

Anti-Agreement and the Complementarity Effect: Two Causes of Impoverished Agreement in VSO*

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1 INTRODUCTION

This paper takes a crosslinguistic perspective on subject-verb agreement in VSO languages examining two phenomena in Welsh, Breton, Irish, Standard and Moroccan Arabic, and Berber. The first is agreement exclusively with pronouns which I refer to as the Complementarity Effect (CE) following [Jouitteau & Rezac \(2006\)](#). The second is the lack of agreement with an extracted subject, typically with clefts or focus constructions, relativisation, and wh-questions. I refer to this as Anti-Agreement (AA) following [Ouhalla \(1993\)](#).

The primary aims of this paper are twofold. First, the language sample shows that CE and AA are, in principle independent of one another with all four logical possibilities attested in VSO: these languages may have both AA and CE, only one of them, or none. Consequently, VS order does not necessitate CE contrary to the view in [Roberts \(2019: 384\)](#). Secondly, I argue that the Celtic languages exhibit both CE and AA. This requires some justification, since the co-occurrence of CE and AA masks AA in all cases except pronoun extraction. Similarities identified between Celtic and other AA languages, primarily Berber, strengthen this argument. A full account of these phenomena in the languages examined is unfortunately beyond the scope of this preliminary squib, although fruitful approaches for future research are adumbrated. In developing a future full account, the ultimate goal is to identify the respective mechanisms responsible for both AA and CE. Clearly separate mechanisms underlie both phenomena, but the advantage of this comparative account is the possibility of providing two analyses both of which explain the phenomena in a unified manner across the various languages of the sample.

The structure is as follows. [Section 2](#) and [Section 3](#) demonstrate that Celtic exhibits both AA and CE. In [Section 4](#), I compare this to Standard Arabic (SA), which has a slightly different manifestation of CE, and Moroccan Arabic (MA), which has neither. [Section 5](#) considers Berber where in-situ agreement is full but extraction causes AA and this in turn informs the interpretation of some more Celtic data on long extraction and negation in [Section 6](#). The paper's data is collected in a typological presentation and possible analyses are examined in [Section 7](#). Finally, [Section 8](#) concludes and looks to further research.

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2 WELSH AGREEMENT

It has long been observed that Welsh verbs agree only with pronominal subjects: in Welsh VS clauses, non-pronominal subjects cannot agree with the verb and trigger a default 3SG affix instead:

- (1) a. *Rhed-odd* (o).
run-3SG.PAST he
'He ran.'
- b. *Rhed-on* (nhw).
run-3PL.PAST they
'They ran.'
- c. *Rhed-odd* y *plant*.
run-3SG.PAST the children
'The children ran.'
- d. **Rhed-on* y *plant*.
run-3PL.PAST the children

With pronominal subjects (1a, 1b), the person and number of the subject is reflected in an agreeing verbal suffix. These pronouns may be overt or non-overt, with more pronoun dropping in literary varieties, although some pronouns may occasionally be dropped colloquially (King 2016: 173-174). Turning to (1c, 1d), observe that the non-pronominal DP subject *y plant* obligatorily causes 3SG agreement: the 3PL affix results in ungrammaticality despite the subject's plurality.

In addition to the unmarked VS order, Welsh possesses a focus construction in which a contrasted element is extracted to the left periphery. This obviates all verbal agreement and default 3SG agreement applies (Borsley 2009: 249-251, Borsley, Tallerman & Willis 2007: 123-126):

- (2) a. *Nhw wel-odd* y *llong*.
they see-3SG.PAST the ship
'It was them that saw the ship.'
- b. **Nhw wel-on* y *llong*.
they see-3PL.PAST the ship
- c. *Y plant wel-odd* y *llong*.
the children see-3SG.PAST the ship
'It was the children that saw the ship.'
- d. **Y plant wel-on* y *llong*.
the children see-3PL.PAST the ship

A focussed pronominal subject no longer agrees with the verb as it does in canonical position and, unsurprisingly, non-pronominal DPs also exhibit 3SG, just as in canonical position. Lack of agreement also applies in other extraction constructions including *wh*-questions and relative clauses:

- (3) *Pa ddyinion wel-odd / *wel-on ddafad?*
 which men see-3SG.PAST / see-3PL.PAST sheep
 ‘Which men saw a sheep?’ (Borsley 2009: 249)

- (4) *A dyma Anni Llŷn yn darllen i='r plant ddaeth draw.*
 and here.is Anni Llŷn PROG read to=the children come.3SG.PAST over
 ‘And here is Anni Llŷn reading to the children who came over.’
 (adapted from Knight, Morris, Fitzpatrick, Rayson, Spasić, Thomas, Lovell, Morris, Evas, Stonelake, Arman, Davies, Ezeani, Neale, Needs, Piao, Rees, Watkins, Williams, Muralidaran, Tovey-Walsh, Anthony, Cobb, Deuchar, Donnelly, McCarthy & Scannell 2020)

Additionally, extraction from embedded positions (so-called long extraction) and from negated clauses behave slightly differently, although I leave discussion of this data until Section 6, since it is more productive to consider it in light of Berber data.

The account that I wish to pursue here is that the data reveals two separate phenomena at work: CE and AA. CE is illustrated in (1) and AA in (2–4). Note that in Welsh, the co occurrence of CE with AA masks the effects of AA when non-pronominal DPs are extracted: in examples (2c, 3, 4) agreement is exactly as it would be in-situ. When pronouns are extracted as in (2a), however, agreement is impoverished compared to in-situ.

The literature offers existing analyses of these facts, although I leave discussion of them until Section 7, which relies on the upcoming crosslinguistic exposition.

3 AGREEMENT IN WIDER CELTIC

3.1 Breton

Breton makes extensive use of a focus-like structure for normal declarative sentences whereby an initial element is followed by a particle (glossed PRT) and then the verb such that the language exhibits a V2-effect (Schafer 1995). Thus, Breton readily uses extraction and very often extraction of subjects. The subject remains in-situ postverbally when another element is moved to the left periphery and, like Welsh, there is no agreement with non-pronominal DPs in this case. Examples are from Hendrick (1988: 28-29) unless otherwise stated.

- (5) *Bemdez e lenn / *lenn-ont ar vugale ul levr.*
 every day PRT read.3SG.PRES / read-3PL.PRES the children a book
 ‘Yann/The children read a book every day.’

Lack of agreement also appears with non-pronominal subject extraction:

- (6) *Ar vugale a lenn / *lenn-ont levrioù.*
 the children PRT read.3SG.PRES / read-3PL.PRES books
 ‘The children read books.’ (Borsley & Stephens 1989: 408)

For pronominal subjects one may either extract the pronoun to the left-periphery, in which case there is no agreement (7), or use an agreement affix on the verb if another element is extracted (8):

- (7) *Int a labour / *labour-ont.*
 they PRT work.3SG.PRES / work-3PL.PRES
 ‘They are working.’

- (8) *Bremañ e labour / labour-ont.*
 now PRT work.3SG.PRES / work-3PL.PRES
 ‘Now he is working.’ / ‘Now they are working.’

Breton differs from Welsh in that an overt pronoun is disallowed following a verb:

- (9) **Bremañ e labour eñ / labour-ont int.*
 now PRT work.3SG.PRES he / work-3PL.PRES they

So Breton patterns similarly to Welsh: in-situ agreement is only with pronominal subjects (CE) and extracted subjects do not give rise to agreement (AA). The only difference is that postverbal pronominal subjects are optionally overt in Welsh whereas they can never be in Breton. Thus, the latter exhibits strict complementarity between overt postverbal subjects and agreement.

3.2 Irish

Irish, like Welsh, is VSO in unmarked declarative clauses (McCloskey 1990). As McCloskey & Hale (1984) report, Irish agreement is complicated by the fact that only a subset of paradigmatic slots have forms that conjugate for ϕ -features of the subject. The conjugated forms are known as synthetic forms and agree for the subject’s ϕ -features as well as tense and mood. Conversely, the analytic forms agree only for tense and mood, requiring an overt pronoun following the verb to express the subject. Analytic and synthetic forms often appear side by side in Irish verbal paradigms giving them a ‘gappy’ appearance, as can be seen with the conditional of *cuir* (‘to put’) in Table 1. The data here is from McCloskey & Hale (1984) unless stated otherwise.

For the paradigm above, the 1SG, 1PL, and 2SG have synthetic forms which agree for conditional mood and ϕ -features. All other slots lack a synthetic form and

	Singular	Plural
1	chuirfinn	chuirfimis
2	chuirfeá	chuirfeadh sibh (you.PL)
3	M chuirfeadh sé (he)	chuireadh siad (they)
	F chuirfeadh sí (she)	

Table 1 The conditional paradigm of *cuir* ('to put') showing synthetic and analytic forms (p. 489).

expression of the subject's ϕ -features requires an overt pronoun following the conditional analytic form. In Table 1, English translations of these pronouns are given. When a synthetic form is available for a particular paradigmatic slot it is generally obligatory, making the analytic ungrammatical in these cases:¹

- (10) **Chuirfeadh mé isteach ar an phost sin.*
 put.COND I in on that job
 Intended: 'I would apply for that job.' (p. 491)

As in Breton, an overt pronoun may not follow a synthetic form. Thus, Irish behaves essentially the same as Breton: there is strict complementarity between overt postverbal subjects and ϕ -agreement:

- (11) *Chuirfinn (*mé) isteach ar an phost sin.*
 put.1SG.COND I in on that job
 'I would apply for that job.' (p. 490)

As in Welsh and Breton, a non-pronominal DP subject cannot follow a conjugated form: synthetic forms are ungrammatical and analytic forms obligatory:

- (12) *Chuirfeadh na léachtóirí uilig isteach ar an phost sin.*
 put.COND the lecturers all in on that job
 'All the lecturers would apply for that job.' (p. 490)

So Irish displays Breton-type CE: agreement is only with non-overt postverbal subjects with the additional caveat in Irish that this is only true whenever there is a ϕ -sensitive form available (i.e., a synthetic form).

When Irish non-pronominal and pronominal DPs subjects are extracted, they cannot co-occur with a synthetic form (McCloskey 1990: 210). This is illustrated by the ungrammaticality of an extracted non-pronominal DP with a synthetic verb

¹ Verbs glossed without further ϕ -specification are analytic forms; synthetic forms are glossed verb. ϕ .TNS.

in (13), and the grammaticality of an extracted pronoun with the analytic form in (14):²

- (13) **Na daoine a rabhadar breoite.*
 the people COMP be.3PL.PAST ill
 Intended: ‘The people that were ill.’ (McCloskey 1990: 210)

- (14) *Mise nach bhfágann a’ baile.*
 me.CONTRAST COMP.NEG leave.PRES home
 ‘Me that doesn’t leave home.’ (p. 504)

This data shows Irish patterns with Welsh and Breton in having AA.

4 ARABIC

Arabic is a VSO language with an alternative SVO order in declarative clauses (Aoun, Benmamoun & Choueiri 2010). Here I discuss standard Arabic (SA), which has CE without AA, and Moroccan Arabic (MA) which has neither.

4.1 Standard Arabic

Verbs in SA agree fully with a non-pronominal subject’s ϕ -features in SVO order, but agreement is impoverished in VS where agreement is only for gender and possibly person:³

- (15) a. *Naama l-ʔawlaad-u.*
 slept.3MSG the-children-NOM
 ‘The children slept.’
 b. *ʔal-ʔawlaad-u naamuu.*
 the-children-NOM slept.3MPL
 ‘The children slept.’
 c. **Naamuu l-ʔawlaad-u.*
 slept.3MPL the-children-NOM
 d. **ʔal-ʔawlaad-u naama.*
 the-children-NOM slept.3MSG

² This example might not be ideal since negation sometimes effects AA (cf. section 5-6). When it does, AA is absent for subject extraction from negated clauses and the verb agrees with the \bar{A} -moved subject. Whether negation interacts with AA is crosslinguistically variable, although it seems safe to conclude on the basis of (14) that there is no interaction in Irish implying that (14) indeed demonstrates AA with pronominal extraction.

³ The status of person exponence in VS order has been subject to debate (cf. Aoun et al. 2010: 76).

(Aoun, Benmamoun & Sportiche 1994: 197)

(15a, 15c) demonstrate that postverbal subjects are only grammatical when the verb does not agree in number, whereas the preverbal subjects in (15b, 15d) are only grammatical with full ϕ -agreement.

With postverbal pronominal subjects impoverished agreement no longer obtains:

- (16) a. *Naamuu hum.*
 slept.MPL they
 ‘They slept.’
 b. **Naama hum.*
 slept.3MSG they

(Aoun et al. 1994: 205)

So there is evidence that SA has some sort of CE because agreement with postverbal non-pronominal subjects is impoverished versus with pronominal subjects. The situation differs from Celtic in important respects. First, verbs in SA do agree with non-pronominal subjects in gender whereas in Celtic there is a default 3SG form. It is impossible to establish solely on the basis of Celtic and Arabic verbal data, whether CE always singles out gender in this manner. Celtic languages do not have gender agreement on verbs so even if there were covert agreement with the gender of postverbal subjects it would never be spelled out morphologically. Second, SA features an alternative SVO order where full agreement holds. This is strong evidence that VS may be a necessary condition for CE.

Unlike in Celtic, extraction in SA does not cause lack of agreement, thus SA lacks AA:

- (17) *ʔayy-u tullabin wasal-uu?* / **wasal-a?*
 which-NOM students arrived-3PL / arrived-3MSG
 ‘Which students have arrived?’ (Ouhalla 1993: 488)

4.2 Moroccan Arabic

MA verbs agree regardless of subject position, thus there is no CE:

- (18) a. **Nʔas lə-wlaad.*
 slept.3SG the-children
 b. *Lə-wlaad naʔs-u.*
 the-children slept-3PL
 ‘The children slept.’

- c. *Naʔsu lə-wlaad.*
 slept.3PL the-children
 ‘The children slept.’
- d. **Lə-wlaad nʔas.*
 the-children slept.3SG

(Aoun et al. 1994: 196)

I have no MA sentences for exposition of subject extraction but there is no reason to suspect that MA displays AA.⁴

5 BERBER

Berber declarative sentences have VSO and SVO possibilities both of which use full subject-verb agreement:

- (19) a. *Tʃan waraw θamən.*
 eat.3PL.PERF boys honey
 ‘The boys ate honey.’ (Ouali 2012: 14)
- b. *Araw tʃan θamən.*
 boys eat.3PL.PERF honey
 ‘The boys ate honey.’ (Ouali 2012: 14)

With DP extraction however, agreement no longer obtains as shown by Ouhalla (1993) whence the following examples. When a Berber subject is extracted, a non-agreeing form known as the participle (glossed PART) is required. The example here is a *wh*-question but the same holds for relativisation and clefts:

- (20) *Man tamghart ay yzrin / *t-zra Mohand?*
 which woman COMP see.PART / 3FSG-see Mohand
 ‘Which woman saw Mohand?’ (p. 479)

AA in Berber is visible with non-pronominal DPs unlike in Celtic where the interaction of AA with CE masks it. As is clear from Section 2 and Section 3, pronoun extraction is the only available diagnostic for AA in Celtic, making the situation less apparent than in Berber. Indeed, there has been controversy on whether the Celtic languages display AA: Ouhalla (1993) includes Welsh and Breton, while Baier (2018) excludes them from his survey on the grounds that the impoverished agreement which is characteristic of AA is also found in-situ. Some additional evidence motivating an AA account of Celtic comes from comparing Berber and

⁴ MA is mentioned neither in Ouhalla’s (1993) treatment of AA in Berber and elsewhere, nor does it feature in Baier’s (2016, 2018) extensive surveys of AA.

Celtic in extraction environments other than affirmative main clauses: these are negations and long extractions (extractions from embedded clauses).

Ouhalla provides the following Berber data for these constructions. With long *wh*-questions, relativisations, and clefts, AA is nullified and full agreement restored:

- (21) *Man tamghart ay nna-n qa t-zra Mohand?*
 which woman COMP said-3PL that 3FSG-see Mohand
 ‘Which woman did they say saw Mohand?’ (p. 480)

Extraction from a negated clause in Berber has a milder effect on AA. Whereas full agreement is a requirement for long extraction, both participles and fully agreeing verbs are acceptable in negated sentences, although the participle is preferred:

- (22) *Tamghart nni ur t-ssn / y-ssn-n Mohand.*
 woman COMP NEG 3FSG-know / 3MSG-know-PART Mohand
 ‘The woman who does not know Mohand.’ (p. 499)

Beyond Berber, Ouhalla discusses the Italian dialects Fiorentino and Trentino, Turkish, Welsh, and Breton. It emerges from his discussion that there is considerable variation in whether AA is affected by long extraction and/or negation and a larger survey by Baier (2016: 77) concurs with this finding. Ouhalla (1993) finds that long extraction nullifies AA in Celtic and Turkish as well as Berber, but not in Fiorentino or Trentino. Baier (2016) reports the same data but unearths an additional 11 languages for which AA remains with long extraction. Regarding negation, Ouhalla (1993) reports optionality of AA for Berber, lack of AA in Celtic, and continued AA in Turkish. Again, Baier (2016) includes this data but cites an additional 11 languages for which AA continues under negation and four for which negation nullifies AA. These parameters of variation seem independent so that agreement in a language displaying AA may, in principle, be affected by none, one, or both of negation and long extraction.

I return to Celtic in light of the Berber and wider typological data, arguing that the data on negation and long extraction is evidence of AA in Celtic.

6 LONG EXTRACTION, NEGATION, AND AGREEMENT IN CELTIC

Given the sensitivity of AA to negation and/or long extraction in some languages, any such sensitivity in Celtic languages would be strong evidence that they do have AA. Indeed, this is what we find. An important point that emerges here is that the choice of particle figures in determining grammaticality of verbal agreement in embedded positions. In Section 7, I offer a preliminary classification of these particles.

6.1 Welsh

There are considerable differences between literary and colloquial Welsh when it comes to long extractions (Willis 2000). For structures with one layer of embedding

the literary language possesses two particles for introducing the embedded clause: *y(r)* introduces a complement cause without extraction, typically after bridge verbs, while *a* introduces a relative clause and triggers a soft mutation⁵ on the following word.⁶ Colloquial Welsh also uses *y* for clausal complements (although it is commonly elided), however for extractions there is a null particle, \emptyset^s , which triggers a soft mutation.⁷

Turning to long extractions of embedded subjects, literary Welsh offers two strategies each employing one of the particles. When *y(r)* introduces both clauses we see full agreement with the extracted subject:

- (23) *Y dynion y dywed-odd Siôn y darllen-ent y llyfr.*
 the men PRT say-3SG.PAST Siôn PRT read-3PL.PAST the book
 ‘The men that Siôn said read the book.’ (Hendrick 1988: 233)

The reverse is the case where the particle is *a*: here we have the 3SG suffix:

- (24) *Y dynion a ddywed-odd Siôn a ddarllen-odd y llyfr.*
 the men PRT say-3SG.PAST Siôn PRT read-3SG.PAST the book
 ‘The men that Siôn said read the book.’ (Hendrick 1988: 233)

The former of these two possibilities also occurs in corpora of literary Welsh and appears to be the preferred option:

- (25) *Oherwydd eich polisiau, y dywed-asoch y bydd-ent yn*
 because.of your.PL policies PRT say-2PL.PAST PRT be-3PL.IMPERF PROG
para o leiaf ddegawd.
 last at least decade
 ‘Because of your policies which you said would last at least a decade.’ (Crown Copyright, Welsh Assembly Proceedings 2007–2010)

In the colloquial language, a long extraction strategy using null \emptyset^s is strongly preferred as exemplified in (26), although for some speakers there is a marginal option with *y(r)* and an overt resumptive pronoun as in (27). With the null strategy continuation of AA is observed, whereas the *y(r)* strategy requires a resumptive pronoun in the embedded clause which unsurprisingly triggers full agreement:

⁵ Mutations are a common phonological changes to initial consonants triggered in certain syntactic environments in Welsh.

⁶ This exposition of the particles abstracts away from some cases: cf. Willis (2000: 531-543) for an overview of the literary Welsh particles.

⁷ Cf. the general overview in King (2016: 374-392) for further information on the colloquial particles although note that I have followed Willis (2000) in positing the null particle \emptyset^s for the colloquial language, where King assumes that these are instances of a covert *a*.

- (26) a. *Y prif bwyntiau rydyn ni='n meddwl fyddai o*
 the main points be.1PL.PRES we=PROG think be.3SG.COND of
ddiddordeb i chi.
 interest to you
 ‘The main points that we think would be of interest to you.’ (Borsley et al. 2007: 142)

- (27) ?*Y llyfrau yr wyt ti='n meddwl y bydden*
 the books PRT be.2SG.PRES you=PROG think PRT be.3PL.COND
nhw='n addas.
 they=PROG suitable
 ‘The books that you think would be suitable.’ (Willis 2000: 556)

So Welsh patterns with Berber when it employs the particle *y*, bolstering the AA account. The *a/∅^s* pattern with continued AA is also in line with other AA-languages including Fiorentino, Trentino, and the majority in Baier’s (2016) sample. Further support for the hypothesis of AA in Welsh comes from the behaviour of negations with extraction: here the literary language has full agreement with the extracted subject:⁸

- (28) *Y dynion na ddaeth-ant.*
 the men PRT.NEG come-3PL.PAST
 ‘The men who didn’t come.’ (Hendrick 1988: 234)

This example features the negative particle *na(d)* which can also appear colloquially with resumption in subject position:

- (29) ... *yn gwrthod gadael i='r plentyn [nad yw e wedi*
 PROG refuse let to=the child PRT.NEG be.3SG.PRES he PERF
dod ag unrhyw beth] i ymuno yn yr hwyl.
 come with anything to join in the fun
 ‘...refusing to allow the child who hasn’t brought anything join in the fun.’ (Willis 2011: 214)

⁸ Importantly, it is not negation per se that leads to full agreement and resumption in (28) and (29), but rather the particle *na(d)*. An alternative possibility uses the postverbal negator *ddim* and has 3SG agreement:

- (i) *Dyma='r dynion allai ddim yn gwneud y gwaith.*
 here_are=the men be_able.3SG.COND NEG PROG do the work
 ‘Here are the men that could not do the work.’ (adapted from King 2016: 379)

Thus, the sentence pairs (23, 27) and (28, 29) provide good evidence that colloquial Welsh permits resumption in environments where the literary language requires full agreement. This is not unexpected, since the literary language is more permissive of null subjects in general.

In the case of subject extractions from negated clauses, there is corpora evidence from the literary language that 1PL, 2PL, and 3PL pronominal subjects behave identically to non-pronominal NPs, in that full agreement is required:⁹

- (30) *Y rheini ohonom nad ydym yn byw yng Nghaerdydd.*
 those of.1PL PRT.NEG be.1PL.PRES PROG live in Cardiff
 ‘Those of us who don’t live in Cardiff.’ (Crown Copyright, Welsh Assembly Proceedings 2007–2010)

- (31) *I=’r rheini ohonoch na wydd-och.*
 to=the those of.2PL PRT.NEG know-2PL.PRES
 ‘To those of you who don’t know.’ (Crown Copyright, Welsh Assembly Proceedings 2007–2010)

- (32) *Llawer ohonyn nhw nad ydynt gyda ni bellach.*
 many of.3PL them PRT.NEG be.3PL.PRES with us still
 ‘Many of them who are not still with us.’ (source: record.senedd.wales/Plenary/13907)

Interestingly, the situation illustrated above does not pertain for all pronouns. In particular, corpus data suggests that extraction of 1SG pronominal subjects from negated relative clauses patterns unexpectedly with 3SG agreement, a finding which must be followed up in future research:¹⁰

- (33) *Tybed a allai=’r Gweinidog egluro wrthyf fi –*
 I.wonder whether be.able.3SG.COND=the Minister explain to.1SG me
na chymer-odd dystiolaeth...
 PRT.NEG take-3SG.PAST evidence
 ‘I was wondering whether the Minister could explain to me – who did not take evidence...’ (i.e. I did not take evidence) (Crown Copyright, Welsh Assembly Proceedings 2007–2010)

⁹ Examples (30) and (31) use a conjugated preposition. A possible assumption is that this licenses a null pro which then acts as the antecedent for the clause. This pro may also be overt as in (32).

¹⁰ Further investigation into the situation with 2SG extractions is also needed.

6.2 Breton

Judgements in the literature conflict on Breton long extractions, a situation which is likely grounded in discrepancies between particles. [Hendrick \(1988\)](#) provides the following judgements which suggest that Breton does have full agreement with long extraction thus nullifying AA; however, this is not clear-cut for all structures:

- (34) *Ar baotred he deus lavaret Mona e lenn-ent /*
 the boys have.3FSG said Mona PRT read-3PL.IMPERF /
**lenn levrioù.*
 read-3SG.IMPERF books
 ‘The boys that Mona has said have read some books.’ (p. 233)

- (35) *Setu ar merc'hed hoc'heus lavaret emaint / ?a zo o*
 here the women have.2PL.PRES said be.3PL.PRES / be.PRES PRT
labourat e Kemper.
 work in Quimper
 ‘Here are the women you said are working in Quimper.’ (p. 245)

[Borsley & Stephens \(1989\)](#) supply judgements for relativisation, *wh*-questions, and clefts that suggest the opposite. In all their examples, embedded agreement is explicitly ruled out as illustrated by relativisation:

- (36) *Ar baotred a soñj din a lenne / *lenn-ent al*
 the boys PRT think to.1SG PRT read.3SG.IMPERF / read-3PL.IMPERF the
levrioù a zo amañ.
 books PRT be here
 ‘The boys that I think read the books are here.’ (pp. 420, 424)

A tentative conclusion is that *a* corresponds to Welsh *a/∅^s* and requires AA whereas *e* is the counterpart of *y* and requires full ϕ -agreement. A more thorough dataset is required to establish this soundly.¹¹

The negation facts are clearer: the literature concurs that a negated verb must agree with an extracted subject thereby nullifying AA ([Hendrick 1988](#), [Borsley & Stephens 1989](#), [Schafer 1995](#)). This holds for all extractions, illustrated again by relativisation:¹²

¹¹ This view is however, backed up by more parallels between the literary Welsh and Breton particles. Both Breton *e* and literary Welsh *y* introduce complement clauses without extractions and have the secondary function of introducing a clause that follows an extracted adjunct; both particles *a* introduce a clause that follows extracted subjects and direct objects of non-periphrastic verbs. Cf. [Willis \(2000: 531-543\)](#) and [Favereau \(1997: 268-272\)](#) for the Welsh and Breton facts respectively.

¹² As in Welsh, it is not negation *per se* causing full agreement here, but rather the particular structural configuration of the subject and *ne...ket*. An alternative negative construction with postverbal subject features AA:

- (37) a. *Ar vugale ne lenn-ent / *lenne ket al*
the children PRT.NEG read-3PL.IMPERF / read.3SG.IMPERF not the
levrioù a zo amañ.
books PRT be here

‘The children who did not read the books are here.’ (Borsley & Stephens 1989: 425)

6.3 Irish

Irish long extraction is examined by McCloskey & Hale (1984) (whence the following examples) and McCloskey (1990). They show that both analytic and synthetic forms are permitted in embedded clauses from which the subject has been extracted. Crucially, the grammaticality of each strategy depends on using the appropriate complementiser: Irish possesses different complementisers for embedded clauses without extraction (*gur/go*, glossed COMP), with resumption (*aN*, glossed COMP_{pro}), and with gaps (*aL*, glossed COMP_t). *aN* is required with synthetic forms and analytic forms with overt resumption as in (38), whereas the analytic with a gap requires *aL* as in (39). The co-occurrence of *aN* with resumption and synthetic forms is central to McCloskey (1990)’s argument that synthetic verbs always involve agreement with a non-overt pronoun.

- (38) *Na daoine aN raibh mé ag dúil goN gcuirfeadh siad /*
the people COMP_{pro} was I PROG expect COMP put.COND they /
gcuirfidís isteach ar an phost sin.
put.3PL.COND in on that job

‘The people that I expected would apply for that job.’ (p. 498)

- (39) *Na daoine aL bhí mé ag dúil aL chuirfeadh isteach*
the people COMP_t was I PROG expect COMP_t put.COND in
ar an phost sin.
on that job

‘The people that I expected would apply for that job.’ (p. 499)

This shows that Irish has optional AA with long extraction, provided the complementiser is correct.

- (ii) *Ne lenn / *lenn-ont ket ar vugale levrioù.*
PRT.NEG read / read-3PL not the children books

‘The children do not read books.’

(Borsley & Stephens 1989: 411)

I have little data on Irish negation, although it seems to have no effect on AA. This is on the basis of (14), where negation co-occurs with an analytic form (i.e., with AA).¹³

6.4 Summary

The following table summarises how AA interacts with long extraction and negation crosslinguistically:

	Long extraction	Negation
Berber	no AA	AA optional but preferred
Welsh	AA depends on particles	no AA with <i>na(d)</i> (pronoun complications)
Breton	AA depends on particles	no AA with preverbal subjects
Irish	AA depends on complementisers	probably AA

Table 2 AA's interaction with long extraction and negation.

The lack of a CE in Berber makes AA conspicuous since it is apparent whenever plural DPs are extracted. The data in this section, especially the pronominal extraction (30-32), shows that an AA account is also suitable in Celtic since the phenomenon varies along crosslinguistically common dimensions for languages with AA.

7 A TYPOLOGY OF VSO AGREEMENT AND DISCUSSION

The main argument I have sought to advance is that there are two phenomena observed in VSO. The findings are summarised in Table 3.

CE is observed in Celtic and in SA VSO clauses: full agreement is only with pronouns, the agreement with non-pronominal DPs being either impoverished for number (SA) or taking a default form (3SG in Breton and Welsh and analytic in Irish). To my knowledge, CE occurs only with VS and may well be restricted to that configuration. AA is far more pervasive as Baier (2016, 2018) shows: he unearths 63 languages exhibiting AA with various word orders from 16 families.

The next step is identifying analyses that are compatible with these facts and able to unify these crosslinguistic observations. I cannot provide a review of approaches here but mention ones which seem fruitful. Ouhalla (1993) suggests that Berber AA is caused by anti-locality restrictions on resumptive pronouns. He argues that, owing to an anti-locality restriction, an extracted DP is too close to the extraction site for this to contain a resumptive *pro* that would trigger agreement. AA is thus

¹³ This may well turn out to be the wrong assumption given the finding from (29-33) that the Welsh 1sg pronoun is seemingly an outlier in the literary language to the extent that its extraction from clauses negated with *na(d)* triggers AA rather than full agreement. It is plausible this could also be true of (14).

	Complementarity Effect with VSO	Anti-Agreement
Welsh	✓	✓
Breton	✓	✓
Irish	✓	✓
Standard Arabic	✓	✗
Moroccan Arabic	✗	✗
Berber	✗	✓

Table 3 The interaction of CE and AA in the VSO languages mentioned here.

understood as repair mechanism which avoids licensing illicit *pro*. Berber long extractions and negations do not have such restrictions on resumptive *pro* and Ouhalla attributes this to to intervening CP and NegP respectively. I call this theory Anti-Agreement as Anti-Locality.

Turning now to CE, it is clear that any approach must distinguish pronouns and non-pronominals, although approaches proposing different ϕ -features in the two cases fare poorly owing to structures where agreement references subject plurality. In this Welsh example, the reciprocal pronoun agrees with the subject:

- (40) *Daeth Cristnogion at eu gilydd yng Nghaergrawnt.*
 come.3SG.PAST Christians to each.other.3PL in Cambridge

‘Christians came together in Cambridge.’ Lit: ‘...came to each other...’
 (Knight et al. 2020)

Several approaches derive CE by ascribing mechanisms different to traditional agreement. Borsley (2009) argues that Welsh agreement is based solely upon linear order such that agreement only arises in the configuration *verb-pronoun*. Roberts (2005) argues that subject pronouns in Welsh cliticise to the verb producing the endings which have traditionally been analysed as agreement. Joutteau & Rezac (2006) have a similar proposition for Breton subject pronouns, proposing incorporation with the verb, although they argue that true agreement underlies the surfacing of 3SG with non-pronominals. On their view, the non-pronominals remain in-situ in a *vP* which itself has 3SG ϕ -features and agrees with the verb. I have no considerations to bear on choosing between these options, but any of them might be compatible with Anti-Agreement as Anti-Locality. On this view, the anti-locality restrictions of Berber also apply in Celtic with relevant stipulations to capture long extraction and negation. The difference between Celtic and Berber is that true agreement with *pro* underlies the Berber facts, whereas some mechanism other than agreement (cliticisation of *pro*, incorporation of *pro*, etc.) underlies Celtic.

The Anti-Agreement as Anti-Locality view fits in nicely with some more data from Welsh and Irish. Recall that on this account, cases of full agreement with negation

and long extraction can be attributed to the presence of *pro* in these environments. Therefore, one might also expect overt resumption in these environments. Indeed, this is what we find. In Welsh, negation ameliorates resumption with embedded subjects (see 29) and objects (41 below), something which is ungrammatical in embedded affirmative clauses:

- (41) *Y dyn na wel-odd Wyn (ef).*
 the man NEG see-3SG.PAST Wyn him
 ‘The man that Wyn didn’t see.’ (Hendrick 1988: 235)

Moreover, Irish synthetic forms are in free variation with analytic + resumptive pronoun in cases of long extraction with the complementiser *aN* as shown in (38). This of course suggests that both options involve resumption.

In addition to a fuller story of the mechanisms behind CE and AA, the present account would benefit from a classification of particles. As is clear from Section 6, particle choice has implications for the grammaticality of AA when subjects are extracted from embedded position. Within a resumption-based approach to AA, such a classification should describe the particles in terms of how they permit or disallow \bar{A} -movement through CP with implications for whether there is a trace or resumption in the embedded clause. Here is a preliminary classification which must be subject to further investigation including on the question of whether the Berber complementisers *ay* and *qa* are amenable to a similar account:

	A	B	C
Welsh	y		a / \emptyset^s
Breton	e		a
Irish	gur / go	aN	aL

Table 4 Preliminary classification of the Celtic particles/complementisers.

In this classification, type-A introduces clauses without extraction, type-B requires resumption which triggers full ϕ -agreement, and type-C allows movement through CP so that traces appear in lower positions and trigger AA. In addition, I suggest that the Welsh negative particle *na(d)* and the Breton counterpart *ket* are particles of type B, thus successfully predicting the appearance of full agreement with negation.

There are some challenges with this account, two of which are mentioned here. First, using pronouns as a test case for AA comes with difficulties. Note that even in English focussed pronouns don’t trigger agreement: *It is me that likes/*like chocolate*. This may be because the pronoun *me* never causes agreement. For some pronouns such as 1SG, Welsh has distinct forms for in-situ versus extracted positions (*i* and *fi* respectively). It may be the case that the ex-situ forms are similar to English *me* in that they never trigger agreement and this would challenge the AA view advanced here. Note however that an earlier variety of English possessed productive

pronoun-focus *with* agreement as this quote from Shakespeare’s *Measure for Measure* demonstrates: ‘It is I that [...] do as the carrion does.’ A clearer understanding of which pronouns trigger agreement crosslinguistically and which don’t is required and may also explain the discrepancy between (30-32) and (33). Second, this account struggles with the data from Arabic (and other non-AA languages). In Berber AA main clauses, one must posit in place of *pro* a trace *t* that doesn’t trigger agreement at the extraction site. The question then becomes, why does *t* agree in Arabic but not in Berber; or, if one assumes Arabic extraction involves *pro*, why the same anti-locality restrictions do not apply in Arabic.

8 CONCLUSIONS AND OUTLOOK

I have argued that AA and CE appear independently in VSO languages and used parallels between Berber and Celtic to strengthen the case for AA in the latter. This is far from the whole story: future research should provide a full account to capture the empirical facts. CE construed as distinct from true agreement and AA as restrictions on resumption seem to be on the right track. In pursuing this, the properties of Celtic and Berber particles and the challenges identified in Section 7 (pronoun extraction, and continuing to account for non-AA languages) demand careful consideration.

ABBREVIATIONS AND GLOSSES

AA	Anti-Agreement	PART	Participle
CE	the Complementarity Effect	PRT	Particle
CONTRAST	Contrastive	SA	Standard Arabic
MA	Moroccan Arabic		

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