

The distribution and interpretation of Welsh N-words*

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1. Introduction

Like many languages, Welsh has a set of n-words, nominal or adverbial elements which seem to be semantically negative. These include *neb* ‘no one’, *dim byd* ‘nothing’, *ddim* ‘not’, *byth* ‘never’, and *nunlle* ‘nowhere’. Unlike their English counterparts, Welsh n-words have a restricted distribution, being excluded from a variety of contexts. Although they are apparently semantically negative, a single negation interpretation is normal where a sentence contains two n-words. In this paper, we will show that there is a complex and challenging body of data here. We will argue, however, that a storage-based analysis of the kind that is developed within Head-driven Phrase Structure Grammar (HPSG) for French by De Swart and Sag (2002) can provide an illuminating account of this data. The analysis involves two main ideas: (a) that negative elements can only have certain clausal constituents as their scope, and (b) that a sentence with two negative elements can have a single negation interpretation if and only if they have the same scope.

There are considerable differences between formal or literary Welsh and informal or colloquial Welsh. Some work has concentrated on the former and some on the latter. We will focus here on informal Welsh, which, it seems to us, is particularly interesting in this area.¹

The paper is organized as follows. In section 2, we provide some necessary background information about negative heads. Then, in section 3, we turn to n-words and consider their semantic status, and in section 4, we will look at their distribution. In section 5, we will outline the storage-based analysis. Next, in section 6, we will look at some data which seems problematic but which we will argue is no problem. In section 7, we will consider the possibility of a single negation interpretation for sentences with two n-words or an n-word and negative head. Finally, in section 8, we summarize the paper.

2. Negative heads

Before we can look in detail at n-words, we must say something about negative heads, which play an important role in Welsh negation.

* An earlier version of this paper was presented at the Fourth Celtic Linguistics Conference at the University of Cambridge in September 2003. The issues discussed here are discussed more fully in Borsley and Jones (forthcoming). In exploring these issues, we have benefited from comments from and/or discussion with a number of people, especially Danièle Godard and Manfred Sailer. Any bad bits are our responsibility.

¹ In our examples, some of the spellings are modified to reflect spoken forms (e.g. *welish* instead of formal *welais*). We discuss the differences between formal and informal negation in Borsley and Jones (forthcoming: chapter 2).

Welsh has a distinction between what we refer to in Borsley and Jones (forthcoming: chapter 3) as weak and strong negative heads. The former are always verbs and sometimes have a distinctive form but are often identical to positive forms. A situation where a weak negative head has a distinctive form is illustrated in (1). The more common situation is illustrated in (2).

- (1)a. Mae Gwyn yn cysgu.
 be.PRES.3SG Gwyn PROG sleep
 ‘Gwyn is sleeping.’
 b. Dydy Gwyn ddim yn cysgu.
 NEG.be.PRES.3SG Gwyn NEG PROG sleep
 ‘Gwyn is not sleeping.’
- (2)a. Fydd Gwyn yn cysgu.
 be.FUT.3SG Gwyn PROG sleep
 ‘Gwyn will be sleeping.’
 b. Fydd Gwyn ddim yn cysgu.
 be.FUT.3SG Gwyn NEG PROG sleep
 ‘Gwyn will not be sleeping.’

All the examples highlight the fact that Welsh is a VSO language, with verb-subject order in finite clauses. The distinguishing property of weak negative verbs is that they must be accompanied by a negative dependent. This may be either a post-subject adverb, as in (1b) and (2b), a subject, as in (3), or a complement, as in (4).²

- (3) Does neb yn yr ardd.
 NEG.be.PRES.3SG no one in the garden
 ‘No one is the garden.’
 (4) Welish i neb.
 see.PAST.3SG I no one
 ‘I saw no one.’

A distinctive weak negative form without an appropriate negative dependent is ungrammatical. (5) is ungrammatical because it does not contain a negative dependent, while (6) is ungrammatical because the negative dependent is not a complement but just part of the complement.

- (5) *Dydy Gwyn yn cysgu.
 NEG.be.PRES.3SG Gwyn PROG sleep
 ‘Gwyn is not sleeping.’
 (6) *Dydy Gwyn wedi gweld neb.
 NEG.be.PRES.3SG Gwyn PERF see no one
 ‘Gwyn hasn’t seen anyone.’

In Borsley and Jones (2001, forthcoming) we propose that both post-verbal subjects and post-subject adverbs are complements and that the requirement on weak negative verbs is simply that they have a negative complement.

² *Does* is a form that appears in sentences with a negative subject, whereas *dydy* appears in other sorts of negative sentence. Some varieties of Welsh have *toes* and *tydy*.

Welsh has a number of types of strong negative head. One type is a verb in a subordinate clause preceded by the particle *na* (*nad* before a vowel).⁴³ (7) illustrates.

- (7) Wn i [na fydd Sioned yn gweithio heno].
 know.PRES.1SG I NEG be.FUT.3SG Sioned PROG work tonight
 ‘I know that Sioned will not be working tonight.’

As this example makes clear, a strong negative head does not require a negative dependent. Another type of strong negative verb is certain distinctive negative forms of the copula found in southern dialects. (8) illustrates:

- (8) Sa i ’n gwbod.
 NEG.be.PRES I PROG know
 ‘I don’t know.’

Other strong negative verbs are the pure negative verb forms *peidio*, which is used to negate a non-finite clause, and *paid* and *peidiwch*, which form negative imperatives. These are illustrated by the following:⁴

- (9) (Mi/Fe) geisiodd Gwyn [beidio (ag) ateb y cwestiwn].
 AFF try.PAST.3SG Gwyn NEG with answer the question.
 ‘Gwyn tried not to answer the question.’
 (10) Paid/ Peidiwch (â) dod yma.
 NEG.SG NEG.PL with some here
 ‘Don’t come here.’

As these examples show, these forms combine with a non-finite VP optionally preceded by the preposition *â* (*ag* before a vowel). Further strong negative heads are the preposition *heb* ‘without’ in (11) and the homophonous aspect marker in (12).

- (11) Ma’ Sioned wedi croesi’r fford heb edrych.
 be.PRES.3SG Sioned PERF cross the road without look
 ‘Sioned has crossed the road without looking.’
 (12) Ma’ Sioned heb gyrredd.
 be.PRES.3SG Sioned without arrive
 ‘Sioned has not arrived.’

(12) means the same as (13), which contains the basic negative adverb and the perfect aspect marker.

³ We assume that *na(d)* forms a constituent with the following verb and that it may in fact be a prefix. However, this is not particularly important in the present context. Welsh also has negative subordinate clauses which are just like negative main clauses. Thus, we can have (i) instead of (7).

(i) Wn i fydd Sioned ddim yn gweithio heno.
 know.PRES.1SG I be.FUT.3SG Sioned NEG PROG work tonight
 ‘I know that Sioned will not be working tonight.’

⁴ *Peidio* appears in (9) as *beidio* as a result of mutation, certain morphophonological alternations affecting initial consonants. Mutation is of little importance in the present context, and we will pass over most instances without comment.

- (13) Dydy' Sioned ddim wedi cyrredd.
 NEG.be.PRES.3SG Sioned NEG PERF arrive
 'Sioned has not arrived.'

All the strong negative heads allow a negative dependent, as we will see in section 4.

3. The semantic status of n-words

We turn now to Welsh n-words and first their semantic status. At least three different views of the nature of n-words can be found in the literature. One view, developed, for example, in Zanuttini (1991), Haegeman and Zanuttini (1996), and De Swart and Sag (2002), is that they are negative quantifiers or operators. Another, advocated in such works as Laka (1990) Ladusaw (1992), Richter and Sailer (1998), and Rowlett (1998), is that they are indefinites which must appear within the scope of negation. A third view, advanced especially in Giannakidou (2000), is that they are universal quantifiers which must take scope over negation. It may well be that each of these views is right for n-words in some language. A number of considerations suggest that they are semantically negative in Welsh.

First, they can be used as an elliptical negative answer to a question. We have examples like the following:

- (14) A: Pwy welest ti?
 who see.PAST.2SG you.SG
 'Who did you see?'
 B: Neb.
 'No one.'
- (15) A: Be welest ti?
 what see.PAST.2SG you.SG
 'What did you see?'
 B: Dim byd.
 'Nothing.'
- (16) A: Wyt ti 'n gweld Sioned y dyddiau 'ma?
 be.PRES.2SG you.SG PROG see Sioned the days here
 'Do you see Sioned these days?'
 B: Byth.
 'Never.'
- (17) A: Lle fuost ti neithiwr?
 where be.PAST.2SG you.SG last-night
 'Where were you last night?'
 B: Nunlle.
 'Nowhere.'

This is only to be expected if n-words are semantically negative. In contrast, it seems problematic for alternative views of n-words, in which they are not negative.

Second, the fact that weak negative verbs are commonly identical in form to positive verbs means that an n-word is often the only element which distinguishes a negative sentence from an affirmative sentence. (2b) is a relevant example. On the face of it, it would be odd to claim that it is the verbs in such examples and not the n-words that are semantically negative.

Third, sentences with two n-words can often have a double negation interpretation, given the right intonation. Thus, the following are ambiguous, as indicated:

- (18) Does neb yn deud dim byd.
 NEG.be.PES.3SG no one PROG say nothing
 ‘No one is saying anything.’ (single negation)
 ‘No one is saying nothing.’ (double negation)
- (19) Alla’ i ddim gneud dim byd.
 can.PRES.1SG I NEG do nothing
 ‘I can’t do anything.’ (single negation)
 ‘I can’t do nothing.’ (double negation)

Similar facts have been observed in French (De Swart and Sag 2002, Mathieu 2001). It is hard to see how double negation interpretations could arise if n-words were not semantically negative.

Thus, there is a variety of evidence that Welsh n-words are semantically negative. We will assume that the main n-words are negative quantifiers. Following De Swart and Sag’s (2002) analysis of French *pas*, we will assume that the basic negative adverb, *ddim*, is a pure negative operator which does not bind any variables. We will also assume that strong negative heads are associated with this operator.⁵

Of course, if these elements are semantically negative, we need to explain how it is possible for a sentence with two n-words or an n-word and a strong negative head to have a single negation interpretation. We will consider this matter in section 7.

4. The distribution of n-words

As we noted at the outset, Welsh n-words are excluded from a variety of contexts.

First they are impossible in unambiguously affirmative declarative sentences. There are two main types of examples. The present tense of the copula has certain third person forms beginning with *m-*, which are confined to affirmative declarative sentences. We see one of these forms in (1a). This cannot co-occur with an n-word, as (20) shows:

- (20) *Mae Gwyn ddim yn cysgu.
 be.PRES.3SG Gwyn NEG PROG sleep
 ‘Gwyn is sleeping.’

We have similar data with the third person plural form *maen*. Welsh also has two preverbal particles which may mark an affirmative declarative sentence, *mi*, which is typically used in northern areas,

⁵ As we might expect, a double negation interpretation is also possible in at least some examples containing a strong negative head and an n-word. The following illustrate:

- (i)a. Mi geisiodd Gwyn beidio (â) deud dim byd.
 AFF try.PAST.3SG Gwyn NEG with say nothing
 ‘Gwyn tried not to say anything.’ (single negation)
 ‘Gwyn tried not to say nothing.’ (double negation)
- b. Paid/ Peidiwch (â) gweld neb.
 NEG.IMPV.2SG NEG.IMPV.2PL with see no one
 ‘Don’t see anyone.’ (single negation)
 ‘Don’t see no one.’ (double negation)

and *fe*, which is typically used in southern areas. (We saw these elements in (9).) They also cannot co-occur with an n-word. Thus, we have (21a) but not (21b) or (21c).

- (21)a. Mi/Fe fydd Gwyn yn cysgu.
 AFF be.FUT.3SG Gwyn PROG sleep
 ‘Gwyn will be sleeping.’
- b. *Mi/Fe fydd Gwyn ddim yn cysgu.
 AFF be.FUT.3SG Gwyn NEG PROG sleep
 ‘Gwyn will not be sleeping.’
- c. *Mi/Fe fydd neb yn cysgu.
 AFF be.FUT.3SG no one PROG sleep
 ‘No one will be sleeping.’

Second, n-words are impossible in the infinitival complement of a finite verb.

- (22) (Mi/Fe) geisiodd Gwyn [ddeud rhywbeth/*dim byd].
 AFF try.PAST.3SG Gwyn say something nothing.
 ‘Gwyn tried to say something/nothing.’

Third, they are impossible in an affirmative imperative.

- (23) Ffonia/ Ffoniwch Gwyn/*neb.
 phone.2SG phone.2PL Gwyn no one
 ‘Phone Gwyn/no one.’

Thus, an analysis of Welsh n-words must exclude them from these contexts.

Where, then, can n-words occur? As we have seen, they can occur in a clause headed by a weak negative verb, and in fact one must occur. (1b), (2b), (3) and (4) illustrate. They can also occur in a constituent headed by a strong negative head although no n-word is required. (24) shows that an n-word can occur in a subordinate clause with a verb preceded by *na(d)*. (25) shows that an n-word can occur with a southern negative form of the copula. (26) shows that a n-word can appear in an infinitival complement headed by the strong negative verb *peidio*. (27) shows that they can appear in imperatives with the strong negative verbs *paid/peidiwch*. Finally, (28) and (29) show that they can appear in a phrase headed by the strong negative preposition *heb* and the homophonous aspect marker.

- (24) Wn i [na fydd Sioned ddim yn gweithio heno].
 know.PRES.1SG I NEG be.FUT.3SG Sioned NEG PROG work tonight
 ‘I know that Sioned will not be working tonight.’
- (25) Sa i wedi gweld neb.
 NEG.be.PRES I PERF see no one
 ‘I haven’t seen anyone.’
- (26) (Mi/Fe) geisiodd Gwyn [beidio (â) deud dim byd].
 AFF try.PAST.3SG Gwyn NEG with say nothing.
 ‘Gwyn tried to say nothing/not to say anything.’
- (27) Paid/ Peidiwch (â) ffonio neb.
 NEG.SG NEG.PL with phone no one
 ‘Don’t phone anyone.’

- (28) Groesodd Sioned y fford heb weld dim byd.
crossed Sioned the road without see nothing
'Sioned crossed the road without seeing anything.'
- (29) Ma' Sioned heb fyta dim byd.
be.PRES.3SG Sioned without eat nothing
'Sioned has not eaten anything.'

These, however, are not the only contexts in which an n-word may appear.

We saw earlier that n-words are impossible in the infinitival complement of a finite verb. They can occur, however, in certain infinitival constituents. They can appear in an infinitival complement of non-finite verb, as (30) illustrates. They can also appear in an infinitival complement of an adjective (31), in a non-finite clause in subject position (32) and in a non-finite adverbial clause (33).

- (30) Dw i 'n licio [gneud dim byd].
be.PRES.1SG I PROG like do nothing
'I like doing nothing.'
- (31) Mae 'n well [deud dim byd].
be.PRES.3SG PRED better say nothing
'It's better to say nothing.'
- (32) Ma' [byta dim byd] yn ddrwg i ti.
is eat nothing PRED bad for you(SG)
'Eating nothing is bad for you.'
- (33) [ar ôl (gneud dim byd trwy 'r bore)], mi weithiodd yn galed
after do nothing through the morning PRT worked ADV hard
yn y p'nawn.
in the afternoon
'After doing nothing in the morning, he worked hard in the afternoon.'

In all these cases, the infinitival constituent may contain the negative verb *peidio*, but it is not required.

There are two further contexts in which n-words may appear. First, they can appear in what are traditionally known as 'absolute clauses'. These are typically introduced by a coordinating conjunction, especially *a* 'and', and contain a subject and the kind of phrase that can appear as the complement of the copula, i.e. an aspect phrase containing an aspect marker and a non-finite verb, a predicate phrase containing the particle *yn* and an AP or NP, or a prepositional phrase. The bracketed absolute clause in (34) contains an n-word.

- (34) O'n i 'n llithro yn araf dros yr ochr, [a Megan
be.IMPF.1SG I PROG slip slowly over the side and Megan
yn deud dim byd].
PROG say nothing
'I was slipping slowly over the side and Megan was saying nothing.'

Finally the adverb *ddim*, in addition to appearing in post-subject position, can appear as a premodifier of certain predicative constituents. (35) illustrates.

- (35) Mae Sioned wedi bod [ddim yn dda].
be.PRES.3SG Sioned PERF be NEG PRED good
'Sioned has been not well.'

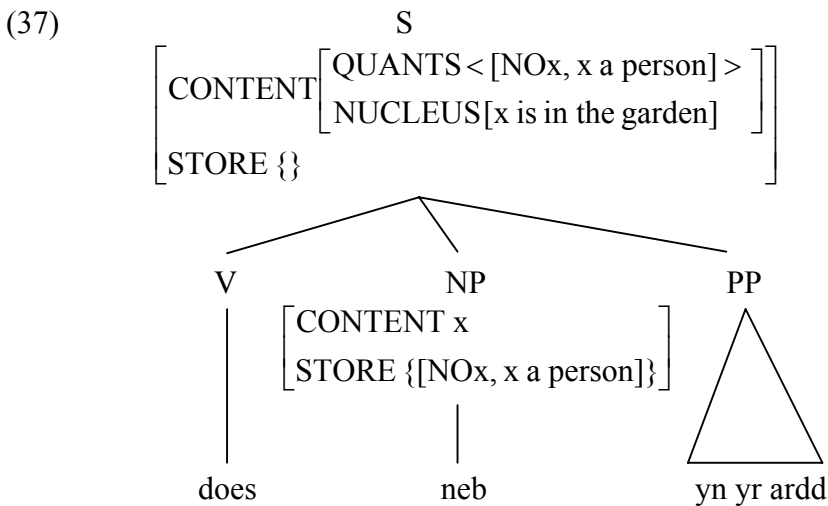
Whereas it is licensed by a weak or strong negative verb when it appears in post-subject position, we assume that it licenses itself here. It also licenses other n-words, as the following show:

- (36)a. Dw i'n dal [ddim yn gweld dim byd].
 be.PRES.1SG I PROG continue NEG PROG see nothing
 'I still can't see anything.'
- b. Dw i'n cofio Mair [ddim yn helpu neb].
 be.PRES.1SG I PROG remember Mair NEG PROG help no one
 'I remember Mair not helping anyone.'

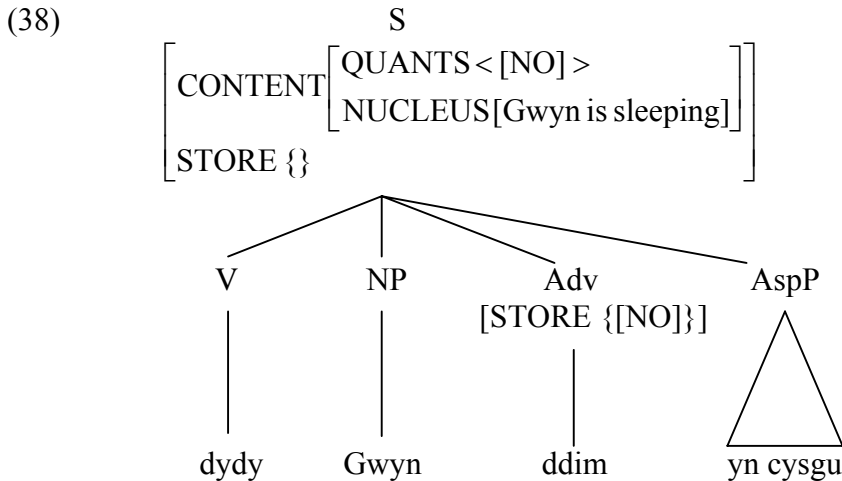
5. A storage-based approach

In this section, we will develop an HPSG storage-based approach to the data that we have just presented, drawing on De Swart and Sag's (2002) analysis of French.

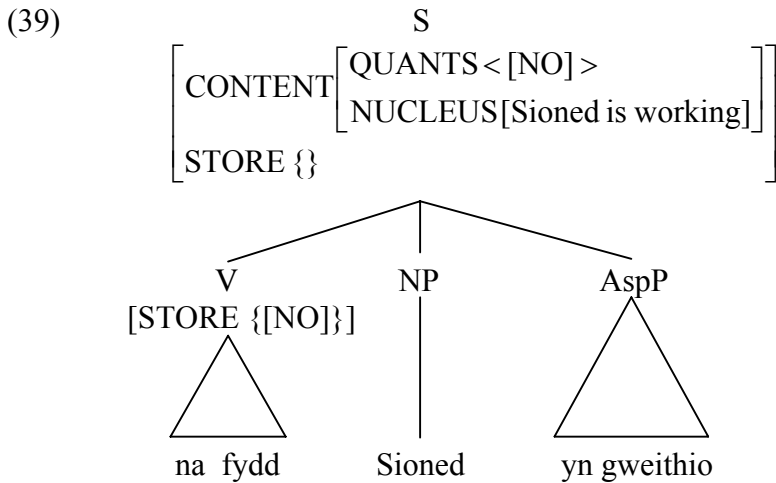
For HPSG, quantifiers, including negative quantifiers, are stored and retrieved from storage at certain clausal nodes which constitute their scope. Assuming this approach and assuming a flat structure analysis for VSO clauses, we can propose the following schematic representation for (3).



Here the CONTENT of the n-word *neb* is a variable but it is associated with a negative quantifier in storage. This quantifier is retrieved at the sentence level and incorporated into the value of QUANTS. We suggested earlier that the negative adverb *ddim* is a pure negative operator which does not bind any variables. This suggests that (1b) has something like the following representation:



We also suggested that strong negative heads include this operator as part of their meaning. This suggests that we have something like the following representation for the complement in (7).



A central question for this approach is: where can negative quantifiers be retrieved from storage? Clearly, they can only be retrieved at positions with an appropriate CONTENT value, hence only at a clausal node. However, there is more to be said here. We know that n-words are licensed in some contexts but excluded from others. We suggest that this is because the associated quantifier can only be retrieved at some clausal nodes.

The following examples suggest that the context that licenses an n-word is also the position which is the scope of the associated quantifier, the position, in other words, at which it is retrieved from storage:

- (40)a. Dw i ddim isio i 'r dynion helpu neb.
be.PRES.1SG I NEG want to the men help no one
'I don't want the men to help anyone/no one.'
- b. Dw i isio i 'r dynion beidio helpu neb.
be.PRES.1SG I want to the men NEG help no one
'I want the men not to help anyone/no one.'

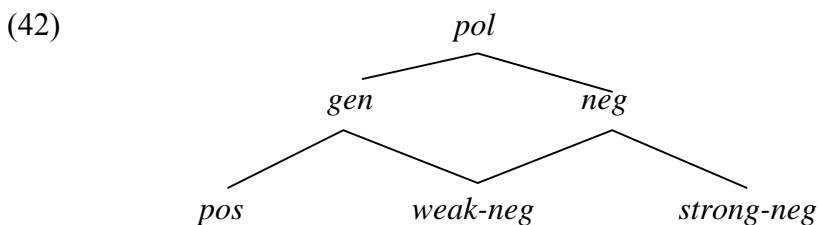
In (40a) *neb* is licensed by the weak negative verb *dw* in the main clause, whereas in (40b) it is licensed by the strong negative verb *beidio* in the subordinate clause. Alternative translations for these examples would be as follows:

(41)a. There is no one that I want the men to help.

b. I want there to be no one that the men help.

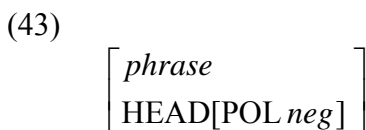
These translations make it fairly clear that we have a quantifier with the whole sentence as its scope in (40a) and a quantifier with just the subordinate clauses as its scope in (40b). Thus, it seems plausible to suggest that a context licenses an n-word if and only if it allows a negative quantifier to be retrieved from storage. Of course, we have to explain how the examples in (40) can have a single negation interpretation. We will consider this matter in section 7.

Assuming that the conclusion we have just reached is sound, an account of the data presented in the last section must restrict the contexts in which a negative quantifier can be retrieved from storage. How can we characterize the contexts which allow retrieval? Before we can answer this question we need a classification of heads. Simplifying somewhat, we will assume a feature POL(ARITY) with the following values:



Here we have three fully specified values: *pos(itive)*, *weak-neg(ative)*, and *strong-neg(ative)*, and a completely unspecified value *pol(arity)*. We also have two partially specified values: *gen(eral)*, which is equivalent to *pos* or *weak-neg*, and *neg(ative)*, which is equivalent to *weak-neg* or *strong-neg*. The former provides for the many verb forms which are ambiguous between a positive and a weak negative status. The latter helps us to characterize the contexts which allow retrieval.

Assuming the feature values in (42), contexts headed by a weak or strong negative head can be characterized as follows:



This, then, is one context in which retrieval is allowed, exemplified by (1b), (2b), (3), (4) and (24)-(29)

A second context in which retrieval is possible is provided by certain infinitival constituents. It is not at all clear how those infinitival constituents which allow retrieval should be distinguished from those which do not. We will simply mark those contexts which allow retrieval as 'F'. We can say, then, that we have retrieval in the following context:

(44)

$$\left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{VFORM } \textit{inf}] \\ \text{'F'} \end{array} \right]$$

This is exemplified by (30)-(33).

Turning now to ‘absolute clauses’, we will assume that the various phrases that can appear as the predicate are all marked [PRED +]. This means that we have retrieval in the following context:

(45)

$$\left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{PRED } +] \\ \text{SUBJ } \langle \rangle \end{array} \right]$$

The [SUBJ $\langle \rangle$] specification ensures that this is a clause. This context is exemplified by (34).

Finally we must consider constituents containing *ddim* as a premodifier. *Ddim* modifies a [PRED +] phrase. Thus, what we have here is a [PRED +] phrase whose first daughter is *ddim*. Thus, we can say that we have retrieval in the following context:

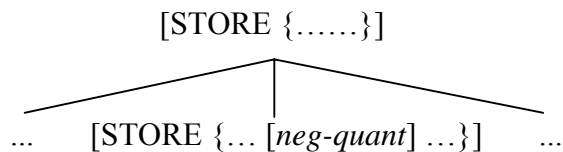
(46)

$$\left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{PRED } +] \\ \text{DTRS } \langle [\text{FORM } \textit{ddim}], \dots \rangle \end{array} \right]$$

This context is exemplified by (35) and (36).

What we need to say is that if a negative quantifier is retrieved from storage then we have one of these four contexts. When a negative quantifier is retrieved from storage we have the following structure:

(47)



In other words, we have a constituent with no negative quantifier is storage, one of whose daughters has a negative quantifier is storage. Thus, we need to say that if we have this structure, then we have (43), (44), (45) or (46). This is what the following constraint says:

$$\begin{aligned}
 (48) \quad & \left[\begin{array}{l} \text{STORE } \{ \dots \} \\ \text{DTRS} < \dots, [\text{STORE } \{ \dots [\textit{neg - quant}] \dots \}], \dots > \end{array} \right] \rightarrow \\
 & \left(\left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{POL } \textit{neg}] \end{array} \right] \vee \left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{VFORM } \textit{inf}] \\ \text{'F'} \end{array} \right] \vee \right. \\
 & \left. \left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{PRED } +] \\ \text{SUBJ } \langle \rangle \end{array} \right] \vee \left[\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{PRED } +] \\ \text{DTRS} < [\text{FORM } \textit{ddim}], \dots > \end{array} \right] \right)
 \end{aligned}$$

Given this constraint, the various ungrammatical examples that we have cited earlier will all have a negative quantifier in storage. We can assume that non-embedded or root constituents are required to have an empty STORE by the following constraint:

$$(49) [\text{ROOT } +] \rightarrow [\text{STORE } \{\}]$$

This, then, is why the various ungrammatical examples are ungrammatical.

The combination of (48) and (49) accounts for the ungrammaticality of various examples. However, we have not in fact ensured that the context that licenses an n-word is also the position at which the associated quantifier is retrieved. There is no problem with the examples in (40) because both only have a single retrieval context. Consider, however, the following:

$$\begin{aligned}
 (50) \quad & \text{Dw} \quad \quad \quad \text{i ddim isio i 'r} \quad \text{dynion beidio helpu neb.} \\
 & \text{be.PRES.1SG I NEG want to the men} \quad \text{NEG help no one} \\
 & \text{'I don't want the men not to help anyone.'}
 \end{aligned}$$

This can be paraphrased as (51a) but not as (51b).

$$\begin{aligned}
 (51)a. & \text{ I don't want there to be no one that the men help.} \\
 & \text{ b. There is no one that I want the men not to help.}
 \end{aligned}$$

It seems, then, that the quantifier can only be retrieved in the subordinate clause although the main clause is also a retrieval context. It looks, then, as if we need to say that if a quantifier can be retrieved then it must be. We can do this by requiring that the contexts which allow retrieval may not have a negative quantifier in storage. The following constraint does this:

(52)

$$\left(\begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{POL } \textit{neg}] \end{array} \right) \vee \begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{VFORM } \textit{inf}] \\ \text{'F'} \end{array} \vee \begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{PRED+}] \\ \text{SUBJ } \diamond \end{array} \\ \vee \begin{array}{l} \textit{phrase} \\ \text{HEAD}[\text{PRED+}] \\ \text{DTRS } \langle [\text{FORM } \textit{ddim}], \dots \rangle \end{array} \Big) \rightarrow \neg ([\text{STORE } \{ \dots [\textit{neg-quant}] \dots \}])$$

This constraint is also very relevant in connection with premodifying *ddim*. This negates the following constituent. Thus, (53) has the meaning indicated and cannot mean ‘Sioned has not been well’.

(53) Mae Sioned wedi bod ddim yn dda.
 be.PRES.3SG Sioned PERF be NEG PRED good
 ‘Sioned has been unwell.’

(52) entails that *ddim yn dda* must not have a negative quantifier in store. Hence the negation associated with *ddim* is restricted to this constituent. The constraint also ensures that the negative operator associated with a strong negative head has the associated phrase as its scope. This will be important below.

There is one further matter that we must consider here. De Swart and Sag propose that quantifiers are retrieved not at the phrasal level but at the lexical level. More precisely, they propose that the head of phrase may retrieve a quantifier from the store of one of the non-heads. This approach is viable where it is clear from the head that the phrase is one that can be negated. However, this is not the case in two of the contexts that are relevant here. The head of an absolute clause will be indistinguishable from the head of a [PRED +] phrase that is not the predicate of an absolute clause. Similarly, the head of [PRED +] phrase modified by *ddim* will be indistinguishable from a [PRED +] phrase not modified by *ddim*.⁶ It seems, then, that some retrieval must take place at the phrasal level, and one might assume that all retrieval does.

6. An apparent problem

We want now to look at some data which seems problematic for the approach that we have just developed. We will argue that there is in fact no problem here.

Welsh has certain non-finite clauses introduced by what looks like the preposition *i* ‘to’, ‘for’, which resemble English *for-to* clause. The following illustrates:

⁶ De Swart and Sag do not discuss French expressions like the bracketed sequence in (i), in which a negative adverb appears as pre-modifier.

(i) [Ne pas parler français] est un grand désavantage en ce cas.
 NEG NEG speak French is a big disadvantage in this case
 ‘Not speaking French is a big disadvantage in this case.’

Such expressions are rather like the bracketed sequences in (35) and (36) and seem to require retrieval at the phrasal level. Godard (forthcoming) proposes an analysis of such examples involving phrasal retrieval.

- (54) Disgwylodd Megan [i Sioned fynd adre].
 expect.PAST.3SG Megan to Sioned go home
 ‘Megan expected Sioned to go home.’

Such clauses can contain the negative verb *peidio*, as (55) shows:

- (55) Disgwylodd Megan [i Sioned beidio (â) mynd adre].
 expect.PAST.3SG Megan to Sioned NEG with go home
 ‘Megan expected Sioned to go home.’

This can license an n-word within the following predicate but cannot license an n-word in the preceding subject position.

- (56)a. Dw i 'n disgwyl i Mair beidio (â) gweld neb.
 be.PRES.1SG I PROG expect to Mair NEG with see no one
 ‘I expect Mair not to see anyone.’
 b. *Dw i yn disgwyl [i neb beidio (â) mynd i Aberystwyth].
 be.PRES.1SG I PROG expect to no one NEG with go to Aberystwyth

An n-word in the subject position of such a clause can only be licensed by a negation in the main clause, as in (57).

- (57) Dw i ddim yn disgwyl [i neb beidio (â) mynd i Aberystwyth].
 be.PRES.1SG I NEG PROG expect to no one NEG with go to Aberystwyth
 ‘I don’t expect anyone not to go to Aberystwyth.’

Notice now that the following French and Polish examples are grammatical:

- (58) Personne n’ est venu. (French)
 no-one NEG is come
 ‘No-one has come.’
 (59) Nikt nie przyszedł. (Polish)
 no-one NEG has-come
 ‘No-one has come.’

In these examples, an n-word in subject position is licensed by a following negative verb. Thus, the ungrammaticality of (56b) is quite surprising. The obvious structure to propose for the subordinate clause in (56b) is something like the following:

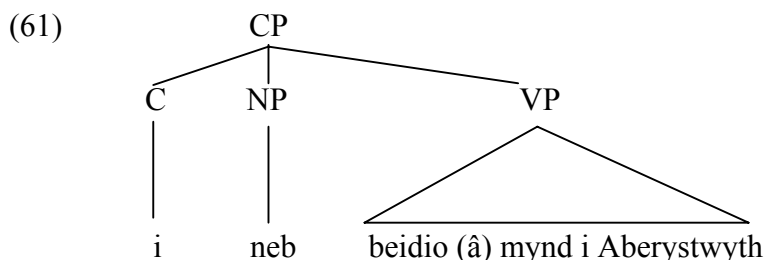
- (60)
-
- ```

graph TD
 CP --> C
 CP --> S
 C --- i
 S --> NP
 S --> VP
 NP --- neb
 VP --- beidio["beidio (â)"]
 VP --- mynd
 VP --- Aberystwyth["i Aberystwyth"]

```

Given such a structure, one would expect (56b) to be grammatical. *Peidio* here is the head of the S. Hence, S will be [POL *neg*], and one would expect *neb* to be licensed. It looks, then, as if we have a real problem here.

In fact, we can argue that there is no problem here. Borsley (1999) argues on independent grounds that *i* in these clauses is a head which takes two complements, an NP and a VP. On this view, the subordinate clause in (56b) has the following structure:



A similar analysis is proposed in Sag (1997) for English *for-to* clauses. Assuming the structure in (61), *beidio* is only the head of VP. Hence only VP is [POL *neg*] and an n-word is only licensed within VP.

It seems to us that the situation here is like that in the following French examples, drawn to our attention by Danièle Godard:

- (62)a. \*Je vois personne ne venir. (French)  
 I see no-one NEG come  
 'I see no one coming.'  
 b. Je ne vois personne venir.  
 I NEG see no one come  
 'I don't see anyone coming.'

Here, a post-verbal n-word cannot be licensed by a following negative verb. We have a similar situation in the following Polish examples:

- (63)a. \*Znalazłem nikogo niezadowolonego. (Polish)  
 I-found no one displeased  
 'I found nobody displeased.'  
 b. Nie znalazłem nikogo niezadowolonego.  
 NEG I-found no one displeased  
 'I didn't find anybody displeased.'

Here, a post-verbal n-word cannot be licensed by a following negative adjective. These examples might be problematic if they involved a single clausal complement, but they will be no problem if they involve two separate complements. It seems to us that the Welsh examples are similar to these examples and not to the earlier French and Polish examples.

## 7. Single negation

We now need to consider how it is possible for a sentence with two n-words or an n-word and a strong negative head to have a single negation interpretation. We will adopt the approach developed by De Swart and Sag (2002).

De Swart and Sag propose that negative quantifiers that are retrieved in the same place can be combined to form a single quantifier complex. They propose that negative quantifiers that are retrieved in the same place can be combined to form a single quantifier complex. This means that it is possible to have not just (64a) but also (64b).

- (64)a.  $NO_{x_1} \dots NO_{x_n}$   
 b.  $NO_{x_1} \dots x_n$

We noted earlier that (18), repeated here for convenience, is ambiguous with the two interpretations indicated.

- (18) Does                    neb    yn    deud dim byd.  
 NEG.be.PES.3SG no one PROG say    nothing  
 ‘No one is saying anything.’ (single negation)  
 ‘No one is saying nothing.’ (double negation)

The two meanings can be represented as follows:

- (65)a.  $\left[ \begin{array}{l} \text{QUANTS} < [NO_x, x \text{ a person}], [NO_y, y \text{ a thing}] > \\ \text{NUCLEUS} [x \text{ is saying } y] \end{array} \right]$
- b.  $\left[ \begin{array}{l} \text{QUANTS} < [NO_x, y, x \text{ a person}, y \text{ a thing}] > \\ \text{NUCLEUS} [x \text{ is saying } y] \end{array} \right]$

Thus, (18) has a single syntactic structure but two different CONTENT values.

This approach predicts that a sentence with two n-words or an n-word and a strong negative head can have a single negation interpretation or a double negation interpretation if the associated quantifiers are retrieved in the same position and can only have a double negation interpretation if the associated quantifiers are retrieved in different positions. This prediction seems to be correct.

Consider first (18). This will have something like the following structure:

- (66)
- 
- ```

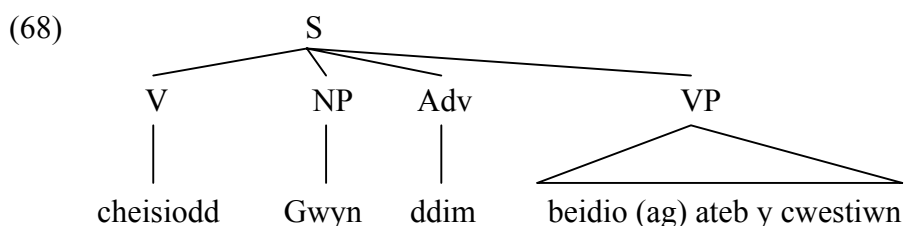
graph TD
  S --> V
  S --> NP
  S --> AspP
  V --- does
  NP --- neb
  AspP --- yn
  AspP --- deud
  AspP --- Triangle
  Triangle --- dim
  Triangle --- byd
  
```


Here there is only one position in which negative quantifiers can be retrieved, namely the S node. Hence, the two negative quantifiers are retrieved in the same position and can form a single quantifier complex.

We can now consider some more complex examples, where negative quantifiers are retrieved in different positions, and where, as a result, a single negation interpretation is impossible. Consider first the following:⁷

- (67) Cheisiodd Gwyn ddim [beidio (ag) ateb y cwestiwn].
 try.PAST.3SG Gwyn NEG NEG with answer the question.
 ‘Gwyn didn’t try to not answer the question.’

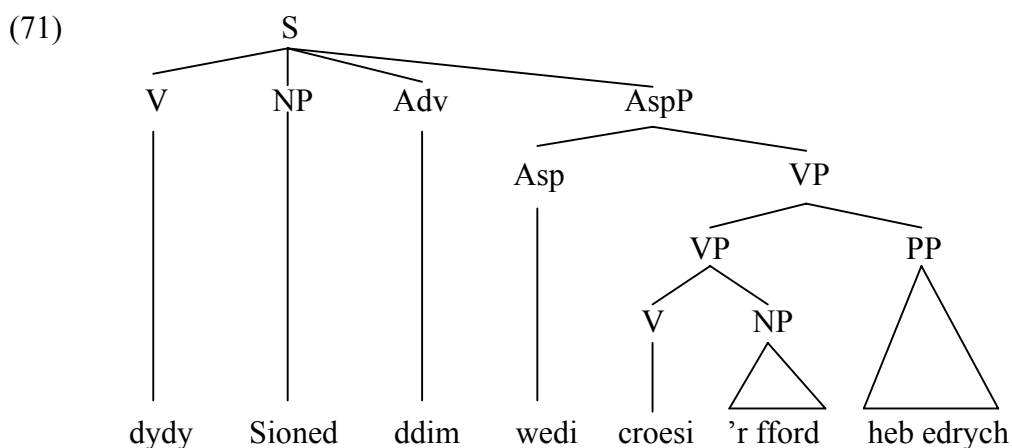
This can only have the double negation interpretation indicated. It will have something like the following structure:



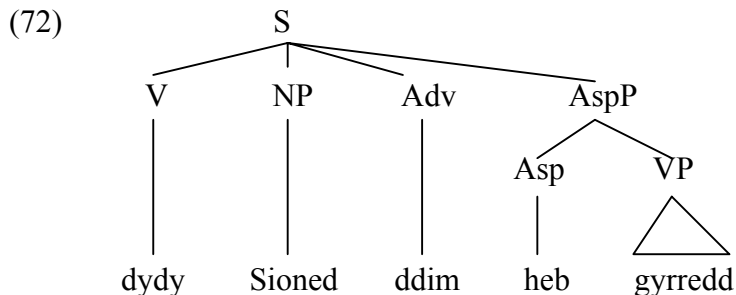
Here, the negative operator corresponding to *ddim* is retrieved at the S node while the negative operator corresponding to *peidio* is retrieved at the VP level. Hence, there is no possibility of a single negation interpretation. Consider now the following:

- (69) Dydy Sioned ddim wedi croesi'r fford heb edrych.
 NEG.be.PRES.3SG Sioned NEG PERF cross the road without look
 ‘Sioned hasn’t crossed the road without looking.’
- (70) Dydy Sioned ddim heb gyrredd.
 NEG.be.PRES.3SG Sioned NEG without arrive
 ‘Sioned has not not arrived.’

Again, we only have double negation interpretations. (69) will have the structure in (71), and (70) will have that in (72):



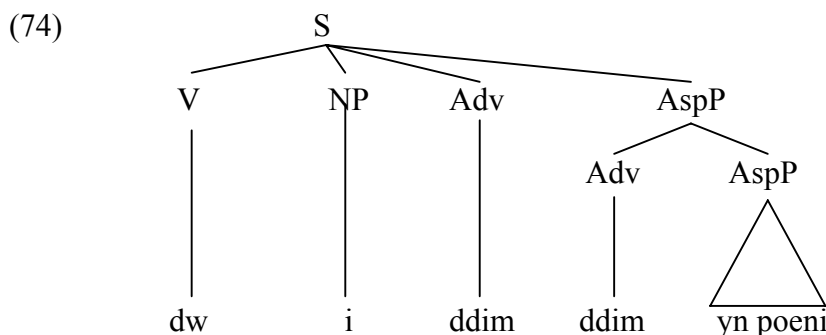
⁷ *Cheisiodd* here is another distinctive weak negative verb form. The positive form is *geisiodd* seen in (9), (22) and (26).



In (71), the negative operator corresponding to *ddim* is retrieved at the S node while the negative operator corresponding to *heb* is retrieved at the PP node. In (72), the negative operator corresponding to *ddim* is retrieved at the S node while the negative operator corresponding to *heb* is retrieved at the AspP node. Hence, there is no possibility of a single negation interpretation in either case. Consider finally (73).

- (73) Dw i ddim ddim yn poeni.
 be.PRES.1SG I NEG NEG PROG worry
 'I don't not worry.'

Here we have *ddim* both as a post-subject adverb and as a premodifier of a predicative phrase. Again, we only have a double negation interpretation. This will have the following structure:



Here, the negative operator corresponding to the first *ddim* is retrieved at the S node while the negative operator corresponding to the second *ddim* is retrieved at the higher AspP node. Once more, then, there is no possibility of a single negation interpretation.

8. Conclusion

In this paper, we have looked at the main properties of Welsh n-words. We have shown that they have restricted distribution, being excluded from certain contexts but allowed in a number of others. We have also seen that there is evidence that they are semantically negative but that a sentence with two n-words or an n-word and negative head can have a single negation interpretation. The facts are quite complex, but we have argued that an HPSG storage-based approach to n-words permits a straightforward account of both the distribution of Welsh n-words and important aspects of their interpretation.

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