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# COMPOUNDS AND SYNTACTIC PHRASES IN MODERN IRISH

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# 1. Introduction<sup>1</sup>

A subject which has attracted much attention in recent studies of morphology is the manner in which the formation of compounds should be handled. For a representative spectrum of opinions see Roeper and Siegel 1978, Selkirk 1982, Lieber 1983, Fabb 1984, Sproat 1985, Di Sciullo and Williams 1987, Borer 1988, Roeper 1988, Spencer 1991. The starting point for this article is a set of data in Irish<sup>2</sup>. In traditional grammars and descriptions of this language, the category compound is not recognised as such, but at the same time there is a large group of expressions which bear all the hallmarks of words rather than phrases. Briefly, the problem is as follows. There exist in Irish phrasal groups consisting of a noun followed by another noun in the genitive, e.g., mac Sheáin "son John-Gen. – John's son". We wish to claim that many of these are in fact compounds, on the basis of criteria familiar from other studies of this sort, namely, lexical integrity, semantic idiosyncracy, and non-specificity.

Having established the existence of this category we turn to a more intriguing problem. This is the existence of phrases which differ from compounds in that they exhibit a lower degree of lexical integrity and are specific rather than generic. At the same time, they seem to behave more like words than syntactic phrases. An example is the phrase fear an ti – man the house-Gen. – "the master", which

<sup>&</sup>lt;sup>1</sup> The research reported in this paper was carried out while I was a visiting scholar at Jesus College, Oxford. I am grateful to the trustees of the Rhys Fund, Oxford, for making my stay there possible. I would also like to thank Edmund Gussmann and Aslı Göksel for reading a draft of this work and making many helpful comments and suggestions.

<sup>&</sup>lt;sup>2</sup> The data are taken from contemporary descriptions and dictionaries of Modern Irish: the most important of these are Ó Cadhlaigh 1940, de Bhaldraithe 1953, Ó hAnluain 1960, Ó Dónaill 1977. The letter h after a consonant indicates lenition, e.g. bean [b'æn] 'woman': a bhean [ð v'æn] 'his woman'. Gen in closses indicates the cenitive Unless otherwise stated, forms are given in the nominative singular.

looks very much like any other syntactic phrase, but on closer inspection turns out to possess a number of lexical properties. As we shall see, the Irish data is very similar to the Modern Hebrew analysed by Borer (1988). We try to point out the parallels between the two systems and ascribe them to properties of universal grammar.

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## 2. Compounds

# 2.1 Identifying compounds

Some authors of Irish grammars claim that compounding is not a productive word-formation process in this language. de Bhaldraithe (1953: 254) can serve as an example: for him a compound is an expression that resembles an English compound in that the second member is the head and the whole is treated as a single phonological word, e.g. muic-fheoil [mik'o:l'] - pigmeat - "pork", carn-fholt [karnolt] - heap-hair - "heaped hair". This is an uncontroversial statement, and we will not be taking issue with it. de Bhaldraithe also mentions (254: sootnote) phrases consisting of Noun+Genitive, which, he says, function as semantic units and correspond to compounds in other languages. It is not clear what the status of these phrases is for him. We will argue that on the criterion of lexical integrity these behave more like words than phrases and as such should be regarded as being produced by the word-formation component.

There is no obvious formal difference between syntactic phrases and what we claim are compounds. It is as if in English we only had phrases of the sort leg of wood, master of the school, son of John and had to decide whether they were syntactic combinations or lexical units. However, by taking two phrases consisting of Noun+Genitive from Irish and performing some elementary syntactic tests on them, it is possible to achieve at least a crude distinction between compounds and phrases.

Below we examine two phrases, cos adhmaid - leg wood-Gen. - "wooden-leg" and seol an bháid - sail the boat-Gen. - "the sail of the boat". The first proves resistant to any kind of syntactic operations.

# (1) a. One-substitution

- Cá bhfuil an chos adhmaid? Α. Where is the leg wood-Gen. "Where is the wooden leg?"
- B. \*An ceann adhmaid? The one wood-Gen. "The wooden one?"

## b. Wh-movement

- Chonac an chos adhmaid Α. I-saw the leg wood-Gen. "I saw the wooden leg"
- B. \*Cén chos? "Which leg?"

#### c. Co-ordination

\*cos agus lámh adhmaid leg and hand wood-Gen. "wooden leg and hand"

cos adhmaid agus lámh adhmaid cf. leg wood-Gen. and hand wood-Gen. "wooden leg and wooden hand"

The syntactic evidence unequivocally indicates that expressions like cos adhmaid are word-level formations. The semantics of these expressions confirms this. They tend to have idiosyncratic readings. In the following examples, the meaning of the whole is not entirely predictable from the meaning of the parts.

buachaill aimsire boy service-Gen. "servant-boy" bean chúnta woman helping-Gen. "midwife" fear tí man house-Gen. "host" maide coise stick leg-Gen. "walking stick"

If we turn how to the phrase seol an bháid we find that it can undergo the very same operations that cos adhmaid proved resistant to in (1).

## (3) a. One-substitution

- Cá bhfuil seol an bháid? Α. Where is sail the boat-Gen. "Where is the sail of the boat?"
- Ceann an bháid? B. One the boat-Gen. "The one of the boat?"

## b. Wh-movement

- Chonac seol an bháid Α. I-saw sail the boat-Gen. "I saw the sail of the boat"
- Cén bád? **B**. "Which boat?"

## c. Co-ordination

seol agus stiúir an bháid sail and tiller the boat-Gen. "the sail and tiller of the boat" One fact about the syntactic phrases and the word-level phrases immediately strikes us. This is the presence of the definite article an before the genitive complement in the former. Normally, this implies that the second member of the phrase is specific. In expressions like cos adhmaid on the other hand, the complement i generic. This of course is what we would expect: the same distinction can be observed between compounds and syntactic phrases in English. For example, Spencer (1991: 312) points out that "neither student nor film in student film society serve to pick out any specific student or film".

# 2.2 The internal structure of compounds

So far we have been arguing for the recognition of the word-status of compounds, stressing the ways in which they differ from phrases. However, it would be disingenuous to pretend that Irish compounds do not display a certain degree of word-internal structure lacking in monomorphemes and items derived by affixation. This manifests itself in a number of ways.

As far as inflectional morphology is concerned, it appears that compounds are headed, with features pertaining to the whole compound being realised on the head. In English, as Anderson (1992: 294-295) points out, evidence for this is provided by irregular inflection. Suppletive plurals, for example, are found in compounds, e.g. washerwomen, men-of-war. This means that the internal structure of these formations is visible to inflection. By and large, the Irish data confirm this picture. Plural inflection is normally realised on the first element only, i.e., the head.

(4)

"wooden-leg"

Sg. Pl. sagart paróiste sagairt paróiste priest parish-Gen. priest-Pl. parish-Gen. "parish-priest" "parish-priests" seol deiridh seolta deiridh sail end-Gen. sail-Pl. end-Gen. "end-sail" "end-sails" bean chaointe mná caointe (irregular) woman lamenting-Gen. woman-Pl. lamenting-Gen. "woman lamenter" "woman lamenters" cos adhmaid cosa adhmaid leg wood-Gen. leg-Pl. wood-Gen.

In work such as Lieber (1983), Williams (1981), di Sciullo and Williams (1987), Borer (1988), it is assumed that compounds allow features to percolate from their heads to the projection of the new word. What this would mean for Irish is that the feature [+pl] would percolate from the head to the whole compound. In the first example in (4) above, the feature [+pl] moves from sagairt to sagairt paróiste, so that the whole compound ends up as [+pl], even though the morphological marking is only present in the head.

"wooden-legs"

Two marginal plural patterns exist. In the first of these, the genitive non-head is also marked for plural.

(5) maidí cos maide coise stick-Pl. leg-Gen.Pl. stick leg-Gen. "walking-sticks" "walking-stick" dochtúirí ban dochtúir mná doctor-Pl. woman-Gen.Pl. doctor woman-Gen. "woman doctor" "women-doctors" saortha cloch saor cloiche craftsman-Pl.stone-Gen.Pl. crastsman stone-Gen. "stone-masons" "stone-mason" éan circe éanacha cearc 'bird-Pl. hen-Gen.Pl. bird hen-Gen. "chicks" "chick"

Normally only the heads of compounds are inflected, but the double inflection seems to be common as a marginal phenomenon cross-linguistically. One can observe it, for instance, in English appositional compounds in plurals like women drivers<sup>3</sup>.

The other marginal pattern of forming plurals involves nominative inflectional marking on the non-head only.

(6)col ceathracha col ceathrair relation four people-Gen. relation four-people-Pl. "first cousins" "first cousin" croch chéastaíocha croch chéasta cross suffering-Pl. cross suffering-Gen. "crosses" "cross" carn aoiligh carn aoilí heap dung-Gen. heap dung-Pl. "dungheaps" "dung-heap"

Here, complete lexicalisation has taken place, and the head is no longer recognised as such.

The headedness of compounds is also manifested in number agreement found on adjectival modifiers. Adjectives follow their nouns in Irish. When they modify a compound they will have the same value for plural as the head. In *bróga leathair daora* – shoes leather-Gen. expensive-Pl. – "expensive leather-shoes", the adjective agrees with the head in having plural inflection.

<sup>&</sup>lt;sup>3</sup> Borer (1988: 57) describes an almost identical situation in Hebrew. Normally, only the head is made plural, e.g. ben melex – son king – 'prince': bney melex – son-Pl. king – 'princes'. However, she does admit that one occasioanly finds plural marking on the complement as well, e.g. ben dod – son uncle – 'cousin': bney dodim – son-Pl. uncle-Pl. – 'cousins'.

Another indicator of headedness is to be found in initial mutations, when they are used to indicate gender agreement. Feminine nouns cause lenition in following nouns and adjectives, e.g. bean "woman" would cause a following complement like caointe [ki:n't'ð] "lamenting" to be lenited to [xi:n't'ð], or a following adjective beag "small" to be lenited to bheag [v'og]. In bean chaointe bheag [b'æn xi:n't'ð v'og] - woman lamenting-Gen. small - "small woman lamenter", both the noun and the adjective are lenited. Thus the head noun affects the adjective despite the intervening complement. This is exactly what would happen in Irish syntax, but it violates the principle of lexical integrity. Compounds contrast with affixal derivatives in this regard: the addition of a suffix can cause a change in gender, with a resulting change in the mutation of a modifying adjective. For example, if we add the suffix -acht to the masculine noun buachaill "herd", we obtain a feminine noun buachailleacht "the act of herding". The syntax will only be sensitive to the gender of the derivative, so that a following adjective like maith [ma] "good" will be lenited because the derivative is feminine, e.g. buachailleacht mhaith [buðxðl'ðxt va] "good herding". But in the case of compounds, it is the head which determines the mutation pattern. Presumably, gender in Irish, like number, is a feature which percolates from the head to the whole compound.

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In keeping with the principle of lexical integrity we would expect adjectives to follow the whole compound, just as they follow single words. By and large, this is the case, e.g. buachaill aimsire maith - boy service-Gen. good-Nom. - "good servant-boy". However, there appear to be exceptions to this. Consider the following examples.

fear oibre maith man work-Gen. good-Nom. "good workman" bean chaointe bhreá woman lamenting-Gen. fine-Nom. "fine woman lamenter" bróga leathair maithe shoes leather-Gen. good-Nom. "good leather-shoes" ceann tuí deas roof straw-Gen. nice-Nom. "nice straw-roof"

fear maith oibre man good-Nom. work-Gen. "good man for working" bean bhreá chaointe woman fine-Nom. lamenting-Gen. "fine woman for lamenting" bróga maithe leathair shoes good-Nom. leather-Gen. "good shoes as regards leather" ceann deas tuí roof nice-Nom. straw-Gen. "nice roof as regards straw"

Here we find the adjective occurring either after the head or after the whole phrase. However, as the glosses are meant to illustrate, there is a semantic distinction between the phrases on the left and those on the right. The difference between the two can be illustrated in expressions with the adjective mór big. As well as its basic meaning, it can be used as an intensifier, much like English big in a big baby. When this is the case, it must follow the head. Otherwise, the meaning is the regular one.

(8) fear oibre mór man work-Gen. big-Nom.

> "big workman" bean siúil mhór

woman walking-Gen. big-Nom. "big woman tramp"

fear mór oibre

man big-Nom. work-Gen. "great worker"

bean mhór siúil

woman big-Nom. walking-Gen. "woman who walks a lot"

What this indicates is that the expressions in the right-hand column are not formed by modifying a compound: fear mór oibre is not the same as fear oibre modified by mór. In other words, we are dealing with a completely different structure here which only superficially resembles that of compounds. We suggest that the genitive is a complement to the adjective, much as in phrases like envious of in English<sup>4</sup>. This means that *fear mór oibre* "big worker" would have the structure N+AP. It has been proposed (e.g. Anderson 1992: 311, footnote 9) that compounding involves lexical elements, i.e. elements of the form X<sup>0</sup>. If this is true, then phrases of the sort we are discussing violate this condition: in fear mór oibre a lexical category fear combines with an AP mór oibre. This looks more like a syntactic operation, involving constituents of the form X', than compounding<sup>3</sup>.

We can sum up the characteristics of Irish compounds as follows.

(9)

- 1. They do not allow the syntax access to their constituents, which rules out such operations as co-ordination or extraction, or adjectival modification of heads or complements.
- 2. They display a more complex word-internal structure than formations derived by affixation: inflectional operations are for the most part realised on the head, which is the first element in the word.

One important fact that emerges from the first of the two characteristics listed in (9) is that compounds are formed pre-syntactically. This becomes more significant in the light of the next group of expressions that we wish to discuss.

# 3. Word-formation and the syntax

We have already remarked that the presence or absence of the feature specificity in the complement is crucial in determining whether a phrase is a compound or not. In other words, we distinguish between [+specific] phrases, where the article precedes the complement, and [-specific] compounds, which generally do not contain the article. In this section we look more closely at phrases containing the article.

<sup>&</sup>lt;sup>4</sup> English does not allow attributive adjectives with complements for the most part. The nearest thing to the phrases we are discussing would be something like a good day for fishing, or a bad shop for meat.

<sup>&</sup>lt;sup>5</sup> Or at least if it is to be recognised as compounding, it will have to be given a special status, as involving elements belonging to both phrasal and lexical categories.

Borer (1988) offers a study of the difference between compounds and what she calls "construct state nominals" in Hebrew: the former are formed before, and the latter after, D-structure. The difference between the two is largely a question of the role of the article in the phrase group. The two constructions are illustrated in the following examples from Borer (1988: 56-57).

- (10) a. Construct state nominals
  - A. manhig ha-kita leader the class "the leader of the class"
  - B. shomer ha-bayit guard the house "the guard of the house"
  - b. Compounds
  - A. ben ha-melex son the king "the prince", not "\*the son of the king"
  - B. rosh ha-ir head the city "the mayor", not "\*the head of the city"

Borer argues that definiteness is to be regarded as a feature which percolates from the complement to the head in both construct state nominals and compounds. In the former, the definiteness of the complement plays a role in determining the meaning of the whole. In compounds, on the other hand, the definiteness of the complement does not contribute to the meaning of the whole.

An almost parallel situation exists in Irish. Let us compare two expressions which resemble each other very closely.

- (11) a. fear an tí man the house-Gen. "the master"
  - b. an fear títhe man house-Gen."the host, householder"

In (11a), only the complement is preceded by the article, but both head and complement are definite. In compounds, like the one illustrated in (11b), the article must precede the whole expression, and it is only the head which is definite.

Borer argues that in Hebrew both compounds and construct state nominals are formed by the word formation component, the difference being that the formation of the former precedes that of the latter. Given the parallels between construct state nominals and phrases with [+definite] complements in Irish, it is worth considering whether a similar interpretation would be plausible for the latter. Before attempting to tackle this problem, it is necessary to look more closely at non-compound complex NP's. Consider the following examples.

(12) mac Shéamais
son James-Gen.
"the son of James"
seol an bháid
sail the boat-Gen.
"the sail of the boat"

At first glance, these examples seem to be of the same sort as fear an ti, and it would seem plausible to regard them all as the result of the application of word-formation rules to syntactic phrases. But there are two important differences. First, the semantics of phrases like fear an ti is less compositional than that of the phrases in (12). If we translate it literally as "man of the house", the meaning "master" is not necessarily obvious. The same applies to other combinations with the genitive of "house".

woman the house-Gen.

"the mistress"

mac an ti

son the house-Gen.

"the male heir"

clann an ti

children the house-Gen.

"the children"

In other phrases of this sort, the complement is generic even though it is definite.

(14) tigh an tábhairne
house the tavern-Gen.
"the pub" (as an institution)
sagart na paróiste
priest the parish-Gen.
"the parish-priest"
tigh na mbocht
house the poor-Gen.
"the work-house"

We seem to be dealing here with lexicalisation: the complement loses the feature [+ specific] despite the presence of the article. No such idiosyncracies arise in examples like those in (12): the semantic relation between head and complement is roughly equivalent to that of possession, and the meaning of the whole is deducible from that of its parts.

The second difference between the phrases in (12) and those in (13) and (14) is paralleled by a distinction in Hebrew discussed by Borer. Construct state nominals in this language do not allow complement extraction, whereas this is possible in the case of other phrases; for example, a noun can be moved out of a PP. Borer

argumenthat this can be accounted for if we assume that construct state nominals have become words by the time they reach S-structure. Because of their new status, they do not allow complement extraction. Now if we apply such a test to the Irish data we find that fear an ti behaves like a word, while other phrases allow movement Compare a) and b) below.

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(15)Sin é sear an tí.

That him man the house-Gen.

"That is the master of the house."

\*Cén tigh go bhsuil a shear san ospidéal?

Which house that is its man in-the hospital?

"Which is the house whose master is in hospital?"

Sin é mac an shir.

That him son the man-Gen.

"That is the son of the man"

Cén fear go bhfuil a mhac san ospidéal?

Which man that is his son in-the hospital?

"Which is the man whose son is in hospital?"

Im (15a) the extraction is ungrammatical, but it is allowed in (15b).

Another feature which serves to distinguish the two kinds of phrase is modification of the complement. This is perfectly normal with syntactic phrases.

(16)Sin é mac an shir mhóir.

That him son the man-Gen. big-Gen.

"That's the son of the big man."

Sin é mac an fhir atá ag caint.

That him son the man-Gen. who-is at talking

"That's the son of the man; who; is talking."

Once again, this contrasts with the behaviour of fear an tí.

(17)\*Sin é fear an tí mhóir.

That him man the house-Gen. big-Gen.

"That's the master of the big house"

\*Sin é sear an tí atá ag titim anuas.

That him man the house-Gen. which-is at falling down

"That's the master of the house; which; is falling down."

Charly, it is necessary to distinguish between two kinds of [+ definite] NP's. On the one hand we have regular, syntactically-formed phrases like mac an shir. As well as these we have expressions like fear an ti. As we have just seen, such phrasis seem in many respects to behave very much like words. Ought they then to be included under the heading of compounds?

There are a number of objections to such a solution. Unlike compounds, these phrasido not allow inflectional operations on their heads. If the head is pluralised, the meaning changes. For example, if we pluralise fear an ti the meaning changes.

(18)fir an tí fear an tí man-Pl. the house-Gen. man the house-Gen. "the men of the house", \*"the masters" "master"

If they are compounds, there seems no reason why they should not be pluralised

Furthermore, they do allow certain syntactic operations to take place on their constituents. We find a limited amount of co-ordination with such phrases.

fear agus bean an tí (19)man and woman the house-Gen. "the master and the mistress" \*fear agus bean tí man and woman house-Gen. "the host and hostess"

We also come across cases of adjectival modification of the head, although such occurrences are rare.

iníon óg an tí (20)daughter young the house-Gen. "the young daughter"

As we saw in 2.2, this is not possible for compounds.

Some of these phrases could be included under the heading of compounds. As we observed above with respect to the examples in (14) like tigh an tábhairne, the complement is non-referential, and there is nothing more remarkable about them than an expression like cock-of-the-walk in English. But phrases like fear an tí constitute a more serious problem precisely because they are specific. fear an ti means the master of a definite house, as can be seen by the use of demonstratives with such phrases.

(21) fear an tí seo man the house-Gen. this "the master of this house" bean an tí sin woman the house-Gen. that "the mistress of that house" muintir an bhaile úd people the village-Gen. you "the people of yon village"

Borer (1988: 46) advocates a model of word-formation which she calls parallel

<sup>&</sup>lt;sup>6</sup> Certain parallels from English prompt themselves. We can pluralise compounds like man of God : men of God, but idioms like the man in the street are immutable; cf. \*the men in the street, \*a man in the street.

morphology, whereby the word-formation component, instead of always preceding the syntax, is allowed to operated parallel to it. She argues that word-formation should be regarded as constraining representations. The level at which these representations appear is not important, as long as well-formedness is not violated. This, she claims, is responsible for the different syntactic properties of compounds and construct state nominals in Hebrew. For example, the latter, being formed after D-structure, allow modification of their complement, which is not possible in the case of compounds. Compounds, with their idiosyncratic semantics, are listed in the lexicon, while the construct state nominals have a fully compositional meaning and are unlisted.

If we apply this model of word-formation to the Irish data, it works as follows. Phrases which have a generic complement are entered in the lexicon as compounds: this would include phrases without the article and some phrases with the non-specific article like those in (14) above. As for phrases with a specific complement, on the whole these are not affected by the word-formation component, i.e., the dominant pattern is for them to behave like other syntactic phrases. The exception are the group we have been discussing, phrases like fear an tt. Unlike Hebrew construct state nominals, which are formed freely and are not listed, these Irish phrases have to be entered in the lexicon, both because of their semantics and also because one cannot predict when they will be formed. In other words, there is an important difference between the Irish and the Hebrew material: the formation of construct state nominals is a systematic process, while that of "nominals" like fear an tt is not.

Ultimately, there is not so much which distinguishes regular compounds from these nominals. Both groups are entered in the lexicon. The non-compounds are more marked, in that they allow the syntax a limited amount of access to their constituents, do not undergo pluralisation, and have specific complements. As we noted above, it would not be appropriate to regard these formations as compounds. On the other hand, the instances of these phrases are not numerous, and their occurrence is not a regular, rule-governed process, so that there would be little justificataion for granting them the status of a main-stream morphological category, like Hebrew construct state nominals. The Irish nominals must be assigned to the margins of word-formation.

Borer's model of word-formation seems well suited to her data. To the extent that it gives the word-formation component a role at the syntactic level, it is helpful in interpreting the Irish material, but in the end we are forced to fall back on the by now traditional notions of listing and the lexicon to account for the facts. Parallel morphology is an exciting theoretical development, and it warrants further investigation using different bodies of data. The brief comparison of the Hebrew and Irish material which we have presented illustrates that the model is of general significance; however, the degree to which it succeeds in deepening our understanding of the specific data depends to a certain extent on the language in question.

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