Pronouns, Inflection, and Irish Prepositions*

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Abstract

Many languages allow a pronoun to go unpronounced in the presence of inflectional marking for person and number. This paper explores the hypothesis that inflection may itself be 'pronominal' using data from Irish which exhibits a well-known complementary distribution between person/number inflection and pronouns. Such complementarity follows if inflection forms a syntactic chain with a pronoun in argument position. Particular attention given to the distribution of inflection on Irish prepositions which provide evidence against previous proposals arguing that inflection represents agreement with a null pronoun. The proposal extends to cases where complementarity breaks down by analogy with clitic doubling and it also provides new insight into so-called "gaps" in verbal inflection for which the least-marked inflections are frequently replaced with pronouns. The analysis is extended to Welsh, where a limited set of pronouns appear to exhibit a kind of feature doubling, and to KiLega, where prepositional inflection appears under cyclic argument extraction.

1 Introduction

Many languages exhibit a complementary distribution between pronouns and inflectional affixes expressing person, number and gender (henceforth, ϕ-features). An example from Spanish is shown in (1) where the inflected verb encodes the person and number. A null subject is acceptable, but an overt pronoun is unacceptable with a neutral interpretation. A similar pattern occurs throughout the Celtic languages (McCloskey and Hale, 1984; Hendrick, 1988; Adger, 1994; Stump, 1984), exemplified with Irish prepositions in (2).[1]

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[1]Spanish allows an overt pronoun to be used with a focus interpretation (1a). Irish, on the other hand, expresses a focus interpretation by the addition of an emphatic particle following the inflected form (1b).

(1) *Focus strategies in Spanish and Irish*

a. ELLA Caminó a la tienda.
She$_F$ walk.PAST-3 to the store.
'SHE walked to the store.'

b. Bhí mé ag caint leofa san inné.
was I PROG talk with.3PL EMPH yesterday

I will set aside the difference in focus strategies shown.

(1) *Complementarity in Spanish*

a. Caminó a la tienda.
walk.PAST-3 to the store.
'She walked to the store.'

b. * Ella Caminó a la tienda.
She walk.PAST-3 to the store.

(2) *Complementarity in Irish Prepositions*

a. Bhí mé ag caint leofa inné.
was I PROG talk with.3PL yesterday
'I was talking to them yesterday.'

b. * Bhí mé ag caint leofa siad inné.
was I PROG talk with.3PL them yesterday

Much literature has addressed the properties of inflection and unpronounced subjects (or covert objects for prepositions) and a strong intuition has been that certain kinds of inflection have a pronominal characteristic (Hale, 1973; Rizzi, 1982; Alexiadou and Anagnostopoulou, 1998). This paper takes up the question of what exactly it means for inflection to be pronominal by focusing on the inflection associated with prepositions in Irish.

Several characteristics distinguish Irish from more familiar "null-subject" languages of the Spanish type. First, as noted, person/number inflection appears on prepositions as well as verbs. I will argue that both types of inflection represent the same phenomenon (following McCloskey and Hale, 1984). Second is the well-known fact that inflection is never possible with an overt argument; Irish full DPs do not allow their ϕ-features to be doubled.

The claim defended here is that inflectional marking on Irish prepositions, and by extension verbs, is a pronominal element akin to a clitic; the surface position of inflection forms a syntactic chain with an element in argument position.[2]

Section 2 quickly reviews the distribution of prepositional and verbal inflection. The argument that inflection is pronominal is defended in section 3 and is contrasted with an agreement account of the facts (McCloskey and Hale, 1984; Legate, 1999). The proposal is detailed in section 4. Section 5 concludes with brief remarks on how the analysis might be extended to deal with non-complementarity in Welsh, and with prepositional inflection in KiLega.

2 The Distribution of Inflection

This section reviews the distribution of person/number inflection on Irish prepositions. For more detail see Brennan (2008). McCloskey and Hale (1984); Acquaviva (1999, 2001); Doyle (2002a) offer further discussion.

[2]See Roberts (2005, ch. 2) and Jouitteau and Rezac (2006) for similar suggestions for Welsh and Breton, respectively.

2.1 Prepositions

Prepositions have both an uninflected base form and inflected forms showing person, number, and gender. The base form of a prepositions is used with a non-pronominal argument (3).[3]

(3) *The base form of prepositions*

a. Bhí mé ag caint le Máire inné.
was I PROG talk with Mary yesterday
'I was talking to M. yesterday.'

b. Bhí an dochtúr ag Cáit inné.
was the doctor at Cate yesterday.
'The doctor visited C. yesterday.'

Inflected forms are used when the argument is a pronoun (4).

(4) *Inflected prepositions*

a. Bhí mé ag caint leofa inné.
was I PROG talk with.3PL yesterday
'I was talking to them yesterday.'

b. Bhí an dochtúr agam inné.
was the doctor at.1SG yesterday.
'The doctor visited me yesterday.'

A separate pronoun cannot be used in conjunction with an inflected preposition (5), nor can the base form of a preposition and a pronoun be substituted for an inflected form of the preposition (6). Table 1 shows the set of subject and non-subject pronouns for reference.

(5) *No inflection with overt pronouns*

a. * Bhí mé ag caint leofa siad inné.
was I PROG talk with.3PL them yesterday

b. * Bhí an dochtúr aige se inné.
was the doctor at.3SG-M him yesterday.

(6) *No overt pronouns with the base form*

a. * Bhí mé ag caint le siad inné.
was I PROG talk with them yesterday

b. * Bhí an dochtúr ag se inné.
was the doctor at him yesterday.

[3]Examples adapted from Ó Siadhail (1989, 1995) unless otherwise noted. Initial consonant mutations are indicated with an N (eclipsis) or L (lenition) on the morpheme causing mutation. The following abbreviations will be used in the glosses throughout:

1,2,3	1^{st} person, 2^{nd} person...	REFL	reflexive/emphatic particle
SG	singular	DEMON	demonstrative particle
PL	plural	CONTR	contrastive/emphatic particle
PROG	progressive particle	C	complementizer

Table 1: Irish pronouns.

		Subjects	Non-subjects
1sg		mé	mé
2sg		tú	thú
3sg	(m)	sé	é
	(f)	sí	í
1pl		muid / sinn	muid
2pl		sibh	sibh
3pl		siad	iad

The data introduced so far shows that inflection on prepositions are in complementary distribution with pronouns. This complementary distribution is also apparent with verbal inflection (7) (McCloskey and Hale, 1984, henceforth MH).

(7) *Complementarity in verbal inflection*

a. Chuirfeadh Eoghan isteach ar an phost sin.
put.COND Owen in on the job DEMON
'Owen would apply for that job.' (MH (4a))

b. Chuirfinn isteach ar an phost sin.
put.COND.1SG in on the job DEMON
'I would apply for that job.' (Legate, 1999 (4a))

c. * Chuirfinn mé isteach ar an phost sin.
put.COND.1SG I in on the job DEMON
(MH (6a))

Unlike prepositions, verbs do not exhibit complete inflectional paradigms (McCloskey and Hale, 1984), instead many paradigm slots are filled with an "analytic" form of the verb (lacking person/number marking) in conjunction with a subject pronoun. The use of analytic verb forms varies widely depending on dialect, and on the tense/aspect of the verb form (see §4.2). Notably, it appears that all dialects use an inflected form for 1^{st} person plurals, while no dialects do so for 3^{rd} person singular (Ó Siadhail, 1989). That is, all dialects use an analytic verb form and an overt pronoun when the subject is 3^{rd} person singular.

Prepositions, which have full inflectional paradigms, show clearly that 3^{rd} person inflected prepositions cannot appear with an overt non-pronominal argument, henceforth a full DP (FDP) (8).

(8) *No inflection with a non-pronominal argument (FDP)*

a. * Bhí mé ag caint léithi Máire inné.
was I PROG talk with.3SG-F Mary yesterday

b. * Bhí an dochtúr aice Cáit inné.
was the doctor at.3SG-F Cate yesterday.

Furthermore, in those dialects that do have 3^{rd} person plural verbal forms (some dialects spoken in Munster; Andrews, 1990; Ó Siadhail, 1989; Doyle, 2002a), the inflected form of the verb cannot appear with an overt argument (9).[4]

(9) *No verbal inflection with a non-pronominal argument*

a. Chuirfeadth na léachtóirí uilig isteach ar an phost sin.
put.COND the lecturers all in on the job DEMON
'All the lecturers would apply for that job.' (MH (4b))

b. * Chuirfidis na léachtóirí uilig isteach ar an phost sin.
put.COND.3PL the lecturers all in on the job DEMON
(Andrews (6))

Thus, not only are inflected forms in complementary distribution with pronouns, (McCloskey and Hale, 1984), but inflected forms appear unacceptable with any overt argument at all (see also Andrews, 1990; Acquaviva, 1999).

Having reviewed the basic complementarity pattern, consider now an apparent exception. For two prepositions, *le* ('with') and *thrí* ('through'), a 3^{rd} person singular masculine form of the preposition is used when taking an overt argument marked with the definite article *an*. (10a-10b).

(10) *An exception to complementarity*

a. Tá Cait anseo leis an mbosca.
Is Cate here with.3SG-M the box
'C. is here with the box.'

b. Tá Máirtín ag breathnú thríd an bhfuinneoig seo.
Is Martin PROG look through.3SG-M the window this
'M. is looking through this window.'

Furthermore, masculine inflection also appears when taking a definite-marked feminine (11a) or plural (11b) DP (Acquaviva, 1999, J. McCloskey, p.c.). As a descriptive label, I will call this pattern "default inflection".

(11) *Default inflection with definite noun phrases*

a. i. leis an mbean
with.3SG-M the woman

ii. * lei an mbean
with.3SG-F the woman

iii. * le an mbean
with the woman

b. leis na fir
with.3SG-M the men

[4] Ó Siadhail (1989, p. 182) notes one further exception to this generalization. For some Munster dialects, older speakers use a pronoun after a third person plural synthetic verb (e.g. *tugaid siad* 'they call').

Although complementarity of inflection overwhelmingly remains the rule, a complete account of the Irish pattern must address this exception as well.

The pattern of inflection is summarized in (12).

(12) *The complementarity effect in Irish*

i. Inflection is in complementary distribution with pronouns and full DPs.

ii. Inflection is obligatory when it is available.

2.2 Verbs

The examples in (7) illustrated the well-known fact that verbs also exhibit complementarity (McCloskey and Hale, 1984; McCloskey, 1986; Doron, 1988; Guilfoyle, 1990; Andrews, 1990; Legate, 1999; Doyle, 2002a). McCloskey and Hale (1984) demonstrate that prepositional and verbal inflection share a similar syntactic status, and therefore that verbal and prepositional inflection represent similar phenomena. Several of their arguments are reviewed below. First, pronominal suffixes can follow the inflected preposition (14) as well as the verb (15) (e.g. *féin*, expressing reflexivity, the demonstrative particles *seo, sin* and *siúd*, and the contrastive/emphatic particle *-sa/-sean*).

(13) *The reflexive particle with pronouns*

mé féin	*myself*	sinn féin	*ourselves*	(MH (10))
tú féin	*yourself*	sibh féin	*yourselves*	
sé féin	*himself*	siad féin	*themselves*	
sí féin	*herself*			

(14) *Inflected prepositions with nominal particles.*

liom féin
with.1SG REFL

'with myself' (MH (44a))

(15) *Inflected verbs with nominal particles*

An gcuirfeá féin isteach ar an phost sin?
Q put.COND.S2 REFL in on that job DEMON

'Would you yourself apply for that job?' (MH 13a)

Second, if inflection is followed by an emphatic or reflexive particle, both inflected prepositions (16a) and inflected verb (16b) can serve as the head for a relative clause.

(16) *Inflected prepositions and verbs can head a relative clause*

a. Labhair mé leofa sin aL bhi i láthair.
speak.PAST I with.3PL DEMON COMP be.PAST present.
'I spoke to those who were present.' (MH 48a)

b. Chuadar sin aN raibh aithne agam orthu go Meiriceá.
go.PAST.3PL DEMON C be.PAST acquaintance at.1SG on.3PL to America
'Those that I knew went to America.' (MH (38a))

Third, if inflection is followed by an emphatic or reflexive particle, both inflected prepositions (17a) and verbs (17b) can be coordinated with an FDP.[5]

(17) *Inflected prepositions and verbs can be coordinated with FDPs*

a. Labhair sé liom -sa agus mo mháthair.
spoke he with.1SG CONTR and my mother
'He spoke to me and my mother.' (McCloskey, 1986)

b. dá mbeinn -se agus tu -sa ann.
if be.COND.1SG CONTR and you CONTR there
'If you and I were there.' (Legate, 1999)

As shown by MH, verbal and prepositional inflection both have a syntactic status similar to that of pronouns, revealed by similar patterns with respect to supporting nominal particles and the capacity to head a relative clause and be coordinated when supported by an emphatic particle.

The syntactic similarity between prepositional and verbal inflection makes it desirable to offer the same account of both. An adequate account must explain the complementarity between inflection and pronouns as well as FDPs and also capture the fact that inflected elements act, syntactically, as if a pronoun is present. A natural intuition is that inflection is itself pronominal. The next section introduces further evidence supporting this intuition and mitigating against an alternative where inflection represents agreement with a separate null pronoun.

3 Inflection is Pronominal

Complementarity follows straightforwardly if inflection is a pronominal element. Following Postal (1966); Elbourne (2005), I take pronouns to be the spell-out of nominal ϕ-features on D^0 in the absence of an overt NP. Thus, pronouns are by definition in complementary distribution with FDPs. The affixal nature of Irish person/number inflection follows if these pronouns are taken to be reduced, or "deficient" pronouns which are displaced from their argument position and attached to a preposition or verbal host. This approach is somewhat similar earlier accounts suggesting that nominal ϕ-features might "incorporate" into the verb or preposition (Doron, 1988; Guilfoyle, 1990; see also Anderson, 1982 with regards to Breton); parallels and differences with these approaches are taken up in §4.3.

The appearance of nominal particles with inflection (14–15) also follows from this account if the particle is taken to be adjacent to the clitic. The possibility of inflection acting as the head of a relative clause (16) follows in the same way if the clitic is permitted to move out of the constituent formed by the pronominal head and the relative clause. One piece of data that does not immediately follow from the pronominal approach are the coordination facts in (17); this issue is taken up in §4.3.

[5]McCloskey (1986) marks example (17a) with a parenthetical '?', noting that coordinations between an inflected preposition and an overt argument are slightly marginal as compared to coordinations of an inflected verb and an overt argument. He attributes this difference to the (preferred) possibility of repeating the preposition before each conjunct.

3.1 An Alternative: Agreement

Several previous accounts take inflection to be the spell-out of an agreement relationship with a null pronoun (McCloskey and Hale, 1984; Legate, 1999; Doyle, 2002a).[6] This section reviews these approaches ands argues that the evidence is most compatible with the inflection itself being pronominal.

Agreement analyses distinguish the spell-out of inflection and of the argument, as each element is taken to be a separate morpheme. Thus, complementarity does not follow naturally but must be imposed using a licensing condition that relates agreement, pronouns, and FDPs. Legate (1999) proposes that a null pronoun (*pro*) is inserted whenever pronominal features appear "in the environment of" identical ϕ-features (p. 14). This is implemented using a contextual restriction in the lexical entry of the null pronoun, along with the stipulation that the null form is the most specific pronominal vocabulary item available. Assuming that vocabulary insertion is subject to the subset principle, the null pronoun will be inserted whenever agreement appears on a preposition or verb.

This proposal raises two concerns. First, as the spell-out of the pronoun is contingent on whether agreement features are realized on the inflected form, spell-out must proceed counter-cyclically from the top of the spell-out domain to the bottom. Second, and perhaps more importantly, this approach fails to predict the absence of inflection with FDPs.[7] This is because the complementarity of agreement and pronouns is handled entirely by appealing to the distribution of null *pro*. Null *pro* plays no role when FDPs are used, thus an FDP will be spelled out regardless of whether agreement is present or not.

McCloskey (2005) offers an alternative licensing requirement for *pro*, deriving the fact that it requires overt agreement by supposing that *pro* contains un-valued ϕ-features which must stand in an agreement relationship with overt ϕ-features present on a c-commanding V (or P) head. Overt pronouns and FDPs are disallowed in the presence of overt inflection because both are taken to instantiate valued ϕ-features. Complementarity then follows under the (non-standard) assumption that verbs have valued, but uninterpretable ϕ-features; valued ϕ-features on the verb and FDP cannot enter into an agreement relationship, leaving the uninterpretable features unchecked, and leading to ungrammaticality.

3.2 Arguments against agreement

Two basic arguments militate against an agreement account. First, complementarity must be stipulated in an agreement account, but cross-linguistic data shows that complementarity for inflected prepositions is the more common and apparently unmarked case. Second, the diagnostics for a null pronoun appear to fail on closer inspection and, in fact, are more compatible with inflection itself being pronominal.

[6] See also Stump, 1984, 1989; Jouitteau and Rezac, 2006 for an analysis along similar lines for Breton, Hendrick, 1988 for Welsh, and Adger, 1994 for Scottish Gaelic).

[7] Legate's proposal also requires the assumption that the null pronoun is more specific than competing overt pronouns, despite being syncretic between all persons, numbers, and genders.

3.2.1 Crosslinguistic distribution of prepositional inflection

The familiarity of agreement inflection on verbs which co-occurres with an overt argument provides initial plausibility to the notion that Irish minimally differs from more familiar agreement phenomena by having a lexically idiosyncratic null pronoun. However, complementarity with prepositional inflection appears to be much more common cross-linguistically than the co-occurrence of inflection with an argument (i.e. "full" agreement).

The World Atlas of Language Structure (Haspelmath et al., 2005, ch. 48) summarizes adpositional inflection from a survey of 378 languages. Those languages which show full agreement between adpositions and their complement is exceedingly rare (5%, almost exclusively found in Mesoamerica) while languages like Irish, in which inflection on adpositions is in complementary distribution with the overt expression of an argument, are over three times more common (18%; the remaining languages show no adpositional inflection).[8]

If the uneven distribution warrants an explanation, it does not seem quite right for the more common, and presumably unmarked, case to follow from *ad hoc* constraints or lexical properties operating along with a simple agreement operation. An approach consistent with the distributional facts is to take inflection to itself be a pronoun which standardly appear in complementary distribution with FDPs. However, a cross-linguistic trend towards complementarity is certainly not sufficient to rule out the possibility that the Irish facts follow from lexical idiosyncrasies as in McCloskey (2005).

3.2.2 *Pro* and nominal suffixes

A primary piece of evidence advanced by McCloskey and Hale (1984) for a null pronoun is the appearance of nominal particles following inflected elements (14–15). They assume that null pronouns act just like overt pronouns (as well as FDPs) when it comes to licensing nominal particles. However, *pro* does not exhibit the general property across languages of being able to host nominal affixes.

Data from Japanese illustrates the point.[9] (18) shows that Japanese allows a pronominal subject to be omitted, that is, it allows *pro*-drop. Crucially, the topic-marker *ha* is not acceptable when the subject is ommitted (18c). Furthermore, (19a) shows an example of the nominal focusing particle *dake* ('only'); as with the topic marker, (19b) shows that the nominal particle is ungrammatical when the subject is omitted (i.e. *pro*).

(18) Pro-*drop and topic marking particles in Japanese*

a. Watashi -ha John -ga suki da.
1SG TOP J. NOM like COP.
'I like John.'

b. *pro* John -ga suki da.
J. NOM NOM like COP.
'I like John.'

[8]Irrespective of whether prepositional inflection co-occurs with an overt argument, inflection is split relatively evenly between languages with post- and pre-positions (48 and 41 languages, respectively).

[9]I am grateful to Jason Shaw, p.c. for the Japanese data.

c. * *pro* -ha John -ga suki da.
TOP J. NOM like COP.

(19) Pro-*drop and focus-marking particles in Japanese*

a. Watashi -dake -ha John -ga suki da.
1SG only TOP J. NOM like COP
'Only I like John.'

b. * *pro* -dake John -ga suki da.
only J. NOM like COP

If nominal affixes are not generally found with null pronouns, their appearance following inflection in Irish is at best a weak argument for the presence of a null pronoun.

Another argument comes from the linear order of nominal particles. For MH, *pro* is crucially taken to be in the same location as an overt subject (20a).

(20) *The position of* pro

a. Chuirfeadh se seo isteach ar an phost.
put.PAST he DEMON in on the job
'This man applied for the job.'

b. Chuireadar *pro* seo isteach ar an phost.
put.PAST.P3 DEMON in on the job
'These ones applied for the job.' (MH 14a)

This predicts that an element that can intervene between a verb and subject should also intervene between a verb and nominal particle. It is possible to insert the phrase *ar ndóigh* ('of course') in this position (21). Note that that whereas pronouns with the contrastive particle and FDPs appear following *ar ndóigh* (22), bare pronouns must preced *ar ndóigh*, appearing directly after the verb (23) (Doyle, 2002b, p. 73).

(21) *Separating the verb from the subject*

Chuaigh, ar ndóigh, se -sean agus iad -san abhaile.
go.PAST of course he CONTR and them CONTR to.home.
'He and they, of course, went home.' (Doyle, 2002a, p. 59)

(22) *Pronouns with emphatic particles follow* ar ndóigh

a. Molfaidh, ar ndóigh, na fir na mná.
praise.FUT of course the men the women
'Of course the men will praise the women.'

b. Molfaidh, ar ndóigh, siad -san na mná.
praise.FUT of course 3PL CONTR the women
'Of course they will praise the women.'

(23) *Pronouns without emphatic particles precede* ar ndóigh

a. Molfaidh siad, ar ndóigh, na mná.
praise.FUT 3PL of course the women
'Of course they will praise the women.'

b. * Molfaidh, ar ndóigh, siad na mná.
praise.FUT of course 3PL the women

If the emphatic particle attaches to a silent pronoun when the verb is inflected, and if pronouns strengthened by the emphatic particle appear after *ar ndóigh*, the agreement account predicts that emphatic particles should appear after *ar ndóigh*. However, it is not possible to insert *ar ndóigh* between an inflected verb and the contrastive particle *sa* (24a). Instead, the particle appears immediately following the verb (24b).

(24) a. * Chuas, ar ndóigh, *pro* -sa agus Cáit abhaile.
go.PAST.1SG of course CONTR and C. to.home
(Doyle, 2002a, p. 60)

b. Chuas -sa, ar ndóigh, agus Cáit abhaile.
go.PAST.1SG CONTR of course and C. to.home
'Cáit and I, of course, went home.'

Doyle (2002a) (arguing for an agreement analysis), suggests that (24a) is ungrammatical because silent *pro* is unable to attach to an "appropriate" host (p. 60), however such a morpho-phonological requirement on the distribution of *pro* is quite unfamiliar cross-linguistically. If inflection itself is taken itself to be pronominal, on the other hand, then this pattern follows naturally: the nominal particle attaches directly to the pronominal inflection.

To summarize, an agreement analysis of Irish inflection makes the wrong predictions concerning the order of nominal particles when a phrase intervenes between the verb and subject position. Such particles appear as affixes directly following the verb (or, by extension, preposition) Instead of acting as if they were attached to a silent pronoun in subject position. Data from Japanese was also presented showing that silent nominals do not, generally, host nominal particles. Furthermore, agreement makes the wrong predictions concerning the nature of prepositional inflection cross-linguistically.

3.3 Inflection as a "deficient" pronoun

This section explores the relationship between pronouns and pronominal inflection. Cardinaletti and Starke (1994) explore the typology of pronominal elements, demonstrating that pronouns vary with respect to the amount of structure they project. Cardinaletti and Starke review a wide variety of tests (morpho-phonological, syntactic, and semantic)[10] to distinguish so-called "deficient" pronominal elements (e.g. clitics) from "strong" pronouns. Person/number inflection, as expected from the present perspective, patterns as a deficient pronominal element. These tests give us the means to detail the syntactic structure of pronominal inflection.

Irish person/number inflection clearly meets the criteria that deficient elements are morphological reduced as compared to strong elements, and are subject to prosodic restructuring. Deficient elements are also preferred over strong pronouns which, noted by the descriptive summary in (12.i), holds of Irish inflection. Deficient elements occur in a "derived" position, that is, their surface position appears to be hierarchically higher than the surface position

[10]See also Kayne, 1975, ch. 2.

of a strong pronoun and, furthermore, deficient elements cannot be coordinated. Although inflected elements can be coordinated when they are followed by a contrastive or reflexive particle (McCloskey and Hale, 1984; McCloskey, 1986), coordination is ungrammatical with a bare inflected form (25) (Doyle, 2002a, 179).

(25) *No coordination with bare inflection*

* linn agus libh.
with.1PL and with.2PL .

Irish person/number inflection also meet the semantic criteria for deficient pronouns: deficient elements, unlike strong elements, need not be referential and they may be used to refer to both animate and inanimate entities. Doyle (2002a, p. 50) shows that inflected forms may or may not be referential (26), and that, while inflected forms can be used to refer to animate and inanimate referents alike, forms associated with the emphatic particle can only be associated with animate referents (Doyle, 2002a, p. 50).

(26) *Bare inflection can be referential*

a. Deirid siad go bhuil sé fior.
say.PRES.3PL that is it true.
'They (referential / non-referential) said it's true.'[11]

b. Dúradar -san go raibh sé fior.
say.PAST.3PL EMPH that was it true.
'They (referential) said that it was true.'

(27) *Bare inflection can refer to animate or inanimate things*

a. Táid go deas.
be.PRES.3PL nice.
'They (people / books) are nice.

b. Bhíodar -san go deas.
be.PAST.3PL EMPH nice.
'They (people / *books) were nice.'

To summarize, person/number inflection in Irish patterns as a deficient pronominal element according to Cardinaletti and Starke's (1994) phonological, morphological, syntactic, and semantic criteria.[12]

A final observation is that the phonological form of pronouns and prepositional inflection is quite similar; a comparison between subject pronouns and inflectional endings is shown in Table 2.

[11]Non-referential use includes generic usage, e.g. "People say it's true", in contrast to pronouns with specific referents (referential use), e.g. "Those people said it's true."

[12]Interestingly, when inflection is followed by the contrastive particle it appears to pattern like a strong pronominal element. This is slightly unexpected in comparison to Cardinaletti and Starke's data, in which no strong pronouns cliticize, and suggests that the dislocation associated with clitics should be dissociated from other properties that distinguish deficient and strong pronominals. Such a dissociation is novel, but compatible with Cardinaletti and Starke's analysis of strong pronouns as containing at least two different

Table 2: Prepositional Inflection and Subject Pronouns.

		le 'with'	*ag* 'at'	Subject Pronouns
1sg		lio**m**	aga**m**	**m**é
2sg		lea**t**	aga**t**	**t**ú
3sg	(m)	lei**s**	aige	**s**é
	(f)	léith**i**	aice	s**í**
1pl		li**nn**	agai**nn**	muid / si**nn**
2pl		li**bh**	agai**bh**	si**bh**
3pl		leofa	acu	siad

It is important to note that regular Irish pronouns also pattern like "deficient" elements according to the syntactic and semantic criteria evaluated here. The distinction mirrors Cardinaletti and Starke's three-way taxonomy of pronominal elements, where clitics and so-called "weak" pronouns stand in contrast to "strong" pronouns. However, at present I will proceed by adopting their approach to the structural differences between strong and weak pronouns, and remain uncommitted to the precise correspondence between Irish pronominals and weak pronouns found elsewhere.

Cardinaletti and Starke propose that strong pronouns include a functional morpheme that is lacking in deficient elements and that weak pronouns contain a morpheme that is lacking in clitics. Accordingly, I suggest that person/number morphemes spell out a simplex DP containing just ϕ-features, whereas Irish pronouns spell out a DP with, at minimum, an additional functional element, labeled Y (I remain uncommitted to the identity of this morpheme). The hypothesized structure for the two classes of pronouns in Irish is shown in (28).

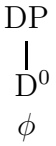
morphemes that are absent in clitics. The Irish data suggest that the distribution of these two morphemes is independent (i).

i.

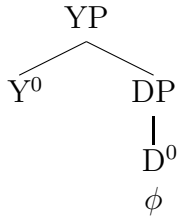
	No Dislocation	**Dislocation**
Strong	*Romance* strong pronoun *Irish* pronoun + nominal prt.	*Irish* inflection + nominal prt.
Deficient	*Romance* weak pronoun *Irish* pronoun	*Romance* clitic *Irish* inflection

(28) *Structural difference between Irish clitics/inflection and weak pronouns*

a. *Clitic / Inflection*



b. *Weak Pronoun*



3.4 Summary

To review, Irish person/number inflection is in complementary distribution with pronouns and with FDPs (§2.1), and taking inflection to be a pronominal element provides offers an intuitive approach to complementarity. Previous approaches that have analyzed inflection as representing agreement with a null pronoun are shown to make the wrong predictions with regards to the use of nominal particles (§3.2), while morpho-phonological, syntactic, and semantic tests are consistent with treating inflection as a deficient element (§3.3).

The next section details the proposal that inflection spells out an element that forms a syntactic chain with a pronoun in argument position.

4 Analysis

This section details the proposal that inflection is the spell-out of a pronominal element, i.e. that the surface position of inflection forms a syntactic chain an element in argument position. I assume that pronominal ϕ-features are a determiner head (in the tradition of Postal, 1966; Elbourne, 2001). The complement of the pronoun/determiner is a silent nominal. The analysis is presented first for prepositions and then for verbs and assumes the minimalist syntactic framework in Chomsky (2000, 2001) and a realization approach to morphology (e.g. Halle and Marantz, 1993).

4.1 Prepositions

4.1.1 Pronominal arguments

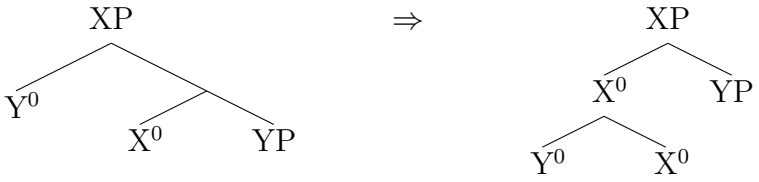
Consider a structure where a preposition takes a pronominal argument. Prepositions select directly for bare ϕ-features, (this assumption will fleshed out in §4.2).[13]

The derivation is as follows. The ϕ-features are first moved to SpecP. I suggest that the pronominal appears as an affix due to the *m-merger* operation (Matushansky, 2006). M-merger is a post-syntactic operation by which two linear adjacent nodes are adjoined, as illustrated in (29).[14]

[13] I will not address complex prepositions that take object pronoun complements, e.g. *gan* ('without'; Doyle, 2002a), nor the prepositions such as *idir* ('between'; Ó Siadhail, 1995) that take weak pronouns in the singular, but inflect with plural complements.

[14] As a viable alternative to the m-merger operation, P might raise and left-adjoin to the clitic (Roberts,

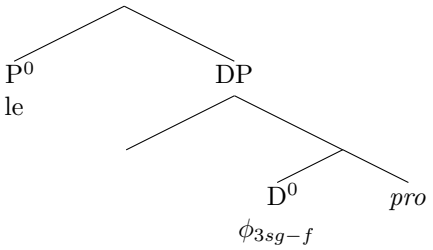
(29) *M-merger*



After movement, vocabulary insertion (VI) targets the syntactic chain consisting of ϕ-features subject to two standard criteria: VI spells out the top node of a syntactic chain (Nunes, 2001), and VI inserts the vocabulary item that best matches the features of the chain (Halle and Marantz, 1993). The derivation of prepositional inflection with a pronoun is sketched in (30).

(30) *Derivation for a preposition with pronominal argument*

léithi ('with her')



i. AGREE: [le [ϕ_{3sg-f}]]

ii. MERGE: [ϕ_{3sg-f} [le [ϕ_{3sg-f}]]]

iii. M-merger: [le ϕ_{3sg-f} [ϕ_{3sg-f}]]

iv. Prep & Top Node of the Chain is spelled out: *léithi Ø*

4.1.2 Full DP arguments

To address the absence of inflection with FDPs we must consider what drives the ϕ-feature movement. Movement may be a requirement of the moving element (pronoun), or a requirement of the inflected element (preposition or verb).

If movement is driven by the needs of the preposition ('probe-driven'), the absence of movement from FDPs should either result in ungrammaticality or be compensated by the insertion of a dummy element to satisfy the needs of the preposition.[15] Since the base form of the preposition is used in these cases, it seems that movement does not satisfy a requirement of the preposition. Instead, movement appears to satisfy requirement of

2005). This movement is particularly plausible if prepositional phrases include several layers of structure, following recent proposals by Koopman (1997); Svenonius (2006, in press).

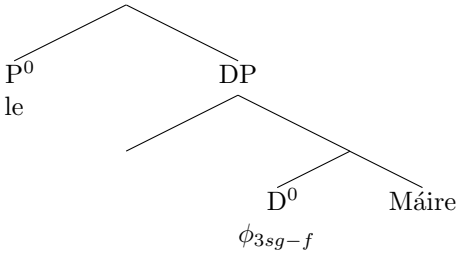
[15]See Preminger (2008) for some discussion.

the moved pronominal ('goal-driven) (Cardinaletti and Starke, 1994). FDPs contrast with pronominals simply by being licit *in situ*.[16]

The proposed derivation with an FDP is shown in (31).

(31) *Derivation with a preposition and FDP*

le Máire ('with Mary')



i. MERGE proper name & ϕ-features:	[[ϕ_{3sg-f}] [Máire]]
ii. MERGE P:	[le [[ϕ_{3sg-f}] [Máire]]]
iii. DP (name & ϕ-ftrs) spelled out:	[le *Máire*]
iv. Prep is spelled out:	*lé Máire*

4.1.3 Default inflection: An exception?

Evidence that the pronominal approach is on the right track comes from the exception to complementarity for prepositions: default inflection. Certain prepositions appear with 3-sg masculine default inflection when taking a definite DP as a complement (10). Crucially, inflection is always 3sg-masc. in these cases regardless of the number or gender of the definite DP (11). Both of these properties lend further support to the analysis of inflection as a pronominal.

The exceptional appearance of inflection recalls cases of clitic doubling, and the importance of definiteness matches what is seen in elsewhere (e.g. Macedonian; Tomiċ, 2004) where only definite arguments may be doubled. With these in mind, consider the suggestion that definite-marked NPs, like pronouns, host a set of ϕ-features which raise and cliticize onto P^0; in this way the ϕ-features of definite DPs are "doubled" in the syntax, akin to clitic doubling.[17,18] Under normal circumstances, however, the doubled ϕ-features are not spelled because VI inserts the most specific item available to realize a chain: as the lower head can be spelled out with determiner that bears both definite features and ϕ-features, the spell-out of that head is more specific, and thus preferred to spelling out the higher head which contains only ϕ-features. This is, indeed, what happens in the case of all verbs and most prepositions.

It seems reasonable, furthermore, to suppose that the two exceptional prepositions trigger a idiosyncratic morphological rule of impoverishment (Bonet, 1991; Noyer, 1998) which

[16]This approach matches McCloskey's (2005), for whom FDPs do not need to enter into agreement relationships with verbs.

[17]Presumably, the definite feature is not pied-piped by the moving ϕ-features.

[18]A reviewer speculates that the availability of doubling may help to explain those languages where prepositional inflection does co-occur with an overt argument, as discussed in section 3.2.1.

reduces the clitic's features to "default" values (3^{rd} person singular, masculine). Such a rule is illustrated in (32).[19]

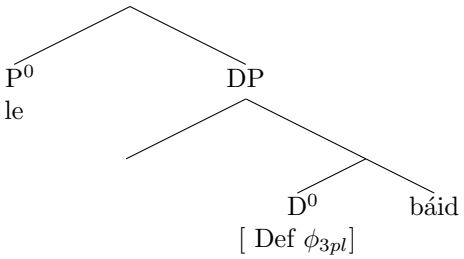
(32) $X^0{}_{\phi[pers,num,gen]} \rightarrow X^0{}_{\phi[\emptyset]}$ / {*le, thrí*} ____

This operation changes the features at the top link of the chain so that they no longer match the features of the bottom link. Whereas spell-out of the bottom link usually offers the most economical realization of the entire chain, impoverishment breaks the chain, forcing both sets of ϕ-features to be spelled out. Accordingly, this approach accounts for for the spell-out of inflection in these instances.

The derivation of a preposition with a definite argument is shown in (33).

(33) *Derivation with a preposition and definite DP*

leis na báid ('with the boats')



i. (Re)-Merge ϕ-features: [ϕ_{3pl} [le [[Def ϕ_{3pl}] [bád]]]]

ii. M-merger: [le ϕ_{3pl} [[Def ϕ_{3pl}] [bád]]]

iii. Impoverishment: [le ϕ_{3sg} [[Def ϕ_{3pl}] [bád]]]

iv. DP spelled out: [le ϕ_{3sg} [[Def ϕ_{3pl}]] *báid*

v. Definite article spelled out: [le ϕ_{3sg}] *na báid*

vi. Prep & infl. spelled out: *leis na báid*

4.1.4 On economy

Before turning to verbal inflection, consider the role of economy principles in the present account. Andrews (1990) proposes that pronouns, inflected forms, and overt arguments all compete to realize the same set of ϕ-features in a representation abstracted away from constituent structure and that complementarity follows from two economy conditions, one which blocks two constituents from spelling out the same feature set, and a second which ensures a preference for features to be spelled out with as few lexical items as possible.

While Andrews' proposal significantly over-generates the kind of morphosyntactic blocking one would expect cross-linguistically (Legate, 1999; Bresnan, 2001; Embick and Marantz, 2008), the present analysis maintains his intuition while avoiding some of the pitfalls by enforcing economy principles over the spell-out of a single syntactic chain (see also Landau, 2006; Bresnan, 1998; Nunes, 2001). Interestingly, data from prepositions further show that

[19] See Brennan (2008) for more discussion.

economy must be evaluated not in terms of overt phonological content (Landau, 2006), but rather in terms of available lexical items.

Several prepositions are syncretic between the base and 3^{rd} singular forms (Table 3). Assuming that the 3sg masc. forms have a null inflectional affix, an economy of pronunciation principle favors the spell out of an overt pronoun if no overt affix carries the features. Contrary to these predictions, no pronoun is spelled out in these cases (34).[20]

Table 3: Prepositions that are syncretic between the base and 3^{rd} singular forms

		as 'out'	*faoi* 'under'
base		**as**	**faoi**
1.sg		asam	fum
2.sg		asat	fut
3.sg	**(m)**	**as**	**faoi**
	(f)	aisti	fuithi
1.pl		asainn	fuinn
2.pl		asaibh	fuibh
3.pl		astu	futhu

(34) *Null 3sg-masc inflection on some prepositions*

a. an dream a bhí ag obair faoi-ø.
the group COMP was PROG work under.3SG-M
'those that were working under him.'

b. Bhain an scéal gáire as-ø.
took the story laugh out.3SG-M
'The story got a laugh out of him.'

These data suggest that the derivation cannot "compensate" if features are not realized by an overt inflectional morpheme, and thus militate against an economy condition defined in terms of pronunciation (contra Landau, 2006); rather, a vocabulary item with a null phonological matrix may satisfy the requirement that a node be spelled out.

4.2 Verbs

Irish verbs do not exhibit complete inflectional paradigms (McCloskey and Hale, 1984; Ó Siadhail, 1989; Andrews, 1990; see also (7) above). Table 4 is a reproduction of data from Andrews (1990)[21] which provides an overview of the distribution of inflection across several different dialects. Paradigm marked with a '–' cannot be expressed with a synthetic

[20] I am grateful to Jim McCloskey for the examples in (34).

[21] Andrews cites Sjoestedt-Jonval (1938) for the data from Kerry and Dunquin (West Munster), O Sé (1983) for the data from Chorca Dhuibhne and S.W. Kerry (West Munster), De Bhaldraithe (1953) and Ó Siadhail (1980) for the data from Connaght and Jim McCloskey p.c. for the data from Ulster.

verb, but require the analytic form of the verb, lacking person/number marking, in conjunction with an overt pronoun. These data show that there is cross-dialectal variation such that more synthetic forms are used, in general, in the southern Munster dialects than in the northern Ulster dialects. Also apparent is that the availability of synthetic forms varies based on the tense/aspect/mood (which I will collectively call *tense* for simplicity) of the verb.

Table 4 indicates clearly that the distribution of synthetic forms is highly patterned across tenses and across dialects. If a paradigm includes only one synthetic form, it will be in the first person singular, and all paradigms lack the 3^{rd} person singular form.

The pattern of available synthetic forms seems to reflect ϕ-feature markedness, for which 3^{rd} person singular is the least marked set of features, while 1^{st} person plural is the most marked (Noyer, 1992; Harley and Ritter, 2002). Regarding tense, if conditional and habitual are considered to be more complex than present, past and future, then there are more inflected forms in the more complex tenses, just as with ϕ-features. The correct account of inflection must allow for inflection to be dependent on ϕ-feature markedness, a property of the argument, and on tense complexity, a property the verb.[22]

Previous accounts argue that analytic forms are used when the inflected form is "unavailable" (McCloskey and Hale, 1984; Andrews, 1990; Legate, 1999). McCloskey and Hale (1984) assume that verbs are introduced into the derivation fully inflected. If there is no verb form in the lexicon that can spell out a given set of ϕ-features, then a null subject pronoun fails to be licensed and the derivation crashes. Legate (1999) revises this view to suggest that post-syntactic spell-out targets Agr prior to spelling-out the pronoun and a null pronominal is licensed if the spell-out of Agr is successful. According to both of these accounts, the gaps exist where there is no vocabulary item available to spell out the inflected form.

These accounts contradict the markedness patterns in the data: the most marked paradigm slots are most commonly spelled out with synthetic forms, while the *least* marked use pronouns. Contra previous accounts, the descriptive facts are that when a full pronoun is not available (i.e. for marked sets of features), inflection is used instead. When a full pronoun is unavailable are forced to insert pronominal inflection. What it means for a full pronoun to be "unavailable" are sketched out below, but a complete analysis awaits future work.

Pronoun paradigms appear to show gaps depending on the tense, aspect, and mood of the verb. The tense-dependency of pronoun inventories connects to the tight relationship between tense and nominative Case (Pesetsky and Torrego, 2001, a.o.). The availability of a pronoun depends on the tense features (i.e. Case) present on the nominal: pronouns that realize complex ϕ-features tend to be unable to co-occur with marked tense features. Recall, further, that pronominal inflection and pronouns are distinguished by the presence of an additional functional head, Y^0, in the latter (see (28) above). Suppose that Case features ([uT], in Pesetsky and Torrego's framework) head a K(ase)P projection at the outermost layer of DP. Pronoun tense-dependence follows from selectional differences among different Case features on this projection: features associated with simpler tenses select for the simplex pronominal complement (i.e. inflection) whereas features associated with complex tenses select for Y^0 which, in turn, selects the ϕ-features, yielding a pronoun. Furthermore, whether

[22]These facts extend to Scottish Gaelic (Adger, 1994), where only the 1^{st} person plural is reflected as a synthetic form (Adger, 1994), though no such gaps are observed in Welsh or in Breton (Hendrick, 1988).

Table 4: The verb *cuir* ('put') across dialects and tenses, adapted from Andrews (1990)

	Pres	Fut	Past	Past. Hab	Cond
West Munster (Kerry, Dunquin)					
1s	cuirim	(cuirfead)*	chuireas	chuirinn	chuirfinn
2s	(cuirir)*	(cuirfir)*	chuiris	chuirteá	chuirfeá
3s	–	–	–	–	–
1p	cuirimíd	cuirfimíd / -eam	chuireamar	chuirimís	chuirfimís
2p	–	–	(chuireabhair)	–	–
3p	(cuirid)*	(cuirid)*	chuireadar	chuiridís	chuiridís
West Munster (Chorca Dhuibhne, S. W. Kerry)					
1s	cuirim	(cuirfead)*	chuireas	chuirinn	chuirfinn
2s	–	(cuirfir)*	chuiris	chuiteá	chuirfeá
3s	–	–	–	–	–
1p	cuirimíd	cuirfimíd / -eam	chuireamar	chuirimís	chuirfimís
2p	–	–	(chuireabhair)	–	–
3p	(cuirid)	(cuirid)	chuireadar	chuiridís	chuiridís
Connaght (Connaght, Cois Fhairrge)					
1s	cuirim	[cuirfead]	[chuireas]	chuirinn	chuirfinn
2s	[cuiris]	[cuirfis/r]	[chuirfis/r]	chuirteá	chuirfeá
3s	–	–	–	–	–
1p	–	–	–	–	–
2p	–	–	–	–	–
3p	–	–	(chuireadar)	(chuiridís)	(chuirfidís)
Ulster					
1s	cuirim	–	–	chuirinn	chuirfinn
2s	–	–	–	chuirinn	chuirfinn
3s	–	–	–	–	–
1p	–	–	–	chuirímis	chuirfimís
2p	–	–	–	–	–
3p	–	–	–	–	–

()* = optional, but preferred
() = optional
[] = restricted to tags and responsives
Certain dialects allow inflected forms only in restricted contexts (Andrews, 1990) the details of which will not be addressed further.

KP can select Y^0 depends on the ϕ-features of the pronoun. Supposing that these features percolate from DP up to YP, it must be the case that the selectional properties of K^0 are sensitive to the ϕ-features present on YP.[23]

To illustrate the proposal, consider the verbs in the Ulster dialect shown in Table 4. In the present, past, and future tenses, unvalued tense features (K) merge as a sister to YP in the unmarked case. Y, in turn, is always merged as a sister to DP. One way to view this is that DP, the projection headed by ϕ-features, must be licensed by Y in order to be a licit argument. The dialect maintains one exception to this requirement: unvalued present tense features on KP may directly merge with DP if and only if DP bears first person singular ϕ-features; 1^{st} singular features are in a sense equivalent to Y with regards to licensing DP. Note that while Y always takes DP as a complement, K does not necessarily take YP as a complement but may merge directly with DP when the right conditions are met. If KP bears more complex Habitual and Conditional tense features, the set of ϕ-features that can license DP is expanded to include first person and second person singular; if DP is headed by a different set of ϕ-features, then Y is merged prior to the merger of KP. At present, I do not have a complete account of the mechanisms that moderate the interaction between complex K and ϕ-features.

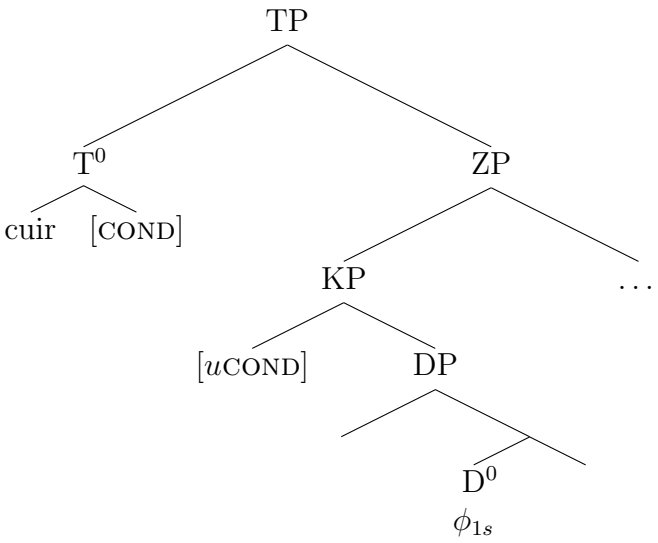
Prepositions, in stark contrast to verbs, have simple selectional requirements: P merges directly with DP.

The proposed derivation of verbal inflection is given in (35) for when a synthetic form is spelled out, and in (36) when the result is an analytic form. KP is the Case projection headed by uninterpretable tense features. Note that tense features of the verb must be spelled out regardless, thus the form of the verb that occurs with an overt argument bears analytic morphology which I take to be the spell out of tense without ϕ-features.[24]

[23]Note that interactions between Case and ϕ-features are familiar from instances of split Ergativity based on person. Dyirbal, for example, allows first and second, but not third person subject pronouns, to be marked with absolutive case (Legate, 2005). In Irish, though, rather than Case being determined by the features of the pronoun, the structure of the pronoun is determined by Case.

[24]The syntactic fragments shown in (35-37) abstract away from significant aspects of Irish clause structure. I assume following McCloskey (1996) that the verb has raised to T and that the subject has raised to a specifier position immediately below T.

(35) *chuirfinn* ('I would put')



i. [*u*COND] valued by AGREE [[cuir [COND]] [[~~*u*~~COND] [ϕ_{1sg}]] . . .]]

ii. (RE)-MERGE Clitic: [[~~*u*~~COND] ϕ_{1sg} [[cuir COND] [[~~*u*~~COND] ϕ_{1sg}]] . . .

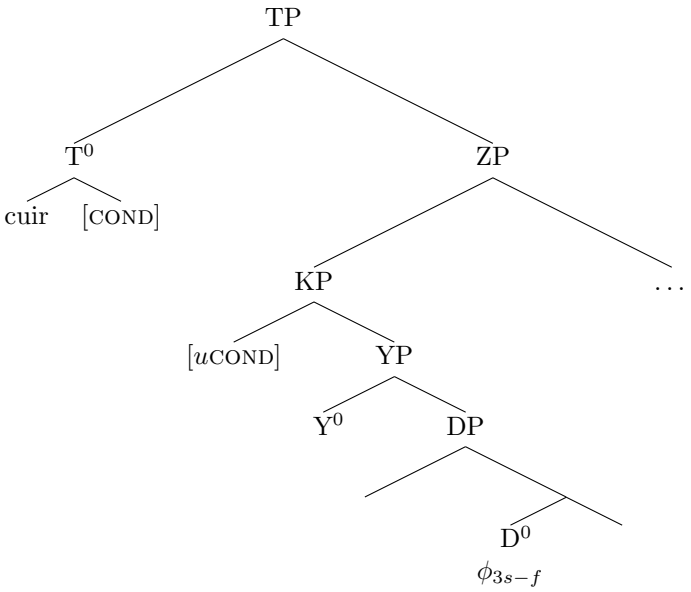
iii. M-merger: [[cuir COND [~~*u*~~COND] ϕ_{1sg}] [[[~~*u*~~COND] ϕ_{1sg}] . . .]]

iv. ϕ-feature chain spelled out at top node: [cuir COND] *-inn* Ø

v. Tense features spelled out: [cuir] *-f-inn* Ø

vi. Verb spelled out: *chuir-f-inn* Ø

(36) *chuireadh sí* ('she (pl.) would put')



i. [*u*COND] valued by AGREE [[cuir [COND]] [[~~*u*~~COND] [Y^0 [ϕ_{3s-f}]]] . . .]]

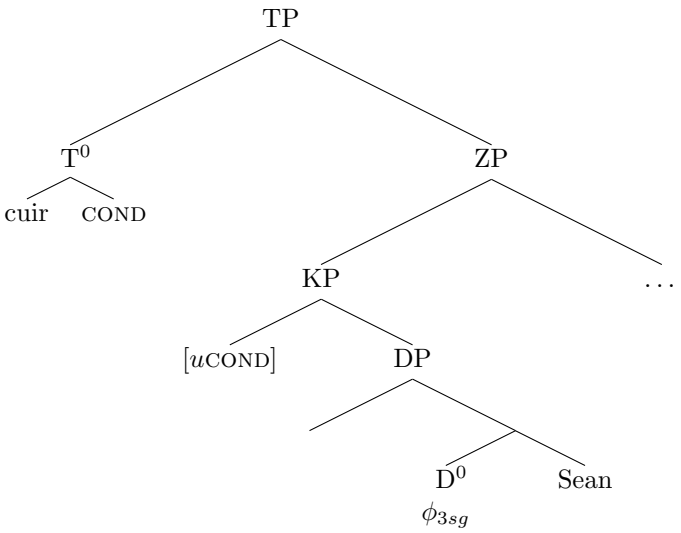
ii. ϕ-features & Y^0 spelled out: [cuir [COND]] [[~~*u*~~COND] *í*

iii. Case spelled out: [cuir [COND]] *s-* *í*

iv. Tense spelled out: [cuir] *-eadh s- í*
v. Verb spelled out: *Chuir-eadh s- í*

The relationship between verbal inflection and FDPs is the same as was seen with prepositions: verbal inflection never co-occurs with an overt argument. FDPs are structurally complete and thus no ϕ-feature movement takes place, leading to an absence of person/number inflection. (37) shows the derivation when the argument is an FDP.

(37) *chuireadh Sean* ('Sean would put')



i. [*u*COND] valued by AGREE : [[cuir COND] [[[~~u~~COND] [ϕ_{3sg}] [Sean]]]
ii. DP (name & ϕ-ftrs) spelled out: [cuir COND] *Sean*
iii. Verb (and tense) spelled out: *chuir-eadh Sean*

4.3 Some possible objections

Several previous accounts of complementarity have taken inflection to represent a pronoun that has "incorporated" into the verb or preposition; here I show that arguments raised against the incorporation accounts do not hold for the present proposal. These arguments are made in one form or another by McCloskey and Hale (1984); Andrews (1990); Legate (1999), among others.

First is the criticism that "incorporated" inflection and pronouns should share significant phonological characteristics. While such correspondence is largely true for prepositions, it does not hold for verbs. However, on the present proposal the pronominal ϕ-features have formed a complex head (via m-merger) with the verb/preposition prior to vocabulary insertion (following Halle and Marantz, 1993). It is well known that complex heads may be subject to suppletion, so the lack of obvious phonological overlap is not necessarily a strike against cliticization as implemented here.

A second criticism is that incorporation fails to account for the gaps in verbal paradigms; the discussion in section 4.2 demonstrated how the present proposal addresses the gaps.

The last argument concerns the fact that inflected elements can be coordinated with FDPs (see (17), repeated below). If incorporation involves the movement of the pronoun to

the position of the verb, such movement would violated the coordinate structure constraint (CSC) against extraction out of a conjunction (Ross, 1967; (38)).

(17) *Inflected prepositions and verbs can be coordinated with FDPs*

a. Labhair sé liom -sa agus mo mháthair.
spoke he with.1SG CONTR and my mother
'He spoke to me and my mother.' (McCloskey, 1986)

b. dá mbeinn -se agus tu -sa ann.
if be.COND.1SG CONTR and you CONTR there
'If you and I were there.' (Legate, 1999)

(38) *The coordinated structure constraint*

a. He spoke to me and my mother.

b. * Who did he speak to *t* and my mother?

This argument depends on whether the proposed pronominal movement is to be treated on a par as the *wh*-movement (i.e. A′-movement) in (38). Ross (1967, p. 98), among others, suggests some forms of movement (e.g. A-movement) might be exempt from CSC effects.

The important question is whether the CSC should apply to the pronominal movement proposed here. Kayne (1992) proposes that clitics are not subject to CSC effects based on an analysis of clitic climbing in Italian. The facts are as follows. Clitics normally follow Italian infinitives (39), however, a clitic may precede the infinitive form when it is used in the negative imperative construction (40).

(39) *Italian infinitives and clitic placement.*[25]

a. Gianni ha deciso di far-lo
G. has decided *di* do.INF-it
'G. has decided to do it.'

b. * Gianni ha deciso di lo fare
G. has decided *di* it do.INF

(40) *Italian negative imperatives*

Non lo fare!
NEG it do.INF
'Don't do it!'

Kayne argues that the clitic-infinitive order in the negative imperative is due to clitic movement indirectly licensed by negation. Interestingly, when two infinitivals are coordinated and embedded under the scope of negation, as in (41), the clitic (in boldface) precedes the first infinitive while the second infinitive is followed by its clitic argument.

(41) *Coordinated italian negative imperatives*

a. Non **lo** prendere adesso e riporta-me-lo tra tre giorni!
NEG it take.INF now and return.INF-me-it in three days
'Don't [take it now and return it to me in three days]!'

[25]The particle *di* is an infinitival complementizer, but is not given a gloss by Kayne (1992).

b. * Non lo prendere adesso e me lo riportare tra...
NEG it take.INF now and me it return.*inf* three...

If the clitic-infinitive order is derived by movement then the data in (41) suggests that such movement place even from within a coordinated structure.[26] Note further that such movement cannot be 'across the board', as the only the first clitic is extracted. These data suggest that clitic movement is not constrained by the CSC.[27] While pronominal person/number inflection may differ in certain respects from familiar pronominal clitics, they are of the same class of elements and, I propose, subject to similar restrictions on movement.

4.4 Summary

Inflection represents the spell out of a pronominal element corresponding to ϕ-features that have moved out of the argument DP. The spell out of features moved is subject standard constraints on the spell-out of a syntactic chain. No such movement has taken place with most FDPs, suggesting that the movement is driven by the requirements of the pronoun, and not of the attracting head. Definite DPs do show inflection with certain prepositions suggesting the definite ϕ-features are moved but, unlike pronouns, both copies of definite ϕ-features are spelled out due to the effects of an impoverishment rule. Verbal ϕ-feature inflection follows from the same principles, with the additional note that subject pronouns show variation in whether they appear as inflection or not, depending on the dialect and tense of the verb; this variation follows from the influence of Case on the inventory of pronouns in a given dialect.

Having seen how the distribution of inflection is derived in Irish, the next section briefly sketches how this approach can be applied beyond Irish.

5 Extensions

5.1 Welsh echo pronouns

A prediction of the present account relates to the distribution of pronominal inflection cross-linguistically. Just as closely related Romance languages show micro-variation in the availability of clitics and especially the distribution of clitic doubling constructions, similar phenomena should be present either within the dialects of Irish or in closely related Celtic languages.

I suggest that this prediction is borne out by the pattern of inflection and pronouns observed in Welsh. Welsh generally exhibits a very similar pattern of complementarity

[26] A reviewer asks whether it is possible that the pre-verbal clitic in (41a) may still be internal to the coordinated VP. Indeed, it does not appear that any elements (e.g. adverbs) can intervene between this clitic and the verb in this construction, raising the possibility that the clitic has been dislocated, but has not been extracted out of the coordinated structure.

[27] Kayne's (1992) claim receives support from recent theoretical treatments of the CSC. Recent proposals derive CSC effects not from a ban on certain movements but rather from constraints over semantic representations (Munn, 1993; Fox, 2000). If these accounts are on the right track, then CSC effects should only apply to movement operations that change the semantic representation. If, as argued by Chomsky (2001, p. 37), clitic movements have no semantic consequences, absence of CSC effects for clitic movement follows.

between inflection on verbs (42) and prepositions (43) and the expression of overt arguments (Hendrick, 1988, pp. 37–39).

(42) *Complementarity in Welsh: Verbs*

a. Canai 'r beirdd.
sing.COND the bards
'The bards would sing.'

b. Canent bob dydd.
sing.COND.3PL every day
'They would sing every day.'

c. * Canent 'r beirdd.
sing.COND.3PL the bards

(43) *Complementarity in Welsh: Prepositions*

a. ar y desg.
on the desk
'on the desk'

b. arno.
on.3SG
'on it'

c. * arno y desg.
on.3SG the desk

Interestingly, verbs show inflection when they occur with so-called 'echo' pronouns. Thus, in (44a) the first person pronoun *fi* occurs along with a verb inflected for first person singular; a similar pattern is seen in (44b). While co-occurrence is possible, it is also grammatical to leave out the pronoun; it is not grammatical, however, to leave out the inflection and express the pronoun alone (45) (Hendrick, 1988).

(44) *Optional non-complementarity with Welsh echo pronouns*

a. Canwn (fi) bob dydd.
sing.COND.1SG I every day
'I would sing every day.'

b. Canent (nhw) bob dydd.
sing.COND.3PL they every day
'They would sing every day.'

(45) *Welsh echo pronouns require inflection*

a. * Canai fi bob dydd.
sing.COND I every day
'I would sing every day.'

b. * Canai nhw bob dydd.
sing.COND they every day
'They would sing every day.'

The pattern in (44–45) resembles object clitic doubling in French (Kayne, 2000). French expresses first person direct object with a clitic pronoun placed before the verb (46). A post-verbal pronoun can co-occur with the clitic (47a), but the pronoun is not acceptable in the absence of the clitic 'double' (47b) (data from Kayne, 2000, 163–164).

(46) *French object clitics*

a. Jean connaît Marie.
J. know.PRES M.
'Jean knows Marie.'

b. Jean me connaît.
J. me know.PRES
'Jean knows me.'

(47) *French doubled object clitics*

a. Jean me connaît moi.
J. me know.PRES me
'Jean knows me.'

b. * J connaît moi,
Jean know.PRES me

Taking the object clitic in French to correspond to inflection in Welsh, co-occurrence of the clitic with a pronoun (47a) parallels non-complementarity with Welsh echo pronouns (44) and the unacceptability of the pronoun alone (47b) matches that in (45). Kayne argues that the French data support a rule stating that (structural) case-marked pronouns be doubled. Such a rule could be imported relatively unchanged: Welsh echo pronouns must be doubled. From this perspective, the only difference between French and Welsh, aside from the kinds of pronouns which must be doubled, is that Welsh has an operation such as m-merger, absent in French, which makes the pronominal element affixal.

5.2 Prepositions in KiLega

A further prediction of the present account emerges from the treatment of inflection as spelling out a dislocated pronominal element. While no inflection should appear if movement does not take place, as in the case of Irish FDPs, such an element could emerge if movement is licensed by an unrelated mechanism. I suggest that inflected prepositions in KiLega presents just such a case.

Data for KiLega are drawn from Kinyalolo (1991, pp. 108–112). Prepositions can be inflected for person and number, and do so when expressing a third person pronominal

argument just as in Irish (48a).[28,29] Also like Irish, KiLega prepositions do not inflect when taking an FDP as an argument (48b). Unlike Irish, However, inflected prepositions are used when the DP argument is extracted via *wh*-movement or passivization (49).

(48) *KiLega prepositional inflection with 3rd person pronominal arguments*

a. Bulambo á-ku-yan-a n'ábó.
B. 1AGR-PROG-joke-fv with-AGR
'Bulambo is joking with them.'

b. bána ta-bá-ku-yan-ág-á na bakúngú.
2child NEG-2AGR-PROG-joke-HAB-fv with 2old person
'Children do not habitually joke with old people.'

(49) *KiLega prepositional inflection when object is extracted*

a. bakúngú ta-bá-ku-yan-ág-u-á ná *(bó).
2old person NEG-2-AGR-PROG-joke-HAB-PASS-fv with *(AGR)
'Nobody habitually jokes with old persons.'

b. nází u-mú-k-énd-a ná *(gé) ku-Ngando?
1who 1AGR-IIPL-FUT-go-fv with *(AGR) 17
'Who will you go with to Ngando?'

Note that the inflecting morpheme (marked as 'AGR', following Kinyalolo for sake of clarity) appearing after the preposition in the extraction examples cannot be a resumptive pronoun as it surfaces under passivization (49a).

Treating inflection as a pronominal offers an alternative account that builds on the same basic intuition as Kinyalolo's, namely that movement across the inflecting head is crucial for prepositional inflection. Supposing first that KiLega matches Irish in generally disallowing ϕ-features to move out of FDPs, accounting for the lack of inflection evident in (48b). Also like Irish, 3rd person pronouns, when merged with P^0, are subject to m-merger yielding their appearance as an affix. If, as Kinyalolo argues, extraction of the prepositional complement requires cyclic movement through SpecP, then the ϕ-features in the trace of the extracted DP should be targeted by m-merger, just as if they were a 3rd person pronoun. Thus the present account predicts that inflection could appear on prepositions when the argument

[28] 3rd person agreement must be distinguished from the third person possessive pronoun which has an identical form (i).

i. Kubóta á-ku-ténd-a na mwána u-ágé.
K Iagr-prog-talk-fv with lchild lagr-3sg
'Kubóta is talking to his/her child.'

[29] Unlike Irish, prepositions do occur with 1/2nd person pronouns.

i. bána ta-bá-ku-yan-ág-á n-iswé / n-inywé.
2child neg-2agr-prog-joke-hab-fv with-us / with-you
'Children do not habitually joke with us / you.'

has been extracted.[30] The absence of inflection under extraction in Irish follows either if Irish extraction does not require cyclic movement through SpecP, or if the ϕ-feature chain remains uniform.

To summarize, in KiLega movement is crucial for prepositional agreement. I suggest, contra Kinyalolo, that such movement does not establish a Spec-Head agreement relationship (which makes the wrong prediction about cross-linguistic prepositional inflection) but rather establishes a chain from which one member cliticizes onto the preposition.[31]

6 Conclusion

This paper has explored the hypothesis that person/number inflection in Irish spells out a pronominal element, akin to a clitic, which has been dislocated from argument position. This approach naturally accounts for complementarity between inflection, pronouns, and FDPs and is compatible with the evidence from nominal affixes that inflection is pronominal. Connecting Irish inflection with pronouns provides insight into exceptions to complementarity with Irish prepositions and certain Welsh pronouns by providing a link to clitic doubling constructions. More broadly, the clitic-properties of Irish person/number inflection offer the suggestion that 'pronominal' inflection in other *pro*-drop languages (Rizzi, 1982; Alexiadou and Anagnostopoulou, 1998) might be derived by similar mechanisms.

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[30] A remaining question is why inflection is spelled out in addition to the (extracted) FDP. This may indicate that the chain linking ϕ-features on the preposition and the extracted argument has been rendered non-uniform in KiLega (as with default inflection in Irish), but this question will not be pursued further here.

[31] An intriguing extension of this approach to KiLega prepositions carries this treatment to other Spec-Head "agreement" configurations, such as French past participles (Kayne, 1989). Kayne (1994) offers a similar suggestion.

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