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## ON THE ROLE OF THE COPULAR PARTICLE: EVIDENCE FROM WELSH Celtic Linguistics Conference 7, Rennes, June 22-23, 2012

## 1. INTRODUCTION: THE SYNTACTIC THEORY OF MEDIATED PREDICATION

Bowers 1993, 2001: all predication must be mediated by a functional head $\operatorname{Pred}^{0}$ (originally, $\mathrm{Pr}^{\circ}$ ). The small clause is a projection of this head (PredP).
(1)


Empirical evidence: predicate case-marking (Bailyn and Rubin 1991, Bailyn and Citko 1999, Bailyn 2001, 2002) and copular particles, as well as some finer details of small-clause syntax
The semantic function of Pred is to create a predicate out of an entity-correlate (or some such construct): APs, NPs and PPs are hypothesized to not denote predicates, and therefore require conversion into predicates (Bowers 1993 citing Chierchia 1985, Chierchia and Turner 1988) NB: Both Bowers 1993, 2001 and den Dikken 2006 take the extreme position, though for different reasons: verbal predication must also be mediated by a functional head. We will not address this complication here.
Bowers 1993, Baker 2003: the Welsh particle $y n$ is an overt realization of Pred ${ }^{\circ}$

## 2. WELSH COPULAR PARTICLE

Initial confirmation: yn clearly appears in small clauses

## Primary predication:

(2) a. Mae Siôn *(yn) ddedwydd.

Rouveret 1996:128
is Siôn PRT happy
Siôn is happy.
b. Y mae Siôn *(yn) feddyg. PRT is Siôn PRT doctor Siôn is a doctor.

Secondary predication: ECM, resultatives and depictives:
(3) Rydw i'n ystyried [Siôn yn niwsans]. am I+PROG consider John PRED nuisance I consider John a nuisance.
(4) a. Peintia'r petryal bach yn goch. paint-IMP+the rectangle small PRED red Paint the small triangle red.

[^0]The author's research was generously supported by NWO (project number 276-70-013).
b. Dw i'n licio cwrw yn oer. Bob Morris Jones, p.c.
be-1SG I+PROG like beer PRED cold I like beer cold.

Absolute constructions (cf. Chung and McCloskey 1987 for Irish):
(5) A mi yn ofnus, ni ddywedais ddim.

Rouveret 1996
and I PRED shy NEG said nothing
Since I am shy, I said nothing.
NP-internal reduced relatives (Willis 2006):
(6) buddsoddi ym mhensaernïaeth fy ngwlad, yn hen ac yn newydd invest.VN in architecture my country PRED old and PRED new to invest in the architecture of my country, old and new.
One or many? The same phonological string yn appears in three different environments, but inducing different mutations (Awbery 1976, Sproat 1985 and Fife 1990:368-386, 422-442, examples from Gensler 2002):
a. Mae Huw yn Nulyn [= Dulyn] is Huw in Dublin Huw is in Dublin.
b. Mae Huw yn dysgu. progressive: no mutation
is Huw in learn-vN
Huw is learning.
c. Mae Huw yn ddysgwr/dda.
predicative: lenition (Soft Mutation)
is Huw in learner/good
Huw is a learner/good.
d. rhedeg yn dda
adverbializing: lenition (Soft Mutation)
run in good
to run well
The hypothesis that the predicative yn in (7) is Pred $^{\circ}$ (Bowers 1993) seems incompatible with a unification approach, such as Gensler's

To the best of my knowledge, scholars working on Welsh haven't investigated the hypothesis that $y n$ is Pred ${ }^{\circ}$ :
$>\quad$ Hendrick 1984, 1996: the predicative yn is $\mathrm{Asp}^{\circ}$, just like the progressive yn and the perfective wedi (homophonous with the prepositions 'in' and 'after', resp.)
$>$ Rouveret 1996: the predicative yn, the progressive yn and the perfective wedi all introduce stage-level predicates (but see Zaring 1996 for the demonstration that individual-level and stage-level adjectives retain their properties with yn)
$>$ Gensler 2002: the predicative $y n$ is the same item as the adverbializing yn (which is, alas, not very explanatory)
Historically, the structure with yn is an innovation, spreading from the depictive use (Gensler 2002, Borsley, Tallerman and Willis 2007)

Crucially for us, in some environments yn is conspicuously absent:
$>\quad$ when the predicate is a PP
$>\quad$ when the predicate is moved to [Spec, CP]
$>\quad$ before equative and intensive (so, such) degree operators
What are the consequences of this distribution for the hypothesis that the $y n$ is Pred $^{\circ}$ ?

## 3. PP and AspP predicates

PP predicates (and VPs when be functions as an auxiliary) disallow yn (Jones and Thomas 1977:47, Jones 2009):
a. Mae Siôn (*yn) yn Lludain /o flaen y tŷ. Zaring 1996 is Siôn PRT in London of foremost the house Siôn is in London/in front of the house.
b. A hwy yn yr eglwys, ysbeiliwyd eu tŷ.

Rouveret 1996 and them in the church was-looted their house While they were in the church, their house was looted.

This is completely consistent with cross-linguistic lexicalization patterns for copular particles and copular verbs (Hengeveld 1992, Stassen 1997, Pustet 2005):
(i) No lexicalization with VPs, unless they are derivationally converted into nouns or adjectives
(ii) No copular particles with PPs; a special copular or stance verb is often required
(iii) Lexicalization with APs only if lexicalization with NPs

A good theory of Pred ${ }^{\circ}$ should explain these patterns. Doing so requires going beyond the simple assertion that Pred ${ }^{\circ}$ mediates predication and providing it with a proper role.
Hengeveld 1992: the correlation in (iii) has to do with the fact that in different languages or within the same language adjectives can be "more verbal" or "more nominal" -- it is the latter category that may require an overt mediator in the predicative position. If this is correct, the languages in question should provide independent evidence for this
Adger and Ramchand 2003 propose a semantic motivation for a nominal copular particle: NP predicates do not have an eventuality argument slot. How does this extend to AP predicates?
I'm only aware of three languages demonstrably using a copular particle with AP predicates: Edo (two different copular particles) and Welsh \& Berber (the same copular particle)

## 4. WELSH ADJECTIVES AS NOUNS

Support: The distributional properties of Welsh adjectives bring them close to nouns.

### 4.1. Nominal adjectives

Cross-linguistically, adjectives may be more or less nominal/verbal (contra Baker 2003).
Japanese adjectives are divided into "verbal" and "nominal" (cf. Kageyama 1982, Miyagawa 1987, Kubo 1992, Nishiyama 1999, etc.), of which only the latter require an overt copula:
(9) Canonical ("verbal") adjectives
a. yama-ga taka-i.
mountain-NOM high-PRES
The mountain is high.
b. yama-ga taka-katta.
mountain-NOM HIGH-past
The mountain was high.
(10) Nominal adjectives
a. yoru-ga sizuka da. night-NOM quiet COP.PRES The night is quiet.
b. yoru-ga sizuka datta. night-NOM quiet COP.PAST The night was quiet.

Only the "verbal" adjectives function as nominal modifiers without additional morphology:
(11) a. Taroo-ga [utukusi-i] tori-o mita.

Yamakido 2000
Taroo-NOM beautiful-PRES bird-ACC saw Taroo saw a beautiful bird.
b. Hanako-ga [kirei na] hana-o katta. Hanako-NOM pretty PRES flower-ACC bought Hanako bought a pretty flower.
Yamakido 2000: both types of adjectives can function as non-intersective modifiers

### 4.2. Adverbs

Welsh doesn't have any adverbializing suffix: VP-internal modification requires an additional marker homophonous with the predicative $y n$.
(12) Fedrith o redeg yn gyflym.

Jones 2009 can.PRES.3SG he run in quick He can run quickly.
The adverbializer yn triggers lenition (soft mutation, like the predicative $y n$ ) rather than nasal mutation (which is what the prepositional yn does), so the question arises if such adverbs are in fact depictives. The answer is no:
(13) Oedden nhw 'n ffyrnig yn achlysurol. Jones 2009 be.IMPF.3PL they PRED fierce in occasional They were occasionally fierce.

### 4.3. Prepositions

Welsh adjectives can appear with the preposition o 'of' yielding AP-internal modification: Judging by the list of adjectives capable of appearing in this construction (from Jones 2009), it encodes strictly degree modification: anffodus 'unfortunate', anghysurus 'uncomfortable', anhygoel 'unbelievable', arbennig 'special', aruthrol 'terrific', arswydus 'dreadful', cythreulig 'devilish', diawledig 'devilish', dychrynllyd 'frightening', difrifol 'serious', eithriadol 'exceptional', gweddol 'fair', hynod 'strange', neilltuol 'particular', od 'odd', ofnadwy 'awful', poenus 'painful', rhyfeddol 'strange', syfrdanol 'surprising', and uffernol 'hellish'.
a. arbennig o ddiddorol
special of interesting
especially interesting
b. aruthrol o hir
terrific of long
terrifically long
A few nouns (andros 'devil', coblyn 'goblin', and syndod 'surprise') and locative expressions (dros ben 'over head' and (y) tu hwnt 'beyond') can also occur in the configuration (12).

### 4.4. AP-AP modification

Welsh adjectives can be modified by adjectives directly, just like nouns (Jones 2009)
(15) a. tawel rhyfeddol
quiet strange
strangely quiet
b. syniad rhyfeddol
idea strange
a strange idea
b. noson ofnadwy evening awful
an awful evening

VP-modification can't be done by an AP (unlike, say, in Hebrew or in German), so adjectives and adverbs are not homophonous in Welsh.
A two-level modification (most awfully noisy) is not allowed for any adjective positions (see Jones 2009), but this could be in part pragmatic (cf. ?? ${ }^{\text {incredibly awfully] noisy) or linked to }}$ the fact that direct AP-AP modification is restricted.

### 4.5. AP position

Adjectives can appear either before or after nouns and adjectives they modify (Rouveret 1994, Sadler 2000 and Willis 2006, among others).
Default: adjectives are post-nominal and pre-adjectival:
(17) a. dadansoddiad cymharol
default analysis comparative comparative analysis
b. cymharol ifanc
comparative young comparatively young
a. penderfyniad difrifol decision serious serious decision
b. difrifol wael
serious ill
seriously ill
Marked pattern:
a. fy hoff hen gi exceptional my favourite old dog my favourite old dog
b. tawel rhyfeddol quiet strange strangely quiet
Adjectives appearing before the constituents they modify trigger lenition.
VP adverbs must appear after the VP, except if functioning as frame adverbials (Jones 2009).

### 4.6. Lenition in the feminine

Mittendorf and Sadler 2006: Welsh feminine nouns trigger lenition on the following AP (the first word thereof):
NB: The mutation on $p$ wysig 'important' in (20c) is not the "soft-mutation" (lenition) but the aspirated mutation, caused by the adverb tra 'very'.

| (20) a.cath ddu fawr UR: cath du mawr <br> cat.FSG black big  <br> a big black cat  |  |  |
| :--- | :--- | ---: |
| b. | agwedd bwysig <br> aspect.FSG important <br> (an) important aspect | UR: agwedd pwysig |
|  |  |  |

c. agwedd dra phwysig UR: agwedd tra pwysig aspect.FSG very important
(a) very important aspect

The feminine adjective, however, can in turn trigger lenition on its own modifier (Jones 2009, citing Thomas 1996:221):
a. noson wyntog ddychrynllyd
night.F windy frightening
a frighteningly windy night
b. diwrnod gwyntog dychrynllyd
day.M windy frightening
a frighteningly windy day
(22) a. merch gas gythreulig
woman.F nasty devilish
a devilishly nasty woman
b. dyn cas cythreulig
man.M nasty devilish
a devilishly nasty man
If the Welsh adjectives behave like nouns in this respect, the explanation is straightforward.

### 4.7. Compounding

With a certain type of compounding the second noun undergoes lenition if the first member is feminine:
a. siop fara
shop bread
baker's (shop)
b. siop gig
shop meat
butcher's (shop)
(24) a. bachgen mawr
boy big
a big boy
b. merch fawr
girl big
a big girl
Given the cross-linguistic similarity between compounding and modification, this extra lack of a difference is encouraging.

Though it can be argued (cf. Williams 1980) that apparent noun-noun compounds are actually genitives of quality (cf. Nikolaeva 2007 for the Russian equivalent), does it really matter?

### 4.8. Comparatives and equatives

Gensler 2002 also emphasizes the similarity between adjectives and nouns: "compared forms exist not just for adjectives but also for a number of nouns (Williams 1980:33-34). Thus, with the superlative: pen 'head', penn-af 'chief'; ôl 'track, rear', ol-af 'last'; diwedd 'end', diweth-af 'last'. And with the comparative: lles 'benefit', lles-ach 'more advantageous'; amser 'time', amser-ach 'more timely'; elw 'profit', elw-ach 'more profitable'. As for the equative degree,
the morphological equative form also has a nominal meaning: teg 'beautiful', cyn dec-ed 'as beautiful as' (with lenition after cyn 'as'), tec-ed '(degree of) beauty'."
Note, however, that the superlative pattern is actually quite similar to English, viz., headmost, hindmost, endmost, etc.

### 4.9. Welsh adjectives are not nouns

$\phi$-agreement: NP-internal Welsh adjectives may agree for number, though generally not for gender -- setting mutation aside (Williams 1980, Borsley et al. 2007):
$\begin{array}{rlr}\text { (25) a. } & \begin{array}{l}\text { llygaid gleision/glas } \\ \text { eyes blue-PL/blue-SG }\end{array} & \text { Williams 1980:178-179 } \\ \text { blue eyes }\end{array}$
Like in German or in Dutch, there is no agreement in the predicate position

### 4.10. Summary

The subcategorization properties of $y n$ are fully consistent with it being a copular particle.
The hypothesis that copular particles subcategorize for nouns and nominal adjectives is not contradicted by Welsh: Welsh adjectives and nouns are clearly very similar.
Restricting copular particles to predicates headed by nouns and nominal adjectives seems to be inconsistent with the hypothesis that the copular particle is Pred ${ }^{\circ}$ (under the standard view of Pred $^{\circ}$ as the head of any small clause).
The unification of the predicative and prepositional instances of $y n$ fits into the general crosslinguistic pattern of prepositional copular particles, which, alongside oblique case-marking, signal/force the transient character of the predicate.
The remaining two $y n$-less environments don't change the picture.

## 5. WeLSH PREDICATE FRONTING

Rouveret 1996, Zaring 1996, etc.: when the predicate is fronted, the particle yn disappears:

| a. Feind wrth bawb ydy Mair. | Jones 1993 via Rouveret 1996 |
| :--- | :--- | :--- |
| kind to everyone is Mair |  |
| Mair is kind to everyone. |  |

b. Meddyg yw Sion. doctor is Sion Sion is a doctor. Rouveret 1996

In addition, the copula is not clause-initial and the form of the copula is different.
Does the new form of the copula reflect the incorporation of the putative Pred ${ }^{\circ}$ ?
Perhaps, but this form is also used in the equative copula, where there is no evidence for the presence of $y n$ :
(27) a. Y brenin yw Arthur.

Rouveret 1996 the king is Arthur Arthur is the king.
b. Arthur yw'r brenin. Arthur is-the king It is Arthur who is the king.

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c. *Y mae Arthur yn y brenin.
    PRT is Arthur PRED the king
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... and when $y n$ is clearly not incorporated (after clause-initial negation, question particle or $i f)$ :
$\begin{array}{lllll}\text { a. } & \text { A ydyw } & \text { Ifan } & \text { yn bregethwr? } \\ \text { Q is } & \text { Ifan } & \text { PRED preacher }\end{array}$
Rouveret 1996
Is Ifan a preacher?
b. Nid yw Ifan yn saer.

Williams 1980:94
NEG is Ifan PRED carpenter Ifan is not a carpenter.
More likely conclusion: the copula form $y w$ reflects the movement of the copula to $\mathbf{C}^{\circ}$ (but see Zaring 1996 for the hypothesis that it is also the lexical copula).
If the predicate is a PP (or an AspP), the mae form must be used:
(29) a. Yn Llundain (y) mae Siôn.

Zaring 1996
in London PRT is John John is in London.
b. *Yn y dre yw/ydy Gwyn.

Borsley et al. 2007 in the town be.PRES.3SG Gwyn ('Gwyn is in town.')
...except after clause-initial negation, question particle or if.
The realization of the copula (cf. Rouveret 1996 and Zaring 1996):
$>$ The copula is spelled out as mae if its specifier contains a locative (including the null locative clitic, proposed by Rouveret 1996). Clause-initial negation, question particle or if block this configuration
$>$ The copula is spelled out as sydd if it is crossed out by a wh-subject. In this case it remains in $\mathrm{T}^{\circ}$
$>$ If preceded by negation and followed by an indefinite subject, it is spelled out as oes
> Otherwise the copula is spelled out as $y w$
Summary: Welsh predicate fronting says nothing about the syntactic or semantic role of yn; while its absence from inverted structures can be attributed to incorporation into be, this is not an explanation and has nothing to do with it being or not being Pred ${ }^{\circ}$
Its absence from identity clauses somewhat supports the hypothesis that $y n$ is $\operatorname{Pred}^{\circ}$.

## 6. EQUATIVES AND INTENSIVES

Welsh equatives can be simultaneously inflected and analytic, depending on the choice of the morpheme, dialect and register: "mor is more characteristic of southern dialects and would not typically occur in formal Welsh." (Jones 2009):
(30) a. $\quad \begin{array}{llll}\text { cyn } / \text { mor } \\ \text { so/as }\end{array} \begin{aligned} & \text { dal-ed } \\ & \text { tall-EQ }\end{aligned} \begin{aligned} & \text { â } \\ & \text { with }\end{aligned} \begin{aligned} & \text { Sioned } \\ & \text { Sioned }\end{aligned}$ as tall as Sioned
b. mor/(*cyn) ddeallus â Sioned so/as intelligent with Sioned as intelligent as Sioned
Neither mor nor cyn are compatible with yn:
(31) a. Mae Gwen mor gryf(ed) â Megan. Jones 2009 be.Pres.3SG Gwen as strong(-EQ) with Megan
Gwen is as strong as Megan.
b. Mae Gwen cyn gryfed â Megan. be.Pres.3SG Gwen as strong-EQ with Megan Gwen is as strong as Megan.
Mor is ambiguous between the intensifying 'so' and the equative 'as'; cyn is equative only:
(32) a. Mae Gwen mor gryf(ed).
be.Pres.3SG Gwen so strong
Gwen is so strong.
b. *Mae Gwen cyn gryf(ed).
be.PRES.3SG Gwen so strong
Only mor can take a standard CP:
(33) Mae 'r tywydd mor/*cyn wyntog heddiw fel bod rhaid cau 'r bont. be.PRES.3SG the weather so/as windy today like be necessity close the bridge The weather is so windy today that the bridge has to be closed.
Why is $y n$ absent?
The most straightforward answer: it's a category issue: mor and cyn are prepositions.
$>$ Support: cyn is homophonous with the preposition 'before'.
> Problem: mor is not homophonous with anything. And though it triggers lenition, just like many prepositions, so do many degree words, such as rhy 'too'
A less likely hypothesis: mor and cyn involve covert movement (cf. Heim 2000).
Degree interrogatives are formed by using the interrogative word pa 'which, what' and the degree word mor 'so' combined with an adjective:
(34) a. Pa mor bell ydy Porthmadog?

Jones 2009
which so far be.pres.3SG Porthmadog
How far is Porthmadog?
b. Pa mor dda ydy Ryan Giggs?
which so good be.PRES.3SG Ryan Giggs
How good is Ryan Giggs?
c. Pa mor dal ydy Mair?
which so tall be.pres.3SG Mair
How tall is Mair?
The obligatory absence of $y n$ results from fronting (note the suppletive form of be).
Could the same explanation apply to equatives?
Problem: all degree operators are incorrectly predicted to disallow yn, as the hypothesis that degree operators involve QR treats comparatives and equatives alike:

| (35) a. | Mae |  |
| :--- | :--- | :--- |
|  | Sioned yn dal-ach na Gwen. <br> be.PRES.3SG Sioned PRED tall-er than Gwen | Jones 2009 |
|  |  |  |
| Sioned is taller than Gwen. |  |  |

b. Mae Aberystwyth yn llai na Llundain. be.PRES.3SG Aberystwyth PRED smaller than London Aberystwyth is smaller than London.
Degree modification in cweit 'quite', go 'fairly', rhy 'too' and reit 'exceedingly' and analytic comparison in mwy 'more, lit. bigger' and llai 'less, lit. smaller' behave exactly the same.

## 7. CONCLUSION AND FURTHER QUESTIONS

The subcategorization properties of the Welsh copular particle $y n$ are consistent with what we know about copular particles in general

The cross-linguistic hierarchy in the lexicalization of copular particles (NP predicates before AP predicates) doesn't follow from the hypothesis that the copular particle is Pred ${ }^{\circ}$
The hypothesis that copular particles only appear with nominal adjectives is supported by the Welsh data.

Bi-nominal copulas may be classificatory (including identity) or ascriptive (predicational), which is often cross-linguistically encoded.
From the semantic point of view, it is unlikely that nominal adjectives are more classificatory than "normal adjectives" -- the difference in encoding doesn't seem functional.

The absence of the copular particle in inversion structures remains a mystery.

## 8. APPENDIX 1: A FEW MORE WORDS ON THE WELSH INVERSION

Any (though only one) constituent can be inverted. Descriptions of the effects of inversion on the interpretation vary.

Gensler 2002 notes no genericity, transience, lifetime, stage-level, etc., effects. My queries support this.
Tallerman 1996 claims that the resulting focus is "mild" and the topic interpretation is also possible.

Rouveret 1996 claims that $\mathrm{DP}_{1}$ is the focus:
a. Pwy yw eich ffrind? - Myfanwy (yw fy ffrind). who is your friend - Myfanwy is my friend 'Who is your friend?' - 'Myfanwy is.'
b. Pwy yw Myfanwy? - Fy ffrind (yw Myfanwy). who is Myfanwy my friend is Myfanwy 'Who is Myfanwy?' - 'She is my friend.'
Borsley et al. 2007: While overt material in [Spec, CP] is normally marked with contrastive focus, $\mathrm{DP}_{1}$ in identity copular clauses is not.
note: Propositional adverbs, such as efallai 'perhaps', hwyrach 'probably', braidd 'hardly' and prin 'hardly', also appear in this position without being contrasted (Borsley et al. 2007:124)
With predicational copulas the fronted constituent is contrastive:
a. Mae Caerdydd yn ddinas hardd
be.PRES.3SG Cardiff PRED city beaut
Cardiff is a beautiful city.'
c. Caerdydd sy 'n ddinas hardd.

Cardiff be.PRES.REL PRED city beautiful
It's Cardiff that's a beautiful city. / CARDIFF is a beautiful city.
note: the verbal form sydd arises whenever the subject is wh-moved. This form is compatible with the particle $a$ (in $\mathrm{C}^{\circ}$ ) and doesn't require the special focus-embedding complementizer (cf. Zaring 1996), unlike the $y w$ form, suggesting that the verb does not move to $\mathrm{C}^{\circ}$ when the subject is in [Spec, CP]

## 9. APPENDIX 2: ROUVERET'S UNIFIED ANALYSIS OF THE WELSH COPULA

Rouveret 1996 distinguishes two types of predication in Welsh: stage-level (with the copula mae) and individual-level (elsewhere)
The structure of mae-predication:


Key points of mae-predication:
$>\quad$ the form mae in $\left[\mathrm{Spec}, \mathrm{Agr}_{\mathrm{S}} \mathrm{P}\right]$ contains an incorporated locative clitic doubled by the predicate PP in locatives (or by the PredP in regular predication?)
> the small clause is represented as a Larsonian shell
) the head-movement of the verb renders the subject and the predicate equidistant
$>\quad[\mathrm{Spec}, \mathrm{TP}]$ is filled by the subject in locatives, by the predicate in existentials the role of the copular particle $y n$ is not discussed
In inverted copular clauses there is no locative clitic:


Key points for the inverted structure:
$>$ there is no basic difference between equative and predicational copular clauses
$>\quad$ the role of the copular particle $y n$ is not discussed
$>$ identificational clauses are derived by moving the subject to [Spec, CP]; as this cannot be right (the copula never agrees with the element in [Spec, CP]; subject extraction gives rise to a different form of be, cf. (37c)), it is simpler to assume the reversal of order inside the small clause. On the other hand, this special form is only used with non-definite predicates...

## 10. Appendix 3: other Celtic languages

Are the noun-like properties of Welsh adjectives shared by other Celtic languages, where AP predicates do not require a copular particle?
Preliminary result: the use of the preposition 'of' to derive degree modifiers seems restricted to Welsh

### 10.1. Irish (Stenson 2008)

Attributive adjectives agree with nouns in number, gender and case; predicative adjectives do not agree (Stenson 2008)
VP adverbs are formed with the particle go, which is identical to the modern preposition go 'to' (but historically derived from co 'with') and can be omitted under certain circumstances NB: In Old Irish, VP adverbs corresponded to the dative singular masculine form of the adjective preceded with the definite article; predicative adjectives agreed (O'Connell 1912, Thurneysen 1946)
AP-internal deadjectival adverbs are null-derived

### 10.2. Breton (Press 1986, Hemon 1995, Favereau 1997)

Adjectives agree for number and gender only via mutation and only in the attributive position Some predicative adjectives are preceded by the particle ez (sometimes treated as assimilated to the particles en, e, end), which is also used to form VP adverbs of manner. No grammar I had access to discussed the distribution of these particles in any great detail
AP-internal deadjectival adverbs are null-derived, but restricted, as far as I could determine, to degree modifiers

### 10.3. Scottish Gaelic (Calder 1923, Lamb 2003, Adger 2010a, 2010b)

Attributive adjectives agree with nouns in number, gender and case; predicative adjectives do not agree
VP adverbs are derived from adjectives by the particle gu (homophonous with the preposition 'to')

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