Agreement in Scottish Gaelic:

A Distributed Morphology Analysis

by

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Preface

In this thesis I examine the agreement system of Scottish Gaelic, where agreement inflection on the finite verb and preposition cannot co-occur with an overt DP; the agreement inflection on the verbal noun, realized as a possessive pronoun; and agreement of the preposition with a definite non-pronominal object. Working within the frameworks of Minimalism and Distributed Morphology, I propose a morphosyntactic analysis of Scottish Gaelic agreement which uses Morphological Merger, Fusion, competition among Vocabulary Items (using the Subset Principle), Impoverishment rules and the syntactic operation Agree to derive the data. I propose that the agreement inflection found on the verb and the preposition is in fact the pronominal argument itself which gains its D-cum-inflection status from a particular context. The observed inflection is the consequence of merger between the pronoun DP and the verb or preposition. As for the verbal noun, the so-called ‘inflection’ does not result from syntactic agreement but is the pronominal complement itself. Definiteness agreement results from feature-valuation at Syntax, with the locality constraints deriving from the Morphological component.

Chapter 1 sets out the facts, beginning with a review of the language of Scottish Gaelic itself. The remainder of the chapter presents the agreement phenomena of Scottish Gaelic in this order: verb-subject agreement, agreement of the verbal noun with its complement, preposition-object agreement, and definiteness agreement. Each section illustrates how the agreement inflection behaves with regards to extraction contexts, pronominal and non-pronominal DPs, and coordinated arguments.

Chapter 2 presents the previous analyses on Celtic agreement, divided into three sections. The first section presents the literature which relies on a mainly syntactic account to
explain Celtic agreement. The second section presents those analyses which use the PF component to explain the idiosyncrasies of Celtic agreement. The third section compares and evaluates the various analyses.

Chapter 3 presents the theoretical frameworks within which the morphosyntactic analysis presented in this thesis is couched. The analysis is based on the assumptions of the Minimalist Program and utilizes the post-syntactic operations of Distributed Morphology to account for the agreement system in Scottish Gaelic. The first section illustrates and explains the main operations of Syntax as assumed in Minimalism: Merge, Agree, and Move. The second section discusses the workings and operations of Distributed Morphology, including the concept of a post-syntactic Morphological Structure and Vocabulary Insertion.

Chapter 4 presents an alternative morphosyntactic proposal of the agreement phenomena in Scottish Gaelic. The organization of this chapter will follow that of Chapter 1, with a section devoted to each of the following: verb-subject agreement; agreement of the verbal noun with its complement; preposition-object agreement; and definiteness agreement.
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Chapter 1  Scottish Gaelic: the Facts

This chapter begins with a section serving as a brief overview of the language of Scottish Gaelic to help the reader unfamiliar with the language. The remainder of the chapter focuses exclusively on the phenomena which have been labelled agreement in the Celtic languages: the second section reviews the data of verb-subject agreement in Scottish Gaelic; the third reviews agreement of the verbal noun with its pronominal complement; the fourth reviews agreement of the preposition with a pronominal object; and the fifth section reviews definiteness agreement in Scottish Gaelic. These four agreement types are examined with respect to the complementary distribution of inflection and an overt argument, to the morphological shape of the inflection, and to their behaviour with an extracted argument and with coordinated arguments.

1.1  Scottish Gaelic: An Overview

Scottish Gaelic is a member of the Goidelic branch of the Celtic language family, spoken mainly in north-western Scotland, and sharing with Modern Irish the common ancestor of Old Irish. Welsh and Breton represent the Brythonic branch of Celtic.

Scottish Gaelic displays strict VSO word order, even in embedded clauses (Adger & Ramchand 2005: 163). For the purposes of this thesis, a syntactic structure of Scottish Gaelic will be assumed as in (1), based on conclusions drawn for Irish by McCloskey (1996).
In this structure, the verbal complex is derived by movement of the verb to Asp, then to T and finally to Mood. The subject moves out of the VP into spec,TP (as proposed by McCloskey 1996 for Irish) to yield VSO order. For the purposes of this thesis, I will be assuming a simplified version of (1), with T representing all potential functional heads. The Conditional feature on the verb will have a major role in the morphosyntactic analysis to be presented here, but whether Conditional appears on T or Mood is not the primary focus.

Following the structure in (2), the Conditional feature will be assumed to be part of T, and the verbal complex is derived by V-to-T movement, with the subject in a lower position, perhaps spec,vP.
As well as having strict VSO order, Scottish Gaelic has strong adjacency effects: the verb cannot be separated from the subject by intervening elements, nor can the complementizer be separated from the verb (Adger 1997: 11).

Elements may be extracted using the copula *is* and the complementizer particle *a* (4b).

(4)  
a. Rinn thu e
    do.PAST you it
    ‘you did it’

b. ‘S e thu -sa a rinn e
    COP it you-EMPH PTCL do.PAST it
    ‘it’s you that did it’

(Byrne 2004: 92)

The verb in Scottish Gaelic has three inflectional forms: Past (5b), Future (5c) and Conditional (5d) (Byrne 2004: 104). The remaining tenses, including the Present tense (5a), are created by way of the verb *bi* ‘to be’, which has a present tense form, and the verbal noun. The verbal noun is used as a non-finite verb but behaves morphosyntactically as a nominal in

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1 All examples are from Scottish Gaelic unless otherwise indicated.
that the verbal noun assigns its complement the genitive case (further discussion in 1.3 below).

(5)  

a. Tha mi a’ seòladh  
be.PRES I PTCL sail.VN  
‘I am sailing’  
(Byrne 2004: 106)

b. Cha do rànaig e ‘n taigh  
NEG PAST reach he the house  
‘He didn’t reach the house’  
(MacLellan 1972: 50)

c. Faodaidh tu falbh ma thogras tu  
may.FUT you go.VN if wish.FUT you  
‘You may go if you want’  
(Byrne 2004: 106)

d. Ach nam biodh tu air tighinn a raoir, cha bhiodh tu cho  
but if be.COND you at come.VN last-night, NEG be.COND you as  
sàbhallte  
safe  
‘But if you had come last night, you wouldn’t be as safe’  
(MacLellan 1972: 101)
The form of the verb varies according to the preverbal particles. The negative particle appears with the verb in (3b), prompting the use of the dependent form of the verb as opposed to the independent form.

The future tense verb form is suffixed by –(a)idh, and the conditional verb takes a –(e)adh suffix. The past tense, however, is formed by lenition of the first consonant of the verb stem, when possible, e.g. *cuir* ‘to put’ → *chuir* (Byrne 2004: 104).

Lenition in Scottish Gaelic appears in various contexts, like marking tense as seen with the past tense verb, or on complements of certain prepositions. Lenition is also used to mark case on nouns (described below). Certain pre-nominal adjectives in Scottish Gaelic (6a) and a few possessive pronouns—mo ‘my’, do ‘your’, and a ‘his’ (6b)—also induce lenition (Byrne 2004: 21). Lenition is marked orthographically by an ‘h’ following the lenited consonant; the phonological change is generally the fricatization of the consonant, e.g. in (6) /k/ → /χ/ and in (7b) /p/ → /f/; but /s/ → /h/ in (7a).

(6) a. seann *chù*  (cù)
old   dog
‘old dog’

b. do *chòta*  (còta)
your coat
‘your coat’

(Byrne 2004: 21)

2 When the verb follows a negative particle, the wh-particle *an*, and relative complementizers, it takes the ‘dependent’ form: *cha do ràinig*. The independent form is used otherwise: *ràinig*. See Appendix 1.
Modifiers (7a), numerals (7b), the negative particle *cha* (7c) and the verb *bu* ‘would be’ (7d) also induce lenition.

(7) a. glè **shàmhach** (sàmhach)
very quiet
‘very quiet’

b. dà **phreas** (preas)
two cupboard
‘two cupboards’

c. cha **sheas** mi (seas)
NEG stand.PAST I
‘I did not stand’

d. bu **chòir dhut** (còir)
COP.COND obligation to.2SG
‘you should’

(Byrne 2004: 21)

Several prepositions— *bho, de, do, fo, mu, ro, tro*—lenite an indefinite object (Byrne 2004: 70-80). The indefinite noun phrase *meadhan oidhche* in (8) is lenited as a complement of the preposition *mu*.

(8) Tha **dùil againn ris an taibhse mu mh**eadhan oidhche.
be.PRES expectation at.1PL to.DEF the ghost around middle night
‘We expect the ghost around midnight’

(Byrne 2004: 78)

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3 There are two other prepositions which induce lenition, *gun* and *mar* (Byrne 2004: 81), but these do not inflect and will not be discussed in this thesis.
The remaining prepositions do not induce lenition on an indefinite noun. The definite object of any preposition will be lenited because the definite article lenites the noun in the dative case (9b) (Byrne 2004: 31). (9b) also illustrates the definite form that prepositions take when the object is definite (Byrne 2004: 70-80; see also discussion below).

(9) a. le clann
   with children.F
   ‘with children’

   b. leis a’ chloinn
   with.DEF the children.F.DAT
   ‘with the children’

(Byrne 2004: 31)

Nouns in Scottish Gaelic have inherent gender distinction, either feminine or masculine, which affects the realization of case. Nouns may be assigned one of three cases: nominative, genitive, or dative. The nominative case (clann in (9a) above or cat in (10a) below)) acts as a sort of default case, appearing on both the subject and object (Byrne 2004: 28). Dative case is assigned to the object of a preposition (Byrne 2004: 28) (7b above). The dative case is marked by lenition of the initial consonant after the definite article, as well as slenderization of feminine nouns (marked by the addition of ‘i’ to the final consonant).

The genitive case appears on the possessor noun in a genitive construction and may also be assigned to the complement of the verbal noun (Byrne 2004: 28). The genitive case usually is marked by slenderizing for both genders, with the masculine nouns also leniting after the article (10b). Definiteness appears only once in the genitive construction, and applies to the entire construct, like the Construct State nominals found in the Semitic languages (Borer 1988, Ouhalla 1991).
This section has covered the general characteristics of Scottish Gaelic. The next four sections will deal exclusively with the agreement system in Scottish Gaelic.

1.2 Verb-Subject Agreement

Compared to Welsh, and even Irish, the Scottish Gaelic verbal paradigm is remarkably incomplete. The verb inflects for the $\varphi$-features of the subject only in the conditional, and only for the first person; but even the first person plural inflection is falling out of use (Byrne 2004: 108). It is interesting to note that in Modern Irish it is the Conditional paradigm that is more complete than the others (McCloskey & Hale 1984: 492), and it is the Conditional paradigm that has kept the agreement inflection in Scottish Gaelic.

The inflected form of the verb is also referred to as the synthetic form. The analytic (uninflected) form is the default form, used with overt subjects. It is ungrammatical for the synthetic form of the verb to appear with an overt subject, even if the subject is emphatic or contrastive (11c):
Only the synthetic verb with an obligatorily null subject is acceptable for a first person singular subject with the conditional (11a). (11b) illustrates that if a synthetic form is available, it must be used—the analytic form with the independent first person singular pronoun cannot be used because of the existence of, in this case, *ruithinn.

When there is no synthetic form available the analytic verb plus independent pronoun is generated as in (12). The Scottish Gaelic past tense paradigm has no synthetic forms whatsoever; only the analytic form is available for past tense, and thus the contrast between (12) and (11b).

Scottish Gaelic also has synthetic forms available in the conditional for a first person plural subject, but it is less commonly used than the synthetic first person singular form. Dialects vary in judgement of the use of the uninflected analytic conditional verb with an independent first person plural pronoun subject (Joan MacDonald, personal communication).
For those speakers whose dialect makes available the synthetic first person plural form, (13b) would be ungrammatical. Dialectal variation aside, it is still ungrammatical to use the synthetic verb with an overt subject pronoun (13c).

(13)  a. ruithe{amaid}
run.COND.1PL

       b. ruitheadh sinn
run.COND we

       c. *ruithe{amaid} sinn
run.COND.1PL we

‘we would run’

Notice that the inflectional ending for the first person plural bears no resemblance to the corresponding independent pronoun. The independent pronoun is *sinn but the corresponding inflectional ending is –amaid (13). For the first person singular, the inflectional ending is –inn while the independent pronoun is *mi (11).

The complementary distribution of agreement inflection and an overt subject carries over to extraction contexts. The verb cannot show agreement with an extracted subject, and has to appear in the analytic form.

(14)  a. Is mise a ruitheadh
COP I -EMPH PTCL run.COND

       b. *Is mise a ruithinn
COP I -EMPH PTCL run.COND.1SG

(Joan MacDonald, p.c.)
The clefting construction in (14) patterns with the phenomenon of ‘anti-agreement’ (Ouhalla 1993, McCloskey 1990), where an extracted subject fails to trigger agreement morphology on the verb.

Similarly, in the case of conjoined subjects, only the leftmost subject triggers inflection on the verb; the verb does not inflect for the φ-features of the entire conjunct. Again, the subject is obligatorily null when the verb is inflected.

(15) a. Ruithinn -sa is iad -san
      runCOND.1SG-EMPH and they-EMPH
      ‘they and I would run’

      (Joan MacDonald, p.c.)

b. *Ruitheamaid mi-se is tu -sa
   runCOND.1PL I -EMPH and you-EMPH
   ‘You and I would run’

To summarize, agreement inflection on the verb is in complementary distribution with an overt subject. Agreement inflection is available only in the conditional and only for the first person. The personal endings share no morphological similarity to the independent pronoun. The verb inflects only for the left-most of coordinated subjects and fails to inflect at all when the subject is extracted.

1.3 Verbal Noun Agreement

The pronominal complement of the verbal noun appears as a possessive pronoun. The possessive pronoun complement does not appear in the same position as a non-pronominal
DP complement, but appears in a position above the verbal noun. The pronoun can either be the complement of the verbal noun itself (16) or may refer to the subject of the matrix verb in a sort of agreement (19 below).

(16) agus bha dùil aige a pòsadh
    and was expectation on.3MSG POSS.3FSG marry.VN
    ‘and he intended to marry her’

(Oftedal 1956: 273)

The verbal noun is notorious for living up to its name: in function it acts like a verb, taking an (arguably) aspectual marker $ag/a$ (as proposed for Irish in Duffield 1995: 247) and used as a non-finite verb; but in the morphosyntactic relation to its nominal complements it acts as though it were a noun, assigning its definite complement the genitive case (17a).

There are three constructions in which the verbal noun appears: the progressive construction (17), expressing intent—as described in Byrne’s (2004) grammar—(20), and in complementing the matrix verb (21). Each construction has a slightly different way of manifesting pronominal and full DP complements, but all are clearly related to the verbal noun’s nominal character.

The progressive construction tends to appear with the matrix verb $bi$ ‘to be’ and is shown here with a non-pronominal complement (17a) and a pronominal one (17b) (Byrne 2004: 118). The progressive verbal noun appears with the particle $a’lag$. The possessive pronoun complement has a tendency to combine phonologically with this particle: $gam$ in (17b), although $ga mo$ may also be found.
The non-pronominal complement appears in the genitive case, but only when the noun is definite. Any use of the genitive is generally falling out of favour (Byrne 2004: 122). An indefinite complement of the verbal noun simply appears after the verbal noun in the nominative case (18a) paralleling nominal possessive constructions (18b). When the possessor noun is indefinite, it follows the possessed noun in the nominative case (Byrne 2004: 122).

(17) a. Bidh sinn a’ clàradh an òrain
be.FUT we PTCL record.VN the song.GEN
‘We will be recording the song’

(Byrne 2004: 122)

b. A bheil sibh gam fhaicinn?
PTCL be.PRES you.PL PTCL-1SG see.VN
‘Can you (plural) see me?’

(Byrne 2004: 123)

(18) a. bithear a’tilgeil chlachan mòra troma air deigh
be.FUT.PASS throw.VN stone.PL big.PL heavy.PL on ice
‘big heavy stones are thrown on the ice’

(BBC Litir do Luchd-Ionnsachaidh 449)

b. dà bhotul mhór bainne
two bottle big milk
‘two big bottles of milk’

(Morrison 1972: 16)

The progressive construction generally indicates an action. To indicate the position of the subject, e.g., sitting, the verbal noun takes the prepositional particle na ‘in’ rather than
a’lag (Byrne 2004: 120) and takes a pronominal complement which agrees with the matrix subject in φ-features as well.

(19) Bha sinn nar dùisg fad na h-oidhche.  
was we in.1PL wake.VN length the.F.GEN night.F.GEN  
‘We were awake all night’

(Byrne 2004: 120)

For the second of the three constructions, expressing intent, the verbal noun appears with verbs of motion, usually rach ‘to go’, but also with thig ‘to come’ and falbh ‘to go’. In this construction the verbal noun appears with the particle a (Byrne 2004: 124)

(20) a. Bha iad a’dol a reic an taighe  
be.PAST they go.VN PTCL sell.VN the house.M.GEN  
‘They were going to sell the house’

b. Thàinig iad gar coinneachadh  
come.PAST they PTCL.1PL meet.VN  
‘They came to meet us’

(Byrne 2004: 125)

The non-pronominal DP complement behaves as it does in the progressive construction, taking the genitive case when definite (20a), but when indefinite appears in the default nominative case (Byrne 2004: 125). The pronominal complement also behaves as it does in the progressive, preceding the verbal noun and often combining phonologically with the aspectual particle (20b).

The most common use of the verbal noun is its use in non-finite complement clauses (Byrne 2004: 126). The verbal noun in this construction behaves somewhat differently from the previous two. In complementing constructions with a non-pronominal complement, the
A pronominal complement appears in the simple possessive form (21c). Unlike the other verbal noun constructions, the pronoun does not combine with the preverbal particle, which is not realized at all with a pronominal complement; the appearance of the particle coincides only with the appearance of a non-pronominal complement.

Agreement inflection on the verbal noun behaves differently in extraction contexts than that of the finite verb. When the complement of the verbal noun is clefted, the verbal noun appears with a possessive pronoun which agrees in φ-features with the extracted DP.
(22) ‘s e **na leabhraichean sin** nach feumaidh sinn **an** leughadh COP it the.PL book.PL these that-not must we AGR-3PL read

‘It’s these books that we must not read’

(Adger 1997: 19)

To summarize, the verbal noun takes a possessive pronominal complement which may reflect the $\varphi$-features of a non-local DP. The non-pronominal complement appears in the genitive case when the verbal noun is used to express intent or the progressive tense; when the verbal noun complements the matrix verb, the non-pronominal complement appears above the verbal noun in the nominative case.

### 1.4 Preposition Agreement

The prepositional paradigm is much more complete than the verbal one, having an inflectional ending for each person, including a gender distinction in the third person singular (23). As with verbal agreement, inflection is in complementary distribution with an overt object (24b), and no agreement morphology may appear with a non-pronominal DP, which must instead appear with the base or definite form of the preposition (discussed in the following section) (24d).

(23) **chon a’ bhaile aige** fhéin to the town at.3MSG self

‘to his own town’

(MacLellan 1972: 53)
(24) a. agam (-sa)
    at.1SG(-EMPH)

b. *agam mi(-se)
    at.1SG I (-EMPH)

c. *aig mi(-se)
    at I (-EMPH)
    ‘at me’

d. *aige a’ ghille
    at.3MSG the boy.M.SG.DAT
    ‘at the boy’

As can be seen from (24a-c) the distribution of inflection and an overt object pronoun
is the same as that of verbal inflection. Although the preposition has inflectional endings for
all persons, inflectional morphology is not available for overt objects.

A sample of some of the more common prepositions and their inflected forms is
presented here, along with the pronominal paradigm for comparison. A complete list of the
inflecting prepositions in Scottish Gaelic and their paradigms may be found in Appendix 3.
The inflectional endings for the first and second persons are for the most part deductible from the independent pronominal form\(^4\). The third person endings are slightly less transparent, but given that Scottish Gaelic makes a differentiation between broad and slender vowels ([a,o,u] and [i,e] respectively), it appears that the third person plural is generally marked by the use of broad vowels while the third person singular feminine forms employ slender ones (cf. Acquaviva 2003 for Irish). The third person singular masculine form of the preposition is in about a third of the cases identical to either the definite or the default form (e.g. *leis*, *ris*, *air* in (25) above). The remaining third person singular masculine forms are similar to *aige*, as in the examples in (26).

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\(^4\) The 2SG pronoun is *thu* /\(u\)/ but alternately appears as *tu* /\(u\)/ in certain contexts: after the copula, after the complementizers *gun*, *nach*, *an*; after *faca* ‘to see’ and *chuala* ‘to hear’; and after the tense/mood endings –as (relative future), –adh (conditional), and –idh (future) (Adger 2000, Byrne 2004: 63). This form bears a closer resemblance to the inflectional ending on the preposition.
When the object of a preposition is extracted, the stranded preposition appears in the third person singular masculine form, and does not inflect for the φ-features of the extracted object DP at all (27a).

(27) a. ‘S e caileag bheag a bha thu a’ bruidhinn ris it’s girl small.F C-REL be.PAST you at speaking with.3MSG ‘It was a small girl that you were talking to’

   (Adger & Ramchand 2005: 178)

   b. am bòrd a bha an leabhar fodha the table PTCL be.PAST the book under.3MSG ‘the table the book was under’

   (Adger & Ramchand 2006: 9)

As will be seen in the next section, a definite non-pronominal object will trigger definiteness inflection on the preposition. In (27b), if the preposition were inflecting for the moved DP, the expected form would be the definite form fon (fon a’bhòrd). Even if the fronted DP were a feminine noun, the preposition still would have 3MSG (default) inflection (Adger and Ramchand 2005: 178), unlike the φ-feature inflection found on the verbal noun for an extracted complement.

To summarize, agreement inflection on the preposition is in complementary distribution with an overt object, similar to verbal inflection. The main differences between verbal and prepositional inflection is that the prepositional paradigm is complete and the
phonological similarities between the personal endings on the preposition and the independent pronoun are much more apparent than those on the verb.

1.5 Definiteness Agreement

The inflecting prepositions discussed in the previous section also inflect for a definite object, and some will even show definiteness inflection when the object DP is qualified by gach ‘every, each’. All inflecting prepositions agree in definiteness for the singular definite article an, and a subset of these also inflect for the plural definite article na and gach5 (compare (28) with (29)) (Byrne 2004: 70-80). In (28) caora ‘sheep’ and in (29) craobh ‘tree’ are both feminine and so slenderize (by taking a ‘slender’ vowel (e, i) at the end) in the dative case. Masculine nouns do not show any change except for the lenition triggered on all nouns by the singular definite article in the dative case (Byrne 2004: 31).

The plural definite article na does not trigger inflection on the preposition fo (29), but the singular definite article will always trigger definiteness inflection on the preposition. The preposition le appears in the definite form for both the singular and plural definite article (28).

5 The prepositions which inflect for gach ‘each, every’ do not always do so; but the prepositions which do potentially inflect for gach are in all cases also the ones which inflect for the plural definite article (Byrne 2004: 70-80).
(28) a. leis a’ chaoire
    with.DEF the.sheep.F.SG.DAT

b. leis na caoraich
    with.DEF the.sheep.F.PL

c. le caoire
    with sheep.F.SG.DAT

d. leis gach caoire
    with.DEF each sheep.F.SG

(29) a. fon a’ chraoibh
    under.DEF the.DAT tree.F.SG.DAT

b. fo na craobhan
    under the.PL tree.F.PL

c. fo chraoibh
    under tree.F.SG.DAT

d. fo gach craoibh
    under each tree.F.SG.DAT

The inflecting prepositions may be divided into two groups, according to whether the plural definite article *na* triggers definiteness inflection or not. The preposition *le* in (28) is indicative of the first class since it inflects for a plural definite object; the preposition *fo* in (29) represents the second class, since it does not. These two classes of prepositions may for the most part be identified by the shape of the definite form: the prepositions of the first class end in –s while those of the second end in –n. Recall that the prepositions which induce lenition on an indefinite DP object are *bho*, *de*, *do*, *fo*, *mu*, *ro*, and *tro*. These prepositions are exactly those which inflect only for the singular definite article and have a –n definite form (excluding *gu*). (30) lists the two classes of prepositions. The first of the two listed forms is
the base form of the preposition, used with indefinite DPs, while the second form is the
definite form.

(30) 1: inflection with *na*   2: no inflection with *na*

<table>
<thead>
<tr>
<th>Preposition</th>
<th>Base Form</th>
<th>Definite Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>à – às</td>
<td>‘from, out of’</td>
<td>bho – bhon ‘from’</td>
</tr>
<tr>
<td>(ann) an – anns (an)</td>
<td>‘in’</td>
<td>de – den/dhen ‘of’</td>
</tr>
<tr>
<td>le – leis</td>
<td>‘with’</td>
<td>do/dha – don/dhan ‘to, for’</td>
</tr>
<tr>
<td>ri – ris</td>
<td>‘to’</td>
<td>fo – fon ‘under’</td>
</tr>
<tr>
<td>gu – gun</td>
<td>‘to, towards’</td>
<td>gu – gus (with time) ‘to, towards’</td>
</tr>
<tr>
<td>mu – mun</td>
<td>‘about, around’</td>
<td>ro – ron ‘before’</td>
</tr>
<tr>
<td>tro – tron</td>
<td>‘through’</td>
<td></td>
</tr>
</tbody>
</table>

The prepositions *aig* ‘at’ and *air* ‘on’ have been omitted because they do not change
form before the definite article, either singular or plural, and so cannot really be grouped
according to when they inflect. Furthermore, like most rules, there are exceptions. One
exception to the –s/-n rule is *gu-gus*. This preposition inflects only for the singular definite
article *an* despite ending in –s.

The preposition *à* appears as *às* before the definite article; and unlike the other
prepositions, also appears in the definite form before possessive pronouns and often before a
vowel (Byrne 2004: 70).

(31) Bha mi a’dol às mo chiall le sgreuchail nam faoileagan
be.PAST I go.VN out-of.DEF my sense with screech.VN the.GEN.PL seagull.GEN.PL
‘I was going mad from the screeching of the seagulls’

(Byrne 2004: 70)
The prepositions of the second class (the prepositions which use an -\(n\) suffix to mark the definite form) are further differentiated from the \(-s\) forms in that the definite article may be omitted with inflection.

(32) thàinig stoirm shneachda \textbf{bho\textasciiacute{n}} iarthuath come.PAST storm snow from.DEF northeast

‘A snowstorm came from the northeast’

(MacLellan 1972: 31)

For this class of prepositions only the appearance of the definite article is optional with inflection (Byrne 2004: 70-80). For the \(-s\) prepositions, the definite article must be phonologically realized.

As with \(\varphi\)-feature agreement on the preposition, definiteness agreement occurs only for a local object; when that object is relativized, the preposition takes the 3MSG default form.

(33) An duine a bha thu ag \(\text{\textasciitilde{e}}\)isteachd \textbf{ris} the man PTCL be.PAST you PTCL listen.VN to.3MSG

‘the man you were listening to’

(Adger & Ramchand 2006: 8)

To summarize, the inflecting prepositions may be split into two classes, the first of which may be identified by the \(-s\) suffix. This first class inflects for the definite article, either singular or plural, and sometimes for \textit{gach} ‘each, every’. The appearance of the definite article is obligatory for this class. The second class of prepositions may generally be identified by the \(-n\) suffix. This class inflects only for the singular definite article, which may or may not be omitted and all the prepositions in this second class, with the exception of \textit{gu} induce lenition on an indefinite DP object.
1.6 Summary

The various agreement contexts of Scottish Gaelic were introduced in this chapter. Agreement inflection on the verb is in complementary distribution with an overt subject; and agreement inflection is available only in the conditional and for the first person, but the first person plural pronoun agreement inflection has been falling out of use in many dialects. In the case of coordinated subjects, the verb inflects for the leftmost one if there is an available synthetic form, with the consequence that the leftmost subject cannot be phonologically realized.

Agreement inflection on the verbal noun appears as a possessive pronoun, either combined with the pre-verbal noun particle or on its own, depending on the construction. The pronominal complement of the verbal noun agrees in φ-features with the matrix subject to which it refers or with an extracted complement.

Preposition agreement, like that of verbs, is in complementary distribution with an overt object. The prepositional paradigm contains a more complete set of personal endings, as opposed to the verbal paradigm. Prepositions also inflect for definiteness with a definite object. The inflecting prepositions can be divided into two classes, the –n suffixed prepositions and the –s suffixed ones: the former inflects only for the singular definite article *an* while the latter inflects for the plural definite article *na* as well. An extracted object no longer triggers definiteness or agreement inflection on the preposition.
Chapter 2  Previous Analyses and Evaluation

As seen in the previous chapter, an analysis of Celtic agreement inflection needs to account for the complementary distribution of agreement inflection and an overt DP as well as anti-agreement and First Conjunct Agreement. Of the various analyses given for Celtic agreement, some have been based in syntax while others rely on PF processes to derive the data. This chapter begins with the analyses which manipulate the syntax to explain Celtic agreement and the second section reviews the PF-based analyses. The third section consists of an evaluation and discussion of these analyses.

2.1  Syntactic Analyses

Agreement is generally considered to be a syntactic phenomenon, so a first attempt at accounting for Scottish Gaelic and Celtic agreement would naturally be syntactic. The Celtic languages provide an interesting challenge to syntacticians because of the complementary distribution of overt pronouns with inflection on verbs and prepositions, first conjunct agreement, and anti-agreement phenomena.

This section presents the syntactic agreement analyses proposed in Adger and Ramchand (2005), Roberts and Shlonsky (1996), Roberts (2005), and McCloskey and Hale (1984).
2.1.1 Adger and Ramchand 2005

Adger and Ramchand propose that Scottish Gaelic relative clauses (1a), *wh*-dependencies (1b) and clefting constructions (1c) all employ the same basic structure, using the relative complementizer *a* (Adger & Ramchand 2005: 164). It is in these sorts of constructions that anti-agreement effects are found in Scottish Gaelic.

(1) a. An leabhar *a* cheannaich thu an diugh
   the book C-REL bought you today
   ‘the book that you bought today’

   (Adger & Ramchand 2005: 164)

   b. Cò *a* bha sgith?
      Who C-REL be-PAST tired
      ‘who was tired?’

   c. ‘S e Iain *a* bha sgith
      it’s Iain C-REL be-PAST tired
      ‘It is Iain that was tired’

   (Adger & Ramchand 2005: 165)

All the above examples include the particle *a*. The common structure and morphological similarity of the particles involved lead Adger and Ramchand to claim that in Scottish Gaelic “the relative clause [(1a)] is basic and that clefts [(1c)] and *wh*-questions [(1b)] are built up from relative clauses plus some extra material” (Adger & Ramchand 2005: 165). The extra material is the copula, which is overt in the clefting constructions (‘S in 1c) but null in the *wh*-questions (e.g. Ø Cò *a* bha sgith in (1b)).
Such structures would typically involve movement of the extracted element. Syntactic movement leaves a trace or copy which retains the \( \phi \)-features of the moved element. Adger and Ramchand propose that Universal Grammar provides languages with the option of using an Agree strategy rather than movement. This Agree strategy involves two distinct elements which are identified with each other via agreement: the extracted DP which is actually base-generated in the clefted position and a null \( pro \) element. The features at the foot of the dependency enter into an Agree relation with those of the relative particle \( a \), identifying the foot of the dependency with the head. Scottish Gaelic uses the Agree strategy to build the structures illustrated in (1).

Syntactic identity effects should indicate whether a language has a Move or an Agree strategy. If the language uses a Move strategy there should be identical elements (the moved element and its copy) in the clefted position and the base position; an Agree strategy instead has two syntactically distinct elements. The identity effects in Scottish Gaelic suggest that the foot of the dependency is null \( pro \) rather than a copy because the element at the foot of the dependency does not match the \( \phi \)-features of the extracted DP.

(2) ‘S e caileag bheag a bha thu a’ bruidhinn *rithe/ ris/ *ri
It’s girl small-F C-REL be-PAST you at speaking with-3FSG/-3MSG/base
‘It was a small girl that you were talking to’

(Adger & Ramchand 2005: 178)

The stranded preposition does not inflect for the feminine gender of the DP, but appears in the rather surprising 3MSG form. Recall from Chapter 1.5 that non-pronominal DPs do not trigger \( \phi \)-inflection in Scottish Gaelic, but they do trigger definiteness agreement as objects of a preposition. An indefinite DP normally appears with the base form of the
preposition: *ri caileag bheag*. The extracted indefinite DP *caileag bheag* in (2) does not trigger the base form of the preposition but rather the default 3MSG form.

The unexpected form of the preposition indicates an Agree situation, where the DP *caileag bheag* is base-generated in the clefted position, with null *pro* occupying the object position at the foot of the dependency. If Scottish Gaelic clefting constructions were derived by Move, the preposition should take the same inflection as it would have had the object remained in the regular object position.

The case found on the extracted DP provides further evidence that Scottish Gaelic uses an Agree rather than a Move strategy. Recall that complements of verbal nouns usually take the genitive case; but if clefted, the complement of the verbal noun appears in the nominative case.

(3) a. Bha thu a’ geàrradh na craoibhe
be-PAST you PTCL cut.VN the tree-GEN
‘You were cutting the tree’

   b. Dè a’ chraobh a bha thu a’ geàrradh?
   Which the tree-NOM C-REL be-PAST you PTCL cut.VN
   ‘Which tree were you cutting?’

   (Adger & Ramchand 2005: 169)

This indicates that the DP has been base-generated in the complement position of the verbal noun and so cannot receive genitive case.

Agree relates the clefted DP to the null *pro* at the base position. This *pro* lacks φ-features, triggering the default/3MSG form of the preposition, and is identified with the clefted DP at LF by the syntactic-semantic feature [Λ] on the relative complementizer *a*. [Λ] is
interpreted as predicate abstraction at the Syntax-LF interface, and requires a variable at the foot of the dependency to abstract over. This variable is null pro, whose identity feature [ID] is unvalued. The [ID:] feature becomes valued as [ID: dep] by [Λ] on the relative complementizer via an Agree relation. The lexicon of Scottish Gaelic is responsible for the Agree strategy because it provides pronouns with this [ID:] feature as well as the [ID: φ] feature found on independent pronouns (Adger & Ramchand 2005: 174).

The Agree operation is motivated by pro’s need to be syntactically well-formed and the complementizer’s need to be semantically well-formed. Null pro is syntactically well-formed when its [ID:] feature is valued. Agree is driven by inadequacies of the [ID:] feature. The relative complementizer a is semantically well-formed by abstracting over a variable (Adger & Ramchand 2005: 175). The LF component is able to interpret the clefted DP and pro together, despite the two being syntactically distinct because the [ID:] feature on pro is valued by the [ID: dep] feature on the complementizer a.

(4) \[ a[C, Λ, ID:dep] \ldots pro[D, ID: ] \rightarrow \\
    a[C, Λ, ID:dep] \ldots pro[D, ID:dep] \\
    \lambda x \ldots x \]

    (Adger & Ramchand 2005: 174)

To summarize, the anti-agreement effects found in Ā-dependencies in Celtic follow directly from this analysis: no agreement on the preposition is expected if the pro at the foot of the dependency has no φ-features and is syntactically distinct from the head.

The clefted DP is base-generated in the clefted position, rather than attaining that position by movement. Because there is no movement, there is no copy left by movement to trigger the appropriate agreement inflection. The variation among languages amounts to the
features of lexical items (Adger & Ramchand 2005: 185); and consequently Scottish Gaelic uses the Agree strategy because its Lexicon provides its relative complementizer with the feature [Λ] and the [ID:dep] feature as well as a null pro with an unvalued [ID:].

2.1.2 Roberts and Shlonsky 1996

Roberts and Shlonsky categorize the agreement systems of Welsh and Semitic as clitic systems with clitics which are “base-generated syntactic affixes in Agr” (Roberts & Shlonsky 1996: 171). These clitics are, contrary to tradition, not pronouns but Agr heads, and this is directly related to the VSO nature of the languages involved.

Welsh and Semitic allow pro. Weak pronouns identify and license their pro NP complement. Roberts and Shlonsky assume the structure of a weak/clitic pronoun DP to be as in (5).

\[(5) \quad [\text{DP pronoun} \ [\text{NP} \ \text{pro}]]\]

(Roberts & Shlonsky 1996: 188)

Weak pronouns must have their N-features checked before spell-out, but in VSO systems the Agr heads have weak N-features, and cannot license weak pronouns. Because weak pronouns cannot be licensed by Agr, and cannot identify pro, the Agr head itself must identify (license) pro. The apparent inflectional endings are clitics which appear in Agr to identify pro (Roberts & Shlonsky 1996: 188). The lexical category on which the clitic appears incorporates onto the Agr head, with the consequence that these clitics are enclitic (Roberts & Shlonsky 1996: 189).
Semitic clitics are found on all lexical categories:

(6) a. fhim\textit{t} -\textit{ha}  
(1) understood-her  
‘I understood her’

b. beet -\textit{ha}  
house-her  
‘her house’

c. min -\textit{ha}  
from-her  
‘from her’

d. \textit{ʔ} in –\textit{ha}  
that-she  
‘that she’

(Roberts & Shlonsky 1996: 176)

The Semitic clitics found in object agreement are affixal Agr heads to which the preposition or other lexical head adjoins (Roberts & Shlonsky 1996: 178). In the case of Semitic subject agreement, however, the clitics are actually base-generated on the verb (Roberts & Shlonsky 1996: 178) because subject clitics must be attached directly on the verb, with the object clitic attached on the outside of the subject.

(7) xayyat-\textit{at-o}  
sew.PERF-3SG.F-3.SG.M  
‘She sewed it’

(Roberts & Shlonsky 1996: 178)
Welsh clitics do not appear on as many categories as the Semitic ones. In literary Welsh there are ‘infixed’ clitics on sentential particles, shown in (8a). Welsh clitics may also act as possessive pronominals (8b). Welsh clitics appear in verbal inflection: (8c) is the declension of the verb *caru* ‘to love’. Prepositional inflection also involves clitics, and (8d) is the paradigm for the preposition *ar* ‘on’. Finally, the Welsh clitic system includes echo pronouns (8e), which are a special type of pronominal able to co-occur with inflection.

(8) a. Mi’ ch gwelais (i)  
PTCL-you saw (I)  
‘I saw you’  

b. ei wraig  
his wife  
‘his wife’  

(Roberts & Shlonsky 1996: 181)

c. caraf carwn  
cery cerwch  
câr carant  
‘love’

d. arnaf arnon  
arnat arnoch  
arno arnon  
arni  
‘on’

e. arno fo  
on.3SG him  
‘on him’  

(Roberts & Shlonsky 1996: 182)
Roberts and Shlonsky find Welsh clitics to be Agr heads because they share many of the properties of Semitic clitics which are also Agr heads (Roberts & Shlonsky 1996: 185).

Welsh has synthetic and analytic forms like the other Celtic languages. Roberts and Shlonsky attribute this synthetic/analytic alternation to the existence of two separate Agr nodes. Analytic Agr has weak N-features, which forces it to be checked via DP raising to the specifier of Agr at LF. Synthetic Agr, on the other hand, has no N-features, making it a ‘pure’ agreement head (Roberts & Shlonsky 1996: 190). Synthetic Agr appears only with null pro because only null pro does not require its N-features to be checked.

Welsh echo pronouns appear optionally with inflection, and because they are optional they cannot be Agr heads like the other agreement clitics which license pro. Roberts and Shlonsky take these echo pronouns to be “generated in an Agr-position inside the pronominal DP”, being the “optional realization” of the Agr in the DP (Roberts & Shlonsky 1996: 194).

To summarize, the complementary distribution found in Welsh and Semitic is the result of the syntactic structure which is tied to the verb-initial word order in these languages (Roberts & Shlonsky 1996: 196). The inability of Agr to license weak pronouns, which in turn license pro, means that the onus falls onto Agr to license pro in Welsh and Semitic. The agreement affixes which license pro are clitics base-generated on Agr. The agreement system in Welsh and Semitic is a direct consequence of the weak N-features of Agr.
2.1.3 Roberts 2005

Roberts claims that VSO word order in Welsh is related to the V- and D-features of the language, which trigger verb and subject movement, respectively. Agreement and anti-agreement in Welsh follow from its V- and D-features (Roberts 2005: 47).

The V-features of Welsh are strong: the agreement inflection on the verb indicates V-to-AgrS movement, usually seen as resulting from strong V-features on AgrS. The strong V-features on AgrS are also demonstrated by the rich agreement morphology found in Welsh. Rich agreement morphology is generally a prerequisite for a strong-agreement language, and Welsh has inflectional endings for all person-number combinations (Roberts 2005: 49). In this respect Welsh contrasts with Scottish Gaelic and Modern Irish, which both have gaps in their verbal paradigms. The verbal paradigm for Welsh is given here:

(9)

<table>
<thead>
<tr>
<th>Tense</th>
<th>Inflections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-past tense</strong></td>
<td>-af, -i, -ith/-iff, -wn, -wch, -an</td>
</tr>
<tr>
<td><strong>Past tense</strong></td>
<td>-es, -est, -odd, -on, -och, -on</td>
</tr>
<tr>
<td><strong>Conditional</strong></td>
<td>-wn, -et, -ai, -en, -ech, -en</td>
</tr>
</tbody>
</table>

(Welsh) (Roberts 2005: 49)

Welsh agreement is sufficiently rich enough to license null subjects. It has been observed that languages with rich agreement also tend to license null subjects, with ‘richness’ understood as allowing up to one syncretism in the paradigm (Roberts 2005: 50). Welsh contrasts with familiar null-subject languages, however, in requiring overt subject to appear in the “spec position immediately following and adjacent to AgrS” (Roberts 2005: 50). That is, the subject must always be adjacent to the verb, whereas other null subject languages will allow some freedom of position in the subject.
As in the other Celtic languages, Welsh verbs must take the third person singular masculine, or default, form with an overt subject (compare (10b) to (10c)). Non-pronominal subjects always fail to agree with the verb. While a pronominal subject triggers inflection on the verb, it cannot be phonologically overt itself (10a).

(10) a. Canodd
Sang-3SG
‘He/she sang’

b. Canodd y plant
sang-3SG the children.PL

c. *Canon y plant
sang-3PL the children.PL

‘The children sang’

(Roberts 2005: 58)

The Welsh data motivates Roberts to propose that the agreement inflection found in both the verbal and prepositional paradigm is the instantiation of a subject clitic in Pers (Roberts 2005: 53). The inflection found on the verb and preposition is actually a subject clitic (SCL) that appears in Pers to value the features there. Welsh verbs do not have verb agreement as found in Romance languages; Welsh uses a subject clitic for the purpose of indicating the φ-features of the subject.
This subject clitic in Pers triggers raising of the verb (or preposition) to Pers by virtue of its being a syntactic affix. The verb then incorporates with the subject clitic, resulting in the subject clitic being suffixed to the verb: and thus the transparent morphology of the Welsh paradigm (Roberts 2005: 53).

This effectively means that Welsh doesn’t have verbal agreement. Rather, Welsh has clitic agreement that results from head movement of the verb to Pers (Roberts 2005: 53). As well as valuing the features in Pers, the subject clitic values the number feature of the lower Num head via an Agree relation (Roberts 2005: 58). Since Roberts supposes subjects to appear in spec.NumP, the appearance of the subject clitic prevents the appearance of an overt subject in spec, NumP, and produces the complementary distribution.
The 3SG form of the verb with a non-pronominal DP derives from the appearance of a default morphological placeholder which does not value the features of Num; this default clitic values Pers but not Num, allowing an overt DP to occupy spec, NumP. Because Num is not valued by a subject clitic in Pers, the interpretation of Num must either be default (3MSG) or specified by an overt DP (Roberts 2005: 59).

Thus there are three ways Num can be valued: either by the subject clitic in Pers (12a), or by an overt DP in spec, NumP (12b), or by default interpretation (12c) (Roberts 2005: 59).

\[(12)\]
\[
\text{a. } \left[ \text{PERS V-SCL}(\varphi) \right] \left[ \text{NUM } \varnothing \right]
\]
\[
\text{b. } \left[ \text{PERS V-SCL}(\text{default}) \right] \left[ \text{NUM DP} \right]
\]
\[
\text{c. } \left[ \text{PERS V-SCL}(\text{default}) \right] \left[ \text{NUM } \varnothing \right]
\]

The complementary distribution in Welsh is a consequence of the appearance of the subject clitic in Pers.

Recall that echo pronouns are permitted to co-occur with agreement inflection.

\[(13)\]
\[
\text{Mi welais i Megan}
\]
\[
\text{PTCL saw-1SG I Megan}
\]
\[
\text{‘I saw Megan’}
\]

(Roberts 2005: 61)

These echo pronouns receive their morphological form from the subject clitic; the echo pronouns do not value Num, which is already valued by the subject clitic in Pers (Roberts 2005: 62). The echo pronoun simply restates the value of the subject clitic.
Irish, on the other hand, lacks echo pronouns, and so displays strict complementary
distribution between agreement inflection and overt arguments. Roberts proposes that in
Irish and similar languages all pronouns inherently have a Number value (Roberts 2005: 63)
and so cannot co-occur with the subject clitic that already values Num. This difference
between Welsh and Irish is a matter of lexical inventory (Roberts 2005: 64).

To summarize, the inflected forms found in Welsh are simply the result of a subject
clitic attracting the verb to Pers. The subject clitic blocks an overt DP from occupying the
specifier of either Pers or Num, resulting in the anti-agreement phenomenon in Welsh
(Roberts 2005: 63). Since the subject clitic attracts the verb to Pers, VSO order is also
accounted for. The subject clitic in Pers values not only Pers but also Num’s uninterpretable
feature; when Num is valued by the subject clitic in Pers, there cannot be a subject in [spec,
Num] because Num’s feature is already valued (Roberts 2005: 59). When there is no subject
clitic, as in the case of the 3SG form, the default morphology appears in Pers, and a non-
pronominal DP may appear in Num. A non-pronominal DP will raise to spec, NumP for case
reasons, but only if Num is unvalued (Roberts 2005: 68). That is, there cannot be a subject
clitic in Pers (automatically valuing Num) if there is an overt DP in Num.

Welsh inflection is the result of subject clitics, not of a syntactic agreement process,
which is why non-pronominal DPs do not appear with corresponding φ-feature inflection.
Welsh is a strong-agreement language at the Pers level but a weak-agreement language at the
Number level (Roberts 2005: 60). The particular agreement system found in Welsh is the
result of the feature strength of Pers and Num.
2.1.4 McCloskey and Hale 1984

For McCloskey and Hale the agreement inflection of Modern Irish is a consequence of the interaction of syntax and morphology. Modern Irish is a Null Subject language in that it permits null subjects in tensed finite clauses (14a), and may furthermore be characterized as a Null Subject language in the ‘strong’ sense because it actually requires subjects to be null when inflection appears on the verb (14b) (McCloskey & Hale 1984: 488).

(14) a. chuirfinn
     put.COND.1SG

b. *chuirfinn mé
   put.COND.1SG I

c. *chuirfeadh mé
   put.COND I

   ‘I would put’

(McCloskey & Hale 1984: 489-91)

The subject cannot be overt with the synthetic verb form. The uninflected, or analytic, form of the verb is only used when there is no synthetic form available (thus the ungrammaticality of 14c), when the subject is a non-pronominal DP, or with trace subjects (15).

(15) Chan m’ a chuirfeadh t isteach ar an phost sin
     COP+NEG me C put.COND in on that job
     ‘It’s not me that would apply for that job’

(McCloskey & Hale 1984: 490)
This complementary distribution of inflection and subject makes a sharp contrast with the facts of more familiar Null-Subject languages like the Romance family, which allow the optional phonological realization of the subject.

A null pro subject, dubbed the ‘Inflectional Argument’, appears with the synthetic form of the verb. This silent subject behaves syntactically as a regular overt pronoun would (McCloskey & Hale 1984: 493-500). McCloskey and Hale argue that this Inflectional Argument is in fact syntactically indistinguishable from an overt subject pronoun. This is most apparent in coordination constructions, where the verb inflects for the leftmost subject and is suffixed for contrastive emphasis (required for coordination of pronouns in Irish).

(16) go mbeinn -se agus tu -sa mór len a chéile (Irish)
     C be.COND.ISG -CONTR and you-CONTR great with each other
     ‘that you and I would be very friendly with one another’

      (McCloskey & Hale 1984: 502)

The inflection, as may be seen from (17), can be followed by emphatic and contrastive suffixes, normally found only on pronominal DPs (McCloskey & Hale 1984: 495).

(17) a. dá ndéanfá -sa (Irish)
     if do.COND.2SG -CONTR
     ‘if you would do’

      (McCloskey & Hale 1984: 495)

b. tú féin
     yourself

      (McCloskey & Hale 1984: 493)
The Inflectional Argument may also make an appearance as a resumptive pronoun
(McCloskey & Hale 1984: 496).

(18)  

a. na daoine a\(^N\) raibh mé ag dúil           go\(^N\) gcuirf\(\text{idíš}\) (Irish)
\[\text{the people}\ C\ \text{was}\ \text{I}\ \text{expect.}\text{PROG}\ C\ \text{put.}\text{COND.}\text{3PL}\]
isteach ar  an phost sin
in  on  that job

b. na daoine a\(^N\) raibh mé ag dúil           go\(^N\) gcuirfeadh \(\text{siad}\) isteach
\[\text{the people}\ C\ \text{was}\ \text{I}\ \text{expect.}\text{PROG}\ C\ \text{put.}\text{COND}\ \text{they}\ \text{in}\]
ar  an phost sin
on  that job
‘the people that I expected (that they) would apply for that job’

(McCloskey & Hale 1984: 498)

Where a regular resumptive pronoun is found (18b), the inflected verb may also appear (18a).

Irish also exhibits this sort of agreement in prepositional inflection. McCloskey and Hale argue that the prepositional forms cannot be derived via a general cliticization rule, as can be seen from the 3MSG data (McCloskey & Hale 1984: 506).
(19) le ‘with’ do ‘to/for’ roimh ‘before’ pronouns (Irish)

1SG liom domh romham mé
2SG leat duit romhat tu
3MSG leis dó roimhe é
3FSG léithi daoithi romhainn í
1PL linn dúinn romhainn sinn/muid
2PL libh daoibh romhaibh sibh
3PL leofa dófa rompu iad

(McCloskey & Hale 1984: 506)

There is no distinguishable suffix that occurs across the paradigm for 3MSG, although the remaining person-number combinations of the prepositions do bear a resemblance to the corresponding pronoun. The form of the 3MSG preposition indicates that the pronominal object is not simply cliticized onto the prepositional head.

The inflected preposition displays the same characteristics as the inflected verb, so McCloskey and Hale propose that null pro is present here as well. The one difference between prepositional and verbal inflection is with coordinated arguments. The verb inflects for the first of the coordinated NPs (16 above), while the preposition must be repeated for both conjuncts. But this is probably just a requirement of prepositional phrases, and not a difference in the behaviour of the inflection itself (McCloskey & Hale 1984: 510).

The ‘Inflectional Argument’ also appears in possessive structures, sharing the position occupied by non-pronominal DPs. This appearance of the Inflectional Argument, or pro, has the same distribution as outlined for the Inflectional Argument of prepositions and verbs.
Rather than being suffixed to the noun however, in this case the inflectional particle is prefixed.

(20) a. mo theach
    1SG house pro
    ‘my house’

   (McCloskey & Hale 1984: 513)

b. mo theach –sa
    1SG house pro-EMPH
    ‘my house’

Having null pro in the complement position explains why emphatic particles, demonstratives and fein may appear following the possessed DP, and not the possessive pronominal. This inflectional particle (in the shape of the possessive pronoun) also appears on the verbal noun.

(21) Bhí siad mo chuartú
    be.PAST they my seek.VN
    ‘They were looking for me’

   (McCloskey & Hale 1984: 512)

Further evidence for a syntactically real pronoun that appears with inflection comes from Welsh. Welsh echo pronouns appear precisely where McCloskey and Hale propose pro to appear (McCloskey & Hale 1984: 518). The presence of an echo pronoun is not required, but has largely to do with register\(^6\).

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\(^6\) Echo pronouns are more common in colloquial Welsh than in Literary Welsh (McCloskey & Hale 1984: 519).
Echo pronouns appear only in positions associated with person-number inflection, which coincides with the appearances of the Inflectional Argument in Modern Irish (McCloskey & Hale 1984: 520).

McCloskey and Hale identify two morphosyntactic mechanisms which may explain the data of Modern Irish. The first is an ‘Agreement Analysis’, under which the “inflected forms of lexical categories are inserted fully-formed at lexical nodes in phrase structure” (McCloskey & Hale 1984: 524).

The Inflectional Argument (pro) occupies the argument position of an inflected item at all stages of the derivation (McCloskey & Hale 1984: 524), and triggers the insertion of a lexical item (e.g. the verb) with matching inflection via syntactic agreement. The appearance of pro is ungrammatical unless it is governed by an Agr node or feature (McCloskey & Hale 1984: 525).

The alternative to the ‘Agreement Analysis’ would be an ‘Incorporation Analysis’ which involves a pronominal DP being “integrated with the phrasal head into a single
inflected word” at syntactic structure (McCloskey & Hale 1984: 527). Under this analysis inflection is identical to the argument, and word formation would have to take place in the syntax.

McCloskey and Hale opt for Agreement over Incorporation because of the existence of doublets in various dialects (the following example is from Connacht), where inflection may occur with an overt pronoun.

(24) a. a chuid seisean
     3MSG portion he-CONTR
     ‘his portion’

     b. a nglór muide
     1PL voice we-CONTR
     ‘our voice’

     (McCloskey & Hale 1984: 529)

To prevent the appearance of an analytic form when a synthetic form is available, McCloskey and Hale propose a ‘Morphological Blocking’ rule, which applies the more specific rule before a generally productive one. The features which trigger the appearance of the synthetic form are listed, triggering the insertion of the more specified form before the generalized analytic one (McCloskey & Hale 1984: 531).

To summarize, the null *pro* Inflectional Argument appears wherever inflection appears, and it must be governed by the agreement inflection at Syntactic Structure. The Inflectional Argument appears with prepositional and verbal inflection, and in possessive constructions, including with the verbal noun. The appearance of *pro* in the syntax triggers
the insertion of the synthetic forms, resulting in the complementary distribution found in Modern Irish.

2.2 PF-Based Analyses

PF-based analyses are not necessarily phonological analyses. The analyses presented here assume some kind of post-syntactic morphological component which may operate on the syntactic representation. Because PF receives input from Syntax, the processes at PF are at least somewhat sensitive to syntactic structure. The PF operations and the Syntax-PF mapping process must be made explicit for PF-based approaches.

Agreement has been noted to behave differently for VS as opposed to SV orders. Because of this, it is tempting to have agreement happen at PF, making it also sensitive to phonological and prosodic considerations. This phenomenon has mostly been recorded and studied in the Semitic languages, which may alternate between SVO and VSO order (Ackema & Neeleman 2003, Aoun, Benmamoun & Sportiche 1994, Roberts & Shlonsky 1996), but can also be found in strict SVO languages like in the following English example.

(25) a. *Amn’t I lucky?
    b. Aren’t I lucky?

(Embick and Marantz 2008: 32)

The complementary distribution of agreement inflection and an overt subject in the Celtic languages suggests that some post-syntactic morphological process is involved. An analysis assuming a post-syntactic component is well-equipped to manage the anti-
agreement effects related to word order, along with many other characteristics of Celtic agreement.


2.2.1 Ackema and Neeleman 2003

Ackema and Neeleman’s analysis of Celtic agreement appeals to prosodic considerations to derive the data. Basically, a head and phrase appear within the same prosodic phrase, priming the application of a reanalysis rule which yields the personal endings found on verbs and prepositions (Ackema & Neeleman 2003: 681).

(26) \{X YP\}

This process happens after syntax on a linearized structure. The linear ordering of constituents as derived from the syntactic structure is the major consideration appealed to when creating this type of ‘agreement’. Celtic verb-subject agreement is well-known for the ungrammaticality of overt pronouns co-occurring with verbal inflection. The observed complementary distribution in (27) follows directly from Ackema and Neeleman’s analysis.

(27) a. Chuirfinn isteach ar an phost sin put.COND.1SG in on that job ‘I would apply for that job’

b. *Chuirfinn mé isteach ar an phost sin put.COND.1SG I in on that job

(Ackema & Neeleman 2003: 716)
The data are similar for all the Celtic languages: inflection cannot appear with an overt subject (27b) and furthermore if an inflected form is available, the uninflected form plus pronoun is ungrammatical (27c). A non-pronominal DP must appear with the uninflected (analytic) form.

The PF constituent according to Ackema and Neeleman consists of the following processes responsible for mapping syntactic structure onto phonological form.

(28) 1. Linearization of syntactic terminals, and at this stage is sensitivity to syntactic constituency
2. The initial prosodic phrasing, which occurs based on the syntactic information but is also sensitive to the linear ordering of constituents—this is where the prosodic boundaries are lined up with the syntactic ones
3. The application of context-sensitive allomorphy rules
4. The spell-out of terminals

(Ackema & Neeleman 2003: 683)

The prosodic boundaries with which PF works are sensitive to the syntactic domains which feed them. The alignment rule in (29) occurs in step 2 of the mapping procedure above.

(29) Align «right edge, XP», «right edge, φ»

(Ackema & Neeleman 2003: 684)

The alignment rule varies according to the headedness of the language—right-alignment for head-initial languages and left-alignment for head-final ones. If an initial
prosodic domain \([\varphi]\) is not phonologically strong enough, the PF component will further realign it to occur within the boundaries of another prosodic domain. Other mapping principles may apply, such as intonational patterns and erasure of boundaries, in the case of modifiers. Under this sort of PF framework, “locality is an effect of prosodic domain formation”, such that if an element does not trigger the closure of a prosodic boundary, it may intervene without affecting locality (Ackema & Neeleman 2003: 690). This statement is further clarified: Ackema and Neeleman claim that only clitics may intervene within a prosodic word (Ackema & Neeleman 2003: 690).

The prosodic boundaries condition the phonological representation for application of post-syntactic allomorphy rules which alter the features of terminals. The features of terminal nodes may be altered in the context of another terminal within its prosodic domain (Ackema & Neeleman 2003: 683).

There are two context-sensitive allomorphy rules which Ackema and Neeleman discuss. The first is a feature-deletion rule. A language may allow features to be deleted when they co-occur with another particular terminal, consequently affecting the phonological realization of that terminal and resulting in the insertion of an alternative exponent (Ackema & Neeleman 2003: 686). This feature-deletion rule is subject to the condition of Recoverability, which requires the agreement of the terminal node and the target of the rule (Ackema & Neeleman 2003: 687).

(30) \[ \{ \ldots [A F_1 F_2] \ldots [B F_1 F_3] \ldots \} \rightarrow \{ \ldots [A F_2] \ldots [B F_1 F_3] \ldots \} \]  

(Ackema & Neeleman 2003: 686)
This example illustrates a potential feature-deletion rule: the order of constituents or features is not fixed. The featural makeup of node A has been altered in the context of a matching feature on node B. That is, the presence of \([F_1]\) on B allows the deletion of \([F_1]\) on A.

The second allomorphy rule changes the phonological realization of a terminal node when it appears within the same prosodic domain as another specified terminal (Ackema & Neeleman 2003: 688). One effect of this rule is the appearance of clitics rather than phonologically independent elements. No features are deleted under this rule and the phonologically altered element still mentions all the features of its terminal.

(31) \[
\{ \ldots A \ldots [B \ F_1 \ F_3 ] \ldots \} \to \\
\{ \ldots <A \ldots [B \ F_1 \ F_3 ] > \ldots \}
\]

(Ackema & Neeleman 2003: 688)

This phonological form-altering rule will most often “apply after a certain class of syntactic heads only” (Ackema & Neeleman 2003: 688) and may apply recursively. Furthermore, the form-altering rule may apply either to a single terminal which finds itself within another terminal’s prosodic boundary, or the rule may apply to the entire phonological phrase itself, resulting in a phonological realization which is entirely distinct from the expected phonological forms of the independent nodes. The nodes A and B in (32) are realized as /c/ rather than /ab/ when in the same prosodic phrase.

(32) \[
A \to /a/ \\
[B \ F_1 F_2] \to /b/ \\
< A [B \ F_1 F_2] > \to /c/
\]

(Ackema & Neeleman 2003: 689)
Celtic verb-subject agreement is the result of this second allomorphy rule which simply changes the phonological realization of the constituents. Although not all pronominal subjects appear as clitics on the verb (recall that the verb’s inflectional paradigm is far from complete for Irish and Scottish Gaelic), Ackema and Neeleman do not believe it affects their analysis (Ackema & Neeleman 2003: 716). This is because of the spell-out system Ackema and Neeleman assume.

Celtic VSO order primes the PF component to realize the verb and its subject in the same prosodic phrase.

(33)  
   a. \([FP [F V] [IP subject t_v [VP t_v object]]]\)  
   b. \{V subject\} {object}  
   
(Ackema & Neeleman 2003: 718)

The formation of prosodic phrases has the consequence that the verb and its subject share a prosodic phrase (33b). This conditions the allomorphy rule responsible for Celtic agreement: the pronoun weakening rule.

(34)  \textit{Irish Pronoun Weakening}  
\[
\{ ... [-N] ... [D (Prt) (Add) ... ] ... \} \rightarrow \\
\{ ... <[-N] ... [D (Prt) (Add)...]> ... \}
\]

(Ackema & Neeleman 2003: 718)

When the pronoun appears within the same prosodic domain as a [-N] head (that is, either a preposition or a verb), it is consequently realized within the same prosodic word as that [-N] head. Prepositions show the same complementary distribution of inflection and an overt object, so the allomorphy rule which produces the so-called ‘agreement inflection’
specifies the context as [-N] to allow the pronoun weakening rule to occur with both verbs and prepositions. This context provides the potential for the spell-out component of Irish to yield an alternative exponent for the pronoun (Ackema & Neeleman 2003: 689). The weakening rule in (34) is obligatory for all pronouns within a [-N]’s prosodic domain, but the spell-out component is responsible for the final appearance of the pronoun as, e.g. –inn or mé.

When a conjoined DP appears in the subject position, the verb inflects only for the left-most pronoun because only the leftmost conjunct is realized within the verb’s prosodic boundaries. Again, the example is an Irish sentence, but the data is similar for all the Celtic languages.

(35) a. da mbeinn -se agus tu -sa ann (Irish)  
   if be.COND.ISG-CONTR and you-CONTR there
   ‘if I and you were there’
   (Ackema & Neeleman 2003: 718)

   b. {mbeinn-se} {agus tusa}

The contrastive suffixes are required for conjoined pronouns, lending support for the syntactic presence of the left-most pronoun (cf. McCloskey & Hale 1984 for Irish), which has been phonologically realized as inflection on the verb.

To summarize, Ackema and Neeleman’s prosodic account neatly explains the complementary distribution of inflection and pronominals. In the end, the ‘inflection’ is just a phonologically-altered form of the pronominal which appears in certain contexts. The pronoun weakening rule proposed in (34) applies whenever the contextual requirements are
met. The phenomenon of first conjunct agreement is also accounted for, since only the first conjunct falls within the prosodic phrase boundary.

2.2.2 Adger 1997

There is strict adjacency between C-V, V-S, and S-O in Scottish Gaelic and Modern Irish: none of these elements may be separated by adverbials (Adger 1997: 10). The subject and object DPs may be separated only by a parenthetical (Adger 1997: 11).

(36) *Chuala ar ndóigh mé an t-amhrán sin
    heard of course I the song that

   ‘I of course heard that song’

   (Adger 1997: 11)

In (36) the adverbial *ar ndóigh intervenes between the verb chuala and the subject mé, making the sentence ungrammatical. The adverbial adjacency effects found in Irish and Scottish Gaelic are linked to the VSO nature of these languages. The post-syntactic analysis Adger proposes to explain these adjacency effects extends to the verbal agreement system also found in these languages.

The adjacency effects derive from the need for strong features on a head to be eliminated by PF in order for the derivation to converge. The D-features in Scottish Gaelic and Modern Irish are strong (Adger 1997: 16), and as such are not permitted to survive to PF. Adger assumes a post-syntactic morphological component which “is implicated in eliminating D and N features in VSO languages” before the derivation reaches PF (Adger 1997: 17). The morphological component does this by reanalysing the V-D sequence as a
single morphological unit via a general morphophonological rule which applies when the following head (e.g. D) bears strong features (Adger 1997: 9).

(37) \[ V_{[DP\ D\ NP]} \rightarrow [V\ D]\ NP \]

(Adger 1997: 20)

This reanalysis is a “linear matter” (Adger 1997: 18), such that an intervening adverbial prevents the D-features from being checked or reanalysed at the morphological component. The need to check strong D-features produces the strict adjacency effects found between the verb and its subject.

Support for a morphophonological analysis of adjacency effects comes from the verbal agreement system. Recall that in both Modern Irish and Scottish Gaelic only a null pronoun may appear with agreement inflection.

(38) Bhuailinn (*mi) an cat seo, mas urrain dhomh.
Hit-COND.1SG (*I) the cat this if+COP ability to.1SG
‘I would hit this cat, if I could’

(Adger 1996: 17)

The inflection on the verb is actually an incorporated pronoun derived via the morphological reanalysis rule in (37) above (Adger 1997: 19). Since pronouns are D heads, the reanalysis rule results in the noted complementary distribution.

Support for a post-syntactic account of agreement comes from coordinated subjects in Scottish Gaelic and Modern Irish which appear to violate the Coordinate Structures Constraint. If the inflection in (39) is the result of a post-syntactic merger, there is no violation.
(39) Bhualainn -se is tu -sa an cat seo
hit.COND.1SG-EMPH and you-EMPH the cat this
‘You and I would hit this cat’

(Adger 1997: 18)

Syntactic Incorporation of the first person subject pronoun and the verb would violate the CSC, because the first conjunct is being treated differently than the second one.

A post-syntactic merger account also easily handles extracted subjects. Recall that when the subject DP is extracted, the verb must appear with default agreement. If the verb were inflected for the extracted subject (e.g. sgriobhainn ‘I would write’ in (40)), the sentence would be ungrammatical.

(40) ‘S e mi-se a thubhairt thu a sgriobhadh an leabhar
COP it I -EMPH that said you that write-COND the book
‘It’s me that you said would write the book’

(Adger 1997: 18)

The behaviour of agreement on the finite verb contrasts with agreement on the verbal noun. Recall that when the complement of a verbal noun is extracted the particle on the verbal noun inflects for the φ-features of the extracted DP (41a). This particle realizes the Agr head and inflects only when the DP is extracted. When the non-pronominal DP is in the normal complement position, there is no inflection (41b).
(41) a. ‘s e na leabhraichean sin nach feumaidh sinn an leughadh
COP it the books these that-not must we AGR-PL read
‘It’s these books that we must not read’

b. Feumaidh mi na leabhraichean a sgrìobhadh
must I the books AGR write.VN
‘I must write the books’

(Adger 1997: 19)

The fact that this agreement particle inflects indicates that there is a trace of some kind left when the complement DP is extracted. The contrast in dealing with extracted DPs indicates that the agreement found on the verbal noun and that of the finite verb are produced by different processes (Adger 1997: 19).

To summarize, the verb-subject agreement in Scottish Gaelic and Modern Irish results from a post-syntactic rule which reanalyses two heads as one morphological unit. This morphological merger explains the adverbial adjacency effects as well as the complementary distribution found in these languages. The difference between the agreement inflection on the finite verb and the non-finite verbal noun is the result of different processes at different points in the derivation.

2.2.3 Acquaviva 2003

Irish prepositional forms have traditionally been classified as having personal endings, along with a base form which is not specified for any particular φ-feature combination (in (42) below, le and ag are the base forms). Acquaviva, because of the shape and behavior of the 3MSG form, proposes that the traditional classification is inaccurate. Rather, the Irish
prepositional paradigm includes a personal non-suffixed form which is most often used for the third person singular masculine pronoun (e.g. *leis, aige* in (42)), but is, along with the base form, an alternative realization of the prepositional head P (Acquaviva 2003: 3).

As may be seen from (42), there are recognizable suffixes for all φ-feature combinations but the third person masculine singular, whose shape is entirely dependent on the prepositional stem (see also Appendix 3 for a list of the inflected prepositional forms in Irish). Acquaviva’s analysis groups the 3MSG or default forms against the other personal suffixed ones: “a suffix exists as such if it can be isolated on the basis of more than one stem” (Acquaviva 2003: 8). Given the presence of an arguably inflected 3MSG form with no recognizable suffix, a distinction must be made between inflection and affixes.

The inflecting prepositions in Irish contain a morphological diacritic [AGR], the realization of which gives rise to the inflected forms of (42) above. The personal endings which realize [AGR] behave syntactically like pronouns but appear in the morphology as affixes (Acquaviva 2003: 4). This [AGR] diacritic is inherent to the prepositional stem, but

<table>
<thead>
<tr>
<th>(42)</th>
<th>le ‘with’</th>
<th>ag ‘at’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>liom</td>
<td>agam</td>
</tr>
<tr>
<td>2SG</td>
<td>leat</td>
<td>agat</td>
</tr>
<tr>
<td>3MSG</td>
<td>leis</td>
<td>aige</td>
</tr>
<tr>
<td>3FSG</td>
<td>léi</td>
<td>aici</td>
</tr>
<tr>
<td>1PL</td>
<td>linn</td>
<td>againn</td>
</tr>
<tr>
<td>2PL</td>
<td>libh</td>
<td>agaibh</td>
</tr>
<tr>
<td>3PL</td>
<td>leo</td>
<td>acu</td>
</tr>
</tbody>
</table>

(Acquaviva 2003: 1)
has no role in the syntax. The syntax plays no part in the formation of these prepositional forms besides giving the context which determines the discharge of [AGR].

The inflected forms, which include the non-suffixed 3MSG form, are grouped together against the base (or uninflected) form. The inflected forms appear when the object is a null pronoun (43a). The uninflected base form appears in a sort of elsewhere distribution, as with a non-pronominal DP (43b).

(43) a. uait
    from.2SG
    ‘from you’

    (Irish) (Acquaviva 2003: 6)

    b. Feicfidh mé le [labhairt le Máire]
    see.FUT I with [talk with Máire]
    ‘I will try to talk to Máire’

    (Irish) (Acquaviva 2003: 18)

The default 3MSG form of the preposition is interesting because it is this form that appears with a (null) 3MSG pronominal object, or when its object is headed by a definite article (in the cases of le ‘with’ and tri ‘through’ only), and it is the default 3MSG form only which has a tendency to take over the function of the base form. Since the default form of the preposition is distinguished from the other inflected forms by virtue of its being non-suffixed, it is unsurprising that it would tend to fill in for the uninflected base form’s function as well as to be used for the default (3MSG) φ-features (Acquaviva 2003: 8).

The default form, like the suffixed forms, is an inflected form (inflected for 3MSG); yet the default form is also, like the base form, a realization of the prepositional P head. The
The default form is an extended stem, realizing the [AGR] diacritic without a suffix (Acquaviva 2003: 14). As an extended stem, the default form is not an exponent for any morphosyntactic property, but simply discharges the prepositional stem along with its [AGR] diacritic. The default 3MSG inflectional form realizes the [AGR] diacritic without reference to any morphosyntactic features, as in (44):

(44) WITH, AGR ↔ leis

The insertion of the exponent leis discharges the diacritic [AGR] as well as the stem WITH.

Only the suffixed forms indicate the φ-features of the preposition’s pronominal object and in so doing discharge [AGR]. The default form gains a 3MSG interpretation because of the gap in the inflectional paradigm.

The [AGR] diacritic is inherent on all the inflecting prepositional stems, distinguishing between the class of inflecting prepositions and those which do not inflect. This morphological diacritic [AGR] “encodes inflection as a lexical property, not as a bundle of pronominal feature values” (Acquaviva 2003: 14). [AGR] is discharged with a value derived from its syntactic context. The personal endings are derived from the stem’s inherent [AGR] diacritic, but it is the φ-features of pro which allow [AGR] to be discharged as a certain suffix, e.g. –t in (45) (Acquaviva 2003: 19).

The insertion of a suffixed inflectional form discharges the stem and the [AGR] diacritic in two parts. For the form leat ‘with you’, the exponents are:

(45) [AGR:2SG] ↔ /l/ /P__

WITH ↔ /l-/ /__AGR
When the base form of the preposition is inserted the [AGR] diacritic is not discharged, although [AGR]'s presence is required to be visible as a property of the prepositional stem.

(46) WITH (AGR) ↔ le

[AGR] needs to be discharged only “for the well-formedness of the complex structure consisting of P and, crucially, a simple pronoun” (Acquaviva 2003: 18). When the object of the preposition is anything but a pronoun, the [AGR] diacritic does not need to be discharged, and so the base form is inserted.

This is not entirely true, however, as in some cases the [AGR] diacritic may be discharged for the definite article, specifically for the default forms leis and tris. These two prepositions appear in the 3MSG or default form when the object is headed by the definite article.

(47) Feicfidh mé leis [an t-alt seo a léamh] (Irish) See.FUT I with.3MSG [the article here PTCL read]
‘I will try to read this article’

(Acquaviva 2003: 8)

The appearance of the default form here has to do with the tendency of the default form to take over the role of the base form, and not with any true syntactic agreement between the definite article and the preposition: “a purely formal morphological readjustment” (Acquaviva 2003: 9).

The default form discharges the [AGR] diacritic without valuing any morphosyntactic features. The base form does not discharge [AGR] at all, and so the default form, being more specific in discharging [AGR] (Acquaviva 2003: 18), may fill the role of the base form but the
base form cannot fill the role of the default form. The appearance of the default form in (47) is one manifestation of this tendency.

To summarize, the inflecting prepositions are differentiated from non-inflecting prepositions via the morphological diacritic [\textit{AGR}], whose discharge is dependent on the morphosyntactic context. The discharge of [\textit{AGR}] by personal suffixes corresponds to the appearance of \textit{pro} in the syntax (Acquaviva 2003: 19). [\textit{AGR}] may also be discharged by insertion of the extended stem (or default form) which, being an exponent which realizes [\textit{AGR}] without reference to any $\phi$-features, may appear with a 3\textit{MSG} object or in contexts where there is no $\phi$-feature discharge.

2.2.4 Legate 1999

The complementary distribution between agreement inflection and overt pronouns in Modern Irish sets it apart from typical pro-drop languages and requires a different analysis (Legate 1999: 1). Working within the framework of Distributed Morphology, Legate updates McCloskey and Hale’s (1984) analysis. Distributed Morphology assumes a post-syntactic morphological component which may alter the syntactic structure in the mapping from Syntax to PF. This post-syntactic morphological component is responsible primarily for giving the syntactic feature bundles their phonological form and linearizing the representation. Legate’s analysis, like McCloskey and Hale’s, is an agreement-based one.

Recall that the Irish verbal paradigm includes synthetic forms which specify the $\phi$-feature of the null subject and the uninflected analytic forms which are used as default forms, with overt subjects and subject-less clauses (Legate 1999: 4).
Agreement inflection cannot co-occur with overt elements in Irish. Complementary distribution is found not only with verbal inflection but also with prepositions and noun phrases.

Furthermore, the syntax does not appear to distinguish between a pronoun and agreement inflection. The two are indistinguishable from a grammatical standpoint, as can be seen from the addition of contrastive suffixes, and the use of inflection as a resumptive pronoun (50a) or as the head of a relative clause (50b).

Agreement inflection may also be conjoined with an overt NP. The above characteristics of Irish agreement contrast with that of a typical pro-drop language.

(48) Chuir -Ø ar an stoirm (Irish)  
put.PAST-AGR on the storm  
‘The storm increased’

(Legate 1999: 4, from McCloskey 1984)

(49) mo theach (*mé) (Irish)  
my house (*I)  
‘my house’

(McCloskey & Hale 1984: 514)

(50) a. daoine nach raibh fhios againn an dtiocfaidís in am (Irish)  
people C.NEG be.PAST knowledge at.1PL.Q come.COND.3PL in time  
‘people that we did not know whether they would come on time’

(McCloskey & Hale 1984: 500)

b. Chuadar sin aN raibh aithne agam orthu go Meiriceá go.PAST.3PL that C be.PAST acquaintance at.1SG on.3PL to America  
‘those that I knew went to America’

(McCloskey & Hale 1984: 504)
Initially, an incorporation analysis may be attractive (cf. Doron 1988, Guilfoyle 1990). The incorporation of the pronoun onto the verb (or preposition or noun) is realized according to the available affixes in the language (Legate 1999: 9). The strict verb-subject adjacency supports an Incorporation analysis, in that the pronominal subject appears to form a phonological word with the verb (Legate 1999: 10).

(51) a. *Chuartaigh, ar ndoigh, siad an bad search. PAST of course they the boat
   ‘They of course searched the boat’

   b. Chuartaigh, ar ndoigh, na saighduiri an bad search. PAST of course the soldiers the boat
   ‘The soldiers of course searched the boat’

   (Legate 1999: 10, from Chung & McCloskey 1987)

More support for Incorporation comes from stress being able to appear on either the pronoun or on the affix, depending on what represents the syntactic pronoun at PF (Legate 1999: 10). If the affix may be stressed in the same way the overt pronoun can, it appears very likely that the affix is indeed a pronoun incorporated onto the verbal or prepositional head, and consequently appears with a different phonological form.

However, Legate argues against such a conclusion, pointing out that the realization of the pronoun as a clitic does not entail that that pronoun had been incorporated onto the head prior to the insertion of phonological exponents at the morphological structure (Legate 1999: 10). Legate considers the Cois Fhairrge dialect of Irish, which allows the use of overt pronominals with inflection, to be compelling evidence against an Incorporation or Merger account. For other dialects of Irish, this construction in (52b) is ungrammatical, with (52a) instead being used.
(52) a. a muinn –se
    her family –CONTR  
    (Irish)

    b. a muinn si -se
    her family she-CONTR

    (Legate 1999: 11)

Even (52a) is argued to be problematic for an Incorporation analysis, because the contrastive particles generally “suffix onto the NP they modify” (Legate 1999: 12). If the possessive pronoun in (52a) is a result of syntactic Incorporation, this is the only instance in Irish where the contrastive suffix is not found directly attached to the NP it modifies. If, however, as proposed by McCloskey and Hale (1984), there is a null pro involved, the contrastive suffix is attached to pro, and the problem is solved.

Following McCloskey and Hale (1984), Legate proposes that the inflectional affixes found on verbs, prepositions and nouns are instances of agreement morphology (Legate 1999: 13). It is stipulated that only pronouns trigger agreement in Irish, and agreement must be realized by an agreeing affix because such affixes are more specific than the default one (Legate 1999: 14). Thus the complementary distribution in Irish is the result of the Subset Principle, which requires that the most specific exponent be inserted at Morphological Structure.

There is a null pronoun in Irish which may realize any combination of φ-features so long as that null pronoun is governed by a head with identical (agreeing) φ-features (Legate 1999: 14). This null pronoun ([Ø] in (53)) is inserted only when agreement morphology is present. Being a more specific exponent, in that it makes reference to context, it is inserted before an overt independent pronoun.
The rule in (53) will apply only if the agreement features on the verb or preposition are visible. If the Vocabulary does not make an inflected form available for insertion, the null pronoun will not be inserted. A feature unrealized by an exponent cannot be further accessible to phonological insertion at Morphological Structure (Legate 1999: 15).

Legate’s analysis also requires that the insertion of phonological forms at Morphological Structure proceed top-down rather than bottom-up (contrary to, e.g. Halle and Marantz (1993) et al., but by no means unattested in the literature) (Legate 1999: 15). The phonological shape of the pronoun is conditioned by the phonological exponent of the agreeing head.

To summarize, Legate updates McCloskey and Hale’s (1984) Agreement analysis of agreement inflection in Modern Irish. The agreement morphology found in Irish is the result of syntactic agreement, but its idiosyncracies result from alternative spell-outs of the pronouns: Irish has a null pronoun which is inserted when the agreement on the head is morphophonologically realized.

2.2.5 Pranka 1983

Pranka (1983) proposes a Merger analysis, contrary to McCloskey and Hale (1983). Like McCloskey & Hale (1983), Pranka treats prepositional and verbal agreement as involving the same process, but disagrees with McCloskey and Hale that the process involved is agreement. McCloskey and Hale posit an agreement-based analysis of the data, but for Pranka, the
The merged verbal complex (Vₘ) contains the features of both the verb [Fᵥ] and the pronoun [Fₒ].

Likewise, the inflected form of the preposition is formed by Merger of the pronominal features of the object with the features of the prepositional head. After Merger of the features, the pronoun’s original syntactic NP node is deleted from the structure.

The complementary distribution and left-conjunct agreement noted in Irish follow directly from a Merger analysis. The reason non-pronominal DPs do not undergo Merger with the verb (or preposition) is because the lexicon cannot specify the full lexical content of that node in a merger rule. Moved elements, as in clefting constructions, are not Merged because there is a linear order condition on Merger which prevents Merger with clefted constituents (Pranka 1983: 99). Pranka’s analysis requires that the grammar “list all pronominal subjects which are allowed to merge with each particular tense/aspect form of the verb” as in (55) (Pranka 1983: 100).
Recall that the synthetic verb forms in Irish are not available for all person-number combinations, and consequently would require a listed context for Merger to occur. Pranka does not believe listedness is entirely undesirable, as it reflects the growing disuse of the synthetic forms (Pranka 1983: 110).

Pranka does not consider the possessive pronouns found with nouns and verbal nouns to be agreement inflection either. For Pranka, the pronouns are assigned Genitive case in the same position that non-pronominal DPs are assigned Genitive case, and are subsequently moved by a PF movement rule.

(56) \textit{teach mo} \rightarrow \textit{mo theach} \\
(Pranka 1983: 111)

To summarize, Pranka’s analysis utilizes Merger of the pronoun and verb or preposition to explain the complementary distribution data and the phenomenon of coordinated subjects. Verb-subject and preposition-object ‘agreement’ results from Merger, but the noun-noun genitive constructions result from movement. A Merger analysis is more ideal because it does not require two sets of pronouns, the overt ones and null \textit{pro} (Pranka 1983: 113).

2.3 Evaluation

The first goal of an analysis of Celtic agreement, whether syntactic or PF-based, should be to explain the fact that only null pronouns occur with agreement inflection. To further
complicate matters, the verbal paradigms in Irish and Scottish Gaelic do not include personal endings for all person-number combinations, a fact that must also be included in the analysis. As well as this, there is the phenomenon of Anti-Agreement of the verb or preposition with extracted DP arguments and First Conjunct Agreement.

All the analyses discussed above have dealt with at least one of these aspects of Celtic agreement. The syntactic analyses have their strengths and weaknesses, as do the post-syntactic ones, whether they are prosodically or morphologically influenced. In this section they will be compared and contrasted with the hope of illuminating the features an optimal analysis should have.

Recall that the analyses which have assumed null pro and agreement are McCloskey and Hale (1984) for Irish, Roberts and Shlonsky (1996) for Welsh and Semitic, and Legate (1999) for Irish. Adger and Ramchand (2005) focus mainly on extraction contexts, in which they posit pro and Agree for Scottish Gaelic. Merger-type analyses have been proposed by Ackema and Neeleman (2003) for Celtic generally, Adger (1997) for Scottish Gaelic and Irish, and Pranka (1983) for Irish. Acquaviva (2003)’s morphological analysis of Irish prepositions remains fairly neutral on the syntactic structure which derives the conditions for agreement. Roberts (2005), although giving a syntactic analysis of Welsh agreement, proposes a subject clitic in Pers which incorporates with the verb—in effect, this analysis is more akin to the Merged-pronoun analyses and so will be grouped with the Merger-type analyses for evaluation.

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7 From now on, to avoid confusion, post-syntactic Incorporation will be referred to as Merger, to be further clarified in Chapter 3. Syntactic Incorporation will continue to be referred to under the same name.
The organization of this section will be as follows: 2.3.1 will discuss and evaluate the pro agreement analyses; 2.3.2 will discuss and evaluate the merger-type analyses. Subsection 2.3.3 will question whether the verbal noun displays the same type of agreement as verbs and prepositions. Definiteness agreement in Scottish Gaelic will be discussed in 2.3.4 to find whether this type of agreement ought to be treated similarly to the verb and prepositional agreement.

2.3.1 Agreement and pro

The first task of an agreement analysis is to explain why agreement inflection in the Celtic languages co-occurs only with pro.

(57) leam  pro
    with.1SG  ‘with me’

This could be done either by stipulating that only pro triggers agreement, as in McCloskey and Hale (1984); or it could be that all DPs agree with the verb or preposition, and a feature-deletion process then removes the agreement features from the agreeing head when the relation is with a non-pro DP.

Recall that Legate 1999 gives an analysis whereby pro is indistinguishable from regular pronouns at syntax; the complementary distribution of inflection and an overt DP is produced by a post-syntactic rule that inserts null pro in the presence of agreeing features. Recall that Legate’s (1999) analysis assumes a post-syntactic component that gives phonological realization to morphosyntactic features.
The appearance of pro rather than the independent pronoun is due to the phonological exponent for pro being more specific and therefore only pro may be inserted into the representation.

Agreement inflection in Scottish Gaelic and Modern Irish does not appear on the verb for all person-number combinations. Recall that in Scottish Gaelic, for instance, synthetic forms are only available in the Conditional and only for the first person.

(59) a. Feumamaid fuireach a staigh leis na h-eich
must.COND.IPL stay.VN inside with.DEF the.PL horse.PL
‘We would have to stay inside with the horses’

(MacLellan 1972: 68)

b. Dh’fheumadh tu fuireach a staigh leis na h-eich
must.COND you stay.VN inside with.DEF the.PL horse.PL
‘You would have to stay inside with the horses’

Legate’s (1999) analysis requires pro-insertion in the case of (59a). The unavailability of agreement inflection for the [2SG] form prevents insertion of pro in (59b). McCloskey and Hale’s (1984) analysis requires pro in the syntax which triggers agreement inflection to appear in (59a) but pro does not appear in (59b). Both McCloskey and Hale (1984) and Legate (1999) treat all agreement in Irish as involving the interplay between agreement inflection and pro, the main difference being that pro is a distinct syntactic element for McCloskey and Hale (1984) but for Legate (1999) pro is an alternative realization of the independent pronouns. Legate’s (1999) analysis may be more theoretically
pleasing in current frameworks because it allows verb-subject agreement to be uniform at syntax, with the post-syntactic component responsible for the discrepancies between forms. Legate’s (1999) analysis requires the insertion of pro to be conditioned by only those features which are represented by the morphophonological shape of the agreeing head, not by the actual morphosyntactic features themselves.

Brennan (2008) builds off Legate’s (1999) analysis, pointing out that the pro-insertion rule only produces null pronominals, but does not prevent agreement inflection from appearing with lexical DPs. Brennan (2008) proposes that in addition to the pro-insertion rule there is also an Impoverishment rule which disallows the realization of $\phi$-features if they are expressed elsewhere.

\[(60) \quad X^\phi_{[\text{pers, num, gen}]} \rightarrow X^\phi / \_\_ \text{DP}_{\text{lex}} \]

(Brennan 2008: 110)

The post-syntactic component allows for the idiosyncrasies of Celtic agreement by alternative spell-outs rather than complicating the syntactic structure.

Roberts and Shlonsky (1996) also analyse preposition agreement and verbal agreement similarly. Roberts and Shlonsky’s (1996) analysis involves insertion of Agr nodes onto the agreeing head at Syntax. The insertion of Agr nodes is a language-specific requirement and determines the appearance of agreement inflection. In Welsh, Agr licenses pro and the inflectional endings are affixes base-generated in Agr, which prevents the appearance of the overt pronominal object with agreement.

Insertion of Agr nodes at Syntax may work well for Welsh, which has a complete verbal paradigm, but the verbal paradigms of Scottish Gaelic and Irish are incomplete.
Whether an agreement affix appears in Agr or not would have to be determined by the Lexicon. This requires the Lexicon to insert lexical items from the top down, such that the availability of an Agr affix precludes the insertion of the independent pronoun—and note that this requirement of top-down insertion is exactly what Legate’s (1999) analysis requires: the form of the agreeing head conditions the appearance of pro.

Two aspects of Celtic agreement are especially problematic for syntactic analyses: extraction contexts and First Conjunct Agreement (FCA). Recall that an extracted DP triggers default agreement on the verb or preposition. In (61), repeated from Chapter 1.2 above, the pronoun mise would normally appear as pro with agreement inflection.

(61) a. is mi-se a ruiteadh
    COP I -EMPH PTCL run.COND

b. *is mi-se a ruithinn
    COP I -EMPH PTCL run.COND. ISG

‘It’s me that would run’

Syntactically speaking, the extraction data is somewhat surprising, but could be accommodated for. Adger and Ramchand (2005) propose that the clefted DP is in fact base-generated in the clefted position, and is linked to a pro element in the subject position via an Agree operation in (61). Recall that there is no movement and therefore no need to expect the verb to show agreement inflection.

Prepositions show anti-agreement as well. Rather than a copy of movement, an independent pro appears as object to the preposition and is semantically identified with the clefted constituent but shows no morphosyntactic link. Because the pro at the foot of the
 dependency is an autonomous syntactic entity, it has its own morphosyntactic features which condition the form of the preposition.

The stranded preposition takes the default form\(^8\), identical to the 3MSG form, but inflecting neither for the \(\varphi\)-features nor for the definiteness of the clefted DP.

(62) Dè am bocs\(a\) a chuir thu am peann ann?
which the box C-REL put-PAST you the pen in-3SG
‘Which box did you put the pen in?’

(Adger & Ramchand 2003: 169)

If extraction of the DP does not involve base-generation and Agree, then it must move there. Movement does not usually eliminate agreement inflection, so there would have to be some language-specific rule that deletes agreement features when the DP is extracted. This could be along the lines of the requirement proposed in Adger (1996), where Scottish Gaelic allows the \(\varphi\)-features of the subject to appear only once.

(63) The \(\varphi\)-feature set of the agreeing element is the complement set of the \(\varphi\)-feature set of the argument that is agreed with.

(Adger 1996: 7)

\(^8\) There are instances, mainly dialectal, where the preposition agrees for the \(\varphi\)-features of the extracted complement. It would appear that in these dialects a Move strategy is available:

An té a thug mi luaidh dhi
the woman PTCL brought I praise to.3SG
‘the woman that I praised’

(Gillies 1993: 219)
If the $\phi$-features of a subject are visible, then inflection is blocked from appearing on the verb according to the requirement in (63). This requirement further entails that the $pro$ element which appears with inflection have no $\phi$-features at all. Thus $pro$ can appear with agreement inflection, but independent pronouns, being fully specified for $\phi$-features, cannot. Again, note that this approach requires that the deletion of the pronoun/appearance of $pro$ be sensitive to the morphophonological shape of the agreeing head, and not to the agreement features themselves. Adger’s (1996) requirement is similar to that proposed by Brennan (2008), where the realization of agreement is disallowed with a lexical DP. While these analyses account for the distribution of inflection, they are stipulations.

First Conjunct Agreement (FCA) is another aspect of Celtic agreement that must be accounted for. In FCA, the verb inflects for only the left-most (pronominal) DP of a coordinated subject (Kayne 1994, McCloskey 1986).

(64) Ruithinn -sa is iad -san
run.COND.1SG-EMPH and they-EMPH
‘They and I would run’

(Joan MacDonald, p.c.)

The FCA phenomenon suggests that Celtic agreement is extremely local, and subject to verb-subject adjacency (cf. Adger 2000). First Conjunct Agreement runs contrary to what is expected of syntactic agreement, which works on a hierarchical structure and as such is not expected to behave in such a linear manner.

A syntactic account might invoke a ConjP structure, in which the second conjunct is too deeply embedded to undergo agreement with the verb.
In FCA in Celtic, using a ConjP structure, the higher DP is null pro whose appearance is conditioned by the agreement inflection on the verb. The verb cannot agree with the conjunct as a whole. This is a cross-linguistic phenomenon which appears to be linked to VS order.

In Standard Arabic, the variation between VS and SV order triggers different agreement inflection on the verb (Aoun, Benmamoun & Sportiche 1994, Roberts & Shlonsky 1996, Benmamoun & Lorimor 2006). Aoun, Benmamoun and Sportiche (1994), rather than relying on a ConjP structure as in (65) above, analyse FCA in Arabic as involving conjoined IPs. A post-syntactic deletion operation would delete all but the second subject DP.

(66) \[ [_{\text{IP}} \text{Ruithinn-se}] \text{ agus } [_{\text{IP}} \text{Ruith iad-san}] \rightarrow \text{Ruithinn-se agus iad-san} \]

Under an IP-conjunction analysis, the verb is expected to agree with the first conjunct only; the verb which agrees with the second subject DP is deleted, agreement and all.
Extended to Celtic, where inflection is in strict complementary distribution with overt pronouns, an IP-conjunction analysis does not pair well with the other syntactic analyses. First, the example in (67) shows that the order of constituents is not fixed. The leftmost conjunct can be the third person plural pronoun *iad*, and so the verb takes default inflection as expected for a non-first person subject.

(67) **Ruitheadh** *iad* -san is **mi-se**
    run.COND they-EMPH and I -EMPH
    ‘They and I would run’

(Joan MacDonald, p.c.)

If the coordinated subject is actually a coordinated IP structure, then the subject clitic analysis of Roberts (2005) and Roberts and Shlonsky (1996) would be untenable. In (67) the [1SG] DP is the subject of the second IP and would, under Roberts’ (2005) and Roberts and Shlonsky’s (1996) analysis, be a subject clitic base-generated in Agr, attracting the verb and blocking any overt realization of the subject. Ellipsis of the verb, which has incorporated with the subject clitic, would leave only a *pro* element since the appearance of an overt DP is disallowed by the appearance of the subject clitic. To avoid this situation requires insertion of forms from the Lexicon after the syntactic structure is built; and the features [1SG] must be present in the derivation outside of the subject clitic.

Similarly, if an analysis along the lines of McCloskey and Hale’s (1984) were adopted, with the appearance of *pro* triggering the insertion of the inflected verb, the syntactic component would have to foresee the deletion of the second and then insert an overt pronoun instead of *pro*. Legate’s (1999) *pro*-insertion rule, on the other had, is dependent on the morphophonological shape of the agreeing head, not the morphosyntactic features of that head, so Legate’s analysis would pair well with a conjoined IP structure to explain FCA.
However, if Aoun, Benmamoun and Sportiche’s (1994) analysis cannot be extended to Celtic, an IP-conjunction analysis poses no problem for the agreement analyses. In fact, it does appear that coordination structures are actually coordinated DPs rather than IPs. Pronouns must appear with emphatic particles when coordinated, and these emphatic particles typically attach only to pronouns (McCloskey & Hale 1984: 493). If coordinated subjects are actually coordinated IPs, there is no reason why the pronouns would be required to appear with emphatic particles. If instead coordinated subjects are coordinated DPs, the emphatic-particle requirement is much more straightforward. A coordinated DP structure, however, only returns to the initial issue of why the verb shows agreement with only the first conjunct.

To summarize, a pro analysis of agreement requires that the morphophonological form of the agreeing head, be it the verb or the preposition, condition the appearance of pro. If pro is a distinct syntactic element, its insertion from the lexicon must coincide with the appearance of the synthetic form of the verb. If pro is an alternative realization of the pronouns at PF, its form is still dependent, not upon the morphosyntactic features but the morphophonological form of the agreeing head.

2.3.2 Agreement as Merged Pronouns

Alternatively, Celtic agreement inflection may come about as a result of post-syntactic Merger, whereby the pronoun is absorbed into the verb at PF, producing the inflection and accounting for the complementary distribution of pronouns and inflection. Recall that an analysis of this type must be post-syntactic, since Incorporation at Syntax violates the
Coordinate Structures Constraint (CSC). The CSC requires that conjoined elements must be worked on equally by the Syntax (Ross 1967). Post-syntactic Merger cannot violate the CSC since the CSC applies only at syntactic structure.

An argument against Merger used by Duffield (1995) and McCloskey and Hale (1984), is that the morphophonological shape of agreement does not resemble that of the independent pronoun. Recall, however, that the prepositional agreement endings are, at least for the first and second persons, very similar to the independent pronoun’s morphophonological shape.

<table>
<thead>
<tr>
<th></th>
<th>aig ‘at’</th>
<th>le ‘with’</th>
<th>air ‘on’</th>
<th>ri ‘to, against’</th>
</tr>
</thead>
<tbody>
<tr>
<td>agam</td>
<td>leam</td>
<td>orm</td>
<td>rium</td>
<td>mi ‘I’</td>
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<tr>
<td>agad</td>
<td>leat</td>
<td>ort</td>
<td>riut</td>
<td>thu ‘you’</td>
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<td>aige</td>
<td>leis</td>
<td>air</td>
<td>ris</td>
<td>e ‘he’</td>
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<td>aice</td>
<td>leatha</td>
<td>oirre</td>
<td>rithe</td>
<td>i ‘she’</td>
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<tr>
<td>againn</td>
<td>leinn</td>
<td>òirnn</td>
<td>rinn</td>
<td>sinn ‘we’</td>
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<tr>
<td>agaibh</td>
<td>leibh</td>
<td>oirbh</td>
<td>ribh</td>
<td>sibh ‘you (pl)’</td>
</tr>
<tr>
<td>aca</td>
<td>leotha</td>
<td>orra</td>
<td>riutha</td>
<td>iad ‘they’</td>
</tr>
</tbody>
</table>

Only the 3MSG forms have no distinguishable suffix across the paradigm, but, as Acquaviva (2003: 6) points out, focusing on only the 3MSG data leaves out an obvious pattern of inflection (see Appendix 3 for the paradigm of inflecting prepositions for both Scottish Gaelic and Modern Irish). Acquaviva (2003: 6-7) notes that even the third person feminine singular and third person plural endings are recognizable in Modern Irish. The Scottish Gaelic endings may be similarly deduced. The vowels vary according to the φ-features of the
pronominal object: the 3FSG form tends to have a slender vowel (*aice, oirre, rithe*) while the 3PL forms take a broad vowel (*aca, orra, riutha*).

The verbal endings do not accord so well with the independent pronoun’s phonological realization.

(69) a. ghabha\textit{inn} (mi)
take.COND.1SG

b. ghabha\textit{maid} (sinn)
take.COND.1PL

But this disparity in form is only problematic if lexical items have their morphophonological shape at syntax. If there is a way to alter the phonological form according to the morphosyntactic context, the morphophonological shape of agreement inflection poses no argument against a Merger analysis. A post-syntactic spell-out system like that assumed in Acquaviva (2003), Ackema and Neeleman (2003), Adger (1997, 2000), Legate (1999), Brennan (2008) and Pranka (1983) solves the problem of morphophonological form.

A Merger analysis must be able to accommodate for what appears to be a real syntactic difference between the synthetic form of the verb and the analytic form plus independent pronoun. The response system in Scottish Gaelic repeats just the verb to indicate ‘yes’; and for ‘no’ the verb is repeated along with the negative preverbal particle *cha*. 
(70) a.  -Do chuir thu ann i?  
PAST put you in she?  
‘Did you put her in it?’

-Chuir  
Put.PAST  
‘Yes’

(MacLellan 1972: 143)

b.  -Nach fhaodadh tu féin a cur dha’n chairt?  
NEG can.COND you self PTCL put.VN to.DEF cart  
‘Couldn’t you yourself put to the cart?’

-Cha n-fhaodainn, no thu-sa!  
NEG can.1SG or you-EMPH  
‘No, nor you! (lit. I couldn’t, nor you!’)

(MacLellan 1972: 120)

It is ungrammatical to repeat the subject along with the verb to simply mean ‘yes’\(^9\); but if the subject would normally trigger the synthetic form of the verb, the synthetic form must appear (70b). Under a Merger analysis, the subject pronoun is the inflection; and as such, the two exponents are not expected to be treated differently.

There does seem to be a syntactic difference, unless these yes/no responses involve ellipsis of everything but the verbal head (McCloskey 1991 for Irish). With a post-syntactic Morphological component ellipsis can occur after Syntax. To best account for the response system with a Merger analysis, ellipsis of all but the verb must be sensitive to the morphophonological shape of the subject: when independent, the subject can be elided, but

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\(^9\) If the subject were included as a response, it would have a contrary or emphatic interpretation (for Scottish Gaelic, Byrne 2004: 115).
when appearing as inflection the subject must remain with the verb. With the synthetic verb effectively a head consisting of the verb and subject heads, all but the initial head is elided to form the yes/no response. Alternatively, ellipsis could occur after the nodes have received their phonological shape, yielding the synthetic form as a single phonological word, with the remainder of the clause elided.

Evidence for the relevance of the phonological word comes from responses involving the copula. To indicate ‘yes’ with the copula, the copula and the next word, be it a preposition, adjective or noun, is repeated (Byrne 2004: 115)\(^{10}\).

\[(71)\] -An aithne dhut am film seo?
  Q knowledge to.2SG the film this
  ‘Do you know this film?’

  -Is aithne
  COP knowledge
  ‘Yes’

(Byrne 2004: 115)

A counterpoint to an ellipsis and Merger analysis to the response system is that in certain dialects of Irish the synthetic form remains only in responses and tag questions, but will not appear otherwise.

\[(72)\] Glanfaidh tú am bord, an nglanfais?
  clean.FUT you the table, Q clean.FUT.2SG
  ‘You will clean the table, will you?’

(Legate 1999: 13, taken from Ó Siadhail 1980)

\(^{10}\) The copula behaves differently from regular verbs in many respects. See Carnie 1995 for details in Irish.
With a post-syntactic component, tag questions can be accommodated. The syntactic-semantic context required for the tag question allows the use of the synthetic form in the same way factors such as register affect the use of certain inflectional forms.

Ellipsis of all but the verb (or verb-plus-pronoun synthetic form) accords well with a post-syntactic Merger analysis. The post-syntactic component receives the syntactic context, which conditions the application of Merger, which combines two heads as a single unit. If the merged subject is spelled out as agreement inflection on the verb, the verb and the subject are realized as a single word\(^{11}\). If ellipsis applies after vocabulary insertion, on a linearized structure, the subject’s appearance as agreement inflection is unsurprising: the subject-as-inflection cannot be elided because it forms a phonological word with the verb.

Yet another argument against Merger concerns the existence of Welsh echo pronouns. Recall that Welsh echo pronouns are special pronominal forms used only with agreement inflection.

\[(73)\]
\[
\begin{align*}
\text{a.} & \quad \text{ei wraig o} & \quad \text{(Welsh)} \\
& \quad \text{his wife he} \\
\text{b.} & \quad \text{arno fo} & \quad \text{(Roberts & Shlonsky 1996: 182)} \\
& \quad \text{on.3SG him}
\end{align*}
\]

\(^{11}\) In Chapter 4 this will be modified, and there will be no recourse to the phonological word to derive the response data; effectively, the formation of the synthetic verb requires a further PF operation which creates a single node from the two syntactic nodes, allowing ellipsis to apply to all but a single terminal node.
McCloskey and Hale (1984) cite these pronominal forms as evidence for the ‘Inflectional Argument’ of their Agreement Analysis: Welsh echo pronouns are phonological instantiations of the pro argument in Irish (compare (73) and (74)).

(74)  

a. a bhean pro  
    his wife  

b. aige pro  
    at.3MSG

If Welsh inflection is also the result of Merger, these echo pronouns would have to be extra elements and not pronouns at all. Recall that Roberts (2005) derived agreement inflection by movement of the verb to Pers, motivated by the presence of a subject clitic there. Welsh echo pronouns are permitted to appear in the subject position because they do not value Num (which the subject clitic already has valued). Echo pronouns, then must be impoverished pronouns, in that their function is not like that of a regular independent pronominal; this is supported by the fact that they appear in agreeing contexts only, and crucially that they are optional.

The phenomenon of First Conjunct Agreement was mysterious with a syntactic approach, but a post-syntactic Merger analysis of verbal agreement accounts for the FCA phenomenon in a neat and direct manner. Quite simply, the first conjoined DP triggers inflection because it is in a position to be merged with the verb.

Adger’s (1997) merger analysis, in which the need to eliminate strong features drives Merger, does not account for FCA. In fact, assuming that merger happens to prevent strong features from being interpreted at PF, the derivation ought to crash because the strong
features on the second pronoun conjunct do not appear to be merged with the verb. Adger (2000) exchanges the idea of feature strength for that of morphological interpretability. Morphological feature-checking may occur in a spec-head or an adjacency relation (Adger 2000: 79). The adjacency found in Scottish Gaelic and Irish is due to the requirement of morphological interpretability of case at PF. The pronominal subject is syntactically present but is realized as a unit with the verb because of the adjacency relation (Adger 2000: 84). To motivate Merger by an inadequacy on the pronominal subject runs into difficulty with FCA.

If coordinated structures are IPs involving deletion of the verb in the second conjunct (as in Aoun, Benmamoun & Sportiche 1994), the verb would have to merge with the pronoun to check the strong D-features and then be deleted; this requires a post-syntactic spell-out as assumed by Adger (1997, 2000) which would allow the V head to be deleted while retaining the independent D node. Otherwise it would be expected that the verb would have to be repeated with each subject in order to check the DP’s features, as with conjoined prepositions.

(75) Ann a fear dhe na botuil agus dhe na bonnaich
in one of the.PL bottle.PL and of the.PL bannock.PL
‘in one of the bottles and one of the bannocks’

(Morrison 1978: 16)

Further support for Merger is that agreement inflection may appear on a preposition for a pronoun which is not its proper syntactic object. The preposition in (76) inflects for the 2SG pronoun *thu* even though *thu* is the subject of the embedded clause. The preposition thus appears to inflect regardless of syntactic constituency.
(76) Bha mi a’ feitheamh ort an t-airgead a thoirt dhomh be.
‘I was waiting for you to give me the money’

(PAST I PTCL wait.VN on.2SG the money give.VN to.1SG)

(77) Bhí mé ag feitheamh le tú an t-airgead a thabhairt domh.
‘I was waiting for you to give me the money’

(Irish)

(McCloskey 1984: 451)

The observed sensitivity to adjacency in the Scottish Gaelic example suggests a PF analysis of prepositional agreement.

Under a post-syntactic Merger analysis the preposition inflects because the pronoun is in the right position to merge with the preposition. A syntactic account would find it a bit more difficult to account for the observed inflection in (76), but it could be argued that the pronoun is in fact the syntactic object of the preposition in a sort of control relationship with the subject position of the embedded clause.

Extraction data also supports a Merger analysis: the non-inflection of the stranded preposition or verb is expected because the pronoun is not in a position to merge with the preposition. However, if the extracted object DP arrives at the clefted position via movement, it is expected to leave either a trace or a copy. Depending on the morphosyntactic
properties of traces or copies\textsuperscript{12} a Merger analysis could be incompatible with a movement account, instead requiring an Agree-based one as proposed in Adger and Ramchand (2005).

Recall that Roberts (2005) identifies agreement inflection in Welsh as subject clitics appearing in Pers. The verb syntactically incorporates with the subject clitic: there is no agreement between the verb and subject in Welsh, only subject clitics on the verb (Roberts 2005: 53). An overt DP appears just below Pers in Num, but a subject clitic in Pers values Num and thus prevents the movement of the overt subject there.

\begin{equation}
\begin{array}{l}
\text{[PersP V [NumP Subj [TP [VP [NP Obj ]]]]]} \\
\text{[PersP V-SCL [NumP [TP [VP [NP Obj ]]]]]}
\end{array}
\end{equation}

However, the subject clitic must prevent the appearance of an overt DP even in its base-generated position as well as prevent the subject DP from moving to the normal subject position in Num.

Also, recall that Welsh differs from Scottish Gaelic or Irish in that the Welsh verbal paradigm is much more complete. Applying a subject clitic analysis to Scottish Gaelic or Irish would require that only the φ-features which trigger agreement inflection on the verb would appear as subject clitics in Pers (79).

\textsuperscript{12} Under the Copy Theory of Movement (Chomsky 1993), the copies (or traces) left behind by the operation Move are exact replicas of the moved element. At least at Morphological Structure copies would have to differ in some respect to prevent the merger or feature copying at PF. This is especially important if clefting constructions involve movement rather than base-generation and Agree (as proposed by Adger & Ramchand 2005).
When there is no agreement inflection, a default clitic appears in Pers, allowing the overt DP subject to move to Num to value the features there.

In Welsh, the default clitic is identical to the 3MSG form. In Scottish Gaelic it would appear that the default clitic for Conditional (–adh) has taken over the paradigm and has been reanalysed as a tense/mood-marker; either that or the default clitic has fused with tense/mood in Scottish Gaelic.

To summarize, a post-syntactic Merger analysis avoids the issue of having to lexically specify which pronouns appear as subject clitics or pro and which appear as independent pronouns in the syntax. The agreement inflection and the pronoun are one and the same. A Merger analysis must be paired with a post-syntactic component which can provide alternate spell-outs to the pronouns, to produce the observed agreement inflection.

(Byrne 2004: 98)
2.3.3 Verb and Preposition Agreement vs. Verbal Noun Agreement

The morphological shape of the pronominal complement of the verbal noun derives from the partially nominal character of the verbal noun, but this has not prevented the possessive pronoun from being analysed as inflection with a null pro complement in the position where non-pronominal DPs are found.

(81) a. mo theach pro  
my house  
(Irish)  
(McCloskey & Hale 1984: 511)

b. Bhí siad mo chuartú pro  
be.PAST they my seek.VN  
‘They were looking for me’  
(McCloskey & Hale 1984: 512)

Analysing the possessive pronoun as inflection allows a unified treatment of all instances of agreement in Modern Irish.

However, agreement on the verbal noun behaves somewhat differently from that of the finite verb and preposition. Agreement inflection on the verbal noun is not always in complementary distribution with an overt DP.

(82) Bha sinn nar dús g fad na h-oidhche  
was we in.IPL.POSS wake.VN length the.GEN night.GEN  
‘We were awake all night’  
(Byrne 2004: 120)

This construction finds a parallel with the regular nominal genitive construction.
Recall that the finite verb cannot inflect for an overt DP, even if that DP has been extracted. This seems to indicate a clear syntactic difference between agreement of the verbal noun and that of the finite verb (cf. Pranka 1983 for Irish).

Another way the agreement inflection on the verbal noun differs from that of the finite verb is the ability of a nominal to inflect for the φ-features of the entire conjoined subject, not just the one closest to it. This behaviour may presumably extend to the verbal noun as well since the agreement inflection on the verbal noun otherwise parallels that of the regular noun.

When the complement of the verbal noun is clefted, the agreement morphology (or the possessive pronoun, boldfaced in (85) below) matches the φ-features of the clefted complement; but the non-pronominal complement of the verbal noun does not trigger inflection in situ.

(83) ‘S gheibh thu mach gum bi mi-se ‘na mo dheagh mhaighistir dhut and find you out that be.FUT I -EMPH in my good master to.2SG ‘and you’ll find out that I’ll be a good master to you’

(Morrison 1978: 15)

(84) Tá mi-se agus mo dheartháir ‘nár ndochtúirí (Irish)
Am I -CONTR and my brother 1PL.POSS doctors
‘My brother and I are doctors’

(McCloskey 1986: 261)

(85) ‘S e na leabhraichean sin nach feumaidh sinn an leughadh COP it the.PL book.PL that that-not must we AGR-3PL read.VN ‘It’s those books that we must not read’

(Adger 1997: 19)
These facts contrast sharply with the clefting data of a finite verb or preposition, which cannot agree with an extracted DP at all. Verbal noun agreement behaves more along the lines of that expected from syntactic agreement, in that it marks the agreement relation of the moved complement with the verbal noun. The remarkable thing is that there is no agreement inflection when the DP is in the regular complement position.

A pro agreement analysis assumes a pro element in the vacated position in (85).

(86) ... an leughagh pro

Somehow this null pro gains the φ-features of the moved element. It would be natural to assume that the particle is inflecting for the copy left by the moved element, but recall that agreement inflection appears with pronominal complements only and the extracted element in (85) is a non-pronominal DP. For the inflection in (85) to be the result of a copy would require that copies and pronouns are grouped together against non-pronominal DPs in the syntax.

The morphophonological form of the pronoun is expected given that the verbal noun assigns its complement the genitive case.
(87) a. Bha sinn a’ glanadh nan each was we clean.VN the.PL GEN horse.PL GEN ‘We were cleaning the horses’
(MacLellan 1972: 177)

b. ‘S ann a bha choire sin aig an fhear a bha ‘gur weutadh COP there PTCL was blame that on the man PTCL was at.2PL.POSS wait.VN ‘In fact that blame was on the man who was waiting on you’
(MacLellan 1972: 126)

The pronoun appears in the genitive case as well, suggesting it occupies the complement position at some point in the derivation.

To summarize, the verbal noun does not agree with a genitive complement; the possessive pronoun is not inflection at all but the pronominal complement that has moved to that position. The agreement inflection on the verbal noun does not behave the same as the inflection on the finite verb or preposition, and should not be treated similarly.

2.3.4 Definiteness Agreement

The inflecting prepositions in Scottish Gaelic also inflect for a definite object DP. Adger (2000), Acquaviva (2003) and Brennan (2008) have discussed definiteness agreement; Adger (2000) discussed definiteness in Scottish Gaelic, Acquaviva (2003) and Brennan (2008) the Irish data. The Irish definiteness agreement behaves differently from that of Scottish Gaelic, as will be seen in this section. Adger (2000) notes that the definite form of the preposition requires the adjacency of the definite article, proposing that definiteness is a morphological feature added at PF (Adger 2000: 86). This section will look at the Irish and Scottish Gaelic
data, noting the differences, and then will discuss whether definiteness agreement in Scottish Gaelic should be treated as syntactic agreement or a morphophonological adjustment.

The inflecting prepositions in Scottish Gaelic take the definite form with a definite object.

(88)  a. A bheil an t-eagal ort ron a’ chù?
Q be the fear on.2SG before.DEF the dog
‘Are you afraid of dogs?’

(Byrne 2004: 80)

b. Tha càirdean dhan a’ bhoirionnach a chaidh a bhàthadh
be friends to.DEF the woman PTCL went PTCL drown.VN

‘san eilean seo gun a’ latha ‘n diugh
in.DEF-the island this until the day today

‘There are relatives of the woman who was drowned living in this island to this day’

(Morrison 1978: 1)

Unlike Modern Irish, Scottish Gaelic has a definite form for each of the inflecting prepositions; the definite preposition takes either an –s or an –n suffix. In Modern Irish, most definite forms of prepositions have an –n suffix. Only two prepositions take an alternate form (and are identical to the 3MSG form) before the definite article: le ‘with’ and trí ‘through’ (Acquaviva 2003: 8). (89) lists the base form, 3MSG, and definite forms of each preposition in Scottish Gaelic (see Appendix 2 for a list of the definite forms of Modern Irish, Scottish Gaelic and Old Irish).
Recall that Acquaviva (2003) argues that the Irish 3MSG default form is an extended stem because the morphosyntactic shape varies according to the stem. Acquaviva notes that in Irish only with definiteness inflection may features appear twice: once on the definite article and again on the preposition (Acquaviva 2003: 9). Scottish Gaelic appears to have generalized this to actual syntactic agreement. The definite article remains phonologically overt, and the inflection on the preposition marks that definiteness.

Brennan (2008), working with Irish prepositions, proposes an Impoverishment rule which prevents the appearance of agreement features with a lexical DP. Brennan (2008)
extends this Impoverishment rule to cover the two prepositions *leis* and *tris* which appear with definite DP objects. Assuming that the 3MSG feature set is a null set, Brennan (2008) produces the rule in (90).

\[(90) \quad X^\phi_{\text{[pers, num, gen]}} \rightarrow X^\phi_{\emptyset} / \underline{\text{DP}_{\text{lex}}} \]

(Brennan 2008: 111)

This Impoverishment rule incorrectly predicts the appearance of the definite form of the preposition whenever a lexical DP is its object. The rule in (90) could be altered to make the Impoverishment of the agreement features on the preposition sensitive to the presence of the definite article, which produces the observed inflection. Irish, recall, uses the 3MSG form of the preposition for definiteness inflection. Scottish Gaelic has forms specifically for definiteness with a regularized suffix, with the exceptions of *aig* and *air*. An Impoverishment rule does not seem to be the answer for Scottish Gaelic definiteness agreement since the morphological forms are not the same.

One characteristic definiteness agreement shares with the other forms of agreement is that it is a highly local phenomenon. As with φ-feature inflection, a preposition will inflect for a definite DP which is not its syntactic object.

\[(91) \quad \text{Dh’fheuch mi } \textbf{ris an teine a chur air dòigh} \]

\( \text{try.PAST I to.DEF the fire PTCL put.VN on well} \)

‘I tried to set the fire up’

(Adger 2000: 86)

Furthermore, an intervening element prevents the appearance of definiteness inflection on the preposition. In (92), there is an ambiguous reading (as indicated by the stressed capitals given by Adger 2000).
The adjacency required for definiteness inflection suggests that definiteness agreement is produced by PF processes. Adger (2000) claims that definiteness is a morphologically uninterpretable feature on the preposition, and that it is optionally added to the preposition (Adger 2000: 86). Morphologically uninterpretable features are checked by adjacency relations in Scottish Gaelic, explaining the adjacency restrictions on definiteness inflection.

A third illustration of adjacency restrictions on definiteness inflection comes from extracted definite DPs. A clefted object only triggers the 3MSG form of the stranded preposition (93a).

(93) a. a’ chraobh a dh’òl thu an leann fodha
       the tree PTCL drank.PAST you the beer under.3MSG

       b. a’ chraobh fon an do dh’òl thu an leann
           the tree under PTCL drank.PAST you the beer
           ‘the tree you drank the beer under’

(Adger & Ramchand 2006: 10)
In some dialects however, the preposition cannot be stranded\textsuperscript{13}, and when the
preposition is clefted along with the definite DP, it appears in the definite form (93b). The
appearance of the particle \textit{an} in (93b) is prompted by the clefted preposition (Byrne 2004:
65). The appearance of the definite form in (93b) is not necessarily connected to the
definiteness of the clefted DP but rather appears to be linked to the syntactic position of the
preposition—indeed, Gillies (1993) refers to this construction as an indirect or ‘dative’
relation, as opposed to the direct relation marked by \textit{a} in (93a) (Gillies 1993: 183).

\begin{equation}
\text{(94)} \quad \text{Agus chaidh am fear eile a lorg sean-aodach saighdeir leis an an\textsuperscript{14} leis}
\end{equation}

The definite preposition \textit{leis} in this example is somewhat unexpected because the
clefted DP \textit{sean-aodach saighdeir} ‘an old soldier’s clothing’ is indefinite\textsuperscript{14}.

Initially it might seem that the preposition is inflecting for the particle \textit{an} because it is
homophonous to the singular definite article \textit{an}. But the answer is not quite so easy.
Prepositions do not take the definite form for the third person plural possessive \textit{an}.

\begin{flushright}
\text{(Oftedal 1956: 269)}
\end{flushright}

\textsuperscript{13} The Lewis dialect in particular does not allow stranding of the preposition, see Adger and Ramchand (2006)
for details.

\textsuperscript{14} It should be noted that the definiteness inflection on the preposition follows naturally from the definite nature
of the relative pronoun/complementizer. I discuss this some more in Chapter 4.
(95) a. Chaidh iad dhachaidh **gu an taighean fhéin**
go.PAST they home to their house.PL self
‘they went to their own houses’

(Oftedal 1956: 281)

b. Cha b’ urrainn dhuinn coiseachd **r’ an taobh**
NEG be ability to.1PL walk.VN to 3PL.POSS side
‘We couldn’t walk at their side’

(MacLellan 1972: 32)

So the definite form of the preposition does not appear according to some phonological rule but is sensitive to morphosyntactic features.

To summarize, definiteness agreement in Scottish Gaelic appears to involve more than an extended prepositional stem, as has been proposed for Irish by Acquaviva (2003). Definiteness agreement behaves more like true syntactic agreement than the φ-feature agreement of the verb or preposition, but its adjacency restrictions strongly suggest that a PF process is at work. The appearance of the definite preposition in clefted constructions in (93b) is surprising, and indicates that there is a syntactic difference between the base and the definite form of the preposition.

2.3.5 Summary

Two basic approaches to Celtic agreement have been reviewed in this section: a *pro* with agreement approach and an inflection-as-merged-pronouns approach. A post-syntactic merger analysis with a post-syntactic component seems to be the best way to explain the
agreement inflection of the verb and preposition: the data seems to fall out more naturally from a Merger analysis.

Verbal noun inflection behaves differently than the agreement inflection of the verb and preposition with regards to extraction contexts, suggesting that the verbal noun’s agreement inflection involves a different process.

As for the definiteness inflection, although it too is a very local agreement process, it does not display the same complementary distribution of the other instances of agreement, indicating that it is the effect of yet a different process.

A post-syntactic Merger analysis seems best able to accommodate the data of the verb and preposition. Post-syntactic processes are generally more locally constrained than the processes at syntax. The complementary distribution found in the verbal and prepositional agreement as well as the First Conjunct Agreement found with conjoined subjects is easily explained in a Merger approach. A Merger analysis has no need for syntactic pro or Agr nodes, which simplifies the syntax somewhat.

The syntactic structure will always condition the post-syntactic operations since it is the syntactic structure which feeds the PF component. In the past decade or so much research has been done on the syntactic structure and the post-syntactic operations which may shed light on the agreement system of the Celtic languages. The alternative analysis to be proposed in Chapter 4 is based in the post-syntactic component, and applies the theories of Minimalism and Distributed Morphology to the agreement system of Scottish Gaelic.
Chapter 3  Theoretical Framework

There are two aspects to agreement: the feature-valuation and Agree operation at Syntax followed by the feature-copying and vocabulary insertion of Morphology. The Minimalist Program is a theory of syntactic relations, while Distributed Morphology examines how Morphological Structure is responsible for the translation from syntactic input to phonological realization. Ideally, feature-copying at Morphological Structure would exactly replicate the feature valuation and Agreement of syntax, but the reality is that it does not always do so faithfully. When there is discord between syntax and morphology, the morphological processes as initially outlined by Halle and Marantz (1993) (3.2 below) are responsible.

3.1  The Minimalist Program

The Minimalist Program has reduced the model of grammar to a computational system, or Syntax, with two interfaces, Phonological Form (PF) and Logical Form (LF). Syntactic structure is constrained in all languages by the interface conditions of LF and PF, according to their respective requirements on interpretation. It is at the lexicon and PF processes that cross-linguistic variation occurs (Chomsky 1995: 26).

\[
\text{Syntax} \\
\text{PF} \quad \text{LF}
\]
The computational system consists of feature bundles which are drawn from the Lexicon. The Syntax then combines these features into hierarchical structure. Features may be uninterpretable or interpretable; the uninterpretable ones are so called because they are unintelligible to the LF component, and therefore must be eliminated from the derivation by then. The derivation converges when all features are intelligible at the interfaces; if there are uninterpretable features at the interfaces, the derivation crashes.

As an example, the agreement features on the verb are uninterpretable and enter the derivation unvalued. The agreement features are then valued by the corresponding interpretable features on the subject. The morphophonological form of the verb reflects this valuation. The operation Agree regulates this valuing and deletion of features at Syntax. In addition to Agree, the Syntax includes the operations Merge and Move to determine Phrase Structure.

### 3.1.1 Merge

Merge is one of the basic operations of syntax, and as such is universal to all languages, as part of Universal Grammar. Merge combines two syntactic objects to form a new object.

\[
(\alpha, \beta) \rightarrow K(\alpha, \beta)
\]

(Chomsky 2000: 101)

Merge extends the syntactic tree with lexical items taken from the Lexicon. To form a DP, Merge will, for example, merge a noun with the D head of the definite article.

\[
[\text{NP book}] \rightarrow [\text{DP the [NP book]}]
\]
Merge will apply as long as there are lexical items to be inserted into the derivation, building up the syntactic structure from bundles of features chosen from the Lexicon.

(4) \[ [TP T [\text{vP} \text{she} \text{V} \text{VP} \text{read} \text{DP the book}]] \]

### 3.1.2 Agree

Agreement was originally speculated to occur as a result of a spec-head relation between the Agr head and an NP; agreement has also been seen as the manifestation of the relation between a head and an adjoined element (Chomsky 1995: 148). The concept of a syntactic Agr, however, has recently been disbanded in favour of the Agree relation. It may be that Agr nodes are still inserted at Morphological Structure, in the PF component (3.2 below).

Agree manifests itself as a relation between two elements which share the appearance of a certain feature, uninterpretable on one element and interpretable on the other. Agree applies under closest c-command. In the sentence in (5), the DP she enters the derivation already valued for the φ-features [3FSG]. The features [3SG] appear on the auxiliary as the agreement inflection –s: ‘has’. Because the pronoun’s φ-features are inherent, these features are interpretable; and since the auxiliary gains values for these features through agreement, they are uninterpretable ([uφ]).

(5) \[ [TP T [\text{vP} \text{she} \text{V} \text{VP} \text{read} \text{DP the book}]] \]

\[ [\phi] \quad [u\phi] \]

The need to value uninterpretable features drives the Agreement operation at Syntax. An element with an uninterpretable feature [uF] will require a matching feature [F] for
valuation, and Agree will search the domain of the Probe (which is the element containing [uF]) for that matching feature. The Goal is the element with the corresponding interpretable feature [F]. In (5), the auxiliary acts as the Probe since its $\varphi$-features are uninterpretable. The Goal is the pronoun *she* since it has matching interpretable features (e.g. person, number). Upon finding a corresponding interpretable feature, Agree will value and mark for deletion the uninterpretable feature, allowing the derivation to converge at LF.

The Agree operation is proposed to be a long-distance one, basically the process of “long-distance feature checking (or valuation) with no displacement” (Boeckx and Uriagereka 2007: 564). Agree ensures that uninterpretable features are deleted before LF by establishing an agreement relation between interpretable features and uninterpretable ones.

### 3.1.3 Move

Move works on elements already present in the derivation, moving them to a new position: Move displaces categories. Move applies after Agree establishes the agreement relation between elements. The element with interpretable features (the Goal of Agree) moves to the specifier of the head where the Probe is located.

In (6), the auxiliary and subject have undergone Agree, as in (5) above, and the subject subsequently moves to the specifier of TP to value the EPP feature of T.

(6) \[
\text{TP} \[\text{DP} \text{she}\] \[\text{T} \text{has} \[\text{VP} \[\text{DP she}\] \text{VP} \text{read} \[\text{DP the book}]\]\]\]

All Movement leaves a chain of copies according to the Copy Theory of Movement (Chomsky 1993). Copies are best described as a “set of occurrences of a single $\alpha$”
This idea of movement and chains results in uninterpretable features being deleted at all instances of $\alpha$ when one of the instances of $\alpha$ has its features checked. In (6) the DP *the girl* has two occurrences: one in spec,TP where it values the [uF] of the auxiliary, and the copy left by movement, in spec,VP.

### 3.1.4 Summary

Three universal operations work on the syntax: Merge, Agree and Move. A very wide range of phenomena result from these operations. Some operations which were originally assumed to happen at syntactic structure have been moved to the PF component, such as head merger, which is now agreed to occur post-syntactically as ‘Morphological Merger’ (Boeckx & Stjepanovic 2001, Chomsky 2000, 2001). The deletion of terminal nodes has been subsumed under the theory of Distributed Morphology (Halle and Marantz 1993).

### 3.2 Distributed Morphology

Halle and Marantz (1993) propose a generative theory of morphology, in which word formation happens throughout the derivation (thus the name ‘Distributed Morphology’). In the mapping from Syntax to PF, morphological processes apply to alter the representation. These processes occur at Morphological Structure. Because Minimalism requires the derivation to have only features at the interface which are intelligible to that interface, Morphological Structure is needed to translate the syntactic features of Syntax to the phonological features of PF.
It is well-known that the morphophonological form is not always directly related to syntactic form; there is not a one-to-one relation between the two. Much of the disparity between syntax and phonology is due to the post-syntactic morphological processes which work on the derivation at Morphological Structure. The theory of Distributed Morphology attempts to constrain the morphological operations in predictable ways such that the syntactic relations of Syntax are preserved as much as possible.

3.2.1 Word-Formation throughout the Derivation

Distributed Morphology is a theory of morphology that sees traditional word-formation as a process that occurs throughout the derivation, rather than simply in the lexicon\textsuperscript{15}, or even at a single stage in the grammar. Words are created by processes which work on the derivation both at syntactic and morphological structure.

The traditional Lexicon is split into three separate lists of feature sets which feed the derivation.

\textsuperscript{15} For arguments against traditional Lexicalist Theories and in favour of Distributed Morphology, see Halle & Marantz 1993, Marantz 1997, et al.
Abstract features and Roots are inserted into the terminal nodes of syntax from the Narrow Lexicon. The grammatical features inserted from the Narrow Lexicon are determined by Universal Grammar, and maybe some language-particular considerations (Marantz 1997: 203). Roots are category-neutral and so must always combine with a category-defining head in the syntax, e.g. \( nP \) or \( vP \). At PF the Vocabulary inserts phonological exponents, called Vocabulary Items, which correspond to the morphosyntactic features. The encyclopaedia aids in semantic interpretation at LF, listing the special meanings of certain words and phrases.

### 3.2.2 Morphological Structure

The mapping from Syntactic Structure to PF takes place at Morphological Structure. Morphological Structure has its own operations which work on the derivation, but which are constrained in their effects on the syntactic output by well-formedness conditions. These well-formedness conditions require that the syntactic structure be altered as little as possible, implying that there is, as default, a direct transfer of individual syntactic nodes to individual morphophonological ones (Halle & Marantz 1993: 137). The initial assumption must be that
the morphological structure is a transparent representation of the syntactic one. However, certain features of languages are best described with post-syntactic processes, such as Latin enclitic –que, used in conjunctions, which appears after the first word of the second conjunct.

(8) bonī puerī –que bonae puellae →
good.NOM.PL boy.NOM.PL and good.NOM.PL girl.NOM.PL
bonī puerī bonae -que puellae
good.NOM.PL boy.NOM.PL good.NOM.PL and girl.NOM.PL
‘good boys and good girls’

(Embick & Noyer 2001: 575)

The conjunction appears between the two NPs at Syntax as most conjunctions do, but at Morphological Structure the enclitic –que appears after bonae, the first word of the second conjunct via morphological movement.

### 3.2.3 Feature Copying

Before the derivation is linearized, Agr nodes are inserted at Morphological Structure according to the morphological requirements of the language (Embick 2000, Embick & Noyer 2007). When and where the Agr node is inserted depends on the syntactic structure and the specific requirements of the language (Halle & Marantz 1993: 166). The process of feature copying then copies the features of one node to another, in a process which recreates the feature valuation of syntax. For the Latin verb laudābāmus ‘we were praising’, there is the morphosyntactic structure in (9).
Features may be altered at this point in the derivation as well. Impoverishment rules delete certain morphosyntactic features in the context of other morphosyntactic features, which conditions the insertion of a more general Vocabulary Item (Embick & Noyer 2007: 20). Embick and Noyer (2007) illustrate Impoverishment with Old English weak adjective declension, replicated in (10a).

(10) a.  

<table>
<thead>
<tr>
<th></th>
<th>MSG</th>
<th>NSG</th>
<th>FSG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM</td>
<td>til-a</td>
<td>til-e</td>
<td>til-e</td>
<td>til-an</td>
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<tr>
<td>ACC</td>
<td>til-an</td>
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</tr>
<tr>
<td>GEN</td>
<td>til-an</td>
<td>til-an</td>
<td>til-an</td>
<td>til-ra</td>
</tr>
<tr>
<td>DAT</td>
<td>til-an</td>
<td>til-an</td>
<td>til-an</td>
<td>til-um</td>
</tr>
</tbody>
</table>

b.  Impoverishment Rule:

\[-superior\] \(\rightarrow\) Ø / __ [neuter ----]  

(Embick & Noyer 2007: 18-19)
Whereas the suffixes –um, -ra and –a all have unique contexts and the –an suffix has an obviously elsewhere distribution, the –e suffix appears in the neuter gender for both nominative and accusative and in the feminine nominative. The –e suffix looks to be a non-masculine nominative case suffix, except for its appearance for the neuter accusative case. The [-superior] feature differentiates accusative case from the nominative, and so it must be this feature which is deleted in the morphology. An impoverishment rule must delete the feature [-superior] from the neuter accusative case morpheme. The –e suffix reflects the general case that in Old English “the neuter direct cases are never distinct” (Embick & Noyer 2007: 19).

Any alteration of morphosyntactic features must occur before Vocabulary Insertion, because an altered morphosyntactic node will receive a corresponding phonological exponent. Features may also be added at PF (“dissociated features”) but must be irrelevant to semantic interpretation (Embick & Noyer 2007: 305).

3.2.4 Morphological Merger and Lowering

The structure of the representation may be further altered by Morphological Merger. Morphological Merger is head-to-head movement, joining two heads under a single node.
Morphological Merger may also operate in the opposite direction, when it is known as Lowering. Lowering also applies to the hierarchal morphosyntactic structure. A famous example of lowering is that of T to V in English tensed clauses (Embick & Noyer 2001: 562).

\[
\begin{aligned}
&[TP \text{ The dog } [T^* \text{ PAST } [vP [v' \text{ jump } [PP \text{ into my lap } ]]]]] \rightarrow \\
&[TP \text{ The dog } [vP [v' \text{ jump-ed } [PP \text{ into my lap } ]]]]
\end{aligned}
\]

Adverbials such as \textit{unexpectedly} may intervene between T and V: \textit{The dog unexpectedly jumped into my lap.} The T head cannot, however, lower past the negative \textit{not}: \textit{The dog did not jump into my lap.}

### 3.2.5 Vocabulary Insertion

Morphosyntactic nodes must receive phonological features in order for the derivation to converge at PF. These phonological features are referred to as Vocabulary Items or
exponents. Phonological features are not present at Syntax, since they do not play a part in the grammar or in semantic interpretation\textsuperscript{16}.

Vocabulary Insertion matches the morphosyntactic features present in the derivation with phonological exponents. The Subset Principle requires that the Vocabulary Item which best matches a maximal subset of the morphosyntactic features in the terminal node is inserted (Halle 1997).

\begin{equation}
\text{[PL]} \leftrightarrow /-s/ \\
\text{`cat-s’}
\end{equation}

The plural feature on a nominal stem in English is given phonological realization as \texttt{–s}.

Only when two competing Vocabulary Items are identical in their morphosyntactic feature specification is the morphosyntactic context considered, known as Conditioned Allomorphy (Halle & Marantz 1993: 123). The morphological forms of English Past tense are a good example of Conditioned Allomorphy, where the context conditions the insertion of an exponent.

\begin{enumerate}
\item [a.] \text{[PAST]} \leftrightarrow \text{\texttt{-ed}}
\item [b.] \text{[PAST]} \leftrightarrow \emptyset / \text{give, take...} \)
\end{enumerate}

\textsuperscript{16} Late Insertion of Roots relates to whether or not roots appear in the narrow lexicon with their phonological form. The issue is still up for debate, but is accommodated either way by the framework of Distributed Morphology. Some operations appear to be sensitive to the phonology of roots despite occurring prior to the insertion of Vocabulary Items. The question of Late Insertion of Roots is further investigated by Marantz 1997 and Embick 2000.
English past-tense may be indicated by an –ed suffix or by a vowel-change in the stem of the verb: \textit{walk} \rightarrow \textit{walked} versus \textit{give} \rightarrow \textit{gave}. The two vocabulary items in (14) each signify [PAST] in their morphosyntactic features so the competition moves to the context for a given past-tense node. If the verb is \textit{take} then (14b) applies because \textit{take} is listed as part of the context. With the verb \textit{walk}, (14a) applies since \textit{walk} does not fit the context of insertion (it is not found in the list), and so the general Vocabulary Item -ed is inserted.

The insertion of phonological exponents occurs before the structure is linearized. Vocabulary Insertion cannot modify the pre-existing feature values, but can only insert a phonological exponent matching the maximum available subset of morphosyntactic features.

\subsection*{3.2.6 Linearization}

After Vocabulary Insertion comes linearization of the representation. Linearization must occur due to the constraints of the PF interface. The process of linearization maps the hierarchical structure to a linear one.

Although morphosyntactic features may no longer be altered, readjustment rules can alter the phonological forms of the nodes and the structure may be further modified by Local Dislocation (a.k.a. ‘Linear Merge’). The structural relationships which held for Lowering and Morphological Merger no longer hold for Local Dislocation. For Local Dislocation, the only relevant notion is “one of linear precedence and adjacency” (Embick & Noyer 2001: 562). Local Dislocation takes linearly adjacent elements and affixes one to the other. Local Dislocation cannot apply in the presence of intervening adverbials, as it is constrained by the nature of the linearized structure.
An example of Local Dislocation would be English comparative/superlative formations (Embick & Noyer 2001: 564). The prosodic shape of the word determines whether it will take the suffix –er/-est or will use the morpheme more/most. Intervening adverbials block the suffixation of –er/-est to the adjective.

(16)  a. Mary is the smart-est person in the room.
    b. Mary is the mo-st amazingly smart person...
    c. *Mary is the t amazingly smart-est person...

(Embick & Noyer 2001: 565)

The superlative –est can only be affixed to the adjective if the adjective is adjacent to it, and if the adjective meets the prosodic requirements of having one syllable. Otherwise the superlative suffix remains before the adjective.

3.2.7 Summary

Distributed Morphology has word-formation happening throughout the derivation. Morphological Structure is the intermediary step in the derivation from Syntax to PF, with the primary responsibilities of inserting Vocabulary Items and linearizing the structure. The processes which apply at Morphological Structure are motivated by language-specific requirements and PF constraints. It is important that as a first assumption the derivation at Morphological Structure is identical to the one at Syntax; otherwise, there is a very real risk of complicating the post-syntactic component for the sake of a minimalist syntax.
Chapter 4  An Alternative Morphosyntactic Analysis

Many of the problematic aspects of Scottish Gaelic agreement, as pointed out in the discussion of the literature in Chapter 2, may find explanation using the framework of Distributed Morphology and Minimalism as outlined in Chapter 3. The analysis to be presented here is essentially morphological, requiring a particular syntactic context for the inflectional morphology to appear. Verb-subject and preposition-object agreement is actually D-cum-inflection resulting from Morphological Merger, with the main difference being subsequent Fusion of the T[COND] and D nodes in the case of verbal inflection. The vocabulary items which realize the pronouns are inserted according to the Subset Principle, such that the more specific vocabulary item is inserted before the others. The so-called agreement found on the verbal noun is the morphological realization of the pronominal object itself, given genitive case by the verbal noun and moved at PF. Definiteness agreement is the result of Feature valuation and Agree at Syntactic structure, which is replicated by Feature Copying at Morphological Structure. The observed non-agreement of the -n class of prepositions with the plural definite article is the result of Impoverishment rules which delete the definiteness feature on the preposition in the context of a plural feature on the object.

4.1 Verb-Subject Agreement

Recall that verbal agreement inflection in Scottish Gaelic is found in the conditional and with the first person; and crucially, verbal agreement cannot occur with an overt subject.

Recall also that Scottish Gaelic verbal agreement inflection is affected by the position of the subject. The verb does not show agreement for an extracted subject. Coordinated
subjects also support the apparent need for adjacency. Like many verb-initial languages, Scottish Gaelic displays First Conjunct Agreement (FCA) (McCloskey 1996 for Irish). In (1a) the leftmost of the coordinate subject is identifiable by the inflectional morphology –inn. (1b) shows that if the order of constituents is switched, the verb takes default inflection, as required for the leftmost subject iad. The first person pronoun, now separated from the verb by the rest of the coordinated subject, triggers no agreement morphology on the verb.

(1) a. Ruithinn -sa is iad -san
       run.COND.1SG –EMPH and they –EMPH

       b. Ruitheadh iad -san is mi –se
       run.COND they –EMPH and I -EMPH

       ‘They and I would run’  
       (Joan MacDonald, p.c.)

Morphological Merger produces the agreement inflection by merging the D head of the pronominal subject with the V+T complex, thus conditioning the Vocabulary Item which realizes the pronoun. First the verb merges with T and the pronoun subsequently merges with the V+T complex at Morphological Structure.

(2)
The resulting configuration of T and D under a single head is the required context for the vocabulary insertion rules for (3) below. Recall that Merger creates a single word with two identifiable morphemes which represent the individual morphosyntactic nodes.

(3) \[1SG] ↔ -inn / T [COND] __

[1PL] ↔ -amaid / T [COND] __

The appearance of agreement inflection is thus restricted to the first person on a verb bearing a conditional feature. The vocabulary items in (3) are alternative spell-outs of the pronouns themselves. The process of vocabulary insertion for the entire merged [V+T+D] node would be along the lines of (4).

(4) \[1SG] ↔ -inn / T [COND] __

RUN [COND] ↔ ruith

*Ruithinn ‘I would run’*

The agreement inflection for a first person plural subject is similarly derived. The -amaid exponent is inserted rather than the independent pronoun *sinn* in (5) because it is more specific.

(5) Well, dh’fheum amaidd a bhith ann aig naoi uairean ‘sa mhadainn
Well must.COND.1PL PTCL be.COND there at nine hours in.DEF morning
‘Well, we would have to be there at nine in the morning’

(MacLellan 1972: 80)

The [1PL] pronoun is realized as the independent pronominal when the morphosyntactic context does not match the condition for insertion. This is illustrated in (6). The future tense verb has no synthetic forms in Scottish Gaelic: the condition for insertion of a D-cum-inflection form is not met.
The [1PL] subject pronoun may be realized as inflection on the verb or as an independent pronoun depending on the context. The [2PL] feature bundle has only one spell-out and so will always be realized as the independent pronoun in the subject position, as in (7) below.

Similar to the analysis given by Ackema and Neeleman (2003) and Adger (1997, 2000), Merger will always occur between the V+T complex and the D head of the pronominal subject, given the right morphosyntactic structure, which requires the subject to be in the position just below the verb. The spell-out system provided by Distributed Morphology (the Vocabulary) is then responsible for the apparent verbal inflection. The synthetic form of the verb and the analytic one share the same morphosyntactic structure (cf. Embick 2007, Embick & Marantz 2008). The difference between the two is that the synthetic form of the verb is derived by an alternative realization of the pronominal subject. In the case of the analytic form plus independent pronoun, there is no alternate form available for the pronoun.

(7) \[2\text{PL}] \leftrightarrow \text{sibh} \\
\text{RUN [COND]} \leftrightarrow \text{ruitheadh} \\
\text{Ruitheadh sibh} \text{ ‘you (plural) would run’}

It may be noted, comparing the verbal spell-out in (4) and (7), that the situation is not quite so simple. When the independent form of the pronoun is inserted, the verb is realized as \text{ruith-eadh}, with \text{-eadh} marking the conditional. But when the subject pronoun is realized
as D-cum-inflection, only the verb stem *ruith is realized. The –eadh ending which typically marks the conditional does not appear on the synthetic form.

This may just be a reciprocal sensitivity of the verb to the features of its subject. That is, the form of the verb could be changing according to the features of its subject just as the form of the subject changes according to the features of the verb. The vocabulary item for the verb would then change as in (8).

(8) a. RUN[COND] $\rightarrow$ ruiheadh

b. RUN[COND] $\rightarrow$ ruith / __ [1]

This solution seems rather ad hoc and complicated. A better alternative would be to focus on the features spelled out in the inflection.

(9) $[T \left[VP V^o\right] [T^o T^o D^o]]$

ruith -inn
*ruith -eadh -inn
*ruith -eadh mi

‘I would run’

The morphosyntactic context yields *ruith-inn rather than *ruith-eadh-inn. The –inn and the –eadh inflections are in complementary distribution, indicating that the [1SG] and [1PL] endings also realize the [COND] feature.

The features [COND] and [1SG] appear to be present on a single vocabulary item. This is the effect of subsequent Fusion of the already-Merged T[COND] and D nodes. Recall that Fusion produces a single vocabulary item where there had been two morphosyntactic heads.
Fusion of the T[COND] and D nodes is triggered by the [1] feature on D. The [COND] feature on T cannot receive the spell-out –eadh because Fusion applies obligatorily in this context. For the Irish paradigm, the application of Fusion is according to contexts which must be listed, more so than the Scottish Gaelic verbal paradigm.
The fact that, unlike the prepositional paradigm (4.3 below), there is no recognizable ending per person across tenses provides some support for a Fusion analysis, whereby the D head is spelled out in the same exponent as the T[COND] head. For the first person plural, Irish provides –aimid for the future and present habitual tenses, with an –f- marking the future; -aimis marks the past habitual and the conditional, with an –f- marking the conditional; and -amar marks the preterite tense. Arguably the shape of agreement inflection is intricately linked to the tense and mood of the verb in Irish.
Further support for Fusion of T[COND] and D comes from responses. Recall that the verb is repeated to mean ‘yes’, and that repeating the verb with an independent pronoun has an emphatic meaning. However, when the synthetic form of the verb is available, it must be used to mean ‘yes’. If this response system comes from ellipsis of all but the verb, then this gives support for Fusion of the T[COND] and D[1] nodes; a merged D node may be deleted, but a fused node must remain.

To conclude, Morphological Merger with subsequent Fusion successfully explains the complementary distribution of inflection and an overt subject found in Scottish Gaelic without recourse to a pro element. Morphological Merger also has the effect that the personal endings behave like pronouns because they are in fact pronouns; the Vocabulary provides the D-cum-inflection form of the pronoun. The further application of Fusion provides an explanation for the difference in prepositional and verbal inflectional morphology straightforwardly.

Syntactic agreement between a verb and its subject is extremely common, and to have Scottish Gaelic verb-subject agreement happen only at morphology may seem a bit extreme\(^{17}\). However, it could be that Merger is an alternative way to represent syntactic Agree. Halle and Marantz (1993: 170) commented that Distributed Morphology may require Merger in order to spell out features. Similarly, recall that Adger (2000) proposed adjacency to be required for Case interpretability.

\(^{17}\) But recall that Roberts (2005) said as much: Welsh agreement inflection is the result not of Syntactic Agreement, but of subject clitics triggering head movement of V to Pers (Roberts 2005: 53). With head movement generally agreed to occur at PF, Roberts’ analysis ends up being a post-syntactic Merger account.
The first person pronominal subject does not appear as an independent pronoun when the verb is in the conditional because the D head merges with the V+T[COND] complex. D and T[COND] subsequently fuse together since the features of each node appear together on a single vocabulary item. The difference between Scottish Gaelic and Modern Irish is due to a loss of Fusion application contexts in Scottish Gaelic, with the consequence that only first person merges and fuses with T[COND] in Scottish Gaelic.

4.2 Verbal Noun Agreement

Recall that the pronominal complement of the verbal noun appears as a possessive pronoun and that the non-pronominal complement takes the genitive case, as with nominal genitive constructions.

(12) a. Dh’fheuch a’ chlann ri mo thogail
    try.PAST the children to my lift.VN
    ‘The children tried to lift me’
    (Byrne 2004: 128)

    b. Dh’fhalbh i a dh’fhosgladh an dorais
    go.PAST she PTCL open.VN the door.M.GEN
    ‘She went to open the door’
    (Byrne 2004: 125)

Agreement of the verbal noun is unlike that of the finite verb or preposition. The verbal noun is able to inflect for an overt DP so long as that DP is outside the embedded clause. When the verbal noun agrees with the matrix subject, agreement inflection co-occurs with a phonologically-specified DP, unlike other φ-feature agreement in Scottish Gaelic.
Because the verbal noun parallels regular nominals in Scottish Gaelic, characterizing the pronominal complement as agreement inflection requires the possessive pronoun in (14) to be treated as agreement as well.

(14) Feumaidh tu do chòta fhàgail
must.FUT you your coat leave.VN
‘You will have to leave your coat’

(Byrne 2004: 127)

The relation between tu ‘you’ and do chòta ‘your coat’ is not traditionally one of agreement, but this is the same pattern found in (13), except that agreement is expected in (13) because it involves a non-finite verb.

Thus the possessive pronoun complement of the verbal noun is similar to the cases of verbal and prepositional inflection; rather than agreement inflection, the pronoun is phonologically present but spelled out alternatively because of the morphosyntactic context. The pronominal complement receives genitive case in the complement position of the verbal noun and is then moved at Morphological Structure.
(15) a. Bidh iad **gar** coinneachadh (ar) a-màireach.
be.FUT they at.IPL.POSS meet.VN tomorrow
‘The will meet us tomorrow’

(Byrne 2004: 123)

b. Bidh iad a coinneachadh an tidseir a-màireach
be.FUT they PTCL meet.VN the teacher tomorrow
‘They will meet the teacher tomorrow’

The structure in (16) is based on Duffield’s (1995) structure for the Irish verbal noun. Duffield, however, proposed the possessive pronoun to be in Asp with the verbal noun in D. I have instead assumed the particle *ag* to be in Asp and the pronominal complement to move to the D head at Morphological Structure because of its pronominal nature; the verbal noun remains in the head position of the verbal noun phrase.

(16)

The pronominal complement is assigned genitive case by the Verbal Noun and subsequently undergoes Object Shift by adjoining to the verbal noun phrase. From here the
genitive pronoun is in a position to merge with D. The movement must be sensitive to hierarchical structure because the possessive pronoun—assuming that the verbal noun and regular nominals share similar structures—precedes pre-nominal adjectives and numerals.

(17) mo thrì taighean ùra
my three house.PL new.PL
‘my three new houses’

(Gillies 1993: 197)

Vocabulary Insertion continues as normal; the genitive case or possessive feature on the pronominal complement primes the insertion of ar ‘our’ in (15a) above rather than the independent pronoun sinn.

(18) [1PL.POSS] → ar

Recall that an argument against Incorporation of the pronoun put forward by McCloskey and Hale (1984) and Legate (1999) is that in the Cois Fhairrge dialect of Irish, the possessive pronoun may co-occur with an independent pronoun exactly where pro is posited to be.

(19) a muirinn sise
her family she-EMPH
‘her family’

(McCloskey & Hale 1984: 528)

If the possessive pronoun reaches its pre-verbal noun position as a result of syntactic movement, the independent pronoun in (19) may be the realization of the copy left by movement. But this would require that movement of the pronominal complement be at Syntax, not PF; and furthermore, the non-genitive case on the copy is slightly mysterious. The same is true if these pronouns are evidence of the pro posited by McCloskey and Hale
(1984): if the independent pronoun occupies the same position as non-pronominal DPs, it is unclear why it is in the nominative case rather than the genitive.

Further research would need to be done, but notice that in (19) the independent pronoun appears with the emphatic/contrastive suffix. If this is the general case, and phrases like a nuirinn si are ungrammatical, then these instances of reduplication are actually emphatic markers that are clarifying the ϕ-features of the possessive pronoun, much like the echo pronouns of Welsh (cf. also Legate 1999 for Irish). Since this reduplication seems to occur only with the verbal noun, this is further evidence for treating the verbal noun’s inflection differently.

To summarize, the possessive pronoun complement of the verbal noun is not agreement inflection, as proposed in McCloskey and Hale (1984), but is rather the pronoun complement itself. The pronoun is generated in the complement position just like non-pronominals, where it receives genitive case, and is Merged to precede the verbal noun at Morphological Structure.

4.3 Preposition Agreement

Recall that prepositions, like verbs, take personal endings in the absence of an overt object only. This complementary distribution between inflection and an overt DP suggests that here too Morphological Merger is at work to produce the observed agreement inflection.
Merger of the P and D heads conditions the Vocabulary to insert a personal ending rather than the independent form of the pronoun. Recall that Morphological Merger produces a structure which allows the Vocabulary to insert a single Vocabulary Item per head, such that agam ‘at me’ is produced by the insertion of ag- for the P head [AT] and –m for the D head [1SG].

Merger allows the personal endings to be spelled out transparently, and the intuition that the pronouns are syntactically present is realized in a very straightforward way. The appearance of agreement inflection rather than the independent pronoun is simply a case of
competition among vocabulary items. The feature bundle [1SG] receives a different exponent according to its context: when the [1SG] D head is merged with a preposition it appears as \(-m\) but when it is independent (unmerged) it receives phonological realization as \(mi\). When a [1SG] D head is merged and fused with T[COND] as in the verbal inflection discussed above, it receives yet a different exponent: \(-inn\).

Not all prepositions inflect for a pronominal object in Scottish Gaelic. To prevent inflection of a non-inflecting preposition, the vocabulary items in (21b) could be altered so that the features [1SG] are spelled out as \(-m\) only for the class of prepositions which inflect. This would be accomplished with an [AGR] diacritic, following Acquaviva’s (2003) analysis of Irish prepositions, which marks inflecting versus non-inflecting prepositions. This diacritic is a morphosyntactic marker which conditions the processes at PF which produce the forms of the inflecting prepositions.

A Merger approach directly explains the highly local nature of prepositional inflection. Recall that in Scottish Gaelic a prepositional complementizer taking a clause as its object will inflect for an adjacent pronoun (22).

(22) Bha mi a’ feitheamh ort an t-airgead a thoirt dhomh
be.PAST I PTCL wait.VN on.2SG the money PTCL give.VN to.1SG
‘I was waiting for you to give me the money’

(Joan MacDonald, p.c.)

The uninflected \(air\ thu\) ‘on you’ is expected if the preposition takes on the entire clause as an object and if inflection is syntactic, but Scottish Gaelic uses the inflected form \(ort\). The morphosyntactic structure gives an environment whereby Merger may apply.
Recall from Chapter 1 above that the subject is generally found in a position lower than TP, perhaps spec, vP. The subject in complement clauses must raise to spec, TP so that it is in a position to merge with the complementizer position\(^{18}\).

Recall also that possessive pronominals do not trigger $\varphi$-feature inflection on the preposition. Presumably Merger of simple D heads occurs regardless of the pronominal spell-out (cf. Adger 2000), so inflectional morphology might be expected with possessive pronouns, but this is not the case.

\(^{18}\) The position of the subject in non-finite clauses is not fully agreed upon, but subject-raising of the subject of a non-finite clause to spec,TP is similar to that proposed in Bondaruk (2006), where the subject of the non-finite clause appears in AGR which is part of T (Bondaruk 2006: 893). See also discussion in Duffield (1995). McCloskey (2002) proposed that the subject is in Spec, TP with the finite verb in the next higher projection.
(24) sheas e ri m’ thaobh
stood he to my side
‘he stood at my side’

(MacLellan 1972: 25)

The lack of inflection with possessive pronouns results from competition among Vocabulary Items. The main difference between the possessive pronoun and the independent one is the feature [POSS] which is visible to morphosyntactic processes. If the D and P heads do merge, the available Vocabulary Items prevent the appearance of inflection. The possessive form is then inserted according to the Subset Principle, which requires the more highly specified exponent to be inserted.

(25) [1SGPOSS] $\rightarrow$ mo

In competition for insertion, the features of the terminal node will count as more specific than the context in which the node is found so any time the [POSS] feature appears, the possessive pronoun will be inserted, regardless of context.

Under an agreement analysis of inflection, the feature [POSS] would have to block syntactic agreement processes, or there would have to be an Impoverishment rule to erase the agreement features on the agreeing head.

A merger account also explains why a clefted object no longer triggers inflection on the preposition. If pronominal inflection is simply a case of head merger at morphological structure, then the absence of inflection when the object DP is not local is not surprising. What is surprising is the appearance of inflection as third person singular masculine.
(26) Seo a’ chaileag a bha thu a’ bruidhinn ris  
this the girl PTCL be.PAST you at speaking with.3MSG  
‘This is the girl you were talking to’

(Adger & Ramchand 2006: 7)

With a Merger account, the unavailability of inflection would be directly related to the position of the DP. With the Copy Theory of Movement, there is a copy in the object position of the stranded preposition. This copy is available to merge with the prepositional head. Copies must be deleted at PF; whether copies are deleted before or after Merger occurs is of no consequence, so long as they are deleted before Vocabulary Insertion.

Scottish Gaelic cannot have stranded prepositions, in which case the preposition would either have to front with its object or a dummy object DP would have to be inserted. This is precisely what is found across dialects in Scottish Gaelic (Adger & Ramchand 2006). Although the constructions vary in grammaticality per dialect, both options are accounted for:

(27) a. am bòrd a bha an leabhar fodha  
the table PTCL be.PAST the book under.3MSG  
‘the table the book was under’

b. am bòrd fon a bheil an leabhar  
the table under.DEF PTCL be.PRES the book  
‘the table the book is under’

(Adger & Ramchand 2006: 9)

To summarize, prepositional inflection results from the Merger of the P and D heads. Morphological Merger efficiently explains the complementary distribution found in Scottish Gaelic between prepositional inflection and overt pronouns, as well as preserving the idea
that there is a syntactically real pronoun present, in the most transparent sense. The fact that there is no inflection in clefting constructions appears at first glance to be *prima facie* evidence for a Merger analysis, but if the clefted DP arrives there via movement, the copy left behind should be available for Merger. The copies left by movement must be deleted before Vocabulary Insertion to prevent the copy from being phonologically realized; and the default realization is due to restrictions on stranded prepositions in Scottish Gaelic.

### 4.4 Definiteness Agreement

Prepositions in Scottish Gaelic not only reflect the φ-features of a pronominal object but also inflect for the definiteness of the object DP. This definiteness inflection coincides with the presence of the definite article. Recall that the definite-inflecting prepositions can be divided into two classes: the –n suffixed and the –s suffixed.

\[ \text{(28) a. bidh a’ chuid as motha dhen a’ bhuidhinn a’dol a shnàmh feasgar be.} \]
\[
  \text{FUT the part biggest of.DEF the group go.VN PTCL swim afternoon}
\]
\[
  \text{‘Most of the groups swim in the afternoon’}
\]
\[
  \text{(Byrne 2004: 75)}
\]

\[ \text{(28) b. anns an teine in.DEF the fire}
\]
\[
  \text{‘in the fire’}
\]
\[
  \text{(Oftedal 1956: 277)}
\]

Since inflection and the definite article co-occur, definiteness agreement contrasts with the other agreement inflection in Scottish Gaelic. If definiteness is a syntactic feature similar to φ-features (Borer 1988, Siloni 1997), at Syntactic Structure definiteness enters the derivation.
as interpretable on the definite article but uninterpretable on the preposition. Agree then establishes the relation between the features on the two nodes, valuing the uninterpretable feature on the preposition, which is then marked for deletion, and the derivation continues on to morphological structure.

(29)

Feature-valuation and Agree, under Minimalist assumptions, ought to occur between the definite article and all inflecting prepositions. The definiteness feature must be valued for each appearance of the preposition; whether the value is realized as morphological agreement is decided by the morphological component. This entails a null but syntactically real indefinite article which values this definiteness feature in the same way the overt definite article does.

At Morphological Structure, the morphological component re-enacts Feature Valuation and copies the definite feature from the definite article onto Agr nodes inserted onto the preposition. The features copied onto the preposition condition the phonological realization of that preposition.
So for a preposition of the –s class, there is the Vocabulary Item in (31a), and for –n prepositions (31b)\(^{19}\).

(31)  
\[ \text{a. } [\text{DEF}] \leftrightarrow -s \]
\[ \text{b. } [\text{DEF}] \leftrightarrow -n \]

Recall that the two classes of prepositions inflect differently with a plural definite object.

(32)  
\[ \text{a. } \text{ach chan eil gin } \text{dhe na } \text{h-ainmeannan agam } -sa \]
\[ \text{but } \text{NEG } \text{be any of } \text{the.PL name.PL at.1SG } -\text{EMPH} \]
\[ \text{‘Though I don’t have any of the names’} \]
\[ \text{(Morrison 1978: 3)} \]

\[ \text{b. } \text{a’ chuid mhór aca } \text{anns na } \text{sean lathaichean} \]
\[ \text{the part } \text{big at.3PL in.DEF the.PL old day.PL} \]
\[ \text{‘the larger part of them in the old days’} \]
\[ \text{(Oftedal 1956: 305)} \]

\(^{19}\) Recall that the prepositions \textit{air} and \textit{aig} have no distinct form to indicate definiteness. It may be that they constitute a third class of preposition which has a null suffix denoting definiteness: \([\text{DEF}] \leftrightarrow \phi\)
The prepositional classes have to be differentiated morphosyntactically in order to accommodate the data. The morphosyntactic [AGR] diacritic proposed in Acquaviva (2003) works very well, with the added distinction between the two classes for Scottish Gaelic. So the preposition *anns* in (32b) above—as well as the other –s suffixed prepositions—comes with the [AGR] diacritic proposed in Acquaviva (2003) along with the further distinction of [AGR1]. For the –n suffixed ones like *dhe* in (32a) the stem appears with the diacritic [AGR2]\(^{20}\).

Definiteness inflection on [AGR2] prepositions does not co-occur with the plural definite article: an Impoverishment Rule is needed to delete the definiteness features. Recall that Impoverishment rules allow certain features to be deleted in specified contexts (Halle & Marantz 1993: 158).

\[
(33) \quad [\text{DEF}] \leftrightarrow \emptyset / P[\text{AGR2}] \_ [\text{PL}]
\]

(33) shows the deletion of the definiteness feature on prepositions of the [AGR2] class in the presence of the plural feature of the plural definite article. Impoverishment rules apply after feature copying, but because the definiteness feature on the Agr node has been

\[^{20}\text{Acquaviva (2003) proposed the [AGR] diacritic to distinguish between inflecting and non-inflecting prepositions at morphology, and so the diacritic was assumed not to be used at all in syntactic operations. Since only inflecting prepositions (i.e. those with the [AGR] diacritic) agree in definiteness, either [AGR] is visible on the roots for feature-valuation (this requires Early Insertion of Roots (Embick 2000)), or at Morphological Structure Agr nodes are inserted only on prepositions that have [AGR] visible.}\]
deleted, the Vocabulary fails to insert an exponent specified for definiteness\textsuperscript{21}. Thus the base form of the preposition appears: \textit{dhe} in (32a)\textsuperscript{22}.

The same class of prepositions which does not inflect for the plural definite article also allows for the optional appearance of the singular definite article. That is, the singular definite article \textit{an} may be dropped when an [AGR2] preposition is inflected.

\begin{itemize}
\item[(34)] Cha robh fios a\'m \textit{fo\’n t-saoghal} gu dé chanainn
\end{itemize}

\begin{itemize}
\item[-] NEG be.PAST knowledge at.1SG under.DEF world that what speak.COND.1SG
\item[-] rithe
to.3FSG
\end{itemize}

\begin{quote}
\textquote{‘I didn\’t know what in the world I would say to her’}
\end{quote}

(MacLellan 1972: 57)

Historically speaking, the \textit{–n} suffix on the preposition is probably the result of a phonological elision between the final vowel of a preposition and the initial vowel of the

\begin{itemize}
\item[-] Occasionally one may come across examples where a preposition which normally inflects for the plural definite article does not, such as \textit{le} ‘with’. This is probably a dialectal variation.
\end{itemize}

\begin{itemize}
\item[-] a. \textit{Agus Niall air falbh le na points orm}
\item[-] and \textit{Niall at go.VN with the.PL points at.1SG}
\item[-] ‘now that Niall is away with my points (rationing cards)’
\item[-] \begin{flushright}(Oftedal 1956: 267)\end{flushright}
\item[-] b. \textit{Chaidh e fiadhaich le na balaich}
\item[-] go.PAST he angry with the.PL boy.PL
\item[-] ‘he got angry with the boys’
\item[-] \begin{flushright}(Oftedal 1956: 293)\end{flushright}
\end{itemize}

This provides more support for the Impoverishment Rule posited here, which in this case would have been generalized to all the prepositions.

\begin{itemize}
\item[-] 22 It may be the case that \textit{dhe na} has more to do with orthography than the reality of the phonology. If the \textit{–n} prepositions are in fact inflected for the plural definite article, the impoverishment rule is unnecessary.
\end{itemize}
The –s endings found on the other class of prepositions are also the result of a phonological requirement on Old Irish. The prepositions which originally ended in a consonant retained the ancient –ss needed for phonological well-formedness (Thurneysen 1946: 293). While most of the definite endings in Scottish Gaelic preserve those of Old Irish, a few have been altered or have lost the endings altogether.

It could be argued that the –n suffixed prepositional forms in Scottish Gaelic are in fact produced by an elision process which combines the prepositional root with the definite article. While the definite article is not required in the presence of definiteness inflection, it often does appear, and is not ungrammatical. Furthermore, the definite article may be a as well as an in the dative case (Byrne 2004: 37), often realized as /ə/, when the (lenited) noun begins with /bh, ch, gh, mh, ph/. Where the article appears as an it is realized as /(ə)N/. The examples given here show the coexistence of the –n ending with the definite article, whether a or an. Note also that the orthography can be very misleading.

23 It could be argued that the –n suffixed prepositional forms in Scottish Gaelic are in fact produced by an elision process which combines the prepositional root with the definite article. While the definite article is not required in the presence of definiteness inflection, it often does appear, and is not ungrammatical. Furthermore, the definite article may be a as well as an in the dative case (Byrne 2004: 37), often realized as /ə/, when the (lenited) noun begins with /bh, ch, gh, mh, ph/. Where the article appears as an it is realized as /(ə)N/. The examples given here show the coexistence of the –n ending with the definite article, whether a or an. Note also that the orthography can be very misleading.

a. de ’n rud /yanə Rud/ (Oftedal 1956: 265)
b. do ’n taigh aige /yanə ’Ntiej aγə/ (Oftedal 1956: 277)
c. air an t-slighe /eðə ’Nti-α/ (Oftedal 1956: 265)
d. leis an asal /lešə ’NdašəL/ (Oftedal 1956: 267)
e. do ’n asal /yan .Ndašəl/ (Oftedal 1956: 267)
What was historically a phonological process is now a morphosyntactic phenomenon; Scottish Gaelic has generalized this to actual morphological inflection derived from Syntactic Agreement. The prepositions which in Scottish Gaelic end in –n do not inflect for the plural definite article and do not require the overt presence of the singular definite article because historically the ending was the definite article. The optionality and other idiosyncrasies of this agreement are the result of diachronic language change: the shift from a phonological process to a morphosyntactic one.

Recall that when a definite object is extracted, the stranded preposition takes the default (3MSG) form (Adger & Ramchand 2005). Alternatively the preposition may be clefted along with the definite object. When the preposition is clefted, it appears to be

---

24 Notice that Modern Irish has retained the phonological process while Scottish Gaelic has developed the morphological process. Modern Irish has definite –n forms (e.g. ón mbord and don bhfear (Ó Sé 1995)) that are derived by phonological merger of the preposition and the definite article, as evidenced by the ungrammaticality of the definite form and an overt definite article. Scottish Gaelic allows the reduplication of definiteness, indicating that it is a morphosyntactic process. Thanks to Gearoid O’Donnchadh for pointing out the difference in the Irish data and to Jamal Ouhalla for pointing out the different paths of development in the two languages.
inflected for definiteness (36b); but this is not related to the definite article, as may be seen from (37) below. The preposition appears to be inflecting for the relative complementizer.

(36) a. a’ chraobh a dh’òl thu an leann fodha
the tree a drink.PAST you the beer under.3MSG

b. a’ chraobh fon an do dh’òl thu an leann
the tree under.DEF that drink.PAST you the beer

‘the tree you drank the beer under’

(Adger & Ramchand 2006: 10)

(37) Agus bha aon gheimciobair aige, fear ris an canadh iad Sandy Mór
and was one gamekeeper at.DEF PTCL call.COND they Sandy Big
‘and he had one gamekeeper, a man they called Big Sandy’

(MacLellan 1972: 51)

Recall that it is the adjacent definite article only that triggers definiteness inflection; if an element intervenes between the preposition and the definite article the preposition cannot inflect for definiteness (Adger 2000: 86). In light of the fact that the preposition takes definiteness inflection for the particle an, (38) is very intriguing.

(38) Cò a chuir am peann anns dè am bocsa?
who C-REL put.PAST the pen in.DEF which the box
‘Who put the pen in which box?’

(Adger & Ramchand 2001: 105)

If the preposition cannot inflect for the definite article, it must be inflecting for the questioning particle dè. These elements which trigger the definite form of the preposition—
an ‘the[SG]’, na ‘the[PL]’, gach ‘each, every’, dè ‘what’ and an (relative complementizer)—form a natural class of definite elements.

To conclude, definiteness agreement in Scottish Gaelic is more like typical agreement that results in a repetition of features, although this agreement is like φ-feature agreement in that it occurs only locally. Definiteness has been proposed to be another φ-feature which may undergo agreement (Borer 1988, Siloni 1997), and the definite agreement in Scottish Gaelic would lend support to this theory. The preposition’s uninterpretable definiteness feature is valued by the definiteness feature on the definite article, and the relation is reconstructed at morphology via feature-copying. An Impoverishment rule deletes the definiteness feature on an [AGR2] preposition in the presence of the plural definite article.

4.5 Conclusion

The analysis presented in this chapter is a morphosyntactic one using the theory of the PF component as outlined by Distributed Morphology and assuming a Minimalist syntactic structure.

Verbal agreement is the result of Merger of T[COND] and D. The two heads subsequently undergo Fusion when the subject is a first person pronoun. The need for Fusion comes from the fact that the personal endings are in complementary distribution with both the overt subject and tense/mood inflection. The verbal endings spell out the Conditional feature as well as the φ-features of the pronominal subject. Prepositional agreement is, like verbal agreement, a result of Morphological Merger. The object pronoun merges with the
preposition and receives an alternate spell-out as a result. The observed ‘inflection’ is, like the verbal agreement, actually D-cum-inflection.

The observed verb-subject and preposition-object inflection are actually D-cum-inflection. The verb merges with T, with the subject in the specifier position just below, allowing Merger and then Fusion of D and T[COND] at Morphological Structure. The pronoun object of the preposition also merges with the P head. The inflection is the result of morphological processes which alter the morphosyntactic context for Vocabulary Insertion.

Verbal noun agreement is the result of its nominal status. The pronoun is assigned genitive case in the same way non-pronominal complements are, and the possessive D head is moved at Morphological Structure to precede the verbal noun.

Definiteness agreement results from feature-copying at morphology, replicated from syntactic Agree and feature valuation. The inflecting prepositions are marked with a diacritic [AGR], proposed by Acquaviva (2003). Scottish Gaelic has two classes of inflecting prepositions, which are distinguished by this diacritic. An Impoverishment rule applies in the context of a plural feature for a preposition of the [AGR2] class, preventing agreement inflection from appearing with the plural definite article. The triggers of definiteness agreement—the singular and plural definite article, gach ‘each, every’, the relative complementizer, and dè ‘what’—form a natural class.
Appendix 1

The dependent form of the verb is used: e.g. *bha* → *robh*

a. in any negative clause (after *cha*, *nach*, and *mura*)
   
e.g. *Cha robh lèine ghlan aig duine aca*

b. after the questioning words *an?* and *càit’ an?*
   
e.g. *Càite an robh i sa mhadainn?*

c. in dependent clauses after *gun*, *an*, *mus*, and *nan*
   
e.g. *Tha mi a’smaoineachadh gun robh iad ceàrr.*

(Byrne 2004: 100)
### Appendix 2

**Definite Prepositional Forms in Old Irish, Scottish Gaelic and Modern Irish for comparison**

<table>
<thead>
<tr>
<th>Old Irish</th>
<th>Scottish Gaelic</th>
<th>Modern Irish</th>
</tr>
</thead>
<tbody>
<tr>
<td>la, lass</td>
<td>le, leis</td>
<td>le, leis</td>
</tr>
<tr>
<td>a, ass</td>
<td>à, às</td>
<td>as, --</td>
</tr>
<tr>
<td>i, iss</td>
<td>an, anns</td>
<td>i, san/sna</td>
</tr>
<tr>
<td>co, coss</td>
<td>gu, gun/gus</td>
<td>chuig, --</td>
</tr>
<tr>
<td>fri, friss</td>
<td>ri, ris</td>
<td></td>
</tr>
<tr>
<td>tri, triss</td>
<td>tro, tron</td>
<td>trí, tríd</td>
</tr>
<tr>
<td>re, ress</td>
<td>ro, ron</td>
<td>roimh, --</td>
</tr>
<tr>
<td>ó, ó-n(d)</td>
<td>(bh)o, bhon</td>
<td>ó, ón</td>
</tr>
<tr>
<td>do, do-n(d)</td>
<td>do/dha, don/dhan</td>
<td>do, don</td>
</tr>
<tr>
<td>di, di-n(d)</td>
<td>d(h)e, d(h)en</td>
<td>de, den</td>
</tr>
<tr>
<td>fo, fo-n(d)</td>
<td>fo, fon</td>
<td>faoi, faoin</td>
</tr>
<tr>
<td>oc, ocan(d)</td>
<td>aig,--</td>
<td>ag, --</td>
</tr>
<tr>
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<td>mu, mun</td>
<td>um, --</td>
</tr>
<tr>
<td>for, forin</td>
<td>air, --</td>
<td>ar, --</td>
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</table>

(Scottish Gaelic: Byrne 2004)

(Old Irish: Thurneysen 1946)

(Modern Irish: Ó Siadhail 1989)
### Appendix 3
Inflecting Prepositional Paradigms for Scottish Gaelic and Modern Irish

<table>
<thead>
<tr>
<th>Scottish Gaelic</th>
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<td></td>
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<tr>
<td>leam</td>
<td>leinn</td>
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<tr>
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<td>leibh</td>
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<td>leoatha</td>
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<tr>
<td>leatha</td>
<td>lándi</td>
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<tr>
<td><strong>mu ‘about’</strong></td>
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<td>umam</td>
<td>umainn</td>
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<tr>
<td>umad</td>
<td>umaibh</td>
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<td>umpa</td>
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<tr>
<td>uimpe</td>
<td>uimpi</td>
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<td><strong>tro ‘thorough’</strong></td>
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<tr>
<td>tromham</td>
<td>tromhainn</td>
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<td>tromhad</td>
<td>tromhaibh</td>
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<td>troim(h)pe</td>
<td>trom(h)pa</td>
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<td><strong>(bh)o ‘from’</strong></td>
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<td>(bh)uainn</td>
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<tr>
<td>(bh)uat</td>
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<td>(bh)uapa</td>
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<td><strong>ó ‘from’</strong></td>
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<tr>
<td>uaim</td>
<td>uainn</td>
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<tr>
<td>uait</td>
<td>uaihb</td>
</tr>
<tr>
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<td>uathu</td>
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<tr>
<td>uaiithi</td>
<td>uaiithi</td>
</tr>
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</table>
Scottish Gaelic

ro ‘before’
romham  romhainn
romhad  romhaibh
roimhe  rom(h)pa
roim(h)pe

(ann) an ‘in’
annam  annainn
annad  annaibh
ann  annta
innte

do/dha ‘to’
dhomh  dhuinn
dhut  dhuibh
da  dhaibh
dhi

d(h)e ‘from’
dhiom  dhinn
dhiot  dhibh
dheth  dhiubh
dhith

Modern Irish

roimh ‘before’
romham  romhainn
romhat  romhaibh
roimhe  rompu
roimpi

i ‘in’
ionam  ionainn
ionat  ionaibh
ann  iontu
inti

do ‘to’
dom  düinn
duit  daoibh
dó  dóibh
di

de ‘from’
díom  din
díot  díbh
de  díobh
di
<table>
<thead>
<tr>
<th>Scottish Gaelic</th>
<th>Modern Irish</th>
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<tbody>
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<td><strong>à ‘out of’</strong></td>
<td><strong>as ‘out of’</strong></td>
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<td>asam</td>
<td>asam</td>
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<td>asat</td>
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<td>aísti</td>
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<td><strong>aig ‘at’</strong></td>
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<td>aice</td>
<td>aici</td>
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<td>ort</td>
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<td>air</td>
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<tr>
<td>oirre</td>
<td>uirthi</td>
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<tr>
<td><strong>fo ‘under’</strong></td>
<td><strong>faoi ‘under’</strong></td>
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<tr>
<td>fodham</td>
<td>fúm</td>
</tr>
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<td>faoi</td>
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<td>fúithi</td>
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### Scottish Gaelic

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<thead>
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<td><strong>gu ‘to, towards’</strong></td>
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<td>thugam</td>
<td>chugam</td>
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<tr>
<td>thugainn</td>
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<td>thuca</td>
<td>chucu</td>
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<tr>
<td>thuice</td>
<td>chuici</td>
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</tbody>
</table>

| **ri ‘to, against’**  | |
| rium                  | rinn               |
| riut                  | ribh               |
| ris                   | riutha             |
| rithe                 |                    |

| **eadar ‘between’**   | |
| eadarainn             |                    |
| eadaraibh             |                    |
| eatorra               |                    |

(Byrne 2004: 70-80)

(MacCongáil 2002: 64-83)

(Gillies 1993: 183)
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