

Parametric change in predication and beyond in Middle Welsh  
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## 1 WORD-ORDER PATTERNS IN COPULAR CLAUSES IN CANONICAL MIDDLE WELSH

In early Middle Welsh, we find the following word-order patterns in finite and non-finite copular constructions. In non-finite clauses, the predicate marker *yn* is compulsory, and the subject follows the predicate in the following order:

- (1) be.INF [*yn* predicate] subject
- (2) Duw, a wyr pob peth, a wyr bot yn eu  
God REL know.PRES.3SG every thing PRT know.PRES.3SG be.INF PRED false  
**hynny** arnaf i.  
that on.1SG me  
'God, who knows everything, knows that that is a lie about me.' (*Pedeir Keinc y Mabinogi* 21.3)

While the predicate marker *yn* is obligatory in nonfinite clauses, it is optional in finite ones. If it is absent, the subject follows the predicate:

- (3) be.FIN predicate subject
- (4) A phy na bei ueichawc hi, nis gordiwedut  
and if NEG be.IMPF.SUBJ.3SG pregnant she NEG+3SG.ACC overtake.IMPF.SUBJ.2SG  
ti.  
you  
'And if she had not been pregnant, you would not have caught her up.' (*Pedeir Keinc y Mabinogi* 64.17–18)

If it is present, the subject precedes the predicate:

- (5) be.FIN subject [*yn* predicate]
- (6) ... a phan uo ef yn rwymedic yn y got  
and when be.PRES.SUBJ.3SG he PRED bound in the bag  
'... and when he is tied up in the bag ...' (*Pedeir Keinc y Mabinogi* 15.14–15)

In finite main clauses in the present tense, the difference between (3) and (5) corresponds to a difference in the form of the copula: *ys* in (3), but *mae* in (5), cf. Irish copula *is* vs. the substantive verb *tá* (Doherty 1996, 1997, Lash 2011). A minimal pair is given in (7), with *ys* and predicate–subject order, as against (8), with *mae* and subject–predicate order.

- (7) Ys guell in ... **kyrchu tref arall** e ymossymdeithaw yndi.  
be.PRES.3SG better to.1PL head.for.INF town other to earn.living.INF in.3FSG  
'It is better for us ... to head for a different town to earn our living in.' (*Pedeir Keinc y Mabinogi* 53.12)

- (8) ... ac y mae y enw yn parawt.  
 and PRT be.PRES.3SG 3MSG.GEN name PRED ready  
 ‘... and his name is ready. (*Pedeir Keinc y Mabinogi* 76.19)

No formal distinction is made in the other tenses.

These word-order patterns are not immediately obvious from a superficial inspection of the texts, because they are obscured by the relatively low frequency of the combinations of elements needed to establish them. However, once account is taken of these problems, they are robustly attested in the canonical Middle Welsh text, *Pedeir Keinc y Mabinogi*. The overall statistical distribution of word-order patterns in the text are summarized in **Table 1**.

	predicate– subject	clausal (CP or VP) subject (predicate– subject)	subject– predicate	null subject ( <i>pro</i> , PRO, or <i>wh</i> - trace)	either predicate or subject topicalized (fronted)	TOTAL
finite with <i>yn</i>	1	1	8	12	4	26
finite without <i>yn</i>	31	13	0	63	83	190
non-finite with <i>yn</i>	6	7	1	16	0	30
non-finite without <i>yn</i>	0	0	0	0	1	1

### Notes

Cases where the subject is clausal (CP or VP) and either predicate or subject is topicalized are counted in the latter category.

**Table 1. Word-order patterns in copular clauses in *Pedeir Keinc y Mabinogi*.**

The underlying pattern for presence vs. absence of *yn* is revealed by the first and third columns in **Table 1**. These show the frequency of predicate–subject and subject–predicate orders in those copular clauses where there is an overt nominal or pronominal subject and where neither subject nor predicate is topicalized.

In nonfinite clauses, *yn* is present in 30 cases and absent in only one case. In this exceptional case, the predicate is topicalized. In Middle Welsh, as in Present-day Welsh, *yn* is obligatorily omitted when the phrase that contains it is fronted. After controlling for this independent phenomenon, then, we can say that *yn* is obligatory in nonfinite copular clauses.

A robust word-order pattern in nonfinite clauses containing *yn* also emerges once extraneous factors are eliminated. In around half of all cases, the subject is null, either *pro* as in (9), or PRO as in (10).

- (9) ...ac a dywedwn uy mot y ueichawc.  
 and PRT say.IMP.F.SUBJ.1SG 1SG be.INF PRED pregnant  
 ‘...and I would say that I am pregnant.’ (*Pedeir Keinc y Mabinogi* 23.12–13)
- (10) ... ac ny allaf PRO uot yn llawen yn un ty ac ef.  
 and NEG can.PRES.1SG be.INF PRED happy in one house as him  
 ‘... and I cannot be happy in the same house as him.’ (*Pedeir Keinc y Mabinogi* 49.15)

This is significant from the point of view of language change, since it means that around half of the data are compatible either with a predicate–subject grammar or with a subject–predicate grammar. These cases are of no use in determining the basic order.

This leaves 14 relevant clauses, with predicate–subject order dominating over subject–predicate order by a margin of 13:1. This reveals the basic pattern. However, it should be noted, since once again it is relevant for language change, that 7 of the case of predicate–subject order involve clausal (CP or VP) subjects, which obligatorily extrapose rightwards in Welsh today, and whose word order could therefore be attributed to this property of the grammar rather than to any underlying predicate–subject word order. An example is given in (11).

- (11) A phan welsant uot yn well udunt **kymryt hun** no  
 and when see.PAST.3PL be.INF PRED better to.3PL take.INF sleep than  
 dilyt kyuedach, y gyscu yd aethant.  
 follow.INF merriment to sleep.INF PRT go.PAST.3PL  
 ‘And when they saw that they preferred to go to sleep that to continue merriment, to sleep they went.’ (*Pedeir Keinc y Mabinogi* 31.14)

In finite clauses, similar issues arise, and, again, clear patterns emerge once the complicating factors are eliminated from consideration. Of the 190 cases of finite clauses without *yn*, around half involve topicalization of either subject, as in (12), or predicate, as in (13).

- (12) **Mi** a uydaf pont ...  
 I PRT be.FUT.1SG bridge  
 ‘I shall be a bridge ...’ (*Pedeir Keinc y Mabinogi* 41.1)
- (13) Llawen uu **pob un** wrth y gilid o honunt.  
 happy be.PAST.3SG every one to 3MSG RECIP of.3PL  
 ‘Every one of them became happy towards one another.’ (*Pedeir Keinc y Mabinogi* 6.17–18)

In another third of cases, the subject is null, so the base order of subject and predicate cannot be determined. This leaves us with 44 cases, all of which conform to the pattern in (3), with predicate–subject order. Of these, 13 have verbal (CP or VP) subjects and are therefore subject to the question of extraposition of clausal subjects as noted before.

In the 26 cases with *yn*, elimination of cases with topicalization of subject or predicate (4 cases) or with a null subject (12 cases), leaves us with 10 cases, with a robust preference (8:2 or 8:1 once the one case with a clausal subject is removed) for subject–predicate order.

To conclude this section, the base word–order patterns given in (1)–(6) are robustly observed in canonical Middle Welsh as represented by *Pedeir Keinc y Mabinogi*. However, they are often obscured by various factors, notably the presence of null subjects in up to half of all examples, the availability of topicalization of either subject or predicate, and the possibility that predicate–subject order with clausal subjects may be due to an extraposition rule for clausal subjects. The commonest actually attested orders give surface patterns which appear to lack any asymmetry, treating finite and nonfinite clauses identically:

- (14) be.INF *yn* predicate  $\emptyset_{\text{subj}}$   
 (15) be.FIN  $\emptyset_{\text{subj}}$  *yn* predicate

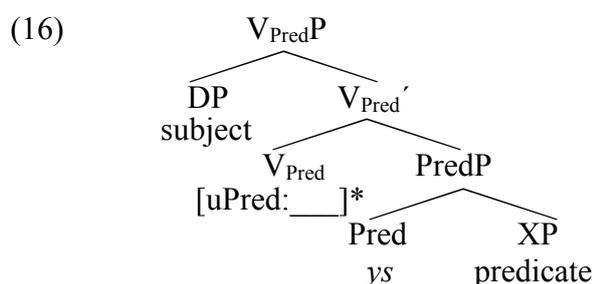
Thus, although hardly any attested clauses contradict these rules, only a minority of clauses positively and unambiguously manifest the patterns outlined above. This is a hindrance both for the linguist trying to establish patterns in the data, and, more importantly from the perspective of language change, for children trying to acquire Middle Welsh as a native language. Their acquisitional robustness is therefore open to question.

## 2 FORMAL ANALYSIS

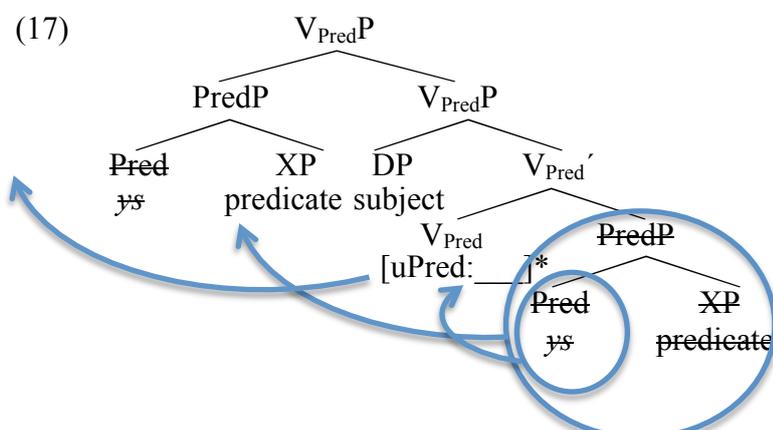
Traditionally, Celtic grammar distinguishes between a true copula and a substantive verb. In Old Irish, these two are formally distinct, but have partially overlapping paradigms. In Middle Welsh, as we have seen, the two are distinguished only in the present tense and otherwise share a single paradigm. Nevertheless, syntactically they seem to be differentiated. In order to derive the various word-order patterns, we need to distinguish two predicational patterns listed in the lexicon, one associated with the predicate marker *yn* and one associated with the true copula.

### 2.1 The structure of the true copula

Consider first the structure lacking *yn*. Here, the role of introducing predication is preformed by the copula itself, *yn* not being present to perform this function. This suggests that *ys* is a predicational head, Pred, projecting the predicate as its complement. This Pred is selected by  $V_{Pred}$ , which introduces the subject of predication:



In (16), the  $V_{Pred}$  head also bears predicate-agreement features (cf. object agreement). This agrees with those features on its predicate complement, and triggers movement of the entire predicate phrase to its outer specifier, cf. Massam's (2001) analysis of predicate raising in Niuean:

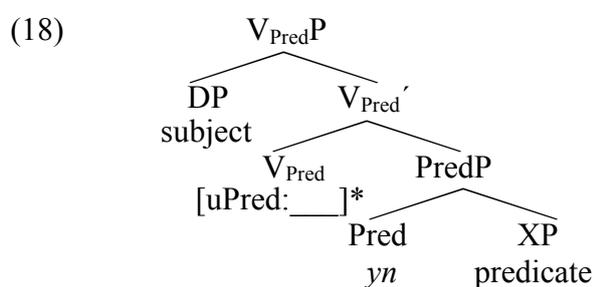


This yields the pattern in (3), with *ys* (be.FIN) – predicate – subject order.

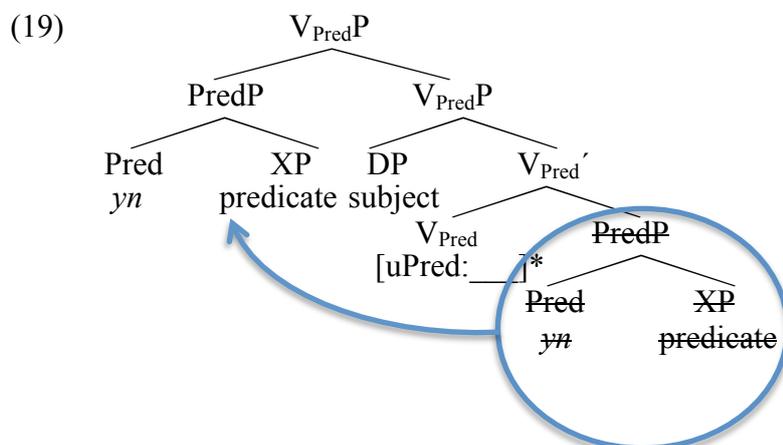
There is no analogue to (3) in non-finite clauses, where *yn* is obligatory. One option would be to stipulate that  $V_{\text{PredP}}$  cannot be selected by a non-finite T. More plausibly, we can suggest that *ys* is the spellout of T+Pred; that is, Pred raises further to T, where it acquires a tense feature, the form *ys* thus being the spellout of [T: PRES], [Pred]. There is no form corresponding to [T: -], [Pred], ruling out the copula in non-finite clauses.

## 2.2 Derivation of *yn* in finite clauses

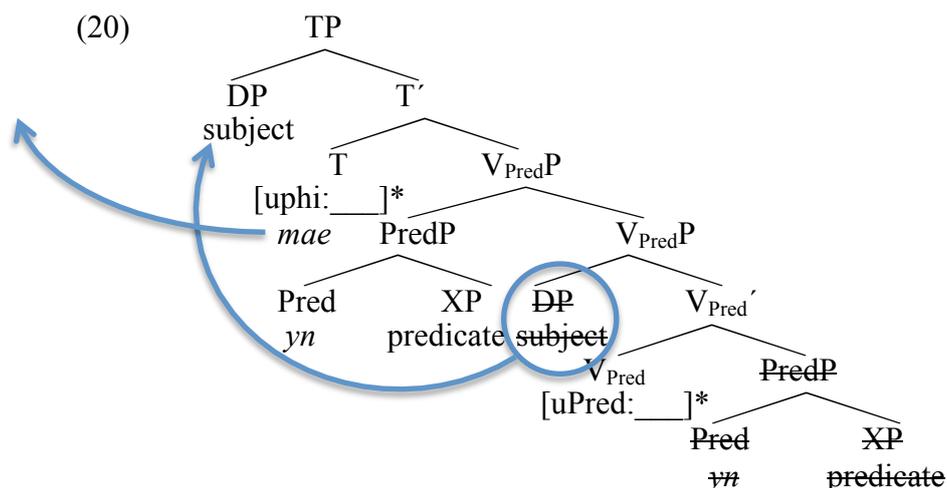
Even in finite contexts, the pattern in (3) is in competition with the pattern in (5) with *yn*. This suggests that the lexicon makes available another Pred-head, allowing for an alternative derivation. This alternative derivation involves projecting predication from the predicate marker *yn*. The derivation initially proceeds as before with the copula. Predication is introduced this time by the predication head associated with *yn*, which, like its counterpart, projects the subject of predication to [Spec,  $V_{\text{PredP}}$ ]:



This is the same  $V_{\text{Pred}}$  head as before, so it too triggers movement of the entire predicate phrase to its outer specifier:



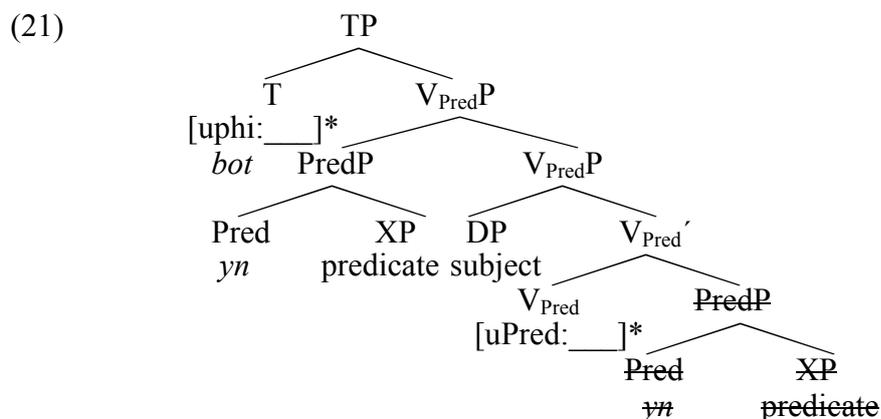
The difference between the two constructions lies in the T-domain. With *yn*, instead of Pred raising to T, the normal T-head of the language is projected. This has subject-agreement phi-features and agrees with the subject, triggering movement of the subject to its specifier.



Finally, once the tense-bearing auxiliary is inserted into T, it undergoes head movement to a head position either high in the T-domain or to C (as is general in Welsh, whose underlying word order is VSO). This yields *mae* (be.FIN) – subject – *yn* – predicate order in finite clauses.

### 2.3 Derivation of *yn* in non-finite clauses

In nonfinite clauses, nonfinite ‘be’ is inserted in T, but nonfinite T does not trigger subject raising, hence the order be.INF – *yn* – predicate – subject obtains.



An alternative version of essentially the same analysis can be proposed using rightward-projecting specifiers (Abels & Neeleman 2012), but is not included here for space reasons.

## 3 DIACHRONIC DEVELOPMENTS

In later Middle Welsh, a new word-order pattern emerges in nonfinite clauses, namely be.INF – subject – *yn* – predicate. Compare the innovative (22) with conservative (2) above.

- (22) ... am dy uot ti yn debic ymi o deupeth ...  
 for 2SG.GEN be.INF you PRED similar to.me from two.things  
 ‘... because you are similar to me in two things’ (*Ystoryaeu Seint Greal* 5667)

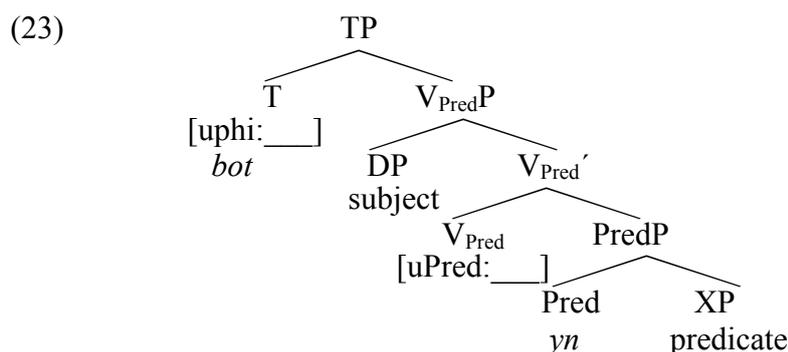
This new pattern emerges and spreads in the fourteenth century. Initially, the two patterns vary with relative weight of subject and predicate being the main conditioning factor.

However, the innovative subject–predicate pattern comes to dominate by the mid fifteenth century.

In finite clauses, the pattern with *yn* continues to spread as Middle Welsh progresses. Ultimately, the copula *ys* disappears from the language entirely.

### 3.1 Loss of predicate raising

We can attribute the word-order change in nonfinite clauses to the loss of the movement-triggering feature on  $v_{\text{Pred}}$ . In nonfinite clauses, the derivation proceeds as far as (18), but, thereafter, there is no movement of  $\text{PredP}$  to the specifier of  $V_{\text{PredP}}$ . The resulting structure is as in (23), yielding subject–predicate order.



The loss of predicate raising makes the structure in (3) unacquirable. The alternative structure in (5) is available to express the same meaning, and it rapidly replaces in the second half of the fifteenth century.

Formally, the change is the loss (failure in acquisition) of a movement diacritic on  $V_{\text{Pred}}$ :



### 3.2 Other effects of this parametric change

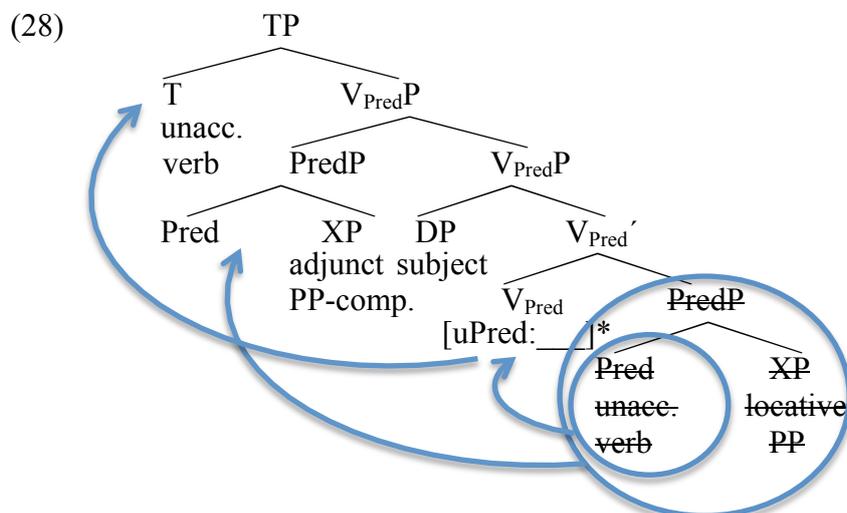
While apparently an isolated change in the copular system, the loss of predicate raising is actually a more far-reaching change in the development of Welsh, having manifestations in other areas of word order and clause alignment. Specifically, Welsh loses postposed subjects in unaccusative structures, and postposed pronominal objects in transitive structures, in parallel with these changes.

Consider first, subjects in finite unaccusative clauses. In Middle Welsh, these may be postposed to a PP or locative complement of the unaccusative verb (Evans 1965):

- (25) verb.FIN.UNACC PP subject
- (26) Pa neges y dodyvch yma chwi?  
 which mission PRT come.PERF.2PL here you  
 ‘On what mission have you come here?’ (*White Book Mabinogi* 475.15)
- (27) ef a doy am dy benn cwbyl o ’r gouut.  
 it PRT come.PRES.3SG on 2SG.GEN head whole of the worry  
 ‘there will come upon you all of your worry.’ (*Pedeir Keinc y Mabinogi* 65.1)

Postposition of a pronominal subject to a PP or locative complement seems particularly strange from a present-day Welsh perspective, but the word order is found with both nominal and pronominal subjects.

Extending the current analysis, we can treat this as an instance of predicate raising. Schematically, the clauses in (25)–(27) would have the following structure:



Here, predicate raising is accompanied by ordinary raising of the finite verb to T, escaping the predicate phrase. The remnant PredP containing only verbal adjuncts or complements undergoes predicate raising, yielding verb–adjunct/PP-complement–subject order. Naturally, when predicate raising is lost, this structure disappears too.

Secondly, consider pronominal objects, again in finite clauses. These sometimes follow PP-complements, as in (30), or adjuncts as in (31) (Evans 1965):

- (29) verb.FIN.TRANS (subject) PP object.PRO
- (30) ac yna y trewis Gwydyon a 'r hudlath ynteu.  
and then PRT hit.PAST.3SG Gwydion with the magic.wand him.CONJ  
'...Gwydion hit him with the magic wand.' (*Pedeir Keinc y Mabinogi* 90.15)
- (31) A chymer yn llawen wynt ...  
and take.IMPER.2SG PRED happy them  
'And take them happily ...' (*Peredur* 15.15)

Provided we assume that subject of unaccusative verbs and objects of transitive verbs occupy the same position, the derivation is parallel to that in (28). Once again, loss of the predicate raising operation will automatically remove this structure from the output of the grammar.

### 3.3 Possible extension in ergative non-finite clauses

Finally, consider another possible extension, this time into the realm of non-finite clauses. Middle Welsh non-finite clauses show a kind of ergative patterning with active subjects of transitive and agentive intransitive verbs being marked with the preposition *o* 'of', while direct objects and subjects of non-agentive intransitives show a genitive pattern: genitive agreement clitics if pronoun, unmarked otherwise (Borsley, Tallerman & Willis 2007: 327–30, Manning 1995, Tallerman & Wallenberg 2012):

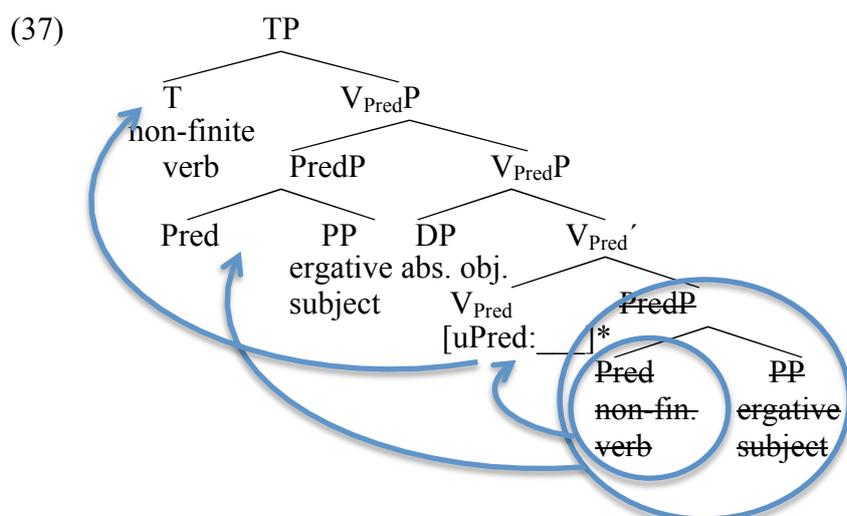
- (32) ...gwedy y adnabot o'r rei guarchaedic ef...  
 after 3MSG.GEN recognize.INF of the ones besieged him  
 '...after the besieged ones had recognized him ...' (*Brut Dingestow* 146.4)
- (33) A gwedy eu diflannu...  
 and after 3PL.GEN disappear.inf  
 'And after they had disappeared...' (*Peredur* 47.9)
- (34) A gwedy peidyaw y gawat...  
 and after cease.INF the shower  
 'And after the shower had ended...' (*Owein* 494)

Late Middle Welsh witnesses enormous changes in clause alignment in non-finite clauses, with ergative alignment being replaced by a system of accusative alignment.

The transitive and intransitive patterns within the ergative system essentially represent instances of (28), with the PP complement in (28) equivalent to an ergative agent and the unaccusative subject in (28) equivalent to an absolutive element (a transitive object or unaccusative subject) here:

- (35) verb.INF.UNACC [PP complement] subject.ABS  
 (36) verb.INF.TRANS [PP subject.ERG] object.ABS

For instance, (36), instantiated in (32), has the structure:



The elimination of predicate raising naturally means that this system cannot continue unchanged. The collapse of the ergative system of alignment in non-finite clauses can be understood as having been partially triggered by the loss of predicate raising, which set in motion another series of reanalyses in this area. These far-reaching changes therefore justify viewing this as a major parametric change in the language.

#### 4 MOTIVATING THE CHANGE

While the analysis presented here links a number of syntactic innovations in late Middle Welsh to a change in a single parameter setting, namely the feature specification of a single verbal head that triggers predicate raising, we are still left with the question of why that feature specification should have changed in the first place. We saw at the outset that the proportion of copular sentences in which unambiguous evidence for predicate raising (namely

copula–predicate–subject orders with overt subjects) was manifested was rather small (37 out of 247 or 15.0% in **Table 1**). The predicate marker *yn* has tended to spread in the history of Welsh and it seems to have continued this spread during Middle Welsh. Any rise in frequency of *yn* in finite clauses will have further reduced the frequency at which unambiguous evidence for predicate raising was encountered. The frequency of these orders may have fallen so low that they became open to alternative interpretations. The distribution of the pattern in some later Middle Welsh texts seems to reflect a tendency to see copula–predicate–subject order as motivated by the presence of a heavy subject rather than by a core grammatical rule. This suggests that it had come to be interpreted as being derived by extraposition rather than as the basic pattern, a situation from which it was open to further erosion.

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