that the soft mutation is the result of phonological deletion of the relative marker *a*<sup>s</sup>. However, A'-constructions formed on other positions show that this is not the case. Below are examples formed on the object of a verbnoun (47a), the object of a preposition (47b), and an adjunct (47c). All allow soft mutation of the clause-initial verb (see Watkins 1961: 203; King 1993: 299–300). Unmutated forms of mutated verbs are given in parentheses.

- (47) (a) Dyna beth fedrat ti 'i wneud, tasat ti wedi  
 that's what could-2S you 3SM-GEN do-VN would-be-2S you PERF  
 bod yma 'n gynt... (medrat)  
 be-VN here PRD earlier  
 'That's what you could have done if you'd been here earlier...'  
 (TMC 28)
- (b) Dyma 'r bobl werthodd y cwmni y tŷ  
 that's the people sold the company the house  
 iddyn' (nhw). (gwerthodd)  
 to-3P (them)  
 'Those are the people that the company sold the house to.'  
 (B. M. Jones 1993: 63)
- (c) Faint o amser fydd o heb y dole? (bydd)  
 how-long will-be he without the dole  
 'How long will he be without the dole?' (WJ 103)

In each case the verb undergoes soft mutation. Since in literary Welsh these contexts would require *y(r)*, a hypothesis of phonological deletion would predict no mutation. The observed data lead us to conclude that colloquial Welsh has a single zero relative marker, *ø*<sup>s</sup>, whose sole exponent is a soft mutation on the following verb.

The data with adjunct A'-constructions are actually more complicated than this. In the variety under investigation, some adjunct *wh*-elements

require a following radical consonant or *y(r)*, whether they are in main clause questions, in embedded questions, or in relative clauses. Examples are *sut* ‘how’ and *lle* ‘where’:

- (48) (a) *Sut basat ti 'n dechra 'r llythyr 'ma?*  
 how would-be-2S you PROG start-VN the letter this  
 ‘How would you start this letter?’ (WJ 147)
- (b) *'Wn i ddim sut y medrwch chi wrando a gweu.*  
 know-IS I NEG how PRT can-2P you listen-VN and knit-VN  
 ‘I don’t know how you can listen and knit.’ (WJ 169)
- (49) (a) *Lle cawsai hi 'r arian i brynu 'r*  
 where get-PLUPERF she the money to buy-VN the  
*ffrog-ddawns grand 'na?*  
 dancing-dress fancy that  
 ‘Where had she got the money to buy that fancy dancing-dress?’  
 (WJ 126)
- (b) *y swyddfa lle gweithiai 'r mab yng Nghaerdydd*  
 the office where worked-IMPF the boy in Cardiff  
 ‘the office where the boy worked in Cardiff’ (WJ 190)

Other overt adjunct *wh*-elements vary in their mutation effects in the relevant variety. For instance *pryd* ‘when’ allows both soft mutation (50) and a following radical consonant (51) (compare also *faint* in (47c) above):

- (50) *Pryd ddoist ti adra...?* (doist)  
 when came-2S you home  
 ‘When did you come home...?’ (WJ 76)
- (51) *Pryd buoch chi 'n prynu hwn...?* (buoch)  
 when were-PERF-2P you PROG buy-VN this  
 ‘When did you buy this...?’ (WJ 141)

Two approaches to this are worth considering. On one, the marker  $\emptyset^s$  is itself an operator, inserted at the extraction site and undergoing A'-movement to SpecCP. This has the advantage of providing a good explanation for why, in colloquial Welsh, the mutation effects of overt adjunct *wh*-elements are lexically idiosyncratic and cannot be predicted by the position of extraction or by the categorial features of the element itself. It is hard to see how the fact that *sut* and *lle* require a radical consonant whereas *pryd* allows also a soft mutation can be specified in any way except as a peculiarity of their lexical entries. If  $\emptyset^s$  is an operator, it will simply not co-occur with other operators, and the problem of making the lack of mutation required by *sut*

and *lle* take precedence over the soft mutation required by  $\emptyset^S$  does not arise.<sup>8</sup>

On a second approach,  $\emptyset^S$  would be analyzed like its literary Welsh counterparts as a complementizer whose function is to check features with a *wh*-element or null operator in SpecCP. If it is assumed that  $\emptyset^S$  can check features with any such element, a problem arises as to why it is not compatible with *sut* and *lle*. It would be extremely difficult to formulate features such that  $\emptyset^S$  could check all *wh*-elements except these. It would also be necessary to introduce a second relative marker  $\emptyset^R$  whose role is solely to check the features of a lexically (rather than categorially) restricted class of *wh*-elements. Both moves seem undesirable. It is a general characteristic of Welsh mutations that the mutation trigger and target must be adjacent (after deletion of NP-trace) (Tallerman 1990b: 397–400). It would be odd to suggest that the mutation effects of *sut* and *lle* could ‘skip over’ the marker  $\emptyset^S$  and thereby forestall its mutation.

I therefore conclude that colloquial Welsh has a single relative operator  $\emptyset^S$ . For literary Welsh, we must posit an additional rule which inserts either  $a^S$  or  $y(r)$  depending on the position on which the relative clause is formed. This rule corresponds to the traditional formulation distinguishing direct from indirect positions.

## 5.2 *Embedded subjects*

Next I examine the evidence that colloquial Welsh allows movement from the subject position of embedded clauses. This evidence comes from agreement patterns and from restrictions on tense, mood and aspect in embedded clauses.

Colloquial Welsh allows A'-constructions lacking rich agreement to be formed into embedded clauses. Other A'-constructions using embedded positions are also possible. Details of other positions are given in section 6.3. The relevant cases involve extraction of subjects across bridge verbs

[8] This approach leaves open the question of what happens when a phrase is topicalized to SpecCP in a fronting structure. Since this operation does not involve the operator  $\emptyset^S$ , independent rules should be available. This may account for why, even in colloquial Welsh, topicalization of an adverbial element does not necessarily trigger soft mutation:

(i) Ddo' cethon ni 'r rhein.	(cethon)
yesterday got-1P we the those	
‘It was yesterday we got those.’	(WJ 115)

(principally *dweud* ‘say’, *gwybod* ‘know’, and *meddwl* ‘think’). Examples are given in (52).<sup>9</sup>

- (52) (a) Pwy wedsoch chi oedd \_\_\_\_ yn dod?  
 who said-2P you was \_\_\_\_ PROG come-VN  
 ‘Who did you say was coming?’
- (b) Beth wyt ti ’n feddwl oedd \_\_\_\_ gin i pan  
 what are you PROG think-VN was \_\_\_\_ with me when  
 oeddwn i ’n byw yn fy nhŷ fy hun?  
 was I PROG live-VN in IS-GEN house my own  
 ‘What do you think I had when I was living in my own house?’  
 (TMC 97)

In the sentences in (52), the verb in the embedded clause is third person singular, and could license *pro* in subject position bound by the third person singular *wh*-element. However, even when the *wh*-element is plural, the verb must remain in the singular:

- (53) Pa lyfrau wyt ti ’n meddwl oedd yn addas?  
 which books are you PROG think-VN was PRD suitable  
 ‘Which books do you think were suitable?’
- (54) \*Pa lyfrau wyt ti ’n meddwl oedden (nhw) ’n addas?  
 which books are you PROG think-VN were (they) PRD suitable  
 ‘Which books do you think were suitable?’

Absence of agreement in (53) is explicable only if this example involves movement from the embedded position. A third person singular verb cannot identify the features of a third person plural *pro*. On the other hand, a *wh*-trace in embedded subject position would be consistent with poor agreement.

Two questions remain though. First, the sentence in (53) would be ungrammatical in the absence of *wh*-movement. In literary Welsh and in varieties of colloquial Welsh embedded clauses introduced by the complementizer *y(r)* ‘that’ are ungrammatical if the verb is in a past or present tense. Thus, while the conditional sentence in (55a) may be embedded as

[9] The possibility that in these cases the bridge clause is an interpolation can be excluded. First, the tense of the bridge verb affects the interpretation of the tense of the embedded verb. In (52a), the verb *oedd* may be interpreted either with past or non-past reference (i.e. corresponding to either of the actual questions ‘Who was coming?’ or ‘Who is coming?’) by virtue of the presence of the past tense verb in the higher clause. Secondly, mutation of the verb in the upper clause in (52b) (*meddwl* → *feddwl*) can only be accounted for if it is assumed that this clause is syntactically integrated into the rest of the structure, see section 6.3 below.



(56a), the sentence in (56b), which results from the same embedding of the past tense sentence in (55b), is ungrammatical for many speakers.

- (55) (a) Byddai 'r hen lyfrau 'n addas.  
would-be the old books PRD suitable  
'The old books would be suitable.'
- (b) Roedd yr hen lyfrau 'n addas.  
was the old books PRD suitable  
'The old books were suitable.'
- (56) (a) Roeddwn i 'n meddwl (y) byddai 'r hen  
was-IS I PROG think-VN (that) would-be the old  
lyfrau 'n addas.  
books PRD suitable  
'I thought that the old books would be suitable.'
- (b) ??Rwy 'n meddwl (yr) oedd yr hen lyfrau 'n addas.  
am-I PROG think-VN (that) was the old books PRD suitable  
'I think that the old books were suitable.'

Given this restriction, the well-formedness of (53), which contains the disallowed past tense verb, is puzzling. Some light is thrown on the problem by the relevant present tense paradigm. As expected, embedding present tense *mae* 'is' results in a shift from grammatical (57) to ungrammatical (58).

- (57) Mae cyfiawnder yn wir bwysig mewn cymdeithas.  
is justice PRD truly important in society  
'Justice is truly important in society.'
- (58) \*Rwy 'n credu mae cyfiawnder yn wir  
am-I PROG believe-VN is justice PRD truly  
bwysig mewn cymdeithas.  
important in society  
'I believe that justice is truly important in society.'

As before, forming a *wh*-dependency on the subject position occupied by *cyfiawnder* 'justice' restores grammaticality, as shown in (59). However, the form of the verb changes, from *mae* to *sy*(*dd*). This is the relative form of the verb *bod* 'to be', found in subject extractions in all *wh*-constructions.

- (59) Beth ych chi 'n gredu sy 'n wir bwysig  
what are you PROG believe-VN is-REL PRD truly important  
miwn cymdeithas?  
in society  
'What do you think is truly important in society.' (WJ 255–256)

A'-dependencies allow disallowed present tense forms to remain also in other person-number combinations:

- (60) Be' ydach chi 'n feddwl ydw' i yn fy nhŷ fy  
 what are you PROG think-VN am I in my house my  
 hun? Ornament?  
 own ornament  
 'What do you think I am in my own house? An ornament?' (*WJ* 34)

Under a movement analysis, a straightforward generalization can be made. Past and present tense verb forms are possible in embedded contexts only if the clause contains a trace. The need to posit this generalization is further evidence in support of a movement analysis of these constructions.

There are thus two arguments to suggest that extraction is permitted from the subject position of a finite clause in Welsh. If movement were not postulated, both the default agreement patterns and the relaxation of tense, mood and aspect restrictions in these clauses would be inexplicable.

As expected, changing the verb in (53) and (54) to a non-restricted form, the conditional in (61) and (62), improves the acceptability of rich agreement, although default agreement is still preferred. Rich agreement in (62) is more acceptable if the A'-construction is a relative clause, if the particle *y(r)* is included, if the verb is left unmutated (*bydden*), and if an overt resumptive is present. Nevertheless, (62) is more acceptable than (54), which falls foul of the tense, mood and aspect restrictions on relative clauses.

- (61) Pa lyfrau wyt ti 'n meddwl byddai/fyddai 'n addas?  
 which books are you PROG think-VN would-be PRD suitable  
 'Which books do you think would be suitable?'  
 (62) ?y llyfrau yr wyt ti 'n meddwl y bydden  
 the books COMP are you PROG think-VN COMP would-be-3P  
 nhw 'n addas  
 they PRD suitable  
 'the books that you think would be suitable'

To conclude, both configurations in (63) below are licensed for A'-constructions formed on embedded subject positions. The one in (63a) involves syntactic movement of the operator, resulting in default agreement on the embedded verb. The presence of the subject trace voids tense, mood, and aspect restrictions on the embedded clause, hence the absence of any contrast in acceptability between (53) and (61). The second configuration, in (63b), involves no movement, hence no subject trace. The absence of the

trace means that tense, mood, and aspect restrictions remain, hence the contrast between (54) and (62).

- (63) (a) [<sub>CP</sub> Op<sub>i</sub> verb...[<sub>CP</sub> t<sub>i</sub> verb-3S t<sub>i</sub>]]  
 (b) [<sub>CP</sub> Op<sub>i</sub> verb...[<sub>CP</sub> y(r) verb-AGR *pro*<sub>i</sub>]]

### 5.3 Preposition stranding

Further evidence that movement from positions other than subject and object must be possible comes from cases of preposition stranding, where, as with embedded subjects, A'-constructions are formed in the absence of agreement that could license resumptive *pro*. Preposition stranding without agreement on the preposition is found in many varieties of colloquial Welsh (chiefly among younger speakers), both with uninflectable prepositions, like *mewn* 'in' in (64) and *hefo* 'with' in (66), and with prepositions that have a morphological paradigm, like *am* 'about' in (65) (see M. Jones & A. R. Thomas 1977: 181). A naturally occurring example is given in (66).

- (64) %Cymraeg yw 'r iaith rôn i 'n siarad mewn.  
 Welsh is the language REL + was I PROG speak-VN in-Ø  
 'Welsh is the language I was talking in.'
- (65) %Beth mae e 'n w(h)ilo am?  
 what is he PROG look-VN for-Ø  
 'What is he looking for?' (Watkins 1977b: 364)
- (66) ...mae pawb dwi wedi siarad hefo ynghlyn a  
 is everyone REL + am PERF speak with-Ø about  
 'r albym yn cytuno am hyn.  
 the album PROG agree about that  
 '...everybody I've talked with about the album agrees on that.'  
 (*Sothach!* 72, July/August 1995, 14)

These examples clearly do not involve resumptive *pro* since *pro* is licensed only in the presence of rich agreement, and such agreement is not found here. Furthermore the preposition *mewn* 'in' in (64) is compatible only with indefinite objects. It is paired with another preposition *yn*, which appears when the object is definite. If (64) involved resumptive *pro*, we would expect, since personal pronouns are inherently definite noun phrases, that the definite preposition *yn* would appear rather than the indefinite preposition *mewn*. It can therefore be concluded that in these examples there is movement of a null operator that leaves behind a trace. The only other solution would be to claim that prepositional agreement has been lost in these dialects, but

this is clearly not the case. For instance, if an overt resumptive pronoun is inserted, the stem form of the preposition is not acceptable:

- (67) \*Beth mae e 'n chwilio am fe?  
 what is he PROG look-VN for- $\emptyset$  it  
 'What is he looking for?'

The question remains, however, as to why it is the stem form that is used (*am*) in (65), rather than a default agreement form, say, the third person singular masculine form (*amdano*), which would parallel more closely the situation with verbs (see section 6.1). This issue is brought out more clearly by the example in (68). There, the resumptive strategy is possible in (68a), and in colloquial Welsh the movement strategy is possible in (68c), but in that strategy the preposition must show zero agreement, rather than the default agreement in (68b).<sup>10</sup>

- (68) (a) Pa lyfrau wyt ti 'n chwilio amdany'n (nhw)?  
 which books are you PROG look-VN for-3P (them)  
 (b) \*Pa lyfrau wyt ti 'n chwilio amdano?  
 which books are you PROG look-VN for-3SM  
 (c) Pa lyfrau wyt ti 'n chwilio am?  
 which books are you PROG look-VN for- $\emptyset$   
 'Which books are you looking for?'

It is not clear at present what rules out (68b).

#### 5.4 *Adjunct extractions*

The evidence surveyed in section 5.3 showed that the resumptive and movement strategies coexist for extractions of objects of prepositions. For embedded elements (except for embedded subjects) the empirical differences between the two strategies are difficult to establish. The resumptive strategy clearly provides a way to license island constraint violations. The movement strategy on the other hand does not. Since the resumptive strategy is always in principle available, and a *pro*-gap is not transparently distinguishable from a *wh*-trace gap, the observed pattern of data should be that Welsh relatives look as though they do not respect island constraints. This is correct. If,

[10] For some speakers, the stem of the inflecting form, with no inflection, *amdan* is grammatical here, however.

however, there is any position on which the resumptive strategy is not licensed, then island constraint violations should be manifested. There are two types of contexts in which there is no appropriate resumptive element in Welsh, namely A'-constructions formed on adjunct and predicate positions. I consider here only adjunct extractions although a parallel argument could be made on the rather more complex data from extractions from predicate positions.

First of all, adjunct A'-constructions are not clause-bound. In (69), *yfory* 'tomorrow' can (indeed must, given the sequence of tenses) be understood as modifying the lowest clause, specifying the day of arrival rather than the day on which the suggestion was made. Attested examples are given in (70). This is a shared feature of literary and colloquial varieties.

- (69) Yfory yw 'r dydd y dywedodd wrthyf y  
tomorrow is the day REL said to-IS that  
byddai 'n dod \_\_\_\_.  
would-be PROG come-VN \_\_\_\_  
'Tomorrow is the day that he/she said to me that he/she would be coming.'
- (70) (a) Sut wyt ti 'n feddwl y daethon ni yma  
how are you PROG think-VN that came-IP we here  
gynta \_\_\_\_, ynte?  
first \_\_\_\_ then  
'How do you think we came here in the first place, then?'  
(TMC 142)
- (b) Nodiodd tua 'r llofft, lle gwyddai fod yr  
nodded towards the attic where knew-IMPF be-VN the  
arweinydd wrth ei waith fel saer.  
leader at 3SM-GEN work as carpenter  
'He nodded towards the attic, where he knew that the leader was  
at his work as a carpenter.'  
(WJ 108)

As was seen from (14), resumptive relatives do not respect island constraints. Adjunct relatives, although they use the same relative particle as resumptive relatives, do show island effects. For instance (71) shows an attempt to form a relative on a position inside a complex noun phrase. The relevant (unavailable) meaning is the one where a rumour spread (at some time in the past) that he or she would come tomorrow. The alternative (grammatical) meaning in which 'tomorrow' is interpreted as modifying the first clause is ruled out by the clash of tense between *yfory* 'tomorrow' and the past tense verb *lledodd* 'spread'. The ungrammaticality of (71) confirms that a resumptive strategy is not involved.

- (71) \* Yfory yw 'r dydd y lledodd y si  
 tomorrow is the day REL spread the rumour  
 y byddai 'n dod \_\_\_\_.  
 that would-be PROG come-VN \_\_\_\_  
 'Tomorrow is the day that the rumour spread that he/she would come  
 (on that day).'

This provides confirmation that relatives formed on embedded adjuncts involve movement, and therefore further confirms that movement from embedded positions is possible in Welsh.

### 5.5 Conclusion

The evidence amassed in this section shows that in addition to subjects and direct objects at least three types of constituent may undergo movement, namely embedded subjects, objects of prepositions and embedded adjuncts. This suggests that movement is a fairly general possibility. In the next section, extraction of objects of nonfinite verbs is investigated. It has already been suggested on the basis of the ungrammaticality of overt resumptive pronouns in this position in all varieties of Welsh, that a movement analysis is likely to be the most promising one. We shall see that there is positive evidence for this conclusion. More significantly, it is shown that this movement must proceed cyclically via SpecAgrOP.

## 6. EVIDENCE FOR MOVEMENT VIA SPECAGROP

The presence of object agreement clitics in A'-constructions formed on the object of nonfinite verbs, for instance, *eu<sup>R</sup>* in (12) repeated here as (72), poses a potential problem for a movement analysis. As was mentioned above (section 2.3), if agreement clitics can no longer be analyzed as licensing null resumptive pronouns, it becomes necessary to introduce some mechanism for bringing about agreement.

- (72) y dynion y byddwch yn eu cwrdd \_\_\_\_  
 the men REL will-be-2P PROG 3P-GEN meet-VN \_\_\_\_  
 'the men that you'll be meeting'

A number of proposals which treat this as true agreement have been proposed in the literature. Hendrick (1991) suggests that this agreement could be a reflection of movement via SpecAgrOP. A similar proposal is made by Tallerman (1993: 25–32). In Tallerman's account *wh*-moved constituents may adjoin to VP on their way to CP.

I review the evidence in support of such a view, specifically one in which movement is obligatorily via SpecAgrOP (or some similar position, such as SpecVP), and introduce some additional evidence that points in the same

direction. I begin by examining a change in colloquial Welsh, reported in Tallerman (1993), which shows that loss of agreement does not trigger the appearance of overt resumptive pronouns in object extractions. Furthermore, analysis of the Welsh passive shows that a mechanism to license object agreement clitics through A-movement is necessary in any case. There is therefore no justification for denying the same possibility to A'-movement. Finally, some varieties of colloquial Welsh have a non-local mutation which can only be accounted for if SpecAgrOP is used as an intermediate landing site for A'-movement.

### 6.1 Defective agreement and A'-movement

If the presence of agreement were the crucial factor in determining the well-formedness of A'-constructions, it would be expected that the grammaticality of A'-constructions would be sensitive to the existence of defective parts of the agreement system.

The agreement clitics on nonfinite verbs are being lost in colloquial Welsh (see Tallerman 1993: 25–32 for a theoretical approach; and for descriptive treatments B. M. Jones 1990a, 1990b on children's Welsh and B. M. Jones 1993: 70–77 on adult Welsh). Thus in addition to (73a), we now find also (73b). Note that in (73b) not even the mutation effect of the clitic remains (see Tallerman 1993: 26).

- (73) (a) Dwi 'n ei ddarllen e.  
am + I PROG 3SM-GEN read-VN it  
(b) Dwi 'n darllen e.  
am + I PROG read-VN it  
'I'm reading it.'

The loss of agreement clitics naturally means that *pro* is no longer licensed in posthead argument position. However, this change has had no effect on the grammaticality of relative clauses. That is, no overt pronoun has appeared in object relatives like (74).

- (74) Dyma 'r car dwi wedi prynu.  
that's the car REL + am + I PERF buy-VN  
'That's the car I've bought.' (B. M. Jones 1990a: 60)

If A'-constructions formed on objects of nonfinite verbs in Welsh require the use of the resumptive strategy with *pro* in object position, the verb *prynu* should be unable to license *pro* and therefore to permit the construction in (74). Under a resumptive analysis of this kind, (74) would be assigned the structure in (75), yet in this structure there is no way to license *pro*.

- (75) [<sub>CP</sub> Op<sub>i</sub> [<sub>AgrSP</sub> dw [<sub>TP</sub> i [<sub>AspP</sub> wedi [<sub>AgrOP</sub> [<sub>VP</sub> prynu *pro*<sub>i</sub>]]]]]]]  
am I PERF buy-VN





variety without mutation, checking occurs with a null element  $\emptyset^R$  that blocks the mutation that would otherwise be triggered by the DP, *wh*-trace.

This construction gives rise to an environment in which the supposedly resumptive strategy is possible even in the absence of the requisite overt morphological agreement. I conclude that the presence of object clitics in extractions from the object position of nonfinite verbs can be triggered by movement via SpecAgrOP. The loss of overt agreement in colloquial Welsh has not prevented the continued grammaticality of these A'-constructions, a fact that provides further evidence to exclude the possibility that object agreement clitics license resumptive *pro*.

## 6.2 Movement in passives

A closer look at Welsh object agreement clitics shows that object agreement must be licensed in two configurations irrespective of the analysis of A'-constructions. This shows that postulation of such agreement in A'-constructions in no way represents a complication in the grammar.

Welsh has a series of object agreement clitics (prefixed/infixes genitive pronouns, *rhagenwau genidol blaen/mewnol* in traditional terminology), which precede a nonfinite verb when its object is a personal pronoun. The pronominal object may be overt or may be *pro*. Both possibilities are illustrated in (78). When the object is a full lexical noun phrase, the clitic is absent, as in (79).

(78) Mae Nia wedi 'i baentio *pro/ef*.  
 is Nia PERF 3SM-GEN paint-VN *pro/it*  
 'Nia has painted it.'

(79) Mae Nia wedi paentio 'r llun.  
 is Nia PERF paint-VN the picture  
 'Nia has painted the picture.'

I assume an analysis of the structure of (79) as (80). Object clitics are assumed to head an object agreement projection AgrOP (Tallerman 1993: 25; Roberts & Shlonsky 1996). In order for the object agreement clitic to be licensed, some checking relation, whether overt or covert, must be established. Since the object clearly remains in a postverbal position at Spell-Out, this checking relation must be established at LF, by means of covert raising of object pronouns to SpecAgrOP.

(80) [<sub>AgrSP</sub> mae<sub>T</sub> [<sub>TP</sub> Nia t<sub>T</sub> [<sub>AspP</sub> wedi [<sub>AgrOP</sub> 'i [<sub>VP</sub> baentio ef<sub>i</sub>]]]]]

That is, (80) becomes (81) at LF. At this level a local structure for licensing the object clitic is found. That structure must be [<sub>AgrOP</sub> [+pro]<sub>i</sub> cl<sub>i</sub>].

(81) [<sub>AgrSP</sub> mae<sub>T</sub> [<sub>TP</sub> Nia t<sub>T</sub> [<sub>AspP</sub> wedi [<sub>AgrOP</sub> ef<sub>i</sub> [<sub>VP</sub> baentio t<sub>i</sub>]]]]]  
 [+pro]<sub>i</sub> CL<sub>i</sub>

If this were the only configuration in which object agreement clitics were licensed in Welsh, it would be difficult to see how those A'-constructions where object agreement is manifested could be analyzed as extractions.

However, the Welsh passive shows independently that the configuration for the licensing of object agreement must be wider than this. The usual passive in Welsh is formed using the auxiliary *cael* 'to receive, get, have'.<sup>12</sup> A lexical nonfinite verb hosts an object clitic that agrees with the passivized object. An example is given in (82).

- (82) Cafodd y llun ei baentio (gan Nia).  
 got the picture 3SM-GEN paint-VN (by Nia)  
 'The picture was painted (by Nia).'

The presence of the object agreement clitic *ei*<sup>s</sup> preceding *baentio* can be accounted for by assuming that raising from object to subject position in Welsh passives proceeds stepwise as in (83). The object raises first to SpecAgrOP, where it checks for agreement against the object agreement clitic heading AgrOP, before moving to a subject position, SpecTP. The result is the formation of an A-chain (*y llun*<sub>i</sub>, *t*<sub>i</sub>, *t*<sub>i</sub>).

- (83) [<sub>AgrSP</sub> cafodd [<sub>TP</sub> y llun<sub>i</sub> [<sub>AgrOP</sub> *t*<sub>i</sub> ei [<sub>VP</sub> baentio *t*<sub>i</sub>]]]]  
 got the picture 3SM-GEN paint-VN

Under this analysis, the clitic *ei*<sup>s</sup> must also be licensed either in the configuration [<sub>AgrOP</sub> DP<sub>i</sub> cl<sub>i</sub>] (the structure before the final stage raising) or [<sub>AgrOP</sub> *t*<sub>i</sub> cl<sub>i</sub>] (the structure after) in the passive. The assumption that checking should be carried out as soon as possible favours the former. Notice that it is only when this configuration arises overtly that it licenses a clitic. Presumably it arises also in the LF-structure of (79), when the object *y llun* raises covertly to check for (the absence of) agreement on AgrO. At LF, however, for lexical DPs the configuration is compatible only with absence of agreement clitics.

One might object that AgrOP should be inactive in a passive construction, since it is standardly assumed that passivization is associated with absorption of the verb's accusative case-checking capacity. Notice, however, that *baentio* in (83) is not morphologically passive: it is simply the (active) nonfinite form of the verb. There is therefore no way to prevent projection of the object agreement phrase. One may speculate that insertion of the clitic *ei*<sup>s</sup> into the AgrO head is responsible for checking the (presumably genitive, given the traditional designation of the clitic) case feature of AgrO, thereby preventing a clash with the nominative case feature of *y llun*, which is checked ultimately (covertly) in AgrSP.

[12] Welsh also has an impersonal passive, in which the verb acquires an impersonal (subjectless) form and the object remains in situ. For details, see Awbery (1976: 146–170), Comrie (1977) and Fife (1985).

An alternative structure is worth considering in the hope of maintaining the original formulation of the licensing configuration. Under this analysis, the passive in Welsh would be a resumptive structure as in (84), in which *pro* in object position raises at LF to SpecAgrOP, thereby forming the original checking configuration for the object clitic.

- (84) [<sub>AgrSP</sub> cafodd [<sub>TP</sub> y llun<sub>i</sub> [<sub>AgrOP</sub> t<sub>i</sub> ei [<sub>VP</sub> baentio *pro*<sub>i</sub>]]]]  
 got the picture 3SM-GEN paint-VN

This, however, is ruled out by the severe ungrammaticality of the equivalent sentence in which the putative *pro* is replaced by an overt object pronoun in (85). In any case, both (84) and (85) may involve a Binding Condition B violation, with a pronoun (*pro* or *ef*) being A-bound by a subject (*y llun*).

- (85) \*Cafodd y llun ei baentio ef.  
 got the picture 3SM-GEN paint-VN it  
 ‘The picture was painted it.’

Although overt object pronouns have replaced *pro* to a great extent in colloquial Welsh, they have not spread at all to the passive (Watkins 1977a: 162; B. M. Jones 1990b: 61–62), and (85) remains ungrammatical for all speakers, even those for whom overt object pronouns are virtually obligatory. This is very strong evidence against the structure in (84).

Once it is accepted that checking of object clitics is possible in this configuration, there is no principled reason not to allow it to extend to include cases of A'-movement. A reasonable formulation would be that overt checking is possible between the clitic and any DP in SpecAgrOP, whereas after Spell-Out checking is restricted to pronominal elements.

### 6.3 *A non-local mutation in embedded extractions*

We have already seen that extraction from embedded clauses is possible in colloquial Welsh. A full paradigm of cases is given below: embedded subject in (86), embedded object of verbnoun in (87), embedded predicate in (88), embedded adjunct in (89), and embedded prepositional phrase in (90).

- (86) Beth wyt ti 'n feddwl oedd \_\_\_ gin i pan  
 what are you PROG think-VN was \_\_\_ with me when  
 oeddwn i 'n byw yn fy nhŷ fy hun?  
 was I PROG live-VN in 1S-GEN house my own  
 ‘What do you think I had when I was living in my own house?’  
 (TMC 97)

- (87) Be' wyddwn i be' oedd o wedi 'i feddwl  
 what knew-IS I what was he PERF 3SM-GEN think-VN  
 am gal \_\_\_\_?  
 about get-VN \_\_\_\_  
 'What did I know about what he'd thought of getting?' (WJ 28)
- (88) Hy, pwy oedd e 'n feddwl \_\_\_\_ oedd e?  
 ha who was he PROG think-VN \_\_\_\_ was he  
 'Ha, who did he think he was?' (WJ 78)
- (89) Sut wyt ti 'n meddwl y daethon ni yma  
 how are you PROG think-VN that came-IP we here  
 gynta \_\_\_\_, ynte?  
 first \_\_\_\_ then  
 'How do you think we came here in the first place, then?'  
 (TMC 142)
- (90) P'run ynta i 'r eglwys ynta i 'r capel rydach chi  
 which-one either to the church or to the chapel are you  
 'n meddwl yr ewch chi \_\_\_\_?  
 PROG think-VN that will-go-2P you \_\_\_\_  
 'To which one, the church or the chapel, do you think you'll go?'  
 (TMC 14)

When a nominal element is extracted across an intermediate clause, a nonfinite verb in that clause may undergo soft mutation in some varieties of colloquial Welsh. This can be seen in examples (86)–(88), where the verb in the higher clause appears as *feddwl* rather than its radical form *meddwl*. Mutations in Welsh are typically local, being subject to a condition that the mutation trigger and target must be adjacent (Tallerman 1990b: 397–400; Borsley & Tallerman 1996). If these examples involve resumptive pronouns, it is extremely difficult to see how the context for this mutation can be stated in local terms. It is not even clear what the mutation trigger would be.

On the other hand, under an analysis where A'-constructions formed on embedded positions involve movement, the mutation receives a natural interpretation. On this account, (86) will have the structure in (91), including movement via SpecCP of the lower clause and SpecAgrOP of the upper clause.

- (91) [<sub>CP</sub> beth<sub>i</sub> [<sub>AgrSP</sub> wyt [<sub>TP</sub> ti [<sub>AspP</sub> 'n [<sub>AgrOP</sub> t'<sub>i</sub> feddwl  
 what are you PROG think-VN  
 [<sub>CP</sub> t'<sub>i</sub> oedd t<sub>i</sub> gin i ]]]]]]  
 was with me  
 'What do you think I had?'

First consider the conditions under which soft mutation appears. Soft mutation is triggered on the word following a large class of lexical items, including prepositions, the definite article before a feminine noun, numerals and complementizers. It is also triggered structurally, for instance, on direct objects of finite verbs in (92), and in a number of other environments that can be assimilated to this. For instance, in (93), soft mutation appears on what appears to be a subject.

- (92) Mi welodd Rhodri gwningen. (cwningen)  
 PRT saw Rhodri rabbit  
 ‘Rhodri saw a rabbit.’
- (93) Mae yn yr ardd gwningen fawr. (cwningen)  
 is in the garden rabbit big  
 ‘In the garden is a big rabbit.’

These environments can be unified by claiming that soft mutation is triggered by all case-marked noun phrases (Harlow 1981: 238–239, 250; 1989: 302–312).<sup>13</sup> For these purposes, traces of A-movement and Head Movement must be inert, neither triggering nor blocking mutation (Tallerman 1990b: 406–409). For instance, in (92), the trace of the raised verb intervenes between subject and object, yet the subject triggers soft mutation on the immediately adjacent object (Tallerman 1990b: 396). Null subjects and *wh*-traces count (unsurprisingly, given their status as phrasal R-expressions) as full noun phrases and act as mutation triggers (Borsley 1984: 283; Harlow 1989: 309–312; Tallerman 1990b: 410; Borsley & Tallerman 1996: 5). For instance, in (77), repeated here as (94), the *wh*-trace triggers mutation of the object.

- (94) Dyna ’r ferch<sub>i</sub> Op<sub>i</sub>welodd t<sub>i</sub> gwningen (cwningen)  
 that’s the girl saw rabbit  
 ‘That’s the girl who saw a rabbit.’

The fact that *wh*-trace is independently required to be a mutation trigger, along with the structure in (91), allows two possible accounts of the presence of mutation in (86)–(88). I suggest that both are correct for some speakers of contemporary colloquial Welsh.

On a conservative interpretation, the *wh*-element checks for agreement as it reaches SpecAgrOP. It must therefore be in a checking configuration with an appropriate agreement element, that is, if extraction is of a nominal *wh*-phrase, an object clitic in AgrO. The object clitic is *ei*<sup>S</sup>, a soft mutation trigger. This may be deleted phonologically leaving only the mutation effect. In fact the object clitic remains in example (87) above.

[13] Other possibilities are that soft mutation is triggered by any phrasal constituent (Harlow 1989), or by any c-commanding phrasal constituent (Borsley & Tallerman 1996). For present purposes, the more straightforward noun phrase definition is adequate, but the account presented here is in any case compatible with either of the other formulations.

The second possibility is that the intermediate trace in the upper SpecAgrOP in (91) is itself the mutation trigger, as suggested by Tallerman (1993: 30–31).<sup>14</sup> Object agreement clitics are being lost in the speech of some speakers (see section 6.1). For these speakers, this is a more plausible account. In the adjunct extraction, the *wh*-operator presumably lacks the nominal feature that makes a noun phrase a mutation trigger, hence the absence of mutation.

Both possibilities depend crucially on the availability of SpecAgrOP as a landing site for movement.

#### 7. AGAINST MOVEMENT FROM POSSESSIVE NOUN PHRASES

The arguments presented so far in favour of the availability of movement in Welsh A'-constructions have not touched those cases formed on possessor noun phrases. The evidence of section 4.1 (especially (32b)) showed that these could involve the resumptive strategy, but no particular evidence has been presented to show they can also involve the movement strategy. I suggest that in fact the movement strategy is ruled out in A'-constructions formed on this position.

As in other languages, licensing of *pro* in Welsh requires an appropriate identifying head to be present. For instance, third person plural *pro* is identified in object position by the genitive object clitic *eu*<sup>R</sup>. It cannot be identified by a clitic of another person-number combination.

In A'-constructions, however, agreement with the extracted operator is not strictly enforced. There are two ways in which this permissiveness is manifested. The pattern of data in both cases suggests that A'-constructions formed on possessor noun phrases do not involve movement.

Object agreement clitics are being lost in colloquial Welsh (section 6.1). This development extends also, albeit to a lesser extent, to clitics attached to nouns, as exemplified in (95), where literary and standard colloquial (95a) contrasts with substandard colloquial (95b).

(95) (a) Dyma 'i llyfr hi.  
that's 3SF-GEN book she

(b) Dyma llyfr hi.  
that's book she

'That's her book.'

(B. M. Jones 1990a: 47)

[14] Presumably, given that there is dialectal or idiolectal variation in the acceptability of mutation in structures like (88)–(90), the option is also open that intermediate traces are deleted as unnecessary for interpretation before mutation assignment takes place. In Tallerman's analysis of Welsh *wh*-movement, movement proceeds optionally via a position adjoined to VP (Tallerman 1993: 30–31). Extending that analysis would raise another possibility, namely that movement via SpecAgrOP is optional. However, it is difficult to see how such optionality could be incorporated into a formal grammar.

The loss of agreement clitics naturally means that *pro* is no longer licensed in posthead argument position. It was argued above that the fact that a gap in object relatives remains grammatical even in varieties that accept the loss of object agreement clitics suggests that these relatives involve *wh*-trace rather than *pro* (see (74)). If extraction of possessor noun phrases proceeded by movement, we would expect the same development to take place, and the appearance of relative clauses like that in (96). The fact that this has not happened suggests that movement of possessor noun phrases is not possible. If possessor noun phrase relatives are necessarily resumptive, the continued ungrammaticality of (96) is explained. In the absence of agreement clitics, *pro* is no longer licensed, and a relevant resumptive structure cannot be derived.

- (96) \*Dyma 'r dyn dwi wedi prynu car.  
 that's the man REL + am + I PERF buy-VN car  
 'That's the man whose car I've bought.'

A related argument comes from another aspect of agreement. In *A'*-constructions formed on the object of a nonfinite verb, the agreement clitic does not have to agree with the antecedent. Although there is normative pressure against this pattern in contemporary Welsh (hence its absence from the standard grammars of literary Welsh), it has a long history, going back to Middle Welsh. In the Middle Welsh example in (97), the genitive (object-agreement) clitic on the verb in the relative clause is masculine singular, yet the antecedent is plural (see Lewis 1942: xl; Armstrong 1987–1988).

- (97) ...peidyav a wnaeth a 'r abertheu yd oed yn  
 stop-VN PRT did with the sacrifices REL was PROG  
 y wneuthur...  
 3SM-GEN do-VN  
 '...he stopped the sacrifices that he was making...'  
 (*Brut Dingestow*, ed. by Henry Lewis, 66.31)

Agreement in this context remains optional in colloquial Welsh today, and to a certain extent even in literary Welsh (Richards 1938: 90), as the example in (98) demonstrates.

- (98) Ond gyda hyn, wele ddarn o dywarchen y bu Rachel yn  
 but with that lo piece of turf REL was-PERF Rachel PROG  
 balu 'r bore hwnnw yn hedfan at ei ben.  
 dig-VN the morning that PROG fly-VN at 3SM-GEN head  
 'But with this, lo and behold, a piece of turf that Rachel had been  
 digging that morning came flying towards his head.'  
 (Richards 1938: 90)

In (98), the antecedent *tywarchen* 'turf' is feminine, hence the object agreement clitic in the relative clause would be expected to be feminine *ei*,

resulting in aspirate mutation on the verb, hence *phalu*. The soft mutation on *balu* ‘to dig’ (radical form *palu*) is not consistent with this, and suggests either that a masculine object agreement clitic *ei*<sup>s</sup> has been deleted phonologically or that the mutation is the result of the operator moving via the SpecAgrOP position immediately preceding the verbnoun.

However, with A'-constructions formed on possessor noun phrases, agreement is strictly enforced.<sup>15</sup> Note the contrast between (99) and (100).

- (99) (a) Dyna 'r fenyw dwi wedi 'i gweld.  
 (b) 'i weld.  
 that's the woman am + I PERF 3SF-GEN see-VN  
 3SM-GEN see-VN  
 'That's the woman I've seen.'
- (100) (a) Dyna 'r fenyw dwi 'n nabod ei mab  
 (b) \*ei fab  
 that's the woman am + I PROG know-VN 3SF-GEN son  
 3SM-GEN son  
 'That's the woman whose son I know.'

This contrast receives a natural explanation if it is claimed that relatives formed on possessor noun phrases are always resumptive, whereas those formed on objects of nonfinite verbs involve movement. Clitics in movement relatives are the result of an agreement process. Agreement is with the empty operator, which may lack person-number features. It is reasonable to assume that it may have either the features of its antecedent, or that it may be unmarked for person and number, in which case default agreement clitics will appear. The two agreement patterns reflect this optionality. On the other hand, in resumptive relatives, object agreement clitics are needed to license *pro*. Incomplete agreement prevents licensing of *pro*, hence (100b) is excluded.

## 8. CONCLUSION

To summarize the previous sections, Welsh relatives divide into three groups: those that can be formed only by movement, those that can be formed only by resumption, and those where either strategy is available. The distribution of resumptive pronouns and *wh*-trace that has been argued to hold for Welsh is summarized in Table 1. Evidence from mutation shows that this movement must be cyclic movement through SpecCP and SpecAgrOP in each clause. This overlapping distribution suggests that the resumptive strategy should not be thought of merely as a ‘last resort’ strategy used when all else fails. It must be subject to licensing conditions of its own.

[15] As for Middle Welsh, Armstrong (1987–1988) gives no examples of agreement failures with A'-dependencies formed on possessor noun phrases, although he does not discuss their properties separately from other types.



Relativization site	Subject	Object of finite verb	Object of nonfinite verb	Adjunct (including embedded)	Object of preposition	Embedded subject	Possessor noun phrase
<i>wh</i> -trace licensed?	yes	yes	yes	yes	yes	yes	no
Resumptive pronoun licensed?	no	no	no	no	yes	yes	yes

*Table 1*  
Summary of the availability of movement and resumptive strategies

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