Welsh NPs without Head Movement[1]

Louisa Sadler

University of Essex

Proceedings of the LFG98 Conference
University of Queensland, Brisbane
Miriam Butt and Tracy Holloway King (Editors)
1998
CSLI Publications
`http://www-csli.stanford.edu/publications/`

[1] I am grateful to Joan Bresnan, Peter Sells and Andrew Spencer for discussion of the issues in this paper - all errors are my responsibility. I began working on these issues while a Visiting Scholar in Cognitive Science at CSLI during Autumn 1996, am opportunity for which I am very grateful.

1 Introduction

The Celtic languages are strongly configurational, exhibiting a highly hierarchical structural (external) syntax. Typologically, they show the salient characteristics of head initial languages and in particular, the finite verb is clause initial (non-finite clauses, on the other hand, show subject-predicate or DP VP structure). If, as is standard, the sentence is identified with IP or CP, this suggests that the finite verb occupies I, a situation which is often modelled derivationally by head movement (of V to I or C).

In Welsh, nominal structure is largely parallel to clausal structure: in particular, very few elements can occur prenominally within noun phrases. The head noun precedes most adjectival modifiers, all complements, PP adjuncts and the possessive specifier. Noun phrase word order poses two interesting challenges for standard assumptions about phrasal structure in configurational languages: (i) (the majority of) adjectives intervene between the head noun and its (putative) complements and (ii) the possessive phrase (putatively a structural specifier) appears between the head noun and its complements (and after any AP modifiers). That is, the linear order is N (AP*) (possessor) (complements). Any analysis of noun phrase structure must also take into account a number of further aspects: (iii) pronominal possessors appear as prenominal clitics; (iv) a head noun cannot take both a possessive and a definite article and (v) a limited set of elements may appear in prenominal position.

Several authors have proposed head movement accounts of Celtic noun phrase structure, in which the substantive categorial head N raises to a dominating functional head position (variously Num, Agr and D). On this view, NS(poss)O(complement) structure in noun phrases is derived in a fashion similar to VSO clausal structure, namely by head movement to a functional category position. The N raising analysis is modelled on earlier analyses of the Semitic noun phrase (e.g. (Ritter 1991)), which is similar in some respects to the Celtic structure (there are, nonetheless, significant differences), and is basically motivated by the phrase structure puzzle presented by (i) and (ii) above.

Despite the initial attraction of this analysis, we argue in this paper that it is fundamentally misguided. One objection is conceptual: N raising must apply in a totally general fashion to all N: it is not restricted to a specialised (morphologically identifiable) subcategory of nouns, or correlated with any specific functional property. It is simply not clear what is functional (in the appropriate sense) about nouns. A further objection is empirical: the N raising account runs into a number of empirical difficulties when a wider range of data is considered. We propose an alternative analysis within the lexicalist framework of (Bresnan 1997a) and show how this can account for the properties (i) - (v).

2 Data

In Welsh NP/DPs, the head noun precedes PP and AP dependents:

(1) y torthau mawr
the loaves big
the big loaves

(2) y llyfrau safonol ar y gwaith
the books standard on the work
the standard books on the work

(3) dyn dysgedig o gwmpas y trigain oed
man learned from round the sixty year
a man around 60 years old

In what I will call the possessive construction, the head noun also precedes the NP/DP possessor: *only* adjectival modifers of the head noun may intervene between possessum and possessor. The possessor precedes all PP dependents of the head noun. The same descriptive content (as the possessor) can be expressed by a PP (generally headed by the preposition *gan:by*), but the possessive construction itself is completely general and not restricted to any subclasses of N as possessor or possessum.[2]

(4) llun rhyfedd y ferch
picture strange the girl
the strange picture of the girl

(5) golau'r lleuad
light-the moon
the light of the moon

(6) disgrifiad y gyrrwr o'r ddamwain
description the driver of-the accident
the driver's description of the accident
the description of the driver of the accident

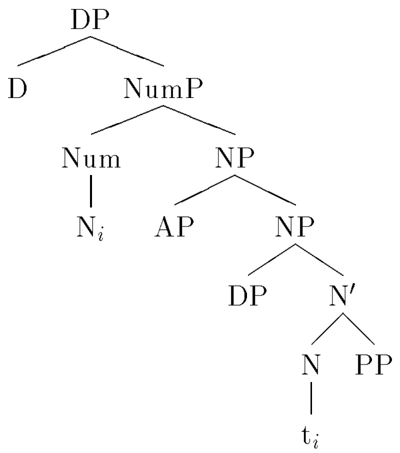
(7) hanes bywiog Wyn am yr ymfndwyr
story lively Wyn about the emigrants
Wyn's lively story about the imigrants

The use of a definite determiner (there is no indefinite article) is absolutely excluded in the possessive construction: the definiteness of the most deeply embedded possessor determines that of the NP construction as a whole. When there is no possessor, the head noun may be preceded by the definite article (a phonological clitic) and other determiners (see (1),(2)).

3 Nouns as Functional Heads

These data present a *prime facie* challenge to standard structural assumptions: the fact that APs and possessives intervene between the head noun and its complements is not compatible with either of the X′ schemata [spec [head comps]] and [[head comps] spec]. The most well-established analysis of NP structure in Celtic maintains standard X′ theoretic assumptions by positing head movement of the N to a dominating functional projection Num in all NPs (Rouveret 1990, Rouveret 1994): some analyses involve further raising of N to Agr or D in possessive constructions (Duffield 1996). The structural syntax shown schematically in (8) accounts straightforwardly for N (AP*) (Poss) (Comps) word order.

(8)



[2]These aspects set the Welsh possessive apart from the Semitic Construct State construction.

Raising N over AP accounts for the occurrence of adjectival modifiers between a head and complements/specifiers, as in (4) and (7). Likewise the raising of N to a position outside and dominating NP accommodates the observed head - specifier - complement order which is otherwise problematic. With head movement, word order within the extended nominal projection is derived in a fashion precisely similar to that of VSO clausal order (which involves raising V to I). In sum, analyses in this style postulate at least two (D, Num) and sometimes three (D, Num, Agr) functional projections within nominal structure, with obligatory N raising forced by some set of assumptions about affixation or the strength/weakness of abstract features.

The head raising account can be expressed in the monostratal constraint based formalism of LFG despite the absence of derivational mechanisms. (Bresnan 1997a) adopts a rather rich view of constituent structure in endocentric configurational languages. The theory posits both lexical and functional categories, but within a strongly lexicalist perspective and provides a clearly articulated and highly constrained view of the role of functional categories and of the relationship between lexical projections and their extended (functional) projections.

The canonical mapping from nodes to f-structures in configurational endocentric structures is expressed by a set of universal principles of (unmarked) structure-function association making reference to sets of grammatical functions including adjuncts, the non-discourse argument functions (CF) and the discourse functions (SUBJ, TOPIC, FOCUS) (Bresnan 1997a).

The central insight of head movement analyses is modelled in this theory by the extended head theory (for this formulation see (Bresnan 1997b))[3]

(9) a. A functional category F^0 and its sister correspond to the same f-structure [they are co-heads]

b. Every lexical category has a(n extended) head.
(X is an **extended head** of Y if X corresponds to the same f-structure as Y, X is of the same/nondistinct category type as Y, and every node other than Y that dominates X also dominates Y)

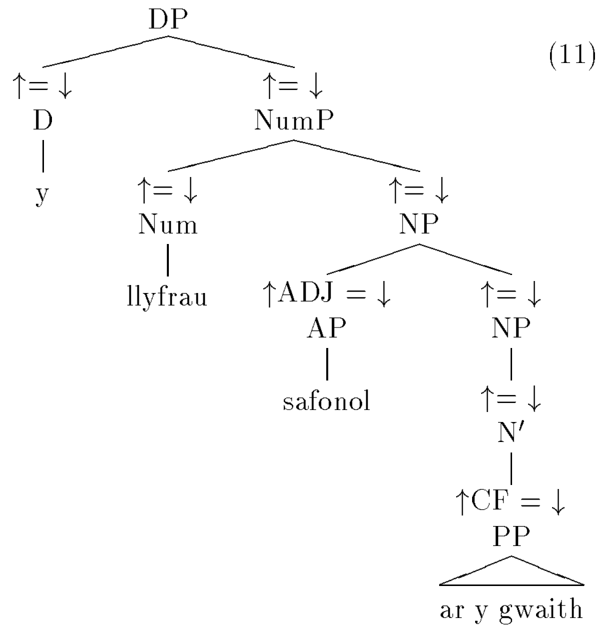
The notion of extended head permits us to model the head movement account of Welsh NPs, capturing the key aspects of surface phrase structure directly. If nouns are actually functional Num heads and APs adjoin to NP, then we predict that APs are postnominal and precede complements and specifiers of NP. We also predict that possessors (specifiers in constituent structure) intervene linearly between head noun and complements. Below we illustrate with (2) and (4), marking co-heads $\uparrow=\downarrow$. The unmarked or canonical function for the specifier of a lexical category is that of adjunct. In Welsh (and the other Celtic languages), the Spec,NP position is associated with the possessive.[4] I will assume without further comment that POSS is a SUBJective function and thus that these languages depart from the unmarked mapping for specifier of NP.[5]

[3] A host of papers show how head movement analyses can be recast in LFG: see (Kroeger 1995), (King 1995) and (Bresnan 1997a), among others.

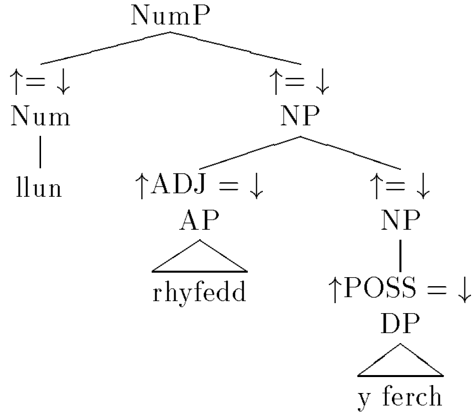
[4] It may be that the possessor is in fact structurally the specifier of DP: we briefly consider this alternative analysis below, and for present purposes nothing hangs on this distinction.

[5] I assume that POSS is a lexically selected function, introduced in semantic forms, but alternatively it may be the case that POSS is a specialisation of the ADJ function itself.

(10)



(11)



The head movement accounts of Celtic noun phrase structure suffer from a number of serious technical difficulties, and are empirically inadequate in various respects when a full range of data is considered. Space precludes providing a detailed discussion of this, but a number of problems with the accounts will emerge as we discuss the alternative in the following sections. The fully lexicalised version in fact avoids a number (but not all) of these empirical problems: for example, no difficulty arises in *ensuring* that head movement is obligatory in the syntax if nouns are *lexically specified* as members of the functional category Num! However a major question arises (in each formalisation) concerning the status of this second functional category within nominal structures.

The most well-established 'head-raising' analyses (of clausal structure) involve two clear, empirical arguments. Firstly, the functional projection itself can be distributionally motivated as the structural position for certain closed class, functional elements, and secondly, a strong argument can be made for an inflectionally defined class of substantive (lexical) heads appearing in a functional position on clear morpho-syntactic grounds - a typical example would be a case in which *finite* verbs appear in I or C while *non-finite* verbs appear in V. The difficulty, however, is that there is no apparent morphosyntactic basis for head raising in Welsh NPs. Head movement is obligatory in noun phrases, irrespective of the presence of determiners (so movement cannot be argued to follow from the need to host affixal determiners), and independent of number marking on the noun (so movement cannot be argued to follow from the need to host a number affix). Neither can N raising be related to the occurrence of a possessive (e.g. the requirement to stand in some structural relationship (perhaps c-command) to the possessive), since it is independent of the occurrence of possessives. Head movement accounts of Celtic NPs variously appeal to abstract affixes and features or the strength/weakness of purely abstract morphological features (without external realisation) to induce head movement as required. Similarly, in well motivated extended head analyses in LFG, the functional categories typically correspond to sets of closed class elements (expressing collections of morphosyntactic features) and/or inflectionally defined subclasses of lexical or open class categories (so typically, there is variation in the position of verbal elements, and so on).

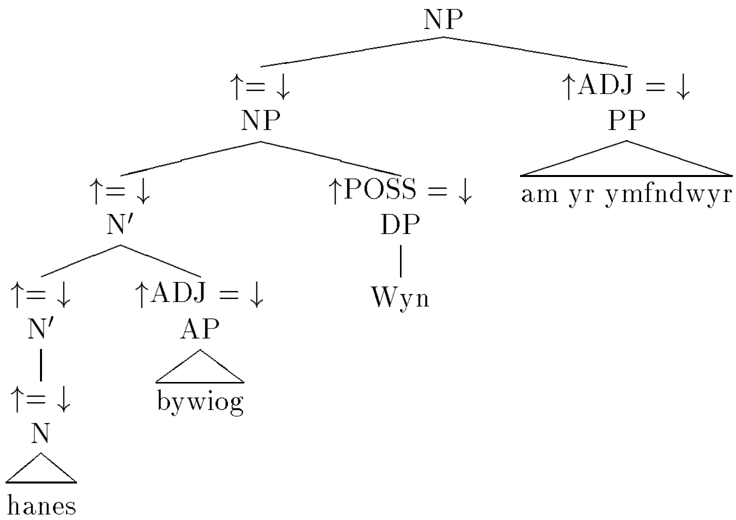
The primary motivation for treating nouns as heads of a Num projection, in either the derivational head movement account, or in the lexicalised extended head analysis, comes only from the observed word order facts: the analyses permit a certain standard set of assumptions about constituent structure to be maintained in the light of empirical difficulties. I conclude that the analysis is therefore undermotivated, and pursue an alternative hypothesis in the rest of this paper.[6]

4 Nouns as Lexical Heads

In this section we provide an alternative analysis of Welsh noun phrases which is surface oriented, avoids the multiplication of abstract categorial entities and is, we believe, empirically well-founded. This analysis, which is equally consistent with the X′ schemata as the head movement analysis, builds on the claim that basic word order in noun phrases follows not from head movement but from the fact that nouns in Welsh systematically lack complements. That is, the apparent intervention of specifier between head and complements, and adjectives between head and specifier, is caused not by the displacement of the head N from its canonical (underlying) position within N′, to a dominating Num projection but by the fact that the 'complements' are not complements at all, but adjuncts. If they are not sisters of the lexical head, then the fact that possessives and adjectives may intervene between head noun and 'complement' is not in any way puzzling.

This view is also consistent with basic X′ theoretic assumptions and is shown schematically for (7) in (12). As above, I take the possessive to map to a POSS function.

(12)



This analysis poses no particular structural difficulties. It embodies three main claims: (i) post-nominal APs are adjoined to intermediate projections; (ii) the specifier of NP maps to POSS, a SUBJective function; and, most fundamentally, (iii) the possessor - PPs order does not reflect head movement from a specifier initial NP but the fact that nominal heads have specifiers (POSS) but no complements (CFs): that is, the PP dependents of N are adjoined to NP and map to non-argument (ADJUNCT) functions.[7] In the rest of this section, we motivate this claim.

[6] Interestingly, (Alexiadou and Stavrou 1998) apparently argue, within the Minimalist/PPT framework and independently of the present paper, that noun movement accounts based solely on word order considerations are undermotivated and therefore problematic. I am grateful to Andrew Spencer for bringing this to my attention.

[7] The relationship bewteen semantic role and syntactic complement for nominal dependents has been much less well studies than for verbal dependents: nonetheless the claim that we are making is not without precedent in the literature: see (Zucchi 1993, Grimshaw 1990) for some discussion.

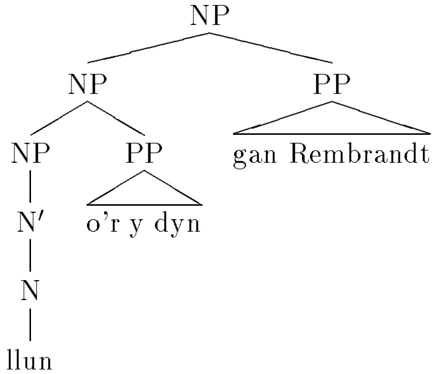
The PPs show the relative freedom of position characteristic of adjunct rather than complement status. Although the possessor DP/NP (when it occurs) must precede any PP dependents, the ordering among PP dependents themselves is free.

(13) llun o'r dyn gan Rembrandt
picture of-the man by Rembrandt
the picture of the man by Rembrandt

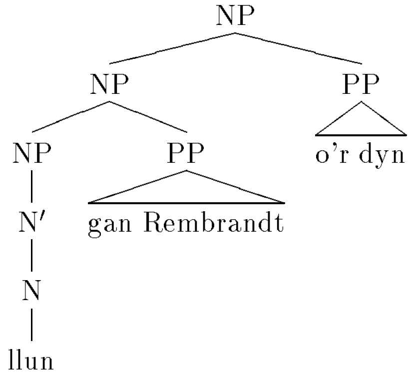
(14) llun gan Rembrandt o'r dyn
picture by Rembrandt of-the man
the picture of the man by Rembrandt

This follows straightforwardly from the recursivity of adjunction.

(15)



(16)



In addition, PP dependents appear to be generally optional. When several arguments to a noun may be expressed (e.g. a *picture* noun or a deverbal nominal), either the theme-like or the more agent-like argument can be expressed as a possessive, though there is at the least a marked preference for the more agent-like argument as possessive if both are expressed, with the result that theme possessors occur felicitiously *only* when the agent-like argument is unexpressed. [8]

Similarly, for Irish (Duffield 1996) reports that when several arguments to a *picture* noun are expressed, the PP is obligatorily the thematic object. Again according to Duffield, in VN based action nominalizations in Irish the possessive can *only* be the thematic object.

(17) *scriobh Sheáin den litir
write.VN Sean.GEN de+DET letter
Sean's writing of the letter

(18) scriobh na litreach
write.VN DET letter.GEN
the writing of the letter

Neither is it the case that binding properties within NP implicate the notion of structural complement. As the examples below show, semantic role rather than linear precedence or c-command seems to determine rank for binding:

[8](Rouveret 1994), citing grammatical judgements from Gwen Awbery) provides the following examples:

(i) ?llun y dyn gan Picasso
picture the man by Picasso

(ii) ?disgrifiad y ddamwain gan y gyrrwr
description the accident by the driver

(19) llun gan Rembrandt$_i$ ohono ei hun$_i$
picture by Rembrandt of-3SM 3SM self
picture of himself by Rembrandt

(20) llun ohono ei hun$_i$ gan Rembrandt$_i$
picture of-3SM 3SM self by Rembrandt
picture of himself by Rembrandt

The only two grammatical possibilities are those in which the agentive PP binds the non-agentive PP. This is straightforward if semantic role is relevant to binding, but if it is assumed that configurational properties are relevant, it is problematic.[9]

In summary, although further work needs to be done to establish the correctness of this analysis, there are a number of aspects of noun phrase structure which lend plausibility to the hypothesis that nouns systematically lack complement.

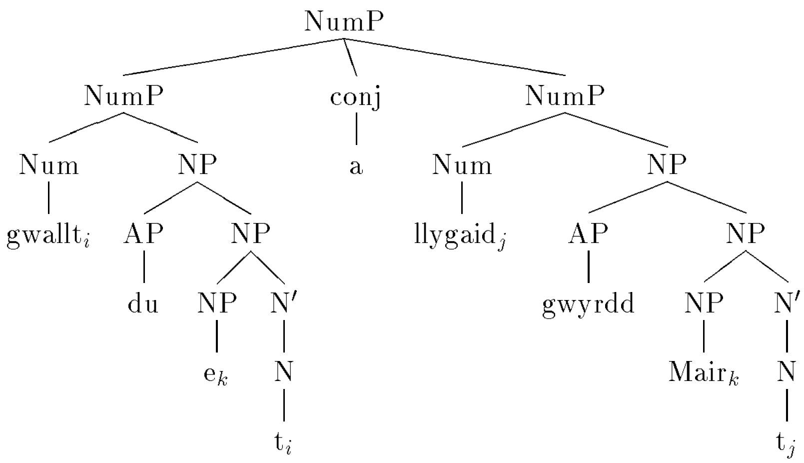
Note that this analysis extends gracefully to coordination data which is certainly challenging on the head movement account. It is possible to coordinate head nouns (and noun- adjectival phrase combinations) with a possessor taking scope over the co-ordination. These must be coordinate NumPs (or Num′), with each conjunct involving N to Num raising. Two structural possibilities, neither of them orthodox, present themselves as possibilities. On the other hand, the structure induced by the present analysis, shown in (26) is straightforward.

(21) llenorion, haneswyr na gwleidyddwyr y dyfodol
authors, historians nor politicians the future
future authors nor historians nor politicians

(22) gwallt du a llygaid gwyrdd Mair
hair black and eyes green Mair
Mary's black hair and green eyes

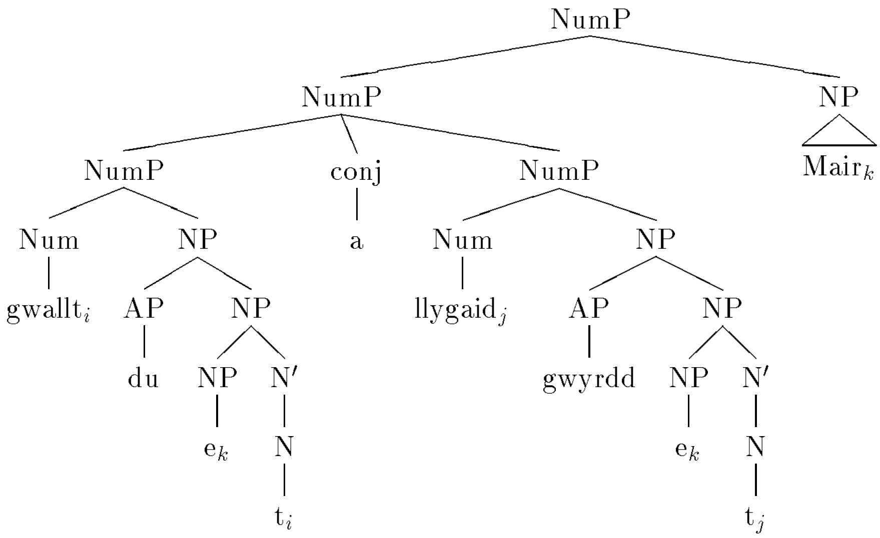
(23) brawd hyna' a chwaer ienga' Sioned
brother older and sister younger Sioned
Sioned's older brother and younger sister

(24)

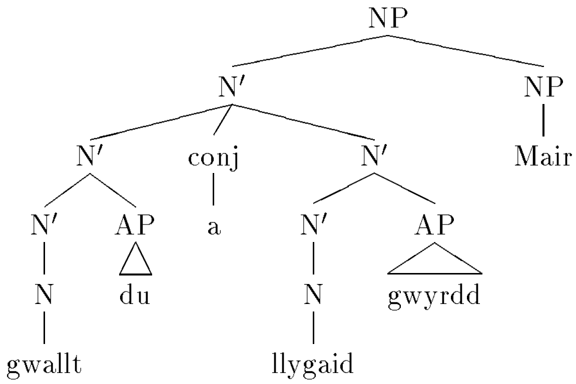


[9] (Rouveret 1994) is forced to assume the existence of a rightward specifier position as well as the leftward specifier position in which NP possessives appear. Accounting for the NP/PP$_{gan}$ alternation in the leftward specifier position requires the postulation of an invisible Genitive case on the possessive NP.

(25)



(26)



5 The Possessive Construction

The head raising or functional analysis encounters a number of serious difficulties with the possessive construction, being unable to elegantly derive all the properties of the construction.

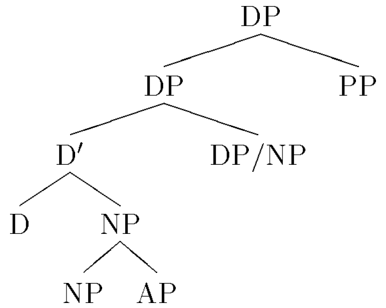
Semantically, the possessive can correspond to a wide range of possible different roles: as noted above, both agent and theme arguments (e.g of a derived nominal) can be expressed as possessives, and virtually every head noun may take a possessive argument in the syntax, corresponding to a range of semantic (argument and non-argument) roles. In short, the bare NP/DP possessive codes both intrinsic and extrinsic possession in the sense of (Barker 1997). Concretely, we assume semantic forms as shown below, with POSS a subcategorised function structurally expressed as SPEC of NP.

(27) llyfr $< >$ ($\uparrow$POSS) (28) disgrifiad $<$ ($\uparrow$POSS) $>$

As a SUBJective function, I shall tentatively assume that POSS is a discourse-oriented argument function, optionally subcategorised by all nominal predicates, and shall further take it that Welsh (and the other Celtic languages) specialises the SPEC,NP position to this function. Clearly, the structural position of the possessive (after APs) is incompatible with the status of complement of N.

An alternative possibility, which maintains the (unmarked) association of discoure-oriented argument functions with the specifier of functional categories, is that the possessive is specifier within the DP projection, with PP dependents adjoining to DP rather than to NP. Demonstratives, as we will see below, follow all other NPs and require the presence of the definite determiner: under this alternative analysis, demonstratives would be in SPEC,DP:

(29)



This raises the issue of what the discourse function of the demonstrative would be, and it seems likely that we would also need to lexically specify the definite determiner requirement, so I do not pursue this hypothesis further here.

In possessor constructions, as noted above, the definite determiner cannot occur with a possessor phrase and the definiteness of the construction as a whole is determined by the presence or absence of a definite determiner within the possessor phrase itself. That is, the specifier position in Welsh NPs is associated with the equation in (30):

(30) $(\uparrow \text{DEF} = \downarrow \text{DEF})$

There are a number of ways in which this surface complementarity (of POSS and definite determiner) can arise, and accounts differ as to whether they implicate structural or functional properties.

On the structural view, to which the head movement account is strongly predisposed (if not in fact committed) definite determiners and possessives cannot co-occur because they entail competition for certain structural positions. The head movement account of (Rouveret 1994) for example, hypothesizes two null determiners, with different sets of properties, one of which co-occurs only with possessive phrases in SPEC,NP. He maintains that Nominal projections obligatorily project the category D (although indefinite noun phrases have no overt article), and postulates three exponents of the category D: (i) the null determiner $[_D \text{ e}]$, which has a default existential interpretation and occurs in indefinite NPs; (ii) the overt definite determiner, which is never expletive; and (iii) the null expletive determiner $[_D \ \delta]$, which is not marked for the feature +/- definiteness, but is marked for the category feature [+determiner]. As an expletive element, this null determiner must be eliminated or substituted for at LF. According to Rouveret, the dependent genitive (possessor phrase) has the featural specification [+determiner] when inserted into structures (as SPEC,NP), because it serves as a logical determiner. For reasons of well-formedness at LF this element must raise to SPEC,DP (because it has the feature [+determiner] and because the expression must have a logical determiner) - this is only possible if D contains the null expletive δ, which is thereby eliminated. Hence overt determiners and possessive phrases are in complementary distribution.

Within a Minimalist framework, citeDuf96 assumes that N raises to D (in Irish Gaelic) when the possessive is definite (we return shortly to why this is). This requires the postulation of a strong [+D] feature on N (to cause the movement to take place), with the unfortunate consequence that the lexicon must contain homophonous nominal forms differing *only* in their specification for a wholy abstract D feature. If N raises to D, then clearly determiners cannot co-occur with definite possessors, because N is in D. Note however that if the possessor is indefinite, on Duffield's analysis, N raises only to Agr. But then it is not clear why a definite article cannot be inserted into D (to check any +D features).

On a straightforwardly functional view, the possessor and the determiner are alternative exponents of the same function: one incarnation of this view would be that definite determiners and possessors both map to a SPEC function: clearly functional uniqueness will then ensure that they do not co-occur. This analysis is proposed in (Williford 1998), which essentially adopts the analysis of noun phrase structure of the present paper, as sketched out in (Sadler 1997). This proposal will naturally accommodate the different structural positions of determiners, but it entails the postulation of an f-structure attribute SPEC which is purely grammatical in the case of the definite article, but which takes a subsidiary f-structure as value in the case of the possessive.

On the view that I will adopt here, the complementarity also arises through the incompatibility of constraints over the f-structure. I assume that it is a lexical fact about the Welsh definite article that it excludes the POSS function: the negative existential equation here has the effect of excluding the POSS function within any f-structure which the D node maps to.

(31) **y(r):** $(\neg\exists \uparrow\mathrm{POSS})$
$(\uparrow\mathrm{DEF}) = +$

Just as the definite article excludes the POSS function, the demonstrative adjective requires the presence of the definite determiner: this too can be stated as a lexical fact:[10]

(32) *(y) dynion hynny
the men those
those men

(33) **hon, hwn, hynny:**
$(\neg\exists \uparrow\mathrm{POSS}) \wedge (\exists \uparrow\mathrm{DEF})$

Interestingly, Welsh demonstratives differ in one small respect from their Irish Gaelic counterparts: in Irish, demonstratives simply require definiteness to be marked within the NP, either by a prenominal definite article (as in Welsh) or by a definite possessor (which is absolutely excluded in Welsh):

(34) am lamh seo
the hand this
this hand

(35) lámh seo an fhir
hand this the man
this hand of the man

Moreoever, Irish Gaelic *does* permit an overt determiner in the possessor construction, so long as the possessor is definite:

(36) (an) mothú sin an tsaighdiúra
the feeling dem the soldier
that feeling of the soldier

In order to accomodate these examples structurally, (Duffield 1996) must assume that the head noun is lexically marked [-definite] so that it raises only as far as Agr, for clearly if two elements engender competition (or themselves compete directly) for the same structural position, then they should not co-occur. Similarly, if determiners (or demonstratives) and possessives are exponents of the same function, they should not co-occur. On the lexical view adopted here, the difference between Irish Gaelic and Welsh is quite simple. The Irish demonstrative does not exclude the POSS function, but (like its Welsh counterpart), requires DEF to be defined. The Irish definite determiner does not exclude the POSS function, but (unlike its Welsh counterpart), requires definiteness to be defined *by the POSS* if there is one:

[10]Notice that the constraint $(\neg\exists \uparrow\mathrm{POSS})$ is required, since $(\exists \uparrow\mathrm{DEF})$ can be satified by a definite possessor, as we will see shortly.

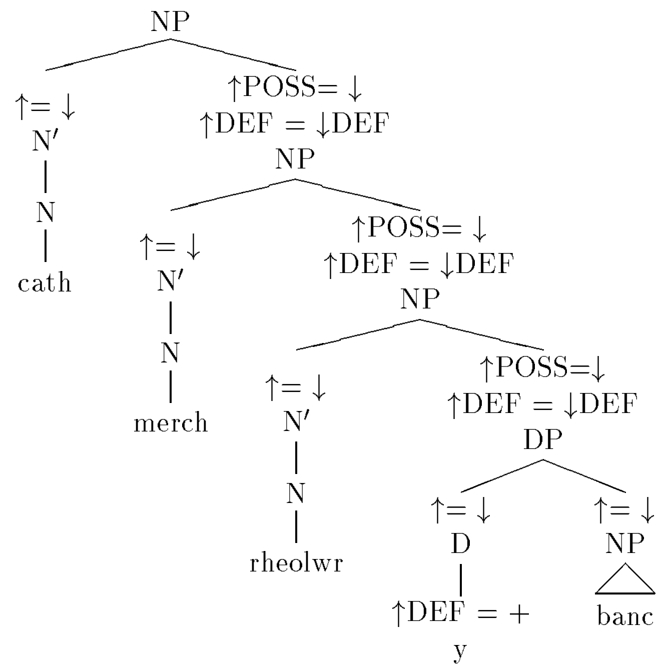
(37) **an:** $(\uparrow\text{DEF}) = + \vee (\exists \uparrow\text{POSS}) \Rightarrow \uparrow\text{DEF} =_c +$

(38) **seo:** $(\exists \uparrow\text{DEF})$

We now turn to the interesting construction effect noted in the data section: the most deeply embedded possessor within the possessive construction determines the definiteness of the entire noun phrase. This follows without further stipulation from (30). Note that despite the fact that the intervening POSS are definite, no definite article can appear (this is ensured by the lexical stipulation associated with *yr* which excludes the POSS function.

(39) cath merch rheolwr y banc
cat daughter manager the bank
the bank manager's daughter's cat

(40)



(41)
$$\begin{bmatrix} \text{PRED} & \text{'cat}\langle\rangle\uparrow\text{POSS'} \\ \text{DEF} & + \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'daughter}\langle\rangle(\uparrow\text{POSS})\text{'} \\ \text{DEF} & + \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'manager}\langle\rangle(\uparrow\text{POSS})\text{'} \\ \text{DEF} & + \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'bank'} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

The analysis of noun phrase structure proposed here extends straightforwardly to pronominal possessors. As shown in (42) and (43), pronominal possessor are expressed as pre-head clitics, optionally doubled by independent pronouns. The use of bound form pronominals is a striking and widespread characteristic of the Celtic languages, and the clitic pronoun possessor is identical in form to the clitic pronoun occurring as object of the uninflected verb ((44)(45)):

(42) eich brawd (chwi)
2pl brother 2pl
your brother

(43) fy mhen i
1s head 1s
my head

(44) Mae'n anhosibl ei dal hi
is.3s-pt impossible 3sf catch 3sf
It is impossible to her

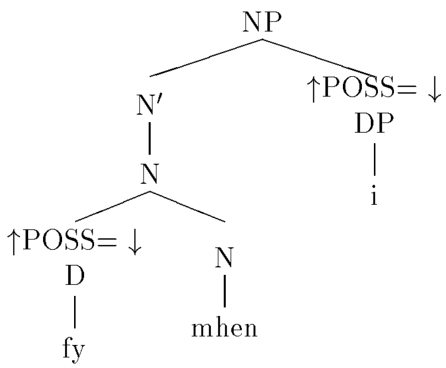
(45) Yr wyf yn ei weld yn aml
pt am.1S pt 3sm see pt often
I see him often

The phrase structure model of Bresnan (1997a) makes no specific provision for clitics (adopting the standard X′ syntax view that everything projects to a maximal projection). (Sadler 1997) argues that clitic host structures in Welsh are syntactically transparent "small" (X^0) constructions, and proposes an extension of this c-structure model and the associated c to f mapping to accommodate such constructions (46). This builds on previous proposals for the existence of small constructions (Sells 1997, Poser 1992, Sadler and Arnold 1994). (Sells 1998) shows how this proposal can given an account of object fronting in Scandinavian.

(46) A language may make use of a lexical adjunction structure to express argument functions. The argument functions which can be so expressed are limited to those which the c-head may project as DPs in phrasal structure under the (universal) endocentric mapping principles

Possessive clitic - head structures such as (43) therefore have the following structure on this analysis:

(47)



Since the clitic is associated with the POSS function, the definite article is excluded with no further stipulation, and without the need to assume that the clitic pronoun enters into any structural competition with the determiner. The clitic is essentially equivalent to an incorporated pronoun and thus always has a PRED value: it is never an agreement marker. The copy pronominal is optionally associated with the equation (↑PRED) = PRO. As alternative means of expression for the pronominal predicate, clitic and pronoun are in competition - the details of how this competition is resolved is presented in (Sadler 1997). This analysis of competition holds across all cases of bound pronominals in Welsh and extends the proposal for inflectional pronominals in (Andrews 1990).

6 Prehead Material

Our presentation of the data so far has been slightly simplified. Although canonical AP position is postnominal, a small set of adjectives, quantifiers and single numerals appear in prehead positions in possessive and non-possessive constructions alike: this is demonstrated in the data below.

The existence of such elements is hardly discussed in Duffield (1996), despite the fact that similar facts hold in Irish Gaelic. Duffield's analysis raises the N in definite possessor constructions to D, and to AGR in indefinite possessor constructions, and therefore cannot easily accommodate this data. Rouveret (1994) assumes that APs adjoin to NumP (as well as to NP), and that prenominal numerals are in Num, with N raising to adjoin to Num:

(48) $[_{DP}$ D $[_{NumP}$ $[_{AP}$] $[_{NumP}$ $[_{Num}$ Num N] $[_{NP}$ $[_{AP}$] $[_{NP}$]]]]]

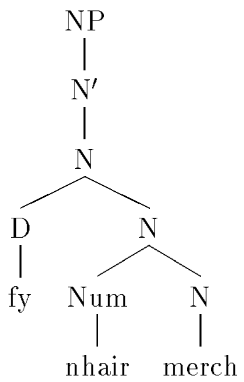
But AP adjunction to NumP is problematic, since prenominal placement of AP is *not* a general syntactic process: it is lexically restricted to a very small set of adjectives, and no adjectives with their own complements occur in this position. In short, there is a lack of empirical evidence to support the postulation of *phrasal adjunction* to NumP. Furthermore it cannot be the case both that AP adjoins to NumP and numerals are in Num, given the facts (not discussed in (Rouveret 1994)) shown below:

(49) y ddau hen greadur
the two old creature
the two old creatures

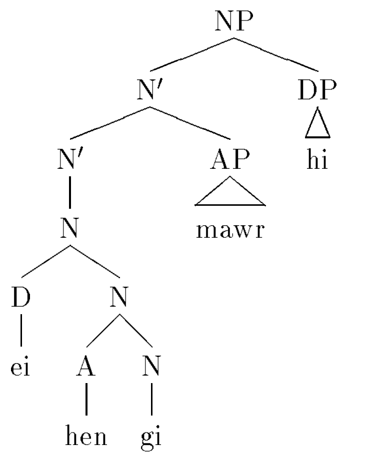
(50) pedwar hoff raglen Mair
four favourite programme Mair
M's four favourite programmes

Note that prehead adjectives and numerals follow the pronominal elements which, we have argued, form small lexical constructions with the N heads. If this analysis of clitic-head structures across a variety of lexical head categories (V, N and (morphologically non-finite) I) is correct, then it suggests a small construction analysis of prenominal adjectives and numerals, with lexical adjunction structures in this case mapping to adjunct functions:[11]

(51)



(52)



[11] For expository purposes, I use the label Num as a categorial shorthand, without commitment to categorial status (as Adj or N) of numerals.

(53) fy nhair merch
my three girls

my three girls

(54) ei hen gi mawr (hi)
3SF old dog big 3SF

her big old dog

The order of pre-head elements is strict: pronoun - numeral- adjective, and clearly the account given here must be supplemented by some ordering convention. There are various ways in which this may be done, compatible with our analysis, but I leave this matter for future research (see (Williford 1998) for a proposal).

An intriguing aspect of the numeral system is that prenominal numerals may take postnominal complements:

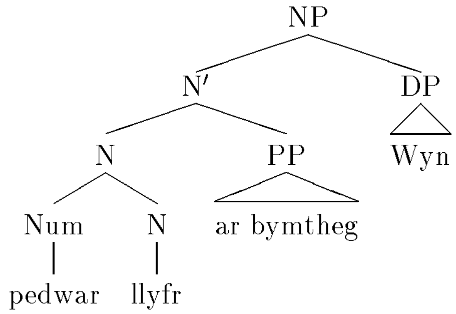
(55) pedwar llyfr ar bymtheg Wyn
four book on fifteen Wyn

Wyn's nineteen books

(56) dau dudalen a deugain y llyfr
two page on forty the book

the book's forty pages

(57)



This is completely unexpected and impossible to accommodate on the standard head movement analysis, which takes the complement of Num to be NP (since Num is the functional or extended projection of N). If the numeral is AP rather than Num, then it is still worse, since it is expected that the complement PP *ar bymtheg* occur within the AP before the N (which is in Num). What may be going on here is some sort of predicate formation, with the N essentially inheriting the argument of the numeral, perhaps in a fashion similar to the English *an easy mistake to make* (compare **an easy to make mistake*). Our structural assumptions accommodate the fact that the complement of the prehead numeral intervenes before the possessor, for if the analysis of basic noun phrase structure is correct, these are in fact the *only* complements to N (other putative complements being adjunctions to NP).

7 Conclusion

This paper has argued against the head movement analysis of Welsh noun phrase structure, and has provided an alternative analysis compatible with the approach to internal and external configurational structure outlined in (Bresnan 1997a). We hold that functional categories must be motivated by clear morphosyntactic properties, and we are not convinced that any such properties define Celtic nouns. Our account of basic noun phrase structure builds on one fundamental claim, that the PP dependents of nouns are not syntactic complements within NP: our alternative structural assumptions accommodate the full range of noun phrase structures without the need for head movement. The final section of the paper considers some data on prenominal elements which is challenging to the head movement account and shows how this can also be accommodated by adopting the small construction proposal for pre-head material in Welsh made in Sadler 1997.

Bibliography

Alexiadou, A., and M. Stavrou. 1998. On the relation between 'strength' and morphological richness: crosslinguistic asymmetries in noun movement. Paper presented at 8th International Morphology Meeting, Budapest.

Andrews, A. 1990. Unification and Morphological Blocking. *Natural Language and Linguistic Theory* 8(4):507–558.

Barker, C. 1997. *Possessive Descriptions.* Stanford: CSLI Publications.

Bresnan, J. 1997a. Lexical Functional Syntax. Unpublished, Stanford University.

Bresnan, J. 1997b. Mixed Categories as Head Sharing Constructions. In M. Butt and T. H. King (Eds.), *Proceedings of the LFG97 Conference*, Stanford. CSLI Publications.

Duffield, N. 1996. On structural invariance and lexical diversity in VSO languages: arguments from Irish noun phrases. In R. Borsley and I. Roberts (Eds.), *The Syntax of the Celtic Languages*, 314–340. Cambridge University Press.

Grimshaw, J. 1990. *Argument Structure.* Cambridge,Mass: MIT Press.

King, T. H. 1995. *Configuring Topic and Focus in Russian.* Stanford: CSLI Publications.

Kroeger, P. 1995. *Phrase Structure and Grammatical Relations in Tagalog.* Stanford: CSLI.

Poser, W. 1992. Blocking of Phrasal Constructions by Lexical Items. In I. Sag and A. Szabolsci (Eds.), *Lexical Matters*, 111–130. Stanford: CSLI.

Ritter, E. 1991. Two Functional Categories in Noun Phrases: Evidence from Modern Hebrew. In S. Rothstein (Ed.), *Perspectives on Phrase Structure*, Vol. Syntax and Semantics 25, 37–62. Academic Press.

Rouveret, A. 1990. X-bar Theory and Barrierhood in Welsh. In H. R (Ed.), *The Syntax of the Modern Celtic Languages*, 27–79. Academic Press.

Rouveret, A. 1994. *Le syntaxe du gallois.* Paris, France: Editions CNRS.

Sadler, L., and D. Arnold. 1994. Prenominal adjectives and the phrasal/lexical distinction. *Journal of Linguistics* 30:187–226.

Sadler, L. 1997. Clitics and the structure-function mapping. In M. Butt and T. H. King (Eds.), *Proceedings of the LFG97 Conference*, Stanford. CSLI Publications.

Sells, P. 1997. Case, Categories and Projection in Korean and Japanese. In Y.-S. K. H-D Ahn, M-Y Kang and S. Lee (Eds.), *Morphosyntax in Generative Grammar.* Seoul: Hankwuk Publishing Co.

Sells, P. 1998. Scandinavian Clause Structure and Object Shift. In M. Butt and T. H. King (Eds.), *Proceedings of the LFG98 Conference*, Stanford. CSLI Publications.

Williford, S. 1998. Two issues in the syntaxof Welsh noun phrases: an LFG approach. Unpublished paper, Stanford University.

Zucchi, A. 1993. *The Language of Propositions and Events.* Dordrecht: Kluwer Academic Publishers.