

# Predication and Equation\*

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## Abstract

In this paper we argue that a structural distinction between predicational and equative copular clauses is illusory. All semantic predicational relationships are constructed asymmetrically via a syntactic predicational head; differences reduce to whether this head bears an event variable or not. This allows us to maintain a restrictive view of the syntax-semantics interface in the face of apparently recalcitrant data from Scottish Gaelic.

*Keywords:* copular clauses, equatives, predication, pronouns, Scottish Gaelic.

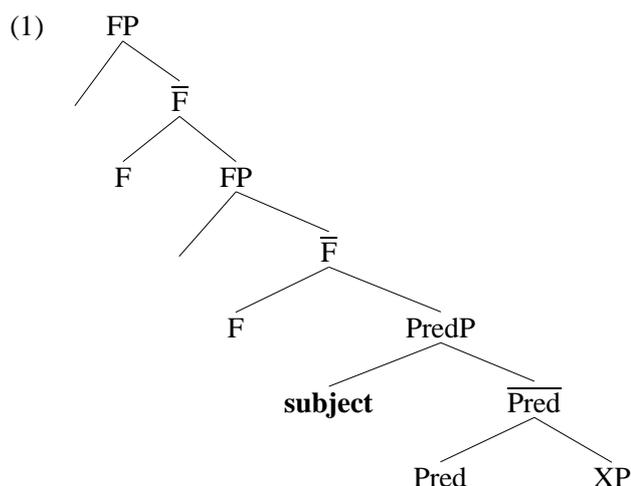
## 1 Introduction: Predication and the Syntax-Semantics Interface

Natural language propositions are often considered to contain a thematic core expressing predicate argument relationships (often termed a *small clause*). Work exploring this idea has been foundational, both to our understanding of clause structure (Williams 1980, Williams 1983a, Manzini 1983, Hoekstra 1984, Bowers 1993, Stowell 1981 and many others) and the semantic construction of predicational relationships (Higginbotham 1985, Rothstein 1995, Doron 1983, Rapoport 1987, among others). This paper defends the view that there is an extremely tight relationship between the syntax and semantics of predication, and that semantic predication always feeds off a syntactic structure containing a predicational head (following Bowers 1993; Svenonius 1994). We do this on the basis of data from Scottish Gaelic, which appears to challenge such a tightly constrained relationship between syntax and semantics. We show that this data, when understood properly, actually provides extra motivation for the approach. This means that it is not necessary to postulate different types of underlying structure to account for apparent differences in the interpretation of predication (contra Rothstein 1995, Rapoport 1987, Pereltsvaig 2001).

More specifically, the view that we defend is that a clause consists of a predicational core where thematic relations are licensed, and which is delimited by a head, Pred. Pred acts as the syntactic edge of the predicational core (Chomsky 2000, Chomsky 2001) and its projection is surmounted by an articulated functional domain containing heads that check formal features, trigger displacement, and mediate other important grammatical and information structural properties of the clause. The predicational core itself is asymmetrically constituted such that the “argument” of the predicate constructed by the head and its complement sits in the specifier position of the predicate phrase.

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This kind of view of the lower domain of clause structure developed from early work by Stowell (1981) which took lexical categories themselves to be predicational. Once it is assumed that predication is mediated through an (essentially) functional head (see, for example, Hornstein and Lightfoot 1987, Raposo and Uriagereka 1990, Moro 1988), the question arises as to what may be the complement of this head. More specifically, are there constraints upon the category, or the semantic type, of XP? A natural translation of Stowell's original insight into the current framework answers this question with a yes: the syntactic category of XP is restricted to the set of lexical categories (N, V, A, P) and semantically these categories may all be unsaturated, in the Fregean sense (see Higginbotham 1985).

The most pressing empirical challenge then becomes equative sentences. Equatives consist of two DPs and a copular verb:

(2) Mairead's songs are Micheal's joy

Since DPs are not lexical categories, and since at least some DPs are usually assumed to be saturated (Higginbotham 1985; Higginbotham 1987), it appears that we have a type of sentence that cannot be reduced to the predicational structure outlined above.

One way of dealing with this problem, is to site the source of the two kinds of predication in the copular verb *be*. This entails that the copula is ambiguous, appearing as both a semantically empty auxiliary, and as a true verb signifying identity between its arguments (Higgins 1973, Rapoport 1987, Zaring 1996, Higginbotham 1987). From this perspective, (1) has a reading familiar from classical logic, where the identity predicate is introduced by the copula:

(3) **Mairead's-songs = Micheal's-joy**

Closely related to this idea are analyses where there are two different types of small clause, one underlying equative sentences, and the other underlying predicative sentences (Heycock 1994, Carnie 1997, Heycock and Kroch 1999), each with an associated logical representation. This idea divorces the type of predication from the copula itself, thus avoiding having to specify an ambiguous copula. However, it weakens the tight one-to-one mapping between the syntax and semantics of predication represented by (1) above.

An alternative is to reject the assumption that proper names and other DPs such as possessives and definites are obligatorily saturated. This approach has been taken by Heggie (1988), Moro (1997) and, for pseudo-clefts, Williams (1994). These authors argue that, in cases where two DPs appear in copular sentences, one of them is semantically and syntactically the predicate, while the other is referential:

- (4) a. Jenny is the doctor.  
b. The doctor is Jenny.

Under this view, *the doctor* is the predicate in both these examples. Syntactically, the (b) example involves raising this DP predicate to some higher position ([Spec, CP] for Heggie (1988), [Spec, IP] for Moro (1997)). Heggie and Moro provide syntactic evidence (from extraction, cliticisation, pronominalisation, focus effects etc ) that there is a syntactic asymmetry in these cases. This kind of analysis entails either that we give up the PredP framework, or that somehow DPs may be the complement of Pred.

Assuming that we maintain the PredP framework, and that Pred always takes an unsaturated complement, we are forced to assume a more complicated picture of the relationship between the syntax and semantics of nominal projections. We have to allow DPs to have more than one interpretation, since they can be referential but also apparently predicative (Partee 1987). If DPs can be both predicative and referential then we do not have an obvious way of maintaining a strict one-to-one mapping between the syntactic category and the semantic type.

Summarizing then, there are two broad lines of attack on the problem of how to approach sentences that contain two DPs: (i) adopt the idea that there are two kinds of predicational structure available, correlating roughly with predicational and equative interpretations; (ii) take the perspective that there is only one kind of predicational structure, but that the complement of Pred is not restricted to lexical categories.

English is one language where equative sentences and non-equative sentences have a similar surface syntax (but see Heggie 1988 and Moro 1997 for a discussion of more subtle differences). In this paper we address the fact that many other languages (for example, languages in the Celtic, Semitic and Slavic families) appear to use radically different morphological means that seem to map intuitively to differences in the type of predication expressed. We take one such language, Scottish Gaelic, and show that the real difference is not between equative and non-equative sentences, but is rather dependent on whether the predicational head in the structure proposed above is eventive or not.

We show that the apparently odd syntax of “equatives” in this language derives in part from the fact that they are constructed via a Pred head lacking an eventuality variable. Additionally, since Pred heads cannot combine with non-predicative categories, such as saturated DPs, “equatives” are built up indirectly from a simple predicational structure with a semantically bleached predicate. This approach not only allows us to maintain a strict one-to-one syntax/semantics mapping for predicational syntax, but also for the syntax of DPs. The argument we develop here, then, suggests that the interface between the syntactic and semantic components is maximally economical — one could say perfect.

## 2 Scottish Gaelic Predicational Structures

One of the major arguments we present in this paper is that DPs cannot be the complement of Pred, a fact, which if true, receives an explanation based on the function of the D-layer in a DP and the syntactic requirements of Pred. We begin by outlining the syntax of clauses, and specifically predicative clauses, in Scottish Gaelic with a view to establishing this claim.

### 2.1 Basic Clause Structure

Scottish Gaelic is a language closely related to Modern Irish. It has a basic VSO structure, with the finite verb preceding the subject and object. The arguments adduced by McCloskey (1983) to show that Modern Irish VSO is derived from an underlying SVO order can be replicated for Scottish Gaelic (Adger 1996, Ramchand 1997). We assume, therefore, that an example like the following has the structure indicated, with the verb raising from its base position to some head within the functional domain of the clause.

- (5) Chunnaic<sub>i</sub> Calum [ *t<sub>i</sub>* Mairi].  
See-PAST Calum Mairi  
'Calum saw Mairi.'

The difference between Scottish Gaelic and more familiar SVO languages is just that in Scottish Gaelic, the main verb raises to T while the subject phrase remains in situ. Chung and McCloskey (1987) provide a compelling range of arguments that show that in Irish, when the verb does not raise (because T is absent, or filled with an auxiliary), the string containing the *in situ* subject and predicate behaves like a constituent. Once again, the same arguments can be made for Scottish Gaelic (Ramchand 1997).

This general picture of Irish and Scottish Gaelic clause structure is uncontroversial. For concreteness, however, we will translate these basic ideas and intuitions into a broadly Minimalist framework, following the notation and some of the ideas of Pesetsky and Torrego 2001, Chomsky 2001 and Chomsky 2000.

The approach to Scottish Gaelic clausal structure we will follow is roughly that of Adger 2001. We adopt the idea that the VP domain is split into more than one head position (Larson 1987; Chomsky 1995b), and that the subject is Merged in the specifier of a 'little *v*', which we assume is equivalent to our Pred in the specific case where it selects a VP (see Bowers 2002 for recent discussion).

We assume that heads and phrases consist of syntactic features, some of which are specified as *uninterpretable*. Uninterpretable features must be marked for deletion during the derivation, since they are not tolerated by the interface systems of Spellout or LF-Interpretation. We notate a feature [F] as uninterpretable by prefixing it with a *u*: [*u*F], following Pesetsky and Torrego (2001).

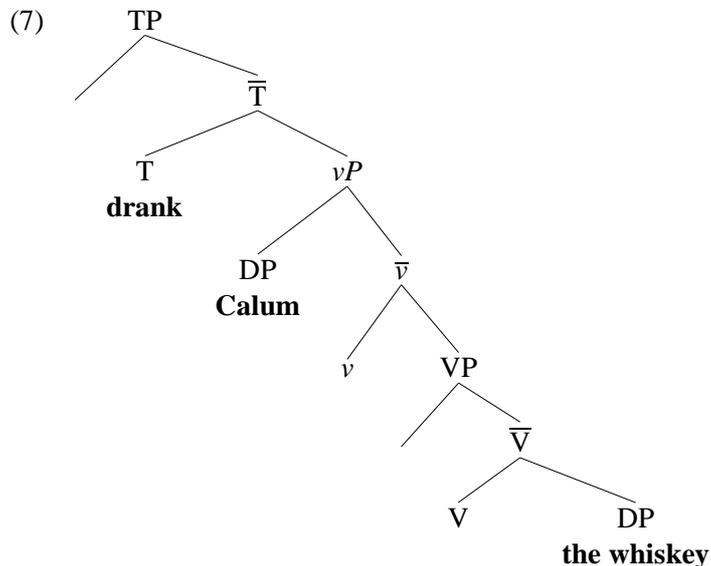
In addition to interpretability, features may also have an EPP property. The EPP property of a feature [*F*<sub>EPP</sub>] is satisfied by filling the specifier of the head that [F] sits on (H(F)) with some XP with which F has Agreed, where the XP contains phonological material. This means that we adopt a view of the EPP that sees it as a structural licensing requirement for particular heads which feeds into well-formedness requirements of the Spellout component. In some ways, EPP on a head is like an affixal-feature.

As far as head movement is concerned, we assume that if XP is the complement of H(F<sub>EPP</sub>), then the head of XP (H(XP)=X) moves and adjoins to H(F). Once again, we assume that the satisfaction of EPP is sensitive to phonology, making EPP that attracts heads even more like a stray-affix requirement.

To implement the generalisation that some overt material always appears in T, we assume that T bears an EPP feature as a sub-feature of its category feature [T<sub>EPP</sub>] (following Pesetsky and Torrego 2001). We follow Alexiadou and Anagnostopoulou (1998), who propose that languages differ in whether the EPP feature of T is satisfied by movement to T<sup>0</sup> or [Spec, TP], and assume that the parameter is set for T<sup>0</sup> in Scottish Gaelic.

In Scottish Gaelic, the EPP feature of T can actually be satisfied in one of two ways. The first way involves movement of the main verb from V through *v* and up to T (as in (6, 7)).<sup>1</sup>

- (6) Dh'òl            Calum an t-uisge beatha.  
 Drink-PAST Calum the whiskey  
 'Calum drank the whiskey.'



The second way to satisfy the EPP feature of T involves the Merge of an independent lexical item carrying pure tense features; compare (6) above with (8).

- (8) Bha            Calum ag òl            uisge beatha.  
 Be-PAST Calum ASP drinking whiskey  
 'Calum was drinking whiskey.'

In this example T is filled by the finite auxiliary shown in the example above, which is usually a form of the verb *bith*, 'be'. *Bith* is, in the traditional grammatical literature, termed the *substantive auxiliary* and we will accordingly refer to these constructions as *Substantive Auxiliary Constructions* (SACs). The SAC allows us to see more clearly the range of constituents that can appear in the PredP position of the sentence. We demonstrate some of these possibilities in the following examples<sup>2</sup>:

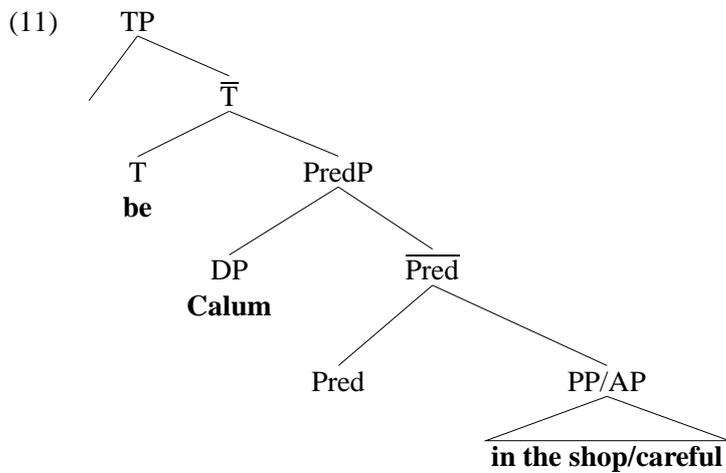
<sup>1</sup>This movement is mediated by the relation of Agree and is driven by the existence of uninterpretable *v* and T features on V and *v* respectively. See Adger 2001 for the details of the implementation in the Scottish Gaelic case.

<sup>2</sup>The forms *bha* and *tha* are respectively suppletive past and present versions of the substantive auxiliary.

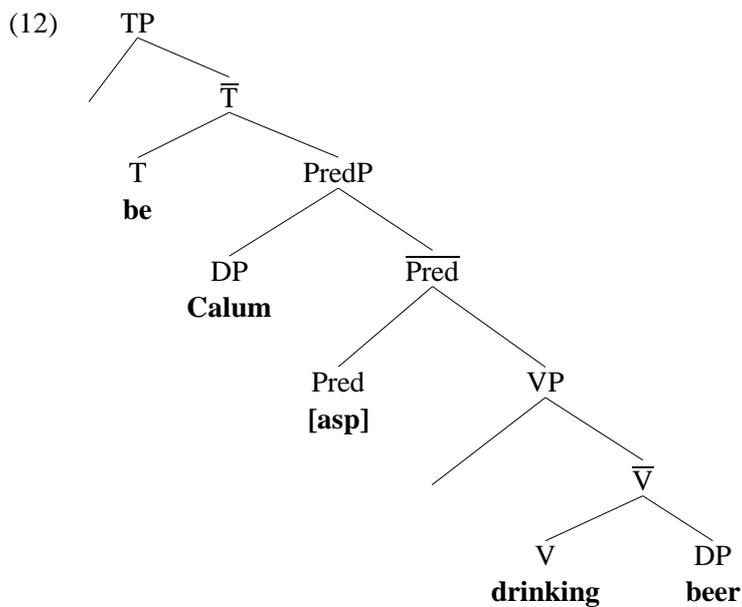
(9) Tha Calum faiceallach.  
 Be-PRES Calum careful  
 'Calum is (being) careful.'

(10) Tha Calum anns a'bhùth.  
 Be-PRES Calum in the shop  
 'Calum is in the shop.'

In the above examples, we see an AP and a PP in the predicate position. We will assume that the subjects of these predicates are introduced by Pred (as in section 1; see Bowers 1993, Svenonius 1994, Adger 2001). The EPP property of T's tense features is satisfied by Merging in a version of the substantive auxiliary *bith*.



We adopt the same kind of analysis in the case of constructions where the little *v* head encodes some aspectual property, such as (8) above:



This approach predicts that the string *Calum ag òl leann* in (8) is a constituent independent of the appearance of the substantive auxiliary, a prediction which is backed up by the appearance of [*PredP* Subj ... VP/AP/PP] strings in small clause structures such as the tenseless absolutive construction in the following examples:

- (13) Chunnaic mi Calum agus [e ag òl leann].  
 See-PAST I Calum and [him prog drinking beer ]  
 ‘I saw Calum while he was drinking beer.’
- (14) Chunnaic mi Calum agus [e air a mhisg].  
 See-PAST I Calum and [him on his drunkenness]  
 ‘I saw Calum while he was drunk.’
- (15) Chunnaic mi Calum agus [e uamhasach toilichte].  
 See-PAST I Calum and [him terribly happy]  
 ‘I saw Calum while he was really happy.’

## 2.2 Nominal Predication and the Substantive Auxiliary

We now turn to cases where the predicative core of the clause consists of two nominals. In such cases, a simple NP predicate is barred:

- (16) \*Tha Calum tidsear.  
 Be-PRES Calum teacher  
 ‘Calum is a teacher.’
- (17) \*Chunnaic mi Calum agus [e tidsear].  
 See-PAST I Calum and [him teacher]  
 ‘I saw Calum while he was a teacher.’

Similar facts are noted for Irish by Chung and McCloskey (1987). In place of a simple NP predication, we find a richer structure:

- (18) Tha Calum ‘na thidsear.  
 Be-PRES Calum in-3MS teacher  
 ‘Calum is a teacher.’
- (19) Chunnaic mi Calum agus [e ‘na thidsear].  
 See-PAST I Calum and [him in-3MS teacher]  
 ‘I saw Calum while he was a teacher.’

The particle ‘*na* seen before the NP in these sentences consists, morphologically at least, of the preposition *ann*, “in,” incorporating a possessive pronoun that agrees in  $\phi$ -feature specification with the subject, so as well as (18), we have (20):

- (20) Tha mi ‘nam thidsear.  
 Be-PRES I in-1SG teacher  
 ‘I am a teacher.’

Why should there be this extra material? Under the system of assumptions we have built up so far, we might expect to be able to simply use the Pred head that cooccurred with APs, and PPs with NPs too, an expectation that is clearly not met.

We put this difference down to the different denotational properties of NPs as opposed to PPs, APs, and verbal constructions: NPs denote properties of individual entities, whereas APs, PPs and verbal constructions denote properties of individuals with respect to an eventuality. The idea that nominals lack an eventuality variable in their logical representation has been argued for by Higginbotham (1985) and Parsons (1990), among others. We take this to be a property of the functional structure under which the lexical root is embedded: the semantics of the functional structure selecting adjectival, prepositional and verbal roots introduces eventuality variables, in contrast to the D-related functional projections selecting nominals.

We follow Ramchand (1996) in taking the SAC in Scottish Gaelic to obligatorily involve binding of an eventuality variable; it will therefore reject the use of NP predicates as the complement of the null Pred head.<sup>3</sup> Instead, the language employs an expletive prepositional head *ann*-‘in’, which by virtue of being a P possesses an eventuality variable, and also selects an NP complement. This PP projection is now possible as the complement of the null Pred head, which needs to bind an eventuality variable in its complement domain. In essence all that the overt prepositional head does is semantically convert the NP into a predicate with an appropriate variable position to bind.<sup>4</sup>

The data we have presented so far does not constitute a challenge for the PredP approach to predication, and, in fact, provides some support for the existence of a separate predicative head. NP predication uses the same mechanisms as AP and PP predication, and is unified with finite verbal structures at the right level of abstraction. All of these structures involve a predicative head that introduces an external argument and that enters into various feature-checking relationships with other heads and XPs in the structure.

However, it is worth noting at this point that, although NPs may be predicates within an SAC, DPs cannot be:

- (21) \*Tha Calum an tidsear.  
 Be-PRES Calum the teacher  
 ‘Calum is the teacher.’

This is equally true in other constructions that take a PredP, such as the absolutive construction we met earlier:

- (22) \*Chunnaic mi Calum agus [e an tidsear].  
 See-PAST I Calum and [him the teacher]  
 ‘I saw Calum while he was the teacher.’

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<sup>3</sup>The interpretation of an SAC is thus akin to the notion of a “stage-level” interpretation. We do not, however, use the terminology of “stage” and “individual” as we assume the relevant interpretative properties to be borne by the sentence, rather than by the predicate, and to arise from the particular functional heads projected. Evidence for this is that SACs may also have generic interpretations where the eventuality variable is bound by a default Generic operator. See Ramchand 1996 for further details.

<sup>4</sup>Note here also that the aspectual heads found in Scottish Gaelic are also etymologically derived from a prepositional source, suggesting the naturalness of this kind of diachronic reanalysis of preposition to event-structural functional head from a language internal point of view.

- (23) \*Bhuail mi Calum agus [e mo bhràthair].  
 Hit-PAST I Calum and [him my brother]  
 ‘I hit Calum while/though he was my brother.’
- (24) \*Bhuail mi Calum agus e [an càraid as fheàrr agam].  
 Hit-PAST I Calum and him the friend best at-me  
 ‘I hit Calum while he was my best friend.’

Unlike in the case of NP predication, there is no way of “saving” this structure by using some extra morphological material, such as the *ann* particle we saw earlier:

- (25) \*Tha Calum anns an tidsear.  
 Be-PRES Calum in the teacher  
 ‘Calum is the teacher.’

Summarizing, then, whereas projections of lexical categories such as NP, PP, VP or AP may occur as the complement of Pred, DPs cannot. We return to a more formal discussion of this restriction in section 4.2.

### 3 A Challenge: Inverted Copular Clauses (ICCs)

In addition to the Substantive Auxiliary Constructions, Scottish Gaelic has another, more unusual, way of forming predicative structures. These constructions appear to involve the inversion of the predicate to a position in front of the subject, and we will therefore refer to them as Inverted Copular Constructions (ICCs). In Scottish Gaelic, inverted copular constructions are less productive than they were only a century ago, and, except for (an admittedly large number of) idiomatic locutions, they have an archaic flavour, or are high register.

#### 3.1 Copular Inversion Structures

Inverted copular constructions consist of the *defective* copula *is/bu* which is immediately followed by the predicate and then the subject. This verb has only these two forms, in contrast to the substantive auxiliary *bith*, which inflects for four tenses (present, past, conditional, future). The form *is* is used when the predication is present, while *bu* marks past, future or conditional<sup>5</sup>:

- (26) Is mòr an duine sin.  
 Cop-PRES big that man  
 ‘That man is big.’
- (27) Is le Calum an cù.  
 Cop-PRES with Calum the dog  
 ‘The dog belongs to Calum.’

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<sup>5</sup>It may be that the functional head that appears within clauses of this type is not T at all, but a modal category signalling realis vs. irrealis features. We continue to assume the T functional projection for concreteness, and because nothing crucial hinges on the particular properties of the functional head here.

The copular verb here is phonologically weak and cliticises to the following predicate. There is evidence that the copula actually forms part of the onset of the syllable following it, suggesting it is incorporated into the following phonological word. This evidence is of two types: the *is* form of the copula is pronounced with a palatalised *s* sound when a front vowel follows, a process that happens within but not between phonological words; if the copula is followed by an aspirated voiceless stop, this stop loses its aspiration, following a general restriction on aspirated stops in word initial *s*-clusters.

Example (26) shows an adjectival predicate, while (27) shows a PP predicate. There is no alternative order, with the subject preceding the predicate:

(28) \*Is            an duine sin mòr.  
 Cop-PRES that man    big  
 ‘That man is big.’

(29) \*Is            an cù leamsa.  
 Cop-PRES the dog with+ me  
 ‘The dog belongs to me.’

As is shown by the translations, the predication in these examples is never tied to particular situations. The ICC always signifies that the predicate is conceived of as holding inherently of the subject, rather than accidentally. The interpretation here is akin to the individual-level interpretation of predicates discussed by Kratzer (1995) and many others. The interpretational effect can be seen most clearly through examples like the following, where the use of the past copula (as in (31)) is only felicitous if Calum is no longer alive. This is explained if the ICC, in contrast to the SAC, does not contain an eventuality variable. We return to the semantics of the ICC below.

(30) Is            tidsear Calum.  
 Cop-PRES teacher Calum  
 ‘Calum is a teacher.’

(31) Bu            thidsear Calum.  
 Cop-PAST teacher Calum  
 ‘Calum was a teacher.’

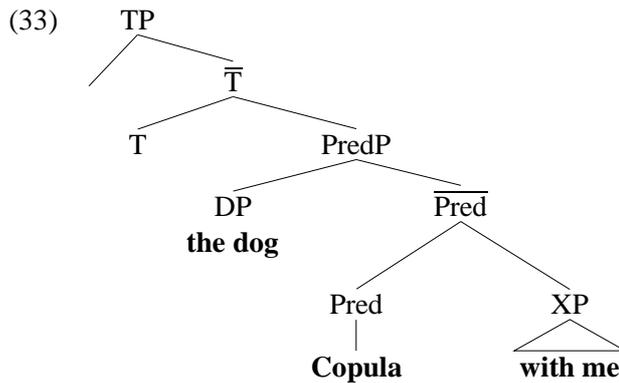
Notice that NP predication follows the same pattern as AP and PP predication: the copular verb is followed immediately by the predicate, which in turn is followed by the subject.

The ICC might be thought to pose an immediate challenge for the PredP approach to predication, since the predicate appears on the ‘wrong’ side of the subject. There is a debate in the literature as to the exact analysis of these structures which we will only mention here (see Doherty 1996, Carnie 1995, Carnie 2000, Doherty 1997, Ramchand 1996, Cottell 1997 for fuller exposition, and see Rouveret 1996 for discussion of related questions in Welsh.) The two broad lines of attack can be characterised as follows: (i) these clauses are completely different in their structure from SACs and are built up from different syntactic atoms; (ii) ICCs are derived from SACs via inversion of the predicate phrase.

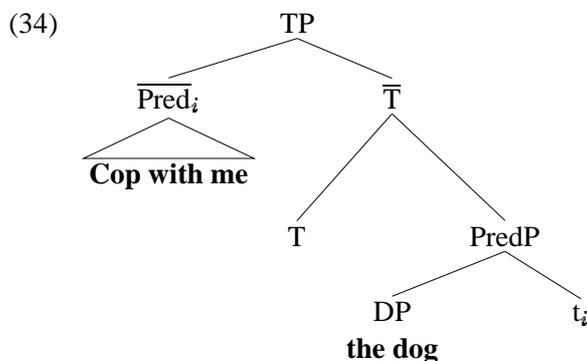
The empirical evidence that might allow us to choose between these two approaches is rather equivocal, and both approaches seem to be compatible with the data. In the interests of reducing

predication to a single structural configuration, we will pursue the second strategy. We assume that the copula is a manifestation of the Pred head, and that it encodes the peculiar semantics of this construction (see below for our explicit proposal). The following shows the phrase structure we assume for sentence (32) below.

- (32) Is leamsa an cù.  
 Cop-PRES with-me (emph) the dog  
 'The dog belongs to me.'



As before, we adopt the idea that T has the EPP property which must be satisfied by an element that the tense feature Agrees with. The extreme phonological weakness of the copula means that it cannot, on its own, satisfy the EPP property of T. This means head movement of the copula to adjoin to T does not take place. However, the [ $\mathcal{u}T$ ] features of the copula are present on its projection, and so  $\overline{\text{Pred}}$  raises into the specifier of T. In essence the copula pied-pipes its complement to ensure that enough phonological material is carried along to satisfy the EPP requirement of T.<sup>6</sup>



The ICC is reminiscent of a discussion in the literature about inverted copular structures in other languages. As mentioned in the introduction, Heggie (1988) and Moro (1997) argue that inversion of a predicate takes place in copular clauses in English examples like the following:

- (35) a. Jenny is the teacher.  
 b. The teacher is Jenny.

<sup>6</sup>Note that within a Bare Phrase Structure type theory (Chomsky 1995a, Chomsky 1995b)  $\overline{\text{Pred}}$  is a syntactic object just like any other, and so may move and target a position where it can satisfy the EPP requirements of T. Unlike Carnie 1995, we do not assume that satisfaction of this requirement takes place adjoined to  $T^0$  but in the specifier of TP.

In both of these examples, these authors claim that *the teacher* is the predicate and has raised to its surface position, inverting over the subject.

However, although the ICC construction in Gaelic is reminiscent of these approaches, it cannot be reduced to them for a number of reasons. Firstly, whereas this kind of predicate fronting is restricted in English, it applies to all lexical categories selected by the copula in Scottish Gaelic. This gives the following minimal contrast, where an indefinite or bare NP cannot generally be fronted in English (but see Declerck 1988), but must be inverted in a Gaelic ICC:

(36) \*A teacher is Jenny.

(37) Is            tidsear Calum.  
Cop-PRES teacher Calum  
'Calum is a teacher.'

(38) \*Is            Calum tidsear.  
Cop-PRES Calum teacher  
'Calum is a teacher.'

Even more strikingly, the same generalisation that we saw with SACs also holds of ICCs: DPs are incompatible with the predicate position of an ICC.

(39) \*Is            an tidsear Calum.  
Cop-PRES the teacher Calum  
'Calum is the teacher.'

(40) \*Is            Calum an tidsear.  
Cop-PRES Calum the teacher  
'Calum is the teacher.'

Note that constructions with the defective copula in Pred accept NP as well as AP and PP as complements. This copula, unlike the substantive auxiliary, does not require an eventuality variable to bind but rather predicates the property denoted by its complement directly of its subject.<sup>7</sup> We assume that NPs denote simple atomic properties (see Chierchia 1984 and (4.1) for fuller discussion) and propose that the semantics of the defective copula is as follows:

(41) [ **is** ] =  $\lambda\pi\lambda\mathbf{x}[\mathbf{holds}(\pi, \mathbf{x})]$

Here,  $\pi$  is the semantic type of simple properties. The copula's function is to state that the property denoted by its complement holds of its specifier. The lack of any eventuality variable signifying spatio-temporal location is what results in the distinction in interpretation between the defective copula and the substantive auxiliary.<sup>8</sup>

<sup>7</sup>Once again, this difference is similar to the stage- vs. individual-level distinction of Kratzer 1995. However, under our analysis, in the SAC the proposition involves the assertion of the existence of an event of a particular type; in ICCs, on the other hand, an atomic property is predicated directly of an individual.

<sup>8</sup>Note that this implies that APs and PPs also denote simple properties in these constructions (albeit, properties that have an eventuality variable in their semantic representation). This means that they have to be nominalised at some level, so that their eventuality variable is bound off. This seems to be the right result: ICCs are fully productive in Irish for NPs but restricted in a fairly idiosyncratic way for APs and PPs. Where APs are productive in this environment is in comparative forms, which have been independently argued to be nominalisations by Stenson (1976) and Adger (1999). See section 4.2 for further details.

It follows from this approach that the ICC does not tolerate bare indefinite subjects (42). It is well known that “individual-level” predications do not allow existential interpretations of indefinites (Milsark 1977, Kratzer 1995):

- (42) \*Is mòr duine.  
 Cop-PRES big a man  
 ‘A man is big.’

A detailed analysis of the interaction between generic and existential interpretations of nominals is beyond the scope of this paper.<sup>9</sup> We merely note the restriction here, and correlate it with the lack of eventuality variable in these constructions: we surmise that the existential interpretation of indefinites found in SACs arises as a side effect of an operation of existential closure, triggered by the need to bind an eventuality variable in an SAC (see Heim 1982, Diesing 1992 for applications of a similar default existential closure operation). This is absent in the inverted copular clause as there is no eventuality variable.

We noted earlier that these constructions were not fully productive in Scottish Gaelic, and this is also true in Irish for APs and PPs (Stenson 1981). We assume that this is because the defective copula in the colloquial language is now highly selective of the lexical items with which it can combine. However, the forms that do exist all conform systematically to the syntax and semantics we have outlined above, and our informants possess robust intuitions about them.

### 3.2 A Further Challenge: Augmented Copular Constructions (ACCs)

We have now seen the two major ways of constructing predicational structures in Scottish Gaelic: the SAC, where the predicate stays in situ unless it is a tensed verb, and the ICC where the movement of the copula pied-pipes the copula’s complement, leading to an inverted structure. Both of these constructions can be profitably analysed as involving the PredP structure discussed in section 1, and neither is compatible with a DP predicate.

However, it is possible to join two DPs with the defective copula as long as an extra element appears. This extra element is morphologically a third masculine singular pronoun, and is traditionally termed *the pronominal augment*, which we gloss as Aug. We will therefore refer to these copular constructions as *Augmented Copular Constructions* (ACCs). In an ACC, the augment immediately follows the copula, which is then followed by the two DPs:

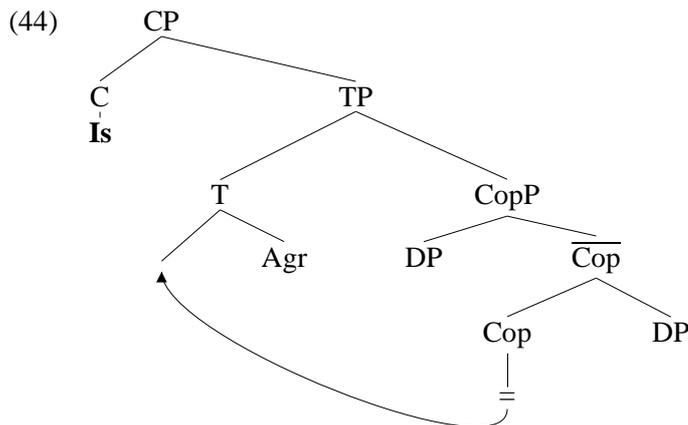
- (43) ‘S e Calum an tidsear  
 Cop-PRES Aug Calum (DP1) the teacher (DP2)  
 ‘Calum is the teacher.’

Augmented copular constructions are not restricted to Scottish Gaelic and Irish. Pronominal elements appear in copular clauses in Hebrew (Doron 1988), Arabic (Eid 1983), Polish (Rothstein 1986), Zapotec (Lee 1999) and other languages. Our contention is that where such pronominals appear, they are the true predicates of the construction, which means that one of the DPs is interpreted via a link with this pronominal. We shall argue that this account both allows us to maintain a

<sup>9</sup>It is possible to have a generic reading of the bare nominal in an ICC. Ramchand (1996) shows that the bare nominal is not independently kind-referring (i.e. this is not a case of D-genericity in the sense of Krifka et al. 1995) but that the generic reading arises from the binding of the individual variable provided by the nominal by a Generic operator. Crucially, this operator can bind the subject only in ICCs, while existential closure is possible only in SACs.

maximally simple relation between the syntax and semantics of predication, as well as explaining a range of empirical properties of these constructions.

ACCs have been previously addressed in the literature on Irish copular constructions. Carnie (1997) argues that these constructions are true equatives, and that there is a null copula that takes two arguments and equates them (see also Zaring 1996). Under this view, the pronominal element is simply an agreement head (following proposals of Doron (1983) for Hebrew). Schematically, this analysis looks as follows:



This proposal appears to receive support from considerations brought to bear by Heycock and Kroch (1999) who argue on the basis of sentences like (45), that true equatives really do exist:

- (45) a. Your attitude towards Jones is my attitude towards Davies.  
 b. My attitude towards Davies is your attitude towards Jones.

In these examples it is difficult to treat one or the other of the two DPs as truly a predicate. Either one can be the syntactic subject with little apparent difference in interpretation. If such sentences exist in English, then one might be tempted to argue that this is what is going on in the Irish and Scottish Gaelic ACCs. However, there are a number of arguments against going down this path. Perhaps most strikingly, there is always an interpretive asymmetry between the two DPs in Scottish Gaelic (and also in Irish: see Stenson 1981).<sup>10</sup> In (46), the only interpretation is that DP2, *Hamlet* is the name of a role. If we swap the two DPs around, it is impossible to interpret the sentence in the same way, even given world knowledge about actors and parts in plays:

(46) 'S e Sean Hamlet a-nochd  
 Cop-PRES Aug Sean Hamlet tonight  
 'Sean is (playing) Hamlet.'

(47) \*'S e Hamlet Sean a-nochd  
 Cop-PRES Aug Hamlet Sean tonight  
 'Sean is (playing) Hamlet.'

<sup>10</sup>This particular objection does not apply to the implementation of this approach offered by Carnie 1997. Carnie proposes that the predicate in an equative assigns two different  $\theta$ -roles, and accounts for the interpretive difference by appeal to this. However, the other arguments given below do apply to Carnie's analysis.

We see here a contrast with what happens in other languages. Williams reports that the inverted sentences are fine in English (Williams 1983b), as does Pereltsvaig (2001) for Russian.

(48) Sean is Hamlet tonight.

(49) Hamlet is Sean tonight.

(50) Vysotskij byl Gamlet  
Vysotsky-NOM was Hamlet-NOM  
'Vysotsky is (playing) Hamlet.'

(51) Gamlet byl Vysotskij  
Hamlet-NOM was Vysotsky-NOM  
'Vysotsky is (playing) Hamlet.'

To further emphasise the point, an equality interpretation is simply not available in ACCs. This means that an example like (53) is not an appropriate translation of (52). The paraphrase in (54) must be used instead.

(52) Cicero is Tully.

(53) \* 'S e Cicero Tully  
Cop-PRES Aug Cicero Tully  
'Cicero is identical to Tully.'

(54) 'S e Cicero agus Tully an aon duine  
Cop-PRES Aug Cicero and Tully the same man.  
'Cicero and Tully are the same person.'

Aside from the semantic asymmetry, there are a number of other difficulties with an equality predicate based approach to ACCs. Note that such an analysis makes these ACCs structurally identical to a true transitive verb construction, with the second DP in object position. Given this, one would expect that the first DP would behave just like the subject of a transitive verb, and the second just like an object. This expectation is not borne out in a number of ways.

Firstly, certain temporal and speaker-oriented adverbs are barred from appearing between the subject and object in a transitive sentence:

(55) \* Chunnaic Mairi an uair sin Sean  
See-PAST Mairi then Sean  
'Mary saw Sean then.'

(56) \* Chunnaic Mairi gu fortanach Sean  
See-PAST Mairi fortunately Sean  
'Mary fortunately saw Sean.'

However, these adverbs may appear between DP1 and DP2 in an ACC:

- (57) 'B e Mairi an uair sin an tidsear  
 Cop-PAST Aug Mairi then the teacher  
 'Mairi was the teacher then.'
- (58) 'S e Calum gu fortanach Hamlet a-nochd  
 Cop Aug Calum fortunately Hamlet tonight  
 'Calum is fortunately (playing) Hamlet tonight.'

Secondly, either the subject or object of a transitive verb may be questioned or relativised upon:

- (59) Cò<sub>i</sub> a chunnaic thu t<sub>i</sub>?  
 Who saw you  
 'Who did you see?'
- (60) Cò<sub>i</sub> a chunnaic t<sub>i</sub> Calum?  
 Who saw Calum  
 'Who saw Calum?'

However, speakers report that there are asymmetries in extraction from ACCs: DP1 is extractable, but DP2 is not:<sup>11</sup>

- (61) Cò an tidsear/Hamlet?  
 Who the teacher/Hamlet  
 Answer: 's e Calum (an tidsear)/(Hamlet)
- (62) ??Cò Calum?  
 who Calum  
 (seeking the answer: 'S e Calum an tidsear')

In addition, interpreting the augment as agreement raises problems of its own: in Scottish Gaelic, agreement is always in complementary distribution with overt DP arguments (see Hale and McCloskey 1984 for Irish and Adger 1996 for Gaelic); if the augment were an agreement marker, it would be the only agreement of its kind in the language.

The ACC then does look like a *prima facie* challenge for the strong claims made about the syntax and semantics of predicational structures in the introduction. It cannot be reduced to a transitive construction, and we have seen already that the Pred head in predicative constructions does not accept a DP complement.

We mention two further facts about ACCs that we believe any analysis of these structures should be able to account for. Firstly, no analysis assimilating ACCs to transitive clauses with agreement accounts for the generalisation that these structures have the property that the first DP after the augment is in presentational focus and receives the main sentence stress. An extremely natural way of answering a *wh*-question like (61) above is by using the appropriate ACC, with the new information occurring immediately after the augment. It is impossible to answer this question with the DPs the other way around:

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<sup>11</sup>Stenson (1981) reports that such asymmetries are also marked in Irish, although she does not give the same judgement as we report here. All that we wish to emphasise is that there is a contrast between the behaviour of the ACC and that of simple transitive clauses. The marked nature of these constructions appears to be dependent on their informational status, which, in section 4.4 we tie down to their syntax.

- (63) Cò an tidsear?  
Who the teacher?  
Answer: 's e Calum an tidsear.  
Answer: \* 's e an tidsear Calum.

The focus properties of the ACC are especially striking considering that, in all other cases, nuclear stress always falls on the *rightmost* stressable element of the final phrase in the clause, unless some dislocation operation has taken place:

- (64) Chunnaic Màiri SEAN  
See-PAST Mairi Sean  
'Mary saw Sean.'

The second fact about ACCs is that they involve the same morphological material as ICCs. An analysis that treats the ACC as involving an equality predicate misses this generalisation.

In the next section, we will argue that, despite appearances, we do not need to allow a different structure for the kind of predication that involves two DPs. We will analyse ACCs as a subtype of ICCs, involving the copula. We will argue that the augment is the predicate in these constructions, and that it inverts with the subject in the same way that other predicates in copular clauses do. The difference between ACCs and ICCs is not really the augment, it is rather the presence of an extra DP that is semantically linked to the augment, in much the same way as DPs are linked to argumental pronouns in pronominal argument languages (see Jelinek 1984) or in dislocation constructions.

## 4 Analysis of ACCs

At this stage, it is clear that definite DPs give rise to serious deviations from the normal predicational structures found in this language. We will argue that the special status of these DPs derives from their semantics, and moreover that the semantics of nominal projections is correlated with their syntactic status within an articulated DP projection (Zamparelli 2000, Longobardi 1994). Firstly, we lay out our assumptions concerning the number and type of projections found within the DP, assumptions based on Zamparelli (2000). Then, we analyse the different types of nominal projection found in Scottish Gaelic and demonstrate the way in which pronouns, proper names, and common nouns pattern together to the exclusion of definite DPs. We use these results together with the semantics of the copula given in section 3.1 to motivate the existence of a particular kind of predicate in copular constructions which is formally a pronoun.<sup>12</sup> Finally, we show how the analysis of ACCs as involving a pronominal predicate related to a right-adjoined nominal phrase accounts for all the syntactic, semantic and discourse related properties of the construction and allows us to maintain the idea that there is only one underlying predicational structure in the language.

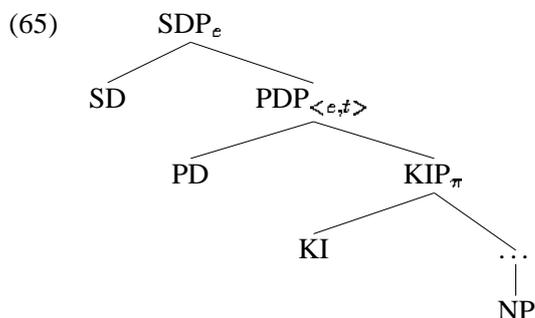
### 4.1 The Semantics of DPs

We follow Zamparelli (2000) in decomposing the DP into different layers of functional projection. Zamparelli argues on the basis of a wide range of data from English and Italian, that (i) three distinct semantic types can be distinguished within nominal projections, and (ii) these semantic

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<sup>12</sup>Note that by pronominal predicate here, we refer not to pro-forms for APs or VPs, but rather to items that are formally pronominals but occur in predicate positions.

types correlate with distributional and morphological facts to motivate a straightforward one-to-one mapping between syntactic projection and the semantics. These levels of projection and their semantic correspondences are shown below in (65).



According to Zamparelli, the only truly referential part of the nominal projection is the element heading the *Strong Determiner Phrase* (SDP) position. At this level the DP is of semantic type  $e$ .<sup>13</sup> The PD projection is the site of numerals and of certain types of adjectives, it is a *Predicative Determiner Phrase* of type  $\langle e, t \rangle$ . The KIP, the *Kind Determiner Phrase*, is the phrase that denotes an atomic property, or a kind (related to the nominalised properties of Chierchia 1984). We have already appealed to such a semantic type in our discussion of the semantics of the defective copula. There, we proposed that the defective copula *is/bu* takes an atomic property of type  $\pi$  as its argument and predicates this property of its subject.

Thus, Zamparelli argues for the following correspondences between projections in nominal phrases and their syntactic/semantic distribution:

- SDPs are referential, and only they can appear in argument positions  
'**The dog** is barking.'
- PDPs are predicative and can appear in certain contexts that host, for example, APs  
'Fido is **a dog**.'
- KIPs represent pure properties, and can appear, for example, as the complement of the 'kind of' construction in English.  
'This is a friendly kind of **dog**.'

We adopt this basic proposal, that there are layers of projection within the nominal phrase, and that these layers correspond to distinct semantic types in a one-to-one fashion. This framework clearly fits in well with the general perspective on the syntax semantics interface that we are defending. We will show that, for Scottish Gaelic, at least two of these levels can be independently motivated: the referential SDP level, and the property-denoting or KIP level.<sup>14</sup>

<sup>13</sup>Zamparelli assumes, in addition, that all quantified phrases raise at LF, leaving behind a variable of type  $e$ . We will not be concerned with quantified NPs in this paper.

<sup>14</sup>We will not make use of Zamparelli's PDP projection in what follows. In our analysis, nominal phrases have only two distinct semantic types: property-denoting or individual denoting. The PDP layer, if it exists in Scottish Gaelic, appears to be syntactically and semantically inactive and we have been unable to identify any empirical effects, and do not wish to implicate PDP in the analysis of numerals and adjectives in this language at least. However, the analysis we will develop is, with minimal elaboration, broadly compatible with the existence of such a projection should it be necessary. If it truly

The semantics associated with SDP and PDP are familiar enough. KIP denotes an atomic property as follows<sup>15</sup>:

(66) [ **KIP** ] = [  $\iota\pi$ : **where  $\pi$  is the relevant distinguishing property associated with dog**]

Other approaches are compatible with what we will say below, as long as the KIP denotes some kind of an atomic type associated with spatio-temporally undifferentiated properties (see Carlson 1977, Chierchia 1984 for different approaches).

Within Zamparelli's system, there are a number of different ways in which the referential level of projection (the SDP) can be instantiated in natural languages. Firstly, languages may come equipped with lexical determiners that are of category SD. It can also be argued that some pronouns, for example, clitic pronouns in Italian, are base generated in SD (see Cardinaletti 1993 for a proposal along these lines). Secondly, some Ns can bear a feature that allows them to raise from the lowest position to fill the SD slot of the extended projection. This is plausibly the case with proper names and some pronouns (see Longobardi 1994). A third possibility is the insertion of an expletive determiner in the SD position, if one exists in the lexical inventory of the language.<sup>16</sup> In the case of common nouns, a null expletive head can be generated to create SDPs when found in argument position. In general within this framework, null expletive SD heads need to be bound by anaphoric reference or default existential closure to be semantically well-formed (see Zamparelli 2000: section 4.4).

Within this overall framework, we will argue that Scottish Gaelic nominals come in two varieties: SDP and KIP. Crucially, we will show that pronominal elements may be bare KIPs in positions where they are not arguments. This will open up the way to an analysis of ACCs.

## 4.2 Nominal Projections in Scottish Gaelic

In comparing Scottish Gaelic nominal phrases with their English counterparts, the most obvious difference is that Scottish Gaelic possesses an overt definite determiner (67), but no indefinite one (68).

(67) an tidsear - 'the teacher'

(68) tidsear - 'a teacher'

The form in (67) is obligatorily definite, and as we have seen, may never appear as the complement of Pred in SACs (unlike nominal phrases headed by *the* in English in analogous contexts). Such DPs are also ill-formed as the complement of the copular Pred head *is* in ICCs (70).

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turns out to be the case that PDP is always inactive in Scottish Gaelic, then this raises interesting questions about the limits of syntactic and semantic variation language allows. In our system, the projection that is interpreted as being of type  $\langle e,t \rangle$  is PredP, and it can select for any projection that is property denoting, regardless of its syntactic category. It is not, then, part of the extended projection of DP that Zamparelli argues for.

<sup>15</sup>We assume that the relationship between the KI syntactic head and the nominal root is analogous to the structures proposed by Marantz (1997) and Borer (2002), who argue that lexical roots are mere encyclopedic concepts devoid of syntactic properties. Here the KI head that constructs the syntactic and semantic properties of KIP is equivalent to their notion of a category-forming head.

<sup>16</sup>Zamparelli argues that some dialects of Italian possess such null expletive determiners for proper names, as opposed to others which raise proper names to SD.

(69) \*Tha Calum an tidsear.  
Be-PRES Calum the teacher

(70) \*Is an tidsear Calum.  
Cop-PRES the tidsear Calum

From this evidence, we infer that Scottish Gaelic definite determiners are base generated in SD, and that DPs headed by such determiners are obligatorily SDP and can only appear in non-predicative positions. In particular, they can never denote properties and therefore never appear as the complement to Pred.

Bare determinerless nominals in SACs can have the meaning of either a nonspecific indefinite (71), or a specific indefinite (72):

(71) Tha mi a'lorg tidsear.  
Be-PRES I seeking a teacher  
'I am looking for a teacher.'

(72) Bha tidsear ann an seo a-raoir.  
Be-PAST a teacher in here last night  
'There was a teacher in here last night.'

On the assumption that the SD layer is required to provide an individual variable to be bound by existential closure in SACs, this indicates that determinerless nouns in Scottish Gaelic can also project to full SDP level when in an argument position. In general then, nominals may project the SDP layer in argument positions. Nominals with overt determiners are obligatorily SD by virtue of the category of the determiner, while bare nominals project to SD by virtue of the fact they are in argument positions.

We implement this observation by adopting Zamparelli's idea that certain DPs may contain expletive determiners in SD. Bare NPs in argument position contain an SD layer with an expletive determiner. The projection of SD in argument positions can be forced by assuming that SD is the locus of Case features in the language. Since argument positions are case checking positions, DPs in such positions have to project to SD. Recall that the ability of the bare noun to get an existential interpretation (whether specific or not) is dependent on the existence of an eventuality variable in the representation. The binding of the individual variable introduced by the null expletive SD head in these cases is achieved via existential closure triggered by the existence of an eventuality variable. Recall also that in constructions lacking an eventuality variable (specifically, the ICC), bare nouns are impossible as existentially interpreted subjects of predication, due to the lack of an appropriate binder that semantically identifies the variable supplied by the SD head.

In addition to its use as an argument, the bare noun can also appear as the predicate in the SAC (73) and in these circumstances the particle *ann* inflected with  $\phi$ -features appears. We showed in section 2.2 that whereas adjectives and prepositions could provide an event variable for the null Pred head to bind, an expletive prepositional head is required with nominals, since nominals lack an eventuality variable of their own. This expletive prepositional head appears as *na* in (73).

- (73) Tha Calum ‘na thidsear.  
 Be-PRES Calum in-3MS teacher  
 ‘Calum is a teacher.’

We assume, then, that bare nouns are KIPs where the function of the KI head is to turn the lexical concept expressed by the root into a property. In (73), the expletive P is essentially an aspectual head combining with a bare KIP and adding an eventuality variable into the representation. Since it is aspectual, this P does not check case, and so no expletive SD is generated.

Bare KIPs may also appear as the complement of the defective copular Pred head in the ICC (74), where they are again Caseless. We argued in section 3.1 that the Pred head in an ICC does not contain an event variable but rather predicates the atomic property directly of its subject, leading to an interpretation analogous to the individual level predication of Kratzer 1995:

- (74) Is tidsear Calum.  
 Cop-PRES teacher Calum  
 ‘Calum is a teacher (by vocation).’

We will assume that APs and PPs also combine with the KI head in ICC constructions, and that this combination is lexically restricted, accounting for the differential productivity of these categories. The KI head nominalises the eventuality-bearing predicate expressed by the AP or PP thereby binding off the eventuality variable. As mentioned in section 3.1 there is independent evidence for the idea that APs and PPs are nominalised in ICCs.

In summary, then, nominal projections in Scottish Gaelic are either SDPs, in which case they may appear in argumental positions, or they are KIPs, in which case they occur as the complement of a Pred head.

The next main categories of nominal we need to examine are proper names and pronouns. Once again there is cross-linguistic variation in how these elements are syntactically represented. There are at least three ways in which pronouns and/or proper names can give rise to SDPs in Zamparelli’s sense: (i) they could be base generated in SD (as in the case of Romance clitic pronouns); (ii) they could possess a null expletive determiner (as in some varieties of Italian) or (iii) they could raise from the base position to the SD functional head. If (i) were the case, we would expect pronouns and proper names to pattern with DPs headed by overt determiners in Scottish Gaelic in not appearing as the complement of a Pred head. However, if either (ii) or (iii) is the case in Scottish Gaelic, then we would expect that they would pattern with bare nouns in allowing the less articulated property-denoting projection, side by side with the full referential projection of SDP. SDP would be obligatorily projected in positions where the pronouns check Case, while KIP projections would be licensed elsewhere.

We show that the evidence is that pronouns and proper names do not pattern with the full determiner nominals of the type shown in (67). In what follows, we will concentrate on the analysis of pronouns, since they will be crucial to our analysis of the augment in ACCs, but we will also make passing reference to the facts concerning proper names as well.

### 4.3 Pronominal Predicates

There is interesting evidence that pronouns in Scottish Gaelic are not generated directly in SD. This evidence comes from a peculiar agreement marking on prepositions (see Adger 2000 for fuller discussion of the contexts for prepositional inflection).

Consider the following paradigm. In Scottish Gaelic, prepositions change form depending on whether the DP following them contains an overt determiner. Thus, in (75) we see a preposition *ri*, ‘with’ in its plain form; while (76) shows what we will call its *D-agreeing* form *ris* when it occurs with a determiner headed nominal.

(75) *ri*            *tidsear*  
with-INDEF. *tidsear*  
‘with a teacher’

(76) *ris*            *an tidsear*  
with-DEF. *the teacher*  
‘with the teacher’

(77) *ris*            *na tidsearan*  
with-DEF. *the-PL teachers*  
‘with the teachers’

(78) \**ri*            *an tidsear*  
with-DEF. *the teacher*  
‘with the teacher’

The same agreement appears on prepositions with the determiner *gach*, ‘each/every’:

(79) *ris*            *gach tidsear*  
with-DEF. *the teacher*  
‘with each teacher’

(80) \**ri*            *gach tidsear*  
with-DEF. *the teacher*  
‘with the teacher’

D-agreement does not occur with bare nouns (75), or with nouns that have adjectival quantifiers or numerals:

(81) *ri*/\**ris*        *mòran tidsearan*  
with-DEF. *many teachers*  
‘with many teachers’

(82) *ri*/\**ris*        *trì tidsearan*  
with-DEF. *three teachers*  
‘with three teachers’

We will not develop an analysis of this construction here (see Adger 2000), but will simply appeal to the generalisation that D-agreement appears on the preposition when there is an overt element in SD. Under the analysis developed in section 4.2, bare NPs contain a null expletive determiner in SD, and so do not trigger D-agreement.

With pronouns, the parallel cannot be made in its most straightforward form, since pronominal objects of prepositions in PPs always appear as *pro* with agreement appearing on the preposition (83).

- (83) rium  
with-1SG ‘pro’  
‘with me’
- (84) rithe  
with-3FSG ‘pro’  
‘with her’

The presence of  $\phi$ -features on the preposition means that it is impossible to determine whether the following *pro* is triggering D-agreement. However, there is another context where D-agreement shows up, and where the nominal is not the actual complement of the preposition. The contexts in question concern sentences that contain what looks like the equivalent of exceptionally case marked subjects. Consider (85) below, where the preposition *ri* selects a whole clausal complement, and appears in its *ris* form with the determiner-headed nominal in subject position of the non-finite clause. See Adger 2000 for motivation for this structure:

- (85) Dh’fheuch mi ris [an leabhar a leughadh].  
try-PAST I with-DEF [the book to read]  
‘I tried to read the book.’

Crucially, when the subject of the nonfinite clause is a bare nominal, the preposition *ri* reverts to its bare form (86).

- (86) Dh’fheuch mi ri [leabhar a leughadh].  
try-PAST I with-INDEF. [book to read]  
‘I tried to read a book.’

The interesting case for us is what happens when the subject of the nonfinite clause is a pronoun: it turns out that the preposition retains its bare form (87).<sup>17</sup>

- (87) Dh’fheuch mi ri [esan a bhualadh].  
try-PAST I with-INDEF. [he-EMPH to hit]  
‘I tried to hit HIM.’

All of these nominals are SDPs since they appear in argument positions. However, since pronouns in Scottish Gaelic do not trigger a change in prepositional form, they are not base generated in SD nor do they obligatorily raise there, unlike clitic pronouns in Romance. This eliminates options (i) and (iii), set out at the end of section 4.2 and suggests an analysis where pronouns occurring in argument positions are SDPs by virtue of a null expletive determiner.<sup>18</sup> This predicts that in contexts where Case is not checked, it should be possible to find pronouns in KIP, with a property denotation. The relevant context is of course the complement position of Pred. This prediction is confirmed: pronouns are well-formed in the complement position of the copular Pred head, as the examples in (88) and (89) attest.<sup>19</sup>

<sup>17</sup>We use the emphatic form of the pronoun here, because the non-emphatic pronoun is obligatorily realised as *pro* in this position.

<sup>18</sup>The data from proper names is exactly the same as for pronouns here: no D-agreement is triggered either in the simple PP cases or in the nonfinite clause cases.

<sup>19</sup>Proper names, on the other hand are never good in this position in Scottish Gaelic. This is not surprising, given the highly restricted set of lexical items that can be selected by the copula in the modern language.

(88) Is mise Catriona.  
 Cop-PRES me Catriona  
 ‘I am Catriona.’

(89) Is iadsan na h-oileanaich.  
 Cop-PRES they the students  
 ‘They are the students.’

On the other hand, pronouns cannot appear as the complement of the null Pred head found in *bith* clauses, as we saw in section 2.2. We repeat the example here:

(90) \*Tha Calum mise.  
 Be-PRES Calum mise  
 ‘??Calum is me.’

However, this is straightforwardly accounted by the fact that pronouns are implausible eventuality predicates; interpretations constructed by combining a pronoun with an eventuality variable are pragmatically ill-formed. Interestingly, it is marginally possible to force proper names to appear in an SAC in special contexts, where a spatio-temporally bound interpretation is forced, such as the following:

(91) Tha e na Einstein an diugh.  
 Cop-PRES he in-his Einstein today  
 ‘He’s being an Einstein today.’

This contrasts sharply with the ungrammatical cases with SDPs we saw in (2.2), where it is not even clear to native speakers how to do the appropriate morphology.

To summarise, the morphology and distribution of pronouns in this language is consistent with them allowing both KIP and SDP syntax, showing that they are not generated in SD. Assuming that pronominals are really functional categories, it follows that they are simply KIPs in Scottish Gaelic. The particular interpretation we associated with KIPs in section 4.1 can be straightforwardly carried over to pronouns, with the caveat that there is no root category for the KIP to attach to. We suggest the following interpretation for pronouns:

(92) [ **KIP** ] = [  $\iota\pi$ : **where  $\pi$  is the relevant distinguishing property associated with  $x$**  ]

where the interpretation of  $x$  is filled in by the context, and constrained by the grammatical features of the pronoun. Given the interpretation of the defective copula that we motivated in section 3.1, an example like (89) has a paraphrase like that in (93):

(93) ‘The relevant distinguishing property associated with a plurality (of some contextually given individuals)’ *holds of* ‘the students’

In this particular case, the relevant distinguishing property might be identified via deixis, or anaphora, depending on the context of the utterance.

In the next section, we exploit this set of ideas about simple copular clauses to provide a natural (but to our knowledge novel) analysis of the Augmented Copular Construction.

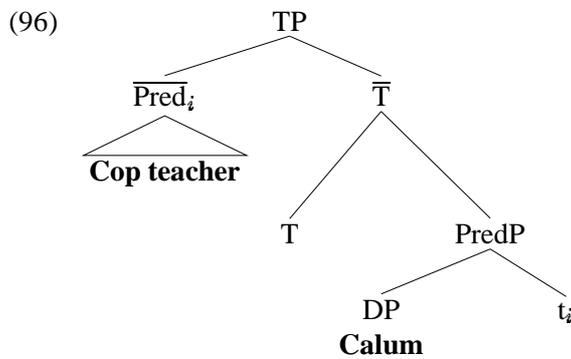
#### 4.4 The Syntax and Semantics of ACCs

Recall the analysis we developed for ICCs in section 3.1. The idea was that the defective copula headed PredP, and combined with a property denoting element. We gave the following basic semantics to the copula:

$$(94) \text{ [ is ]} = \lambda\pi\lambda x[\text{holds}(\pi, x)]$$

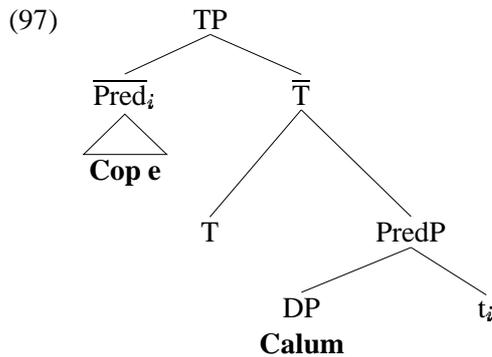
In order to satisfy the EPP property of T, the copula raises and pied-pipes its complement, ending up in the specifier of TP. This means that an example like (95) has a structure like that in (96):

- (95) Is            tidsear Calum  
 Cop-PRES teacher Calum  
 ‘Calum is a teacher (by nature or vocation).’



The bare nominal here is a KIP, is the complement of the copula, and raises with it to the specifier of TP.

Now recall that we have shown that pronouns may be KIPs with a KIP interpretation. Our expectation is that pronominals may also occur as complements to the defective copula, and we saw cases of this in section 4.3. If we take an unmarked, third person masculine pronoun, we predict the following well-formed structure (Moro (1997) gives arguments for a similar surface structure in comparable English constructions):



This derivation, under the assumptions we have defended so far, predicts the well-formedness of (98), with the interpretation in (99):

(98) ‘S e Calum.  
 Cop-PRES Aug Calum  
 ‘It’s Calum.’

(99) ‘The relevant distinguishing property associated with some contextually salient individual’  
*holds of* ‘Calum’.

In fact such sentences are perfectly well formed, and are used as answers to *wh*-questions, or as exclamations to introduce someone after some event has taken place (such as someone knocking at the door). Clearly the interpretation given in (98) is exactly correct for these situations. In *wh*-questions, the relevant distinguishing property is that given by the stated content of the question, while in the exclamation case it is supplied directly by the context.

This particular result immediately offers us a way of understanding ACCs: the augment is no more than a pronominal generated in the complement of Pred, with exactly the interpretation of a KIP pronoun. The DP that appears immediately after the augment is simply the subject of the construction, while the second DP is right adjoined. The right adjoined DP’s function is to explicitly identify the ‘contextually given individual’ in the semantics of the pronominal augment with overt linguistic material.

The way that this identification takes place is via a purely semantic operation, similar to that proposed in the E-type pronoun analysis of anaphora (Evans 1980). The semantic value of a pronoun is replaced by a definite description. In the particular case at hand, the adjoined SDP provides a definite description for the interpretation of the variable in the semantic representation of the pronominal predicate; it does so without reference to any syntactic agreement or coindexing information. See (100) in Spanish (and its English translation) for a situation where the subject pronoun and the coreferential left-adjoined phrase are mismatched in person features.<sup>20</sup>

(100) Las mujeres estamos contentas.  
 The women ‘pro’-1PL/F be-1PL happy  
 ‘We, the women are happy.’

The relationship between the “E-type” pronominal predicate and the right-adjoined DP is a case where semantic association mechanisms and syntactic category identity are decoupled. Although the mapping between the syntax and the semantics is tightly constrained, there are purely autonomous semantic operations that can establish effects of this kind.

Take an example like (101):

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<sup>20</sup>In Scottish Gaelic as well, the agreement facts go in this direction. Although agreement has been lost in the colloquial language in these constructions, more conservative dialects still display residual number agreement between the pronoun and the DP. It is possible to construct an ACC where DP1 and DP2 are grammatically different in number. In this case, the pronominal predicate “agrees” with DP1, its “true” subject in our sense and not with the adjunct, DP2.

(i) ‘S e dithis oileanach na gaisgeach  
 Cop-PRE Aug two students-SG the heroes-PLURAL  
 ‘The pair of students are the heroes.’

(ii) ‘S iad na gaisgeach dithis oileanach  
 Cop-PRES Aug-3PL the heroes-PL two students-SG  
 ‘The pair of students are the heroes.’

Jim McCloskey (p.c.) points out to us that in Irish, where the agreement facts are more robust, the same pattern can be seen quite clearly. Our approach would treat the agreement seen here as obtaining between predicate and subject, but not between predicate and adjunct. We leave the detailed mechanisms for further research.

- (101) 'S e Calum Hamlet.  
 Cop-PRES he Calum Hamlet  
 'Calum is Hamlet.'

The interpretation predicted is given in (102):

- (102) 'The relevant distinguishing property associated with *x* holds of 'Calum'.  
 Where: *x* is described/replaced by the definite description 'Hamlet'.

Clearly this interpretation, in conjunction with world knowledge about what names are parts in plays, gives the right meaning for the example. If the two DPs are swapped around, the sentence is perfectly grammatical, but clashes with our word knowledge, and appropriate contextualisation renders it perfectly acceptable (if, for example, Calum is a part in a play and Hamlet is an actor). In general, the meaning of the second DP forms part of a property description, which accounts for the role interpretation.

This approach also correctly explains the fact that ACCs can never have the meaning of pure identity statements, and require the paraphrase discussed in section 3.2. There is no identity statement in the semantic representation that is built up on the basis of the syntactic atoms and they way they have been combined. Instead, there is always a predicational asymmetry stemming from the fact that an ICC ascribes a property to an individual.

In addition to correctly predicting the interpretational asymmetries observed in ACCs, the idea that the second DP is adjoined rather than being a true argument explains the fact that adverbs may occur between the two DPs of an ACC, in contrast to the impossibility of adverbs between the subject and object of a transitive sentence. We repeat the relevant data here:

- (103) \* Chunnai Mairi an uair sin Sean.  
 See-PAST Mairi then Sean  
 'Mary saw Sean then.'

- (104) 'B e Mairi an uair sin an tidsear.  
 Cop-PAST Aug Mairi then the teacher  
 'Mairi was the teacher then.'

The adjoined nature of this second DP also explains why it does not take the primary sentence stress, in apparent violation of normal clausal stress patterns in the language. The semantic function of the DP is to provide information usually given by the context, since this is the interpretation of the augment. As such, this DP signifies backgrounded information, and is destressed. The same fact accounts, of course, for the focus properties of this construction. Since there are essentially only two major constituents in the proposition, and one is destressed, the other is obligatorily in focus. It is this that also accounts for the strict constraints on the two DPs in an ACC that answers a wh-question:

- (105) Cò an tidsear?  
 Who the teacher?  
 Answer: 's e Calum an tidsear.  
 Answer: \* 's e an tidsear Calum.

Since the DP immediately after the augment (the subject) is in focus, only it can felicitously serve as the element that introduces the new information required by the fact that the utterance is being used to answer a *wh*-question.

The analysis we present here also explains why only a definite DP can appear in the second position in an ACC:

(106) ‘S e                    Daibhidh \*tinn/\*tidsear/an tidsear.  
Cop-PRES aug David    sick/teacher/the teacher  
‘Its David who is \*sick/\*a teacher/the teacher.’

(107) ‘The relevant distinguishing property associated with *x* holds of ‘David’.  
Where: *x* is described/replaced by the definite description ‘the teacher’.

The right adjoined element must be an definite description and therefore, given our framework, an SDP. Recall that bare NPs are KIPs and only project to SDP when they are arguments (a fact that is perhaps related to Case). This means that an SD determiner must be present in the adjoined DP, or else the adjoined DP would not have the required semantic properties.

Finally, the restrictions on the subject of an ACC also follow directly on our account. The defective copula states that a property holds of some individual, as an inherent fact. Thus, the subject of such a clause must be individual denoting. We saw that in the simple ICC construction, the subject position had to be a name or a determiner-containing definite because bare NPs were restricted to eventive predication. That restriction carries over straightforwardly to the first nominal of the ACC, since under our analysis this position is identical to the Subject position of a simple ICC.

The approach we have developed here is remarkably successful in explaining a range of semantic and syntactic facts about the ACC that appear, at first, to be seemingly unrelated. Furthermore, it does so on the basis of plausible and independently motivated syntactic and semantic specifications for the constituent parts of the ACC, so that the apparently peculiar properties of the ACC are all reduced to well-motivated properties of other constructions. Perhaps most importantly, the ACC no longer constitutes a challenge, in this language at least, to the idea that predication is always constituted via the same basic syntactic structure.

## 5 Conclusion

The hypothesis we have been exploring here is that apparently different types of predicational structure all reduce to one underlying case. In Scottish Gaelic, the differences arise because of the particular semantic specification of the predicational head (whether it is eventive or not) and its syntactic and phonological properties (how and where it satisfies EPP). This particular language has no identity predicate and has determiners that are obligatory SD heads, forcing full SDP projections for a crucial subset of nominals.

The use of a pronominal predicate to link two DPs is one of the strategies that can be followed given these constraints. We do not consider it to be an accident that pronouns are implicated in copular constructions/identity statements crosslinguistically (Hebrew (Doron 1988); Arabic (Eid 1983); Polish (Rothstein 1986); Zapotec (Lee 1999)). We leave it to further research to determine whether the particular parametric options exploited in Scottish Gaelic are also available in these

languages. Most importantly, the possibility of pronouns not projecting to full SDP status predicts the availability of pronominal predicates as a strategy for circumventing the constraints imposed by the syntax-semantics interface in constructing identity statements.

More broadly, the hypothesis we have been defending in this paper is that predicational constructions all reduce to the same syntactic/semantic type: there is a Pred head that takes a property as its complement. The Pred head may either be eventive or non-eventive, but its basic function is the same in either case. The selectional requirements of the Pred head are always for a property denoting complement. It follows from the strongest version of this hypothesis, that no language should have a Pred head that takes a complement of SDP type. This means that Pred can never encode an identity predicate.

This naturally raises a question for English, where it has been argued by various researchers, either that the verb *be* itself is ambiguously an identity predicate (Higginbotham 1987), or that one of the small clause types in English involves an identity predicational head (Heycock and Kroch 1999). Cases that have been argued to be true equatives include examples like the following:

- (108) a. These are the best pictures of Mary.  
b. The best pictures of Mary are these.

However, it is interesting to note that the possibility of equatives of this type seems to be directly dependent on the explicit presence of the verb *to be* in English. Consider the contrast in the small clause complements in (109) and (110) respectively.

- (109) a. I consider [these the best pictures of Mary].  
b. \*I consider [the best pictures of Mary these].

- (110) a. I consider [these to be the best pictures of Mary].  
b. I consider [the best pictures of Mary to be these].

On the basis of the small clause asymmetries, we suggest that a successful analysis of the English equatives will hinge on the particular properties of the lexical verb *to be* in English and how it combines with the (asymmetrical) Pred head. This is the kind of approach taken by Moro (1997) who also argues for an irreducibly asymmetrical analysis of copular clauses in English. A detailed analysis is however, beyond the scope of the present paper.

In this paper, we have pursued a research agenda that seeks to reduce all varieties of predication to a single syntactic structure. Variation in syntactic form is only apparent and derives from the semantic and combinatorial properties of functional heads. Taking the example of Scottish Gaelic, which seemed to show evidence of a number of strikingly different types of predicational structure, we showed that they all conformed to one simple asymmetrical syntactic form, correlated with an asymmetrical semantic relationship. Thus, despite the initial appearance of a particularly knotty counterexample to the claim that there is really only one kind of predicational syntax, Scottish Gaelic ends up confirming the most restrictive hypothesis concerning the nature of predication in natural language.

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