Welsh unaccusatives? Identifying unaccusative structures

Abstract

This paper attempts to identify structural unaccusativity by using verb semantics to identify diagnostics which differentiate unaccusative verbs from unergatives.

The analysis assumes a structural similarity between the argument of unaccusative intransitive verbs and the derived subjects of transitive verbs in order to identify a diagnostic of structural subjects for Welsh. Starting with intransitives, Welsh verbs are probed using diagnostics identified for other languages – where applicable to Welsh. The resultative construction proves successful in producing two differing semantic readings, as previously found for English.

The second part of study turns to transitive verbs and identifies a correlation in the behaviour of four verbs in passive, causative and reflexive constructions – *gwybod* 'know', *gallu* and *medru* 'be able to' and *ymddigrifo (mewn)* 'be entertained' – as potential diagnostics of derived subjects. The resultative construction cannot diagnose transitive verbs and applying the potential diagnostics for derived subjects in transitive verbs, or 'unaccusativity' in transitive verbs in different terms, to intransitive proves a) impossible due to their structures or b) they do not diagnose a derived subject. A unified account of unaccusativity in Welsh intransitive and transitive verbs was not found to be possible.

Keywords: unaccusative, argument structure, resultative, Welsh verbs, causative

1   Introduction

The lasting impact of Perlmutter's (1978) UNACCUSATIVITY HYPOTHESIS is the observation of structural differentiation between certain intransitive verbs (unaccusative verbs) and other intransitives. This analysis differentiates unaccusative intransitive verbs from unergatives by proposing different statuses (within Relational Grammar) for the sole arguments of these two verb-types: the inability of unaccusative verbs to passivize led to the conclusion that their sole argument corresponds to the object of transitive verbs, meaning that this sole subject must be realized as a surface subject due to language-specific requirements for agreement in surface relations. Later, Burzio (1981) treats these same observations on the behaviour of intransitive subjects under a different approach to syntax: the surface representation of the sole-arguments of the two verb-types correspond to different structural positions occupied by those arguments.

This distinction is commonly realized in intransitive verbs of various languages, sometimes marked by the selection of auxiliary verbs for intransitive verb participles as in German (1) and other times realized by differing case-morphology on intransitive subjects, like the dative subject of the Waris intransitive (2b).

(1) a. sie hat gearbeitet
         she has worked.PTCP
         'She has worked'

     b. sie ist gestorben
         she is died.PTCP
         'She has died'   German - auxiliary selection

In the above example from German, the unaccusative verb *gestorben* 'die' requires the copula *sein* whereas *haben* is used for unergatives.

(2) a. Ka-va ye-m   hévakomandha-v.
         1-TOP 2-DAT kill-PRES
         I kill you.[1]

     b. He-m   daha-v.
         3-DAT die-PRES
         He is dying.   Waris (Papua New Guinea; Brown (1988)[2]) - case marking

Although unaccusativity manifests in various morphosyntactic phenomena cross-linguistically, the assumption is that unaccusativity is semantically predictable, though syntactically encoded (Levin & Rappaport Hovav (1995), amongst others). Verbs which are syntactically unaccusative have sole arguments that will fall under the proto-Patient (Dowty 1991) or Undergoer macro-roles in terms of their semantics. On the whole, verbs with Patient subjects will have a structurally object-like position (Perlmutter 1978) and the sole Patient-argument of an intransitive verb may be realized as a subject, despite having a structural position internal to the verb phrase.

Despite this assumption, that patient-subjects do not occupy the same structural position as other subjects (at least not without some derivation, promotion or some such process), languages are known to differ in their sensitivity to patienthood. Some languages treat patient-subjects as they would any other, regardless of the verb's supposed argument structure and the subject's status as external or derived. This entails that a large sample of verbs which contrast in the thematic role of their subjects is required to reliably determine whether or not a language will differentiate morphosyntactically between Proto-Patients and Proto-Agents.

The goal here is to determine whether it is possible to identify unaccusative verbs in Welsh. Assuming that such structural differences exist in intransitive verbs, it should be possible to find the syntactic impact of these structures. Middle Welsh non-finite intransitives display some characteristics of unaccusativity, reviewed in section 2.1. Section 2.3 demonstrates one reflex of unaccusativity in Modern Welsh intransitives.

The second part of the investigation turns to transitive verbs. Although, initially, unaccusativity was a term applied only to intransitive verbs, Belletti & Rizzi's (1988) proposal of derived subjects in transitive verbs invites comparison with the structure of unaccusative verbs. The parallelism of these assumptions lead to some of Belletti & Rizzi's diagnostics being used on both transitive verbs and intransitives (sections 3.1 and 4 respectively) followed by a discussion of the efficacy of the diagnostics for Welsh in section 6. The original data used are based on my own native-speaker intuitions for Welsh, supported by examples found in online sources (linked), including an online corpus of Welsh (Ellis et al. 2001).

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[1]-m only appears on animate or less-affected inanimate Ps (Brown 1988)

[2]Original glossing by Brown (1988)

2 Unaccusativity in Welsh intransitives

Before addressing unaccusativity in modern-day Welsh, it is worth noting that unaccusativity was marked (variably) in Middle Welsh by some verbs. Section 2.4 reveals that these verbs no longer represent the set of unaccusative intransitives in Welsh, although there is some overlap.

2.1 Middle Welsh split

A split in the subject marking of non-finite intransitives has previously been observed for Middle Welsh (Manning 1995). A genitive preposition *o* marked the subject of non-finite transitives in Middle Welsh, as in (3), and likewise the subjects of certain intransitives (4b)[3], variably.

(3)   kymryt o   Arthur y   daryan eureit
      take   GEN Arthur ART f\shield golden
      'Arthur took[4] the golden shield'

(4)   a.   kynn diodef Crist
           'Before Christ suffered'
      b.   kynn diodef o Grist
           'Before Christ suffered'

As illustrated by the contrasting examples in (4), this marking was not always consistent in Middle Welsh, with both genitive-marked and unmarked sole arguments appearing with the same verbs, within the same texts, leading Manning to describe the system as fluid intransitivity (meaning Dixon's (1979) fluid-S system). A small set of verbs (Table 1) tended to prefer O-marking of their subjects.

Verb	Gloss	Total	O-marking	A-marking
mynet	go	94	87 (93%)	7 (7%)
dyuot	come	31	24 (77%)	7 (23%)
kyuaruot	meet	5	4 (80%)	1 (20%)

Table 1: Marking preferences of Middle Welsh (Manning 1995)

Manning (1995) found the verbs 'go, come' and 'meet' to strongly prefer O-marking their subjects (where O-marking, or object-marking, takes the form of Ø-marking, whereas A-marking would imply the use of the preposition *o*), as 87 of the 94 tokens of *mynet* 'go' exemplify. Table 2 (from Manning (1995)) shows that the animacy of the subject and the aktionsart class of the Middle Welsh verb influence the presence of the case-marking preposition, although, as with Table 1, it is to be understood that the results describe tendencies in the data (no p-values were given for the factors involved) and not categorical results.

Whilst the fluid intransitivity system of *o*-marking no longer applies to Modern Welsh, which simply uses *o* as a non-case marking preposition, the non-finite verbs found not to require *o* in Middle Welsh are of interest to this study, as a set of potential unaccusative verbs for the purposes of comparison, and are listed in Appendix B.

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[3]Translation Manning (1995), glossing my own
[4]translated from a non-finite form

Transitivity	S NP denotation	V aktionsart class	S marking
Transitive			Yes
Intransitive	- Human S NP		O-marking
	+ Human S NP	Activity V	A-marking
		Achievement V	Fluid marking
		Stative V	O-marking

Table 2: Fluid intransitive system of Middle Welsh (Manning 1995)

2.2 Modern Welsh

There is some difficulty in determining whether the sole argument of a Welsh intransitive is treated as A or P syntactically due to several factors. Welsh word order (VSO) means that both would take the same position with respect to the verb in a basic clause. With auxiliary support, however, the word order would be AuxSVO – a prevalent sentence structure in Welsh – leaving the sole argument of intransitives in the subject position. Pronominal forms do not vary according to case or alignment in Welsh, with previous analyses suggesting givenness and information structural reasons for variation in the realisation of pronouns (Awbery 1976). Initial consonant mutation does not consistently mark direct objects of transitive verbs (Borsley & Tallerman 1996; Tallerman 2006; Borsley, Tallerman & Willis 2007), therefore it cannot mark case on sole arguments of verbs either – though claims have been made that this kind of mutation marks accusative case (Zwicky 1984; Roberts 1997) – see Tallerman (1987), Ball & Müller (1992) or Borsley, Tallerman & Willis (2007:Ch.7) for a full discussion. Without overt marking of A and P, we must therefore rely on other syntactic diagnostics for unaccusativity or derived subjects.

2.3 Identifying diagnostics

As with English, the diagnostics for unaccusativity in Welsh are very limited. Welsh has no morphological marking, no variable auxiliary selection (of which there are at least remnants in English *she is gone* vs. *she has gone*) and no word order variation between verbs, to name a few diagnostics common to the literature on unaccusativity.

However, as in English, a split in the semantics of Welsh intransitives can be observed in resultative and depictive constructions – with *yn* + ADJ forming the VP adjunct for Welsh – as was found by Simpson (1983) for English and further explored by Levin & Rappaport Hovav (1995) in their work on unaccusativity.

(5)   Resultative

    a.   rhew-odd   y   llyn yn   galed
        freeze-3SG.PST ART lake PRED MUT\hard
        'the lake froze hard/solid'[5]

    b.   sych-odd   y   geg   yn   lân
        dry-3SG.PST ART F\mouth PRED MUT\clean
        'the mouth dried clean (/completely)'

[5]Nouns unmarked in respect to gender or number and following an article should be interpreted as masculine singular. This has been omitted from the glosses due to the lack of morphological marking and frequency of occurrence, for legibility.

In both examples given in (5), the adjectives *caled* and *glân*, respectively, describe the resulting state of the named argument as a consequence of the event named by the verb. For this reason, the preposition *yn* has been labelled with the function of PREDICATIVE as this usage seems consistent with the function of *yn* in copular clauses like *mae'r llyn yn galed*, 'the lake is hard'. This interpretation of *yn* + ADJ is consistent with Gensler's (2002) 'subpredicative' analysis of *yn*Len, which is the form of *yn* that triggers lenition/soft-mutation in the following noun or adjective. The examples in (6) have *yn* glossed as ADV and this reflects their 'non-predicative' function under Gensler's interpretation. The non-predicative adverbializing prepositions modify the verbs' meaning so that the property named by the adverb holds true for the whole event, and that the property is depicted at each point of the event named by the verb.

(6)   Depictive

   a.   penlin-iodd   Meilir yn   flin-edig
        kneel-3SG.PST Meilir ADV MUT\tired-ADJ
        'Meilir kneeled tired(ly)'
        # Meilir kneeled until he was tired

   b.   chwardd-odd   Erwan yn   sâl/sal-aidd
        laugh-3SG.PST Erwan ADV sick/sick-ADJ
        'Erwan laughed in a sickly way'
        # Erwan laughed himself sick

This contrasts with (5) in which the adjunct names a state that requires the event to be completed, meaning that a simple diagnostic phrase such as "and was already ADJ before the end of the event" can disambiguate a resultative from a depictive and possibly, then, a non-predicative from a subpredicative use of *yn*. The diagnostic has a non-sensical interpretation for the unaccusative verbs (7), but not for unergatives (8):

(7)   #rhew-odd   y   llyn yn   galed   ac roedd   yn   galed   cyn
      freeze-3SG.PST ART lake PRED MUT\hard and be.IMPF.3SG PRED MUT\hard before
      i'r   llyn rew-i
      DAT'ART lake MUT\ice-VRB
      '#the lake froze solid and it was solid before the lake froze'   Resultative

(8)   penlin-iodd   Meilir yn   flin-edig   ac roedd   yn   flin-edig   cyn
      kneel-3SG.PST Meilir ADV MUT\tired-ADJ and be.IMPF.3SG PRED MUT\tired-ADJ before
      iddo   benlin-io
      DAT.3SG.M MUT\kneel-VRB
      'Meilir knelt tired(ly) and was tired before he knelt'   Depictive

   A potential problem with this diagnostic is the lack of adverbial morphology in Welsh. Using three adjectives (*glân*, *caled* and *blinedig*) in the same construction yields a varying outcome as to which verb gives rise to resultative readings of their adjectives. For example, one adjective might give a resultative reading with the verb *rhewi* whilst another could only be depictive, whilst another yet might be ambiguous. This is exemplified and discussed both here and in section 2.4 below (examples (17a)–(17c)). This potential ambiguity may be due to the adjectival forms used by Welsh under each of these circumstances: whether adverbial or adjectival, the form is invariable as there is no adverbial morphology, as exemplified in (9).

(9)   a.   mae'r   ceffyl hwn   yn   araf
             be.PRS.3SG'ART horse PROX.M PRED slow
             'this horse is slow'

       b.   symud-ai'r   ceffyl hwn   yn   araf
             move-IMPF'ART horse PROX.M ADV slow
             'this horse moves slowly'

However, when the construction VERB + *yn* + ADJ must be interpreted as resultative rather than depictive (when a depictive reading is unavailable as in (5)), the diagnostic selects a structural object as the recipient of the resultant state named by the adjective, as shown by a two-argument verb:

(10)   rhew-odd   ei   rhewgell y   dŵr   yn   galed
        freeze-3SG.PST POSS.3SG F\freezer ART water PRED MUT\hard
        'Her freezer froze the water hard'

The adverbial adjunct *yn galed* in (10) can only be interpreted as being the result state of the verb's object, *y dŵr*, after the event named by the verb has taken place. Accordingly, a depictive reading can apply to a subject:

(11)   penlin-iodd   Meilir ei   blent-yn   yn   flin-edig
        kneel-3SG.PST Meilir POSS.3SG M\child-SG ADV MUT\tired-ADJ
        'Meilir kneeled his child tiredly'

This example clearly describes the subject and agent, Meilir, as the tired party whose tiredness was not brought about by the event named, but other VERB + *yn* + ADJ constructions are more ambiguous.

(12)   cur-odd   Bryn yr hufen yn   galed
        beat-3SG.PST Bryn ART cream ADV MUT\hard
        'Bryn whipped the cream hard'

Whilst the most obvious interpretation of this utterance is that of the depictive reading – as glossed, in which the action named by the verb is modified by *yn galed* 'hard', it is also possible to interpret *yn galed* as being the result state of *yr hufen* 'the cream', if we take this hard state to be relative to the consistency of cream in (12). These results vary, with certain adjectives more prone to receiving a depictive interpretation than others, but examples such as (10), in which a depictive reading is not possible, suggest that the structural status of the subject may differ from predicates with a depictive or ambiguously depictive reading.

This may be the strongest diagnostic for unaccusative verbs in Welsh, where no available depictive reading indicates an unaccusative structure.

For English, adjectival passives or perfect participial adjectives are used as an additional diagnostic of unaccusative verbs (Levin & Rappaport 1986; Levin & Rappaport Hovav 1992): unergative verbs are unable to produce adjectives of the kind *the much-painted artist, *the shouted worker* as opposed to the unaccusative *the melted snow, the badly-written letter*, which are perfectly acceptable.

A deverbal suffix *-edig* is often referred to as a resultative suffix in Welsh (Haspelmath 1994), as in (6a)'s *blinedig* and as illustrated in Table 3, and forms resultative adjectives. However, this suffix

does not consistently imply that a change of state has taken place, as is commonly assumed to be the function of this type of morphology cross-linguistically, and as implied by Borsley, Tallerman & Willis (2007:1:10) who state that the suffix is "lexically restricted to a minority of verbs and often having an idiosyncratic meaning"[6]. This implies that the Welsh deverbal adjectives formed using *-edig* do not behave in the same way as the participial English diagnostic adjectives as confirmed below, and of course nominal modification is not restricted to the deverbal adjectives that we expect to derive from unaccusatives (13) (marked P in Table 3 as having a semantic proto-Patient subject, impressionistically).

Verb	Translation	Adjective	Subj of: intrans	trans
llygru	pollute	llygredig	A	A
amgau	enclose	amgaëdig	A	A
cysegru	consacrate	cysegredig	A	A
nodi	note	nodedig	A	A
sathru	stomp	sathredig	A	A
ysgrifennu	write	ysgrifenedig	A	A
caru	love	caredig	A	?A
crwydro	wander	crwydredig	A	?A
gweld	see	gweledig	A	?A
methu	unable	methedig	A	n/a
ymadael	leave	ymadawedig	A	n/a
darfod	finish	darfodedig	?A	A
troi	turn	troëdig	A	A/P
crynu	shake	crynedig	P	A
blino	tire	blinedig	P	A
syrthio	fall	syrthiedig	P	n/a
diflannu	disappear	diflanedig	P	n/a
gwywo	wilt	gwywedig	?P	A
anghofio	forget	anghofiedig	?	?
colli	missing, be lost	colledig	n/a	?P

Table 3: Deverbal adjectives with *-edig*

Examples of the adjectival suffix *-edig* given in Table 3 show that both verbs with Proto-Agent and Proto-Patient subjects derive adjectives with *-edig*.

(13)   byddin fawr, flin-edig
        army   F\big, F\tire-ADJ
        'a big, tired army'
        Straeon ac Arwyr Gwerin Groeg, Myrddin ap Dafydd, CEG[7]

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[6]Semantic shift may contribute to the diverse meaning types of the *-edig*, which sees a clear resulting state semantics to adjectives such as *sathredig* 'trodden', gwywedig 'wilted' and llygredig 'polluted', for example, and a less clear relation between the adjectives *caredig* 'kind, kindly', *colledig* 'missing' and *gweledig* 'visible' and their verbal roots.

[7]Examples marked CEG are taken from the electronic database of Welsh (Ellis, O'Dochartaigh, Hicks, Morgan & Laporte 2001)

(14)   yr   holl   sylwad-au   ysgrifen-edig
       ART entire comment-PL write-ADJ
       'all the written comments'
       Cofnodion Cyngor Dwyfor, CEG

Alternatively, it could be argued that rather than being derived from a verb with a Proto-Patient subject, adjectives such as *blinedig* in (13) simply have no external cause inferences. Verbs with Proto-Agent subjects, like *ysgrifennu* 'write', do not alternate with inchoative intransitives, but still fail to build adjectives with external cause inferences (14). Of course, it is arguably the case that adjectives such as *ysgrifenedig* 'written' are derived from verbs with Proto-Agent subjects but with two structural arguments, where the object is implied by the verb's semantics. However, as the problem returns to needing identified unergative intransitives in order to test the diagnostics themselves, the examples below in (15) are perhaps the most conclusive evidence available to this analysis.

The *-edig* deverbal adjectives are not participial like English diagnostic adjectives, which are unmarked deverbal adjectives, and the nominal modification is not restricted to the deverbal adjectives that we expect to derive from unaccusatives (13). Some adjectives of this type seem more awkward to apply postnominally than others, such as *?ceffyl rhededig* 'a run horse' and *dyn gwaeddedig* 'a shouted man' which are equivalents of English unergative derived adjectives and whose contexts might be a little obscure, but the forms are attested in Modern Welsh.

(15)   a.   arbrawf   rhed-edig
            experiment run-ADJ
            'running experiment'
            http://www.golwg360.com/blog/adolygiadau/78306-barn-y-bwyles-ar-s4c July 2012
       b.   eu   pechod-au ffiedd   gwaedd-edig
            POSS.3PL sin-PL   odious shout-ADJ
            'their odious, crying sins'
            E. ab Ellis, *Cofiadur Prydlon Lloegr*, 1761 (GPC)

This data demonstrates that Welsh 'resultative' *-edig* deverbal adjectives are not diagnostic of unaccusative verbs, as they are in other languages, such as English.

2.4   Comparison with Manning (1995)

Using the adjectival modification diagnostic from 2.3 on the set of verbs identified by Manning (1995) reveals that his verb classification does not correlate to the reading of the structure *yn +* ADJ, as proposed in here. Only two of the Modern Welsh counterparts of the Middle Welsh verbs, *mynd* 'go' and *dod* 'come', from either the A-marking or O-marking lists (see Appendix B), gave rise to a resultative interpretation of the adjective.

(16)   daeth   y   rhaff yn   rhydd
       come.3SG.PST ART rope PRED free
       'the rope came loose/free'

Three more verbs, *cerdded* 'walk', *rhedeg* 'run' and *ymwasgu* 'squeeze together', lend their adjectives a resultative interpretation. All three are motion verbs, with two manner of motion verbs, *cerdded*

and *rhedeg*, but with all three encoding some kind of directed motion, and take adjectives as predicative complements denoting a resultant state.

(17) a. cerdd-odd   Nelson Mandela yn   rhydd
          come-3SG.PST Nelson Mandela PRED free
          'Nelson Mandela walked free'

          http://www.bbc.co.uk/cymrufyw/20663565

      b. o   foch   [...sydd]   yn   cael cerdded yn   rhydd
          GEN MUT\pig.PL [...be.REL] PROG get walk.VRB ADV free
          'from pigs that are allowed to roam freely'

          http://www.pagwynedd.org/docs/gwynedd-ar-blat.pdf

      c. ...wedi cael eu   gweld yn   cerdded yn   rhydd,
          ...after get POSS.3PL see   PROG walk   ADV? free
          '...were seen walking free/freely'

          http://www.golwg360.com/newyddion/145969-sylwebwyr-milwrol-yn-cael-eu-rhyddhau-yn-yr-wcrain

As suggested by the translation of (17b) a depictive interpretation of *cerdded* 'walk' (as well as *rhedeg* 'run' and *ymwasgu* 'squeeze together') is also possible. In this example, *yn rhydd* means to depict the character of the walking, not to describe a new state that results from the event of walking. The example in (17c) is more ambiguous as to which reading is intended, even in context, although it is likely resultative.

The four adjectives used to test the list of verbs in Appendix B were *rhydd*, as illustrated above, *blinedig* 'tired', *caled* 'hard' and *glân* 'clean'. There are potential problems with this diagnostic as *blinedig*, a derived adjective as discussed in 2.3, seems to force a depictive reading in all but *mynd* 'go' and *dod* 'come', to which it optionally provides a depictive meaning. The adjective *caled* 'hard' sees the same results, but it additionally lends the predicate formed with *ymwasgu* 'squeeze together' the option of having a depictive or a resultative reading. Lastly, *glân* 'clean' is more consistent with *rhydd* in picking out the five verbs mentioned above with a resultative reading. Additionally, the verb *ymwahanu* 'to separate, to diverge' forms a predicate with a resultative interpretation with *glân*.

These kinds of exceptions are common to the class of motion verbs, as demonstrated by Basque and Italian verbs of inherently directed motion taking the same auxiliary as unaccusative verbs (despite the semantic Proto-Agent subject) (Levin & Rappaport Hovav 1995:148), English motion verbs patterning with unaccusatives in being unable to appear with a cognate object according to Levin & Rappaport Hovav (1995:148) – unlike unergatives – and Dutch manner of motion verbs participating in an 'alternation' between unergative and unaccusative structures (Van Hout 2013:55-56).

It seems then that Levin & Rappaport Hovav's (1995) diagnostic for English unaccusatives using a resultative construction can be applied to Welsh too. The same construction, as described in this section (2.3), produces a depictive reading of the 'adjectival' adjunct for unergatives, whereas Welsh unaccusative intransitive verbs produce a resultative reading of their adjectival adjuncts. Another potential diagnostic, based on English and as found by Levin & Rappaport Hovav (1995), did not yield the same results (the alleged 'resultative' adjectives suffixed by *-edig*) and did not prove to be diagnostic of any verbs with semantic patient subjects and therefore, potentially unaccusativity.

3   Derived subjects

This section investigates whether a relation holds between semantic unaccusatives and derived subjects in Welsh. Belletti & Rizzi (1988) explore the relation between the assignment of θ-roles and the morphosyntactic marking of arguments in language by using data from Italian. Their data show that there is a clear relation between what is realised in the surface syntax and the thematic roles of their verbs, which led to the identification of derived subjects in semantically and syntactically consistent verb groups. They hypothesize that correlations in the surface syntax were due to differences in the verb's underlying argument structure. This will be outlined in more detail in section 3.1.

Assuming that verbs which are semantically unaccusative (have patient subjects) have a syntactically derived subject, this paper asks whether these derived subjects are marked differently from true, external subjects in Welsh.

3.1   Italian psych-verbs and θ-theory

Belletti & Rizzi's (1988) theory of Case-grids is based on the relation between morphosyntactic marking of Italian subjects and the assignment of θ-roles, based on the syntactic structure of the verbs in question. They showed that there were three different morphosyntactic configurations, in their verbs of psychological state (psych-verbs)[8]:

(18)   Gianni teme questo.
         Gianni fears this
         'Gianni fears this'   Experiencer subjects

(19)   Questo preoccupa Gianni.
         this   worries   Gianni
         'this worries Gianni'   Experiencer objects

(20)   a.   A Gianni piace   questo.
            to Gianni pleases this
            'this pleases Gianni'

       b.   Questo piace   a Gianni.
            this   pleases to Gianni
            'this pleases Gianni'   Case-marked experiencers

Belletti & Rizzi find three different Case-grids assigning θ-roles in their psych-verb data. The *temere*-type verb has an external argument to which 'experiencer' is assigned and behaves as other two-place predicates, but in contrast, no external argument is found in *piacere* and *preoccupare*. Belletti & Rizzi's conclusion was that V does not assign structural case to these two verb types. Their paper supports the split in the behaviour of unaccusatives and unergatives going beyond intransitives, as these verbs also differ in that one type lacks an external argument, meaning that other languages can be expected to carry the same split in their predicate structures.

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[8]Belletti & Rizzi's (1988) gloss and translation

3.2 Diagnostics

The three diagnostics used by Belletti & Rizzi (1988) which might plausibly be applied to Welsh are as follows.

Belletti & Rizzi's use of causativization as a diagnostic of derived subjects relies on Burzio's (1986) analysis of the causative construction in Italian. The Italian causative construction template consists of the verb *fare* 'make, do' with an embedded clause, where the causative verb controls the external argument of the embedded clause. This Italian causative construction may optionally mark the affected argument, controlled by the argument of the main clause, with a dative preposition *a*, as exemplified in (21). Burzio (1986) shows a VP to be extracted from an embedded clause at some level of representation, such that the clause containing the VP will be left with a true, structural subject, but sees a clause constructed of a derived subject and VP (no longer containing its original argument) produce an ungrammatical sentence due to the original internal argument being 'unbound' by its antecedent. Belletti & Rizzi (1988) provide the structures in (21) in explanation:

(21) a. Gianni ha fatto   telefonare (a) Mario.
          Gianni ha fatto [$_{VP}$ telefonare]   [Mario VP]
          'Gianni made [Mario call]'

       b. *Gianni ha fatto   essere licenziato   (a) Mario.
           Gianni ha fatto [$_{VP}$ essere licenziato e_i]   [Mario$_i$ VP]
           'Gianni made Mario be fired'   Italian[9] - causative diagnostic

The causative selects only verbs with an external argument or 'true subject' in Italian. A similar diagnostic may hold for Welsh, but to date, no analysis of the argument structure of the Welsh causative construction exists. A similar proposal is made by Levin & Rappaport Hovav (1995:145) – their *immediate cause linking rule* states that the verb's external argument must be the immediate cause of the event named by the verb and their *directed change linking rule* states that the undergoer of a verb of this type will be an internal argument. They predict, due to this rule, that languages that only have causative morphemes will allow unergative verbs to causativize (presumably implying that no language with causative morphemes will allow unaccusatives but not unergatives to causativize under this morpheme).

According to most definitions of the passive, the subject of the predicate is demoted or suppressed (Perlmutter 1978; Siewierska 1984; Kiparsky 2013). It follows that a predicate without an external agent should not be able to passivize, if we assume that the argument structure associated with a certain predicate is formed before passivization is possible, and this is indeed what is found for Italian. Welsh has at least two potential passive constructions, but the GET-passive is the most suited for this diagnostic purpose as its restrictions are more straightforward than any other Welsh valency-reducing construction.

The Italian reflexive clitic *si* was also used as a diagnostic for derived subjects and whilst there is no reflexive clitic in Welsh as there is in Italian, French and Russian, reflexivization is widely used as a diagnostic for unaccusatives in other European languages at least. Similarly to the passive, the assumption is that agent of a reflexive should be an external argument, in order to act on itself as an explicit causer (as stated by the *immediate cause linking rule*).

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[9]As above.

11

3.3 Psych verbs

Using Belletti & Rizzi's (1988) diagnostics to test transitive verbs of psychological state, it can be shown that both verbs with experiencer subjects, *fear*, and more agent-like subjects, *worry* passivize, reflexivize and causativize in Welsh.

The verb *hoffi*, 'to like', has an experiencer subject (the experiencer *Annwen* in (22)) and passes all the diagnostics:

(22) a. hoffai   Annwen hufen iâ
            like-IMPF.3SG Annwen cream ice
            'Annwen likes ice cream'

        b. mae   rhywbeth yn   gwneud i Annwen hoffi   hufen iâ
            be.3SG something PRED make   to Annwen like.VRB cream ice
            'something makes Annwen like ice cream'

        c. iselder   wedi dechrau oherwydd nad oedd   yn   hoffi ei   hun
            depression past start   because   NEG be.PRET.3SG PRED like POSS.3SG self
            'depression had started because he/she didn't like himself/herself'

           http://news.bbc.co.uk/welsh/hi/newsid_8970000/newsid_8979500/8979573.stm

        d. bysai   Lindsay yn   cael ei   hoffi'n fawr   iawn
            be.FUT.COND.3SG Lindsay PRED get POSS.3SG like'ADV MUT\big very
            'Lindsay would be very well liked'

           http://www.golwg360.com/newyddion/cymru/44620-ieuan-wyn-cyhoeddiad-cyn-bo-hir

Similarly, the verb *ofni* 'fear, be afraid of', has an experiencer object and passes all the diagnostics:

(23) a. mae Siôn yn   ofni   hyn
            be.3SG Siôn PRED fear.VRB this.ABST
            ' Siôn is afraid of this/Siôn fears this'

        b. gwneud i bobl ofni   trais   corfforol
            do/make to people fear.VRB violation bodily
            'make people fear/afraid of bodily harm'

           http://www.cliconline.co.uk/cym/gwybodaeth/amgylchedd/pobl/hawliau-dynol/

        c. ofn-ai   Siôn ei   hun
            fear-IMPF.3SG Siôn POSS.3SG self
            'Siôn feared himself'

        d. 'roedd   Aleister Crowley yn   cael ei   ofni   a'i
            be.PRET.3SG Aleister Crowley PRED get POSS.3SG fear.VRB and'POSS.3SG
            barchu   i'r   un graddau
            M\respect.VRB to'ART one degree.PL
            'Aleister Crowley was feared and respected to the same degree'

           http://www.filmagencywales.com/cy/AbertoirHorrorFestivalscheduleannounced

A representative sample of the results of the 47 psych-verbs and predicates studied is illustrated in Table 4 and sees the verbs fall into four distinct 'types', according to their behaviour.

The verbs all pass the diagnostics, despite the role of experiencer varying between subject and object positions in these transitives. This differs from the Italian data shown by Belletti & Rizzi (1988) as they found the assignment of θ-roles to correlate with the verbs causativizing, accepting a reflexive clitic and passivizing.

The acceptability of causativization is the only differentiating factor between the Welsh verbs

Verb	Experi. subj.	Causative	Reflexive	GET-Passive	Type
ofni 'fear'	✓	✓	✓	✓	I
hoffi 'like'					
edmygu 'admire'					
meddwl *am* 'think of/about'					
dychryn 'frighten'		✓	✓	✓	II
poeni 'worry'					
diflasu 'get bored of'					
blino 'tire'					
plesio 'please'		?	✓	✓	III
boddhau 'please, satisfy'					
bodloni 'please, content'					
syfrdanu 'shock'					
gwybod 'know'	✓				IV
gallu 'be able to do'					
medru 'be able to do'					
ymddigrifo *mewn* 'entertain (in)'					

Table 4: Correlations in psych-verbs and predicates tested

of type II and III of Table 4, with type II verbs all being perfectly acceptable in the causative construction. Type III verbs are all a little less acceptable with the causative construction, although a context might be found in which they may be more acceptable. Type IV verbs on the other hand behave quite differently with regards to the diagnostics.

Type IV verbs, of which there are only 4, all fail to causativize, reflexivize and passivize. Like type I, these verbs all have experiencer subjects. Superficially, these groups do not differ from type I verbs in any sort of marking or in the assignment of θ-roles, but they do differ from type I verbs in failing the diagnostics.

As a two-place predicate, the verb *gwybod*, 'to know', is perfectly acceptable with the experiencer appearing in subject position, post verbally, and the information that is known appearing in the object position after the subject. However, *gwybod* is the verb which is used for 'knowing information' or 'knowing a fact' – as is common in other European languages, but unlike the English counterpart which encompasses being familiar with a person or a place etc. Instead, Welsh uses another verb or verbal stem, *adnabod*, for knowing or recognising a person which falls into type I of the verbs in the table above.

(24)   gwyddai   Cadi hyn
       know.IMPF.3SG Cadi this
       'Cadi knew this'

The verb *gwybod* is unacceptable in the causative construction which is formed here again with an analytic causative comprising an auxiliary verb *do* as the causing verb followed by a preposition, as the other verb types allowed.

(25) *Mae gwahanol ffyrdd o wneud   i bobl   wybod y   gwir
     be.II different way.PL of MUT\make to MUT\people know ART truth
     'There are three different ways to make people know the truth'

The reflexive NP is equally as unacceptable with *gwybod* – speakers would again select the 'familiar' type of knowing in these reflexive contexts.

(26) *gwydd-ai   Cadi ei   hun
     know-IMPF.3SG Cadi POSS.3SG self
     'Cadi knew herself'

Passivizing *gwybod* results in an ungrammatical utterance. This time, although the other knowing verb *adnabod* would be acceptable passivized, it would not give an equivalent meaning. In this instance it is simply not grammatical to use this verb in a passive construction.

(27) *mae hyn   yn   cael ei   wybod (gan Cadi)
     be.3SG this.ABST PRED get POSS.3SG know (by Cadi)
     'this is known by Cadi'

In summary, a correlation was found in the syntactic behaviour of three verbs using causativization, reflexivization and passivization (type IV). This correlation in the diagnostics suggests that there may be a difference in the syntactic structure of type IV versus verbs of type III and their arguments. This may indicate that verbs of type IV have syntactically derived subjects , like those found in the Italian data. As this correlation has no relation with the assignment of θ-roles, it is difficult to draw such a parallel based on the shared behaviour of three diagnostics alone, especially as the point of Belletti & Rizzi's (1988) paper was to account for this relation between case grids and θ-assignment.

On the other hand the analysis of derived subjects cannot be disregarded as type IV verbs still display a difference in their syntactic behaviour compared to the other three groups. Some property of type IV verbs causes their subjects to be treated differently.

However, the the lack of correlation of patient subjects and the ungrammaticality of the diagnostics does cause additional problems for an unaccusative analysis. Furthermore, the awkwardness of causatives with type III verbs suggests it is a weak diagnostic in the first place, leaving only two diagnostics.

4   Unaccusativity and derived subjects

If the causative, reflexive and passive constructions diagnose the structural status of the subject, intransitives should exhibit the same behaviour as transitives. The prediction that follows is that the diagnostics should result in an ungrammatical utterance with unaccusative intransitives and, conversely, unergative intransitives should pass these diagnostics.

The results, partly illustrated by Table 5, show that all intransitives pass the causative diagnostic and that none of them passes either the reflexive or the passive diagnostic.

As evident in Table 5, the thematic role of the sole argument of these predicates is unrelated to the results of the syntactic tests – as was the case in the transitive results. The verbs have been coded impressionistically as to whether the subject or sole argument is more of a Dowtian

Verb	Translation	Caus	Refl	Pass	Arg
eistedd	sit	✓	?	X	A
aros	wait/stay	✓	?	X	A
blodeuo	flower/blossom	✓	?	X	P
digwydd	happen	✓	X	X	P
diflannu	disappear	✓	X	X	P
marw	die	✓	X	X	P
cysgu	sleep	✓	X	X	P
penlinio	kneel	✓	X	X	A
mynd allan	go out/exit	✓	X	X	A
dod	come	✓	X	X	A
dychwelyd	return	✓	?	X	A
geni	be born	X	X	✓	P

Table 5: A selection of the 28 intransitive verbs (predicates) tested

proto-Agent or proto-Patient, represented by A and P respectively in the final column.

The following intransitive predicates, of the 28 considered, were found to behave as described above:

(28) blodeuo 'flower/blossom', eistedd 'sit', sefyll 'stand', aros 'wait/stay', gafael 'grip/hold', diflannu 'disappear', cyrcydu 'crouch', penlinio 'kneel', rhedeg (as intrans) 'run', marw 'die', cysgu 'sleep', edrych 'look', mynd allan 'go out/exit', dod 'come', mynd i lawr 'go down/descend', cydio 'grab', cydfyw (recip) 'coexist', byw 'live', digwydd 'happen'.

Applying the diagnostics to intransitives that alternate with transitive verbs yielded the expected result – the causative can apply to either, whilst the reflexive and passive are only grammatical with the transative verbs. Semantic unergatives were most difficult to differentiate due to possible dropped objects of cognate object effects.

Geni 'to be born', of the dataset in Table 5, is a defective verb, meaning the verb's paradigm is incomplete and the apparent passivization is simply a remnant, similar to English 'be born'.

The less-well-behaved intransitive verbs found in the dataset of 28 verbs were mostly verbs prefixed by *ym-* and are laid out in Table 6. Interestingly, *ym-* is frequently referred to as a reflexive prefix (A.R. Thomas 1992; P.W. Thomas 1996), it is a misleading shorthand for a prefix which shares its etymology with Indo-European preverbal affixes, cf. Greek *afufri-*, Latin *ambi-* (Morris-Jones 1913:263-264), Proto-Celtic *ambi-* and Proto-Indo-European *mbhi-/ambhi-* (Hamp 1973). The Modern Welsh prefix is acknowledged to have reflexive as just one of its functions and not as its basic function (Irslinger 2014), with the reflexive meaning having extended from the reciprocal, which in turn developed from the prepositional meaning of *ym-/am-* 'around, about' (Morris-Jones 1913; Vendryes 1927).

Additionally, restrictions apply to the arguments of *ymafael* and *ymddigrifo* of Table 6; the subject of *ymafael* 'grasp/grip' is restricted to things that have the ability to grip, whether animate or inanimate, and *ymddigrifo* 'be entertained/find entertainment' is the only verb of Table 6 to require

Verb	Translation	Caus
ymsefydlu	settle/establish	✓
ymolchi	wash (animate)	✓
ymledu	spread/expand/dilute	✓
ymddeol	retire	✓
ymwasgaru	scatter	✓
ymafael	grasp/grip	✓
ymddangos	appear	✓
ymddigrifo	be entertained	X

Table 6: intransitive verbs 'prefixed' with -*ym*

a preposition in order to take an object at all (see Table 7).

Verb	Translation	Caus	Refl	Pass	Arg
ymsefydlu	settle/establish	✓	✓	X?	X?
ymolchi	wash (animate)	✓	✓	✓	X?
ymledu	spread/expand/dilute	✓	✓	✓	X?
ymddeol	retire	X?	X	✓	A
ymwasgaru	scatter	✓	X	X?	X?
ymafael *yn/mewn*	grasp/grip	X?	X	X	A
ymddangos	appear	X	X	X	P
ymddigrifo *mewn*	be entertained	X	X	X	P

Table 7: transitive verbs 'prefixed' with -*ym*

The first two verbs of Table 6 may be accounted for by the meaning of verbs' transitive counterparts interfering with the diagnostics (being unable to force an intransitive reading and so on) as these behave as normal transitives of types I–III. The next *ym-* verb behaves as a normal intransitive of Table 5 would and as its non-prefixed stem is quite rare – *deol* 'banish' (cf. *diarddel, alltudio*, also 'banish') – and as the semantics of *ym-* has shifted from the original un-prefixed meaning somewhat, it may be that this prefix+stem has become fully lexicalized. Certainly, *ymddeol* is a far more common verb than *deol* in Modern Welsh, with zero attested occurences of *deol/ddeol* in the CEG [electronic database of Welsh] (Ellis, O'Dochartaigh, Hicks, Morgan & Laporte 2001) compared to 53 for the lemma *ymddeol*.

The first and most obvious problem is that the diagnostics used here for derived subjects fail to pick out classic unaccusatives such as *break*:

(29) a.   gwnaeth   y   rhew i   gord-iau'r   ffenestr   dorri
          made.PST.3SG ART ice   DAT cord-PL'ART MUT\break.VRB
          'the ice made the window cords break'[10]

      b.   gwnaeth   y   rhew i'r   dyn eistedd
          made.PST.3SG ART ice   DAT'ART dyn sit
          'the ice made the man sit / caused the man to sit'

Assuming that *the man* is agentive in the unergative *sit*, and that *sit* is an unergative verb, there is a split in the grammaticality of the previously correlating diagnostics. Intransitive verbs all pass the causative diagnostic, but not the other two diagnostics. If the type IV verbs from Table 4 fail the three diagnostics due to having derived state of their subjects, this is not reflected by semantically unaccusative intransitives, implying that transitive verbs and intransitive verbs would need a very different structural account.

On the other hand, if the diagnostics assumed for unaccusativity in fact diagnose transitivity and properties of transitivity, perhaps a unified account of two-place and one-place predicates can be retained. Only a diagnostic for intransitive unaccusatives has been identified in this paper (section 2.3), namely the resultative and depictive readings of intransitives in those respective contructions. The correlations in the diagnostics based on the (Belletti & Rizzi 1988) diagnostics appropriate for the Welsh data have not shown the same correspondence between the expression of the experiencer role and the assignment of subject position as occurs in the Italian data, but have left the behaviour of a few verbs unexplained, namely the type IV verbs of section 3.3.

5 Potential accounts for restricted verbs

5.1 Transitivity

Hopper & Thompson's (1980) identification of independent properties of transitivity provides one possible account for the correlation in the diagnostics for type IV verbs. Hopper & Thompson propose that transitivity might be viewed as a gradient feature comprised of several separate properties, which are properties of the entire clause rather than the predicate alone. These properties provide several parameters for the concept of transitivity, which are shown in Table 8.

	HIGH	LOW
A. PARTICIPANTS	2 or more participants A and O	1 participant
B. KINESIS	action	non-action
C. ASPECT	telic	atelic
D. PUNCTUALITY	punctual	non-punctual
E. VOLITIONALITY	volitional	non-volitional
F. AFFIRMATION	affirmative	negative
G. MODE	realis	irrealis
H. AGENCY	A high in potency	A low in potency
I. AFFECTEDNESS OF O	O totally affected	O not affected
J. INDIVIDUATION OF O	O highly individuated	O non-individuated

Table 8: Hopper & Thompson's (1980) parameters of Transitivity

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[10]compare with

(i)   *Gall olwyn-ion pwli sydd wedi rhewi **achosi i gordiau'r ffenestr dorri**'n gynamserol*, source: http://cadw. gov.wales/docs/cadw/publications/Maintenance_Matters_Replacing_Sash_Cords_CY.pdf

in which the causative verb *achosi* 'cause' is used rather than *gwneud* 'do/make' as has been used to exemplify the Welsh causative construction in this paper. The example provided in the main body was constructed for consistency.

The consequence of this take on transitivity is that a one-place predicate may be 'more transitive' than a two-place predicate. Interestingly, they state that "...although the presence of a true patient participant is a crucial component of Transitivity, that of a second participant which is not much of a patient (i.e. which does not receive any action) is not." (Hopper & Thompson 1980:254), which seems to describe fairly well the case of the type IV verbs. The second argument of (24), 'Cadi knows this', is not much of a patient as it does not receive any action, arguably.

This approach to transitivity suggests that type IV verbs – *gwybod* 'know', *gallu* and *medru* 'be able to' and *ymddigrifo (mewn)* – fail to causativize, reflexivize and passivize due to their low transitivity properties. Interestingly, this generalized scale fails to capture the correlations found by Van Valin (1990) and van Hout (2004) between telicity (high transitivity) and unaccusatives (typically telic). Evidence from Dutch (van Hout 2004), for example, has shown that telic intransitive verbs are unaccusative and atelic intransitives are unergative. Assuming that type IV verbs are to be considered unaccusative, section 5.2 finds that animacy plays a role in type IV's restrictions, but provides no further evidence to suggest that low transitivity of the Hopper & Thompson (1980) variety, has any relation to this.

5.2 Cognizer

The four verbs which fail the diagnostics for derived subjects, *gwybod* 'know', *gallu* and *medru* 'be able to' and *ymddigrifo (mewn)*, all have objects arguably unaffected by the state named by the verb and almost equally unaffected subjects, or at least subjects which are less 'affected' than the other verbs of psychological state of Table 4. That is, the (experiencer) subject of a verb of emotion undergoes that named emotion at some point as it is a temporary state, whereas verbs of cognition name states which are intuitively more permanent. These three verbs fall into a different semantic group from the other psych-verbs, in that the subject fits with the 'Thematic Relation' of cognizer, parallel to emoter and perceiver – each a subtype of the macrorole experiencer (Foley & Van Valin 1984). Cognizers have the semantic roles of thinkers, believers, knowers and presumers, as opposed to the likers, lovers and haters of the emoter relation (Van Valin 2004). The representations in (30) detail the semantic composition of verbs of cognition, first their macroroles, then the thematic role of the cognizer subtype, as suggested by Van Valin (2004).

(30)   a.   **know** (x, y) x = EXPERIENCER, y = THEME
        b.   **know** (x, y) x = COGNIZER, y = CONTENT

Under this approach, EXPERIENCER can be interpreted as either an Actor or an Undergoer (in Van Valin's terms), or proto-Agent and proto-Patient for the purposes of this paper. This is compatible with a gradient view of transitivity, as a verb with an Actor-experiencer subject has more transitive properties and will therefore causativize, reflexivize and passivize, whilst a verb with an Undergoer-experiencer subject would fail the diagnostics. This distinction may be not only language-specific but also context-dependent.

If verbs of cognition form a semantic group to which Welsh grammar is sensitive, (transitive) verbs with cognizers as subjects would be predicted to fail the diagnostics used in this paper. However, no additional verbs of type IV were found within this limited group.

The verbs of cognition in Table 9 are either included in the full dataset, referred to in section

Verb of cognition	Translation	Psych-type
credu	believe	I
deall	understand	I
beirniadu	judge	I
parchu	respect	I
cofio	remember	I
dysgu	teach	I
dysgu	learn	no reflexive
meddwl	think	no reflexive
synhwyro	sense	no reflexive
gallu/medru	know how to	IV

Table 9: Cognizers

3.3, and their experiencer subjects happen to be of the type 'cognizer', or fit into type I, or form a new type. Cognition verbs of this new Type V causativize and passivize but fail to reflexivize. This suggests, again, that reflexivization is really sensitive to semantic factors which coincide with those of causativization and passivization to some extent, when testing verbs of psychological state. The diagnostics will be explored individually in section 6.

5.3 Animacy of the object

Type IV verbs remain difficult to characterize semantically, perhaps predictably so (Levin 1999). One remaining potential proposal is in the characterization of their objects, which in the case of *gwybod* 'know', *gallu* and *medru* 'be able to', at least, must all be inanimate, as is demonstrated by the verb *gwybod* in section 3.3, examples (24)–(26).

(31) *gwydd-ai   Eleri ei   chwaer
       know-PFV.3SG Eleri POSS.3SG sister
       'Eleri knew her sister' (cf. (26))

(32) a. *medr-ai   Cian heddwas
           be.able.to-PFV.3SG Cian policeman
           'Cian was able to [be] a policeman'

      b. medr-ai'r   delyn
           be.able.to-PFV.3SG'ART f\harp
           'He/she could [play] the harp'

Although animacy of the object was not controlled for in the initial study of psych verbs outlined in this paper, a cursory search for transitive psych-verbs with inanimate objects reveals that the diagnostics still yield grammatical results:

(33) cafodd   ei   ffug-len ei   hedmygu
       get.PST.3SG POSS.3SG fake-lore POSS.3SG f\admire
       'His fiction was admired

       http://cy.wikipedia.org/wiki/Arthur_Machen

Therefore this generalization does not seem to hold, unless it applies only to verbs which cannot take an animate object at all, which suggests that a property other than animacy is the true cause of this behaviour in these four 'type IV' verbs.

6 Diagnostics

As well as failing to identify actor or proto-agent, versus experiencer or proto-patient, as seen in the psych-verb data, intransitives show that the diagnostics fail to differentiate between (semantic) unaccusatives and unergatives as evidenced by (29). Assuming that transitives and intransitives behave similarly under these diagnostics, the explanation of type IV verbs' failing the diagnostics becomes trickier.

6.1 Causative

All of the intransitive and most of the transitive verbs were found to causativize with *gwneud i*. The Welsh causative seems to be a traditional clause union-type causative, combining the argument structure of two clauses straightforwardly.

The Welsh causative construction did not differentiate prototypical semantic unaccusative intransitives from unergative intransitives. Its failure to be applied to three transitive verbs may be attributed to other properties of those verbs, although this does not rule out the conclusion that the subjects of those verbs are syntactically derived from a position internal to the VP.

6.2 Reflexive

The Welsh reflexive is a true reflexive of the form POSS.PRON + *self* (NP) and as such can only apply to verbs with two argument slots, in which the referent is able to act on itself.

The examples in (34) illustrate that the reflexive differentiates transitives from intransitives, not unaccusatives from unergatives.

(34)   a. *diflannodd   y   frenhines ei   hun
          disappear-PST.3SG ART F\queen POSS.3SG self
          '*the queen disappeared herself'

       b. *penliniodd   y   frenhines ei   hun
          kneel-PST.3SG ART F\queen POSS.3SG self
          '*the queen knelt herself'

       c. dychrynodd   y   neidr ei   hun
          frighten-PST.3SG ART snake POSS.3SG self
          'the snake scared itself'

The first example above is of a reflexive NP failing to be grammatical as part of an unaccusative one-argument verb, the second as part of an unergative one-argument verb and the third shows the grammaticality of a two-argument verb with the reflexive NP in the position of its second argument.

The failure of the reflexivization then simply reflects the status of the verb's second argument – the second argument must be affected by the first argument or verb in order for reflexivization to occur.

6.3 Passive

The canonical passive in Welsh is formed with the auxiliary verb GET (*cael*) + POSS.PRON + VERB (infinitival nominal verb).

The passive, like the reflexive, also requires two arguments in order to apply. Below in (35) are the same unaccusative, unergative and two-argument verb as above.

(35)   a.   *cafodd   y   frenhines ei   diflannu
            get.PST.3SG ART F\queen POSS.3SG disappear
            '*the queen was disappeared'

       b.   #cafodd   y   frenhines ei   phenlinio *(ganddi   ei   hun)
            get.PST.3SG ART F\queen POSS.3SG F\kneel   *(by.3SG.F POSS.3SG self)
            '# the queen was knelt *(by herself)'

       c.   cafodd   y   neidr ei   ddychryn (ganddo ei   hun)
            get.PST.3SG ART snake POSS.3SG M\frighten (by.3SG.M POSS.3SG self)
            'the snake scared itself'

The second example above (35b) shows that the unergative verb is grammatical in a passive construction when it can be interpreted as having a suppressed agent. The reflexive agentive adjunct shows that as a one-argument verb, the intransitive interpretation is unlicensed.

The failure of the passivization also reflects the status of the verb's second argument – the second argument must be affected by the first argument or verb in order for passivization to apply.

7   Conclusion

There is no evidence that the assumed semantic unaccusative transitives are treated differently, syntactically, in Welsh, until the macrorole of experiencer is reconsidered as branching into actor and undergoer. Once this is proposed, it may be the case that the four two-argument verbs which correlate in their syntactic diagnostics may have derived subjects and correspond to semantically unaccusative verbs. Nevertheless, this analysis would imply that prototypical unaccusatives such as 'break' would not be expected to pass the same diagnostic in Welsh. The sole argument of *break* would need to be considered under the role of proto-agent in this case, which, although unusual, might be possible under the heading Actor, where volition is less obviously implied.

The exact nature of the causative construction, *gwneud i* (section 3.3) has yet to be determined in terms of its impact on argument structure, which could lead to the conclusion that the Welsh constructions tested in this paper are not sensitive to the structure of verbs with derived subjects. The type IV verbs of section 3.1 might be considered too low in transitive properties to reflexivize and GET-passivize (as suggested in section 5), with both being diagnostics of transitivity rather than derived subjecthood.

Another argument against causatives, reflexives and passives as diagnostics of unaccusativity is the lack of correlation between their results with two-place and one-place verbs. Whilst their behaviour was uniform with the intransitive verbs tested, the split between the ungrammaticality of the group IV verbs in causative, reflexive and GET-passive constructions and the other 47 verbs of psychological state suggests the overlap in the argument structures of the three constructions in question lie elsewhere.

The findings of section 2.3 suggest that the semantics of intransitive verbs in the resultative

construction may be the only diagnostic of unaccusative structures in Welsh, which of course requires further corroboration to be meaningful to the field of Welsh syntax.

A   Glossary

Abbreviations

3	third person
abst	abstract noun
adj	adjective
adv	adverbial
art	article
cond	conditional
dat	dative
f	feminine
f\	feminine mutation
fut	future
gen	genitive
impf	imperfective
m	masculine
m\	masculine mutation
mut\	mutation (morphosyntactically conditioned)
neg	negative
pfv	perfective
pl	plural
poss	possessive
pred	predicative
pret	preterite
prog	progressive or continuous
prox	proximal
prs	present
pst	past
ptcp	participle
rel	relative
sg	singular
vrb	verbalizer

Acronyms

CEG – Corpws Electroneg y Gymraeg 'Electronic Corpus of Welsh' (Ellis, O'Dochartaigh, Hicks, Morgan & Laporte 2001)

GPC – Geiriadur Prifysgol Cymru, *A Dictionary of the Welsh Language. The standard historical Welsh dictionary.* Cardiff. 1950-2015

B   List of Middle Welsh *o*-marked verbs

Middle Welsh	Modern Welsh	Translation
but	bod	be
marw	marw	die
llithraw	llithro	slip
diangk	dianc	escape
dygwydaw	(disgyn)	fall
mynet	mynd	go
dyuot	dod	come
kyuaruot	cyfarfod	meet

Table 10: List of intransitive O-marking verbs from Manning (1995)

Middle Welsh	Modern Welsh	Translation
eisted	eistedd	sit
ymwahanu	ymwahanu	separate
kerdet	cerdded	walk
redec	rhedeg	run
crwydraw	crwydro	wander
llauuryaw	llafurio	labor
ymlad	ymladd	fight
pregethu	pregethu	preach
bwyta	bwyta	eat
studyaw	astudio	study
gwylyaw	gwylio	watch
ryuedu	rhyfeddu	wonder
gwedyaw	gweddio	pray
ymbaratoi	ymbaratoi	prepare self
ymwasgu	ymwasgu	embrace e. other
ymrodi	ymroddi	devote self
ymchoelut	(dychwelyd)	return
esgynnu	esgynnu	mount
ymdidan	sgwrsio	converse
pechu	pechu	sin
ymgroessi	ymgroesi	cross self

Table 11: List of intransitive A-marking verbs from Manning (1995)

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