

# Decomposing Pronouns

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Starting with the idea that the notion “pronoun” is not a primitive of linguistic theory, we propose that it is necessary to recognize (at least) three pronoun types: pro-DP, pro- $\phi$ P, and pro-NP. Evidence supporting this three-way split comes from the sensitivity of certain proforms to the predicate/argument distinction, the internal structure of proforms, and the binding-theoretic properties of proforms. Recognizing different pronoun types also sheds light on the formal (dis)similarities between obviation and switch-reference.

*Keywords:* pronoun, clitic, agreement, DP syntax, predicate/argument asymmetries, binding theory, obviation, switch-reference

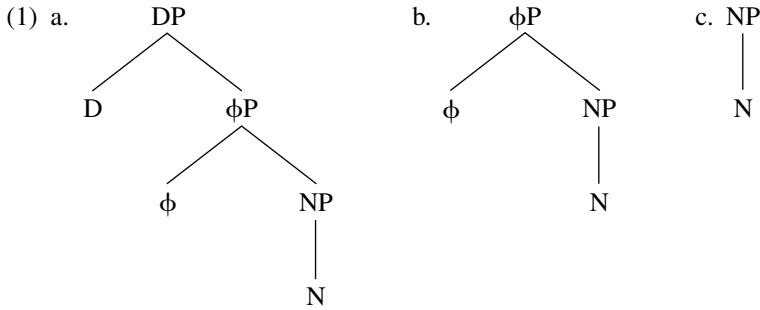
## 1 The Proposal: Pro-NP, Pro- $\phi$ P, Pro-DP

We propose that the notion “pronoun” is not a primitive. Rather, pronoun types are defined morphosyntactically, and in turn, the morphosyntactic status of a given pronoun type determines its binding properties. This analysis provides a principled solution to the problem arising in theories that, following Postal (1966) and Abney (1987), uniformly treat pronouns as DPs. Such theories claim that differences in the distribution of pronouns correlate with differences in their internal structure (e.g., Cardinaletti 1994, Ritter 1995, Noguchi 1997). However, this begs the question of how the syntax can “see” the internal structure of a DP. In other words, attributing internal structural differences to pronouns does not solve the problem of external differences. Our solution is to recognize the distinct categorial status of (at least) three different pronoun types.

Given the general proposal that “pronoun” is not a primitive, we expect that it is not a uniform syntactic object. We argue that this is correct: languages can have three pronoun types—pro-DP, pro- $\phi$ P, and pro-NP—and each one is associated with a distinct syntactic projection, as in (1). Some pronouns have a true DP shell and therefore function like ordinary R-expressions; these are pro-DPs, as in (1a). In addition, each subconstituent of the DP can function as a proform in its own right. These are pro- $\phi$ Ps and pro-NPs, as in (1b) and (1c).<sup>1</sup>

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<sup>1</sup> For now we abstract away from the distinction among phrasal pronouns, clitics, and agreement. As will emerge, the D/ $\phi$ /N distinction that we are postulating cuts across these pronominal types (see sections 4 and 6).



The categorial status of these pronominal categories determines their external syntax and their inherent semantics, which in turn determines their binding-theoretic status. This is summarized in (2).

(2) *Nominal proform typology*

|                          | Pro-DP                            | Pro- $\phi$ P                 | Pro-NP    |
|--------------------------|-----------------------------------|-------------------------------|-----------|
| Internal syntax          | D syntax; morphologically complex | neither D syntax nor N syntax | N syntax  |
| Distribution             | argument                          | argument or predicate         | predicate |
| Semantics                | definite                          | —                             | constant  |
| Binding-theoretic status | R-expression                      | variable                      | —         |

A pro-DP is predicted to have the syntax of a determiner (phrase). Also, we claim that pro-DPs will always contain  $\phi$ P and NP as subconstituents. Given their external category as DPs, we further predict that they will be restricted to argument position, on the assumption that DPs can only be arguments (cf. Stowell 1989, Longobardi 1994).<sup>2</sup> As for their semantics, DPs are demonstrably definite and consequently function as R-expressions, and so for the purpose of binding theory they are subject to Condition C.

We consider *pro- $\phi$ P* to be a cover term for any intermediate functional projection that intervenes between N and D and that encodes  $\phi$ -features (where  $\phi$ -features include number and gender, and in some cases person). Pro- $\phi$ Ps are predicted to have neither the syntax of determiners nor that of nouns. We further claim that there is no inherent restriction on their distribution; consequently, they can function either as predicates or as arguments. We argue that they lack

<sup>2</sup> We adopt a strong version of the syntax/semantics mapping hypothesis (see Déchaine 1993). Note that both Stowell (1989) and Longobardi (1994) actually make a weaker claim, to the effect that a DP can be an argument, and that an NP cannot.

inherent semantics; that is, they simply spell out  $\phi$ -features. Their binding-theoretic status is that of a variable, and so they correspond to the standard ‘‘Condition B pronouns.’’

Finally, pro-NPs have the same syntax as lexical nouns, and as NPs we predict that they will occur in predicate position (just as other lexical categories do). Syntactically, they are predicates; semantically, they are constants. We argue that they are undefined with respect to binding theory; rather, their binding properties follow from their inherent semantics in a predictable way.

In the remainder of the article we present evidence for the proposal that there are (at least) three pronoun types: pro-DP, pro- $\phi$ P, and pro-NP. On the basis of evidence from different languages, we argue in section 2 that the pro-DP/ $\phi$ P/NP distinction is necessary in order to account for the behavior of different pronoun types. Having established the plausibility of the D/ $\phi$ /N distinction, we then explore some consequences of the analysis. In section 3 we show how English pronouns are to be analyzed within the present proposal. In section 4 we consider how the D/ $\phi$ /N distinction sheds light on the Romance pronominal system (using French as the example language). In section 5 we show how recognizing different pronoun types allows us to formalize the similarities and differences between reference-tracking systems, in particular obviation and switch-reference. In section 6 we present the general conclusion and consider the broader implications of the analysis. Although we concentrate on the distinction among DPs,  $\phi$ Ps, and NPs as it pertains to proforms, we suggest that this tripartite division is observable not just with pronouns, but also with other nominal expressions.

## 2 On the Necessity of the Pro-DP/ $\phi$ P/NP Distinction

We argue that the different behavior of pronouns in different languages reflects their categorical status. We first discuss Halkomelem pro-DP, then Shuswap pro- $\phi$ P, and finally Japanese pro-NP.

### 2.1 *Pro-DPs: Halkomelem Independent Pronouns*

Halkomelem is a Central Coast Salish language; the data used are from the Upriver dialect (Stó:lō Halq'eméylem). It is a head-marking language and is consistently predicate initial. In addition to pronominal clitics and affixes, Halkomelem has a set of independent (emphatic) pronouns, which are relevant for the present discussion. The Halkomelem independent pronoun paradigm is given in (3).<sup>3</sup>

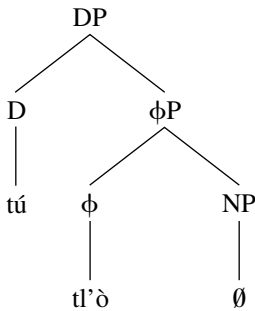
<sup>3</sup> Abbreviations used: 1 = 1st person, 2 = 2nd person, 3 = 3rd person, ACC = accusative, AGR = agreement, ARG = argument, COMP = complementizer, CONJ = conjunction, COP = copula, DEIC = deictic, DET = determiner, DS = different-subject marker, EMPH = emphatic, EXCL = exclusive, FEM = feminine, FOC = focus, FUT = future, GEN = genitive, LINK = linker, MASC = masculine, NEG = negation, NOM = nominative, NOML = nominalizer, OBJ = object, OBL = oblique, OBV = obviative, OP = operator, PAST = past tense, PL = plural, POSS = possessor, PRED = predicate, PRES = present, PROX = proximate, REDUP = reduplicative, SG = singular, SS = same-subject marker, SUBJ = subject, TNS = tense, TRANS = transitivizer.

(3) *Halkomelem independent pronouns* (adapted from Galloway 1993:171–172)

|   | Singular   | Plural   |
|---|--|--|
| 1 | <i>te-ʼélthe</i> (DET-1SG)<br><i>te-áʼelthe</i> (DET-1SG.EMPH) | <i>te-lhlímelh</i> (DET-1PL)   |
| 2 | <i>te-léwe</i> (DET-2SG)                                       | <i>te-lhwélep</i> (DET-2PL)  |
| 3 | <i>tú-tlʼò</i> (DET-3SG)<br><i>thú-tlʼò</i> (DET.FEM-3SG)      | <i>tu-tlʼó:lem</i> (DET-3PL)<br><i>thu-tlʼó:lem</i> (DET.FEM-3PL)<br><i>yu-tlʼó:lem</i> (DET.PL-3PL) |

Halkomelem independent pronouns show all the properties of full DPs. First, they have D syntax and are morphologically complex. Second, they are restricted to argument position. Third, they have the binding-theoretic status of R-expressions.<sup>4</sup> This cluster of properties is explained by the hypothesis that they are pro-DPs.<sup>5</sup>

On independent grounds, Wiltschko (1998b, 2002) argues that Halkomelem independent pronouns are DPs with the structure shown in (4).

(4) *Pro-DP structure*

This structure implies that independent pronouns are morphosyntactically complex.<sup>6</sup> The pronoun is made up of a determiner—here *tú*—which is syntactically visible. The rest of the pronoun (*tlʼò*) is identified as pro-φP and specifies person and number features (here 3rd singular).

The structure in (4) further predicts that independent pronouns contain an NP position. This NP position can be either overt or covert, the latter resulting in the “pronominal” use of the pronoun.

- (5) *Tlʼó-cha-l-su* *qwemcíwe-t* [*thú-tlʼò* *qʼami*]<sub>ARG</sub>.  
 then-FUT-1SG-so hug-TRANS DET.FEM-3SG girl  
 ‘Then I’m going to hug that girl.’ (Galloway 1993:174)

<sup>4</sup> Definiteness, in the sense of familiarity, is often localized in DP syntax in many languages (e.g., English). As discussed at length in Mathewson 1998, (in)definiteness contrasts are not relevant for Salish.

<sup>5</sup> The pro-DP analysis also extends to German *d*-pronouns (Wiltschko 1998a) and perhaps to Turkish (Baggaley 1998).

<sup>6</sup> See Wiltschko 1998b, 2002, for additional evidence supporting this proposal.

The [Det N] sequence in (5) establishes two things: first, that the Halkomelem independent pronoun *thú-tl'ò* can function as an article; second, that the *tl'ò* subconstituent cannot be equated with a noun.

The DP analysis of Halkomelem independent pronouns straightforwardly explains why they have the same syntactic distribution as full DPs. Given their categorical status as DP, we predict that independent pronouns are restricted to argument position. This prediction is borne out.

- (6) a. [Lám]<sub>PRED</sub> [tú-tl'ò]<sub>ARG</sub>.  
 go            DET-3SG  
 'He goes.' (Galloway 1993:173)
- b. \*[Tú-tl'ò]<sub>PRED</sub>-cha te Bill kw'e may-th-óme.  
 DET-3SG-FUT        DET Bill COMP help-TRANS-2SG.OBJ

Independent pronouns occur only in argument position, (6a). In (6b) the independent pronoun appears in predicate position and the result is ungrammatical. Note, however, that “pronominal” forms are not excluded from predicate position per se.<sup>7</sup> Rather, a subconstituent of the independent pronoun can appear in predicate position—namely, *tl'ò* (7a), which we analyze as a  $\phi$ P. Since  $\phi$ Ps can function as arguments or predicates, we also predict that *tl'ò* can appear in argument position. However, this is not so, as shown in (7b).

- (7) a. [Tl'ò]<sub>PRED</sub>-cha te Bill kw'e may-th-óme.  
 3SG-FUT            DET Bill COMP help-TRANS-2SG.OBJ  
 'It will be Bill that helps you.' (Galloway 1993:172)
- b. \*[Lám]<sub>PRED</sub> [tl'ò]<sub>ARG</sub>.  
 go            3SG  
 'He goes.'

That Halkomelem  $\phi$ Ps are restricted to predicate position is not the effect of any inherent property of pro- $\phi$ Ps in this language. Rather, we argue that it reflects a general markedness principle that governs blocking (Wunderlich 1996, Williams 1997). For concreteness, we adopt Koster's (1997) Principle of Maximal Specialization.

(8) *Principle of Maximal Specialization*

In a grammatical dependency relation R, select the most specialized form. A form A is more specialized than B if A can fulfill fewer functions than B. (Koster 1997:224)

Halkomelem has both pro-DPs and pro- $\phi$ Ps. Given that pro-DP is specialized for the argument function, it follows that Halkomelem pro- $\phi$ P is blocked from this position.

This much accounts for the distribution of Halkomelem independent pronouns: as pro-DPs,

<sup>7</sup> Language-internal evidence supports the claim that *tl'ò* occupies a predicate position. First, Halkomelem (like all Salish languages) is strictly predicate initial. Second, the future marker *cha* attaches to predicates. Third, if *tl'ò* is not analyzed as a predicate, then the example in (7a) will have no predicate in the matrix clause.

they may function as articles, and they are restricted to argument position. Now consider their binding properties. We proposed above that R-expressions, as arguments, are to be defined as DPs. Consequently, we predict that Halkomelem independent pronouns, as DPs, should be subject to Condition C. This prediction is borne out.

- (9) \*Súq'-t-es [te swíyeqe]<sub>i</sub> te kopú-s [tú-tl'ò]<sub>i</sub>.  
 search-TRANS-3.SUBJ DET man DET coat-3.POSS DET-3SG  
 ≠ 'The man<sub>i</sub> was looking for his<sub>i</sub> coat.' (Wiltschko 1998a:444)

By the same reasoning we further predict that independent pronouns (as R-expressions) cannot function as bound variables. This prediction is also borne out.

- (10) \*[Mékw' ye swíyeqe]<sub>i</sub> kw'ákw'ets-et-es te stóles-s [tú-tl'òlem]<sub>i</sub>.  
 every DET.PL man looking-TRANS-3.SUBJ DET wife-3.POSS DET-3.PL  
 ≠ 'All men<sub>i</sub> are looking at their<sub>i</sub> wives.' (Wiltschko 1998b:445)

Having shown that Halkomelem independent pronouns have all the properties of DPs, we now turn to Shuswap independent pronouns.

## 2.2 Pro-φPs: Shuswap Independent Pronouns

Shuswap (Secwepemctsin) belongs to the Northern Interior branch of Salish, spoken in the interior of British Columbia. Like Halkomelem, Shuswap is a head-marking language (full DP arguments are optional) and it is predicate initial. Arguments are marked on the verb as clitics or agreement affixes. In addition, there is a set of independent (emphatic) pronouns. They are listed in (11).

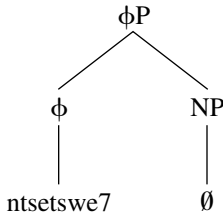
- (11) *Shuswap independent pronouns* (adapted from Kuipers 1974, Lai 1998)

|   | Singular                    | Plural   |
|---|-----------------------------|--|
| 1 | n-tsets-we7 (1SG-EMPH-DEIC) | wll-enwi7-kt (PL-EMPH-1PL)<br>wll-enwi7-s-kucw (PL-EMPH-3-2EXCL) |
| 2 | 7-enwi7 (2SG-EMPH)          | wll-enwi7-mp (PL-EMPH-2PL)                                       |
| 3 | newi7-s (EMPH-3)            | wll-enwi7-s (PL-EMPH-3)  |

Shuswap independent pronouns differ strikingly from their Halkomelem counterparts. We suggest that this is a reflex of a categorical difference. In particular, we propose that Shuswap independent pronouns are of category φP, as in (12).<sup>8</sup>

<sup>8</sup> Although Shuswap independent pronouns are morphologically complex, Lai (1998) argues that they are syntactic atoms.

(12) *Pro- $\phi$ P structure*



As pro- $\phi$ Ps, Shuswap independent pronouns show the following cluster of properties. First, they have neither D syntax nor N syntax. Second, they can be predicates or arguments. Third, they act like Condition B pronouns in that they can be bound outside their local domain, and they can function as bound variables.

Evidence for this analysis comes from the following considerations. First, as Lai (1998) shows, independent pronouns do not have NP syntax, as can be seen by comparing them with true NPs. Davis, Lai, and Matthewson (1997) argue that complex nominal predicates like the one in (13) must be of category N.

- (13) Yiri7 te [sqélemcw]<sub>N</sub> l wí.w.k-t-sem-s.  
 DEIC OBL man COMP see(REDUP)-TRANS-1SG.OBJ-3SG.SUBJ  
 ‘That’s the man that saw me.’ (Lai 1998:41, (39a))

Crucially, as Lai (1998) observes, Shuswap independent pronouns cannot appear in this position.

- (14) \*Yiri7 te [newi7-s] wí.w.k-t-sem-s.  
 DEIC OBL EMPH-3 see(REDUP)-TRANS-1SG.OBJ-3SG.SUBJ  
 ‘That’s HIM that saw me.’ (Lai 1998:41, (39b))

The ill-formedness of (14) establishes that Shuswap independent pronouns are not of category N.

Furthermore, Lai (1998) also shows that Shuswap independent pronouns do not have DP syntax. Evidence comes from the fact that they can be preceded by the same determiner as full NPs—namely, *re*.

- (15) a. [Wí.w.k-t- $\emptyset$ -en]<sub>PRED</sub> [re n-tséts-we7]<sub>ARG</sub>.  
 see (REDUP)-TRANS-3SG.OBJ-1SG.SUBJ DET 1SG-EMPH-DEIC  
 ‘I saw him.’ (Lai 1998:28, (10))  
 b. [Wík-t- $\emptyset$ -s]<sub>PRED</sub> [re John]<sub>ARG</sub>.  
 see-TRANS-3SG.OBJ-3SG.SUBJ DET John  
 ‘S/he saw John.’ (Lai 1998:11, (15))

If Shuswap independent pronouns were themselves DPs, we would not expect them to be preceded by a determiner, as in (15a). And if they were NPs, we would not expect them to be blocked from nominal positions, as in (14). Consequently, Shuswap independent pronouns are neither

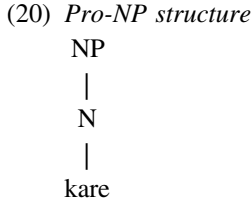




syntax: they may function as arguments or as predicates, and in binding-theoretic terms they are variables.

2.3 *Pro-NP: Japanese Kare*

Finally, we turn to the last type of proform, pro-NP. We argue that Japanese *kare* instantiates this type and that it has the structure in (20).



Pro-NPs are predicted to have the syntax of nouns. This is indeed the case. *Kare* can be preceded by an adjective, a possessive, or a demonstrative pronoun (Kuroda 1965:105, Noguchi 1997:777).

- (21) a. *tiisai kare*  
 small he  
 ‘he who is small’  
 b. *watasi-no kare*  
 I-GEN he  
 ‘my boyfriend’  
 c. *kono kare*  
 this he  
 ‘this guy here’

As for its binding properties, recall that a pro-NP is undefined with respect to binding theory. Rather, its properties follow from its inherent semantics. With this in mind, let us consider the bound variable properties of *kare*.

Because they are nouns, pro-NPs are inherently constants. Constants cannot function as bound variables; as a result, *kare* (and its corresponding feminine form *kanozyo*) cannot function as a bound variable.

- (22) a. \**Daremo<sub>i</sub>-ga kare<sub>i</sub>-no hahaoya-o aisite-iru.*  
 everyone-NOM he-GEN mother-ACC love-PRES  
 ‘Everyone loves his mother.’ (Noguchi 1997:770, (1a))  
 ≠  $\forall x$ , x loves x’s mother  
 b. \**Dono zyosei<sub>i</sub>-mo [kanozyo<sub>i</sub>-ga tensai-da to] omotte-iru.*  
 every woman-also she-NOM genius-COP COMP think-PRES  
 ‘Every woman thinks that she is a genius.’ (Noguchi 1997:770, (1b))  
 ≠  $\forall x$ , woman(x), x thinks that x is a genius

Now consider the coreference properties of *kare*. *Kare* has referential properties in that it connotes the features [MALE] and [MARRIAGEABLE AGE] (Sugamoto 1989:270, as cited in Baggeley 1998:49).<sup>10</sup> Referential properties are a prerequisite for coreference. We argue that this is precisely the reason that *kare* can support coreference and consequently does not show Condition C effects.

- (23) a. *John<sub>i</sub>-ga kare<sub>i</sub>-no hahaoya-o aisite-iru.*  
 John-NOM he-GEN mother-ACC love-PRES  
 ‘John<sub>i</sub> loves his<sub>i</sub> mother.’ (Noguchi 1997:770, (2a))
- b. *Mary<sub>i</sub>-ga [kanozyo<sub>i</sub>-ga tensai-da to] omotte-iru.*  
 Mary-NOM she-NOM genius-COP COMP think-PRES  
 ‘Mary<sub>i</sub> thinks that she<sub>i</sub> is a genius.’ (Noguchi 1997:770, (2b))

Previous analyses of *kare* have accounted for its exceptional behavior by stipulating that it must be  $\bar{A}$  free (Aoun and Hornstein 1992:5), that it must be operator free (Katada 1991), or that it must be discourse bound (Sportiche 1986). In a more recent proposal Noguchi (1997) tries to reduce the binding properties of *kare* to its categorical status as an N (as opposed to D). Noguchi proposes that *kare* be treated as an N contained within a DP. As a result, his analysis faces the problem discussed above: namely, if all pronouns have the structure of a DP, then the syntax cannot treat proforms such as *kare*, which have a vacuous DP layer, any differently than pronouns that have a nonvacuous DP layer.

Our pro-NP analysis of Japanese *kare* makes possible a more principled account of its properties: it has N syntax, and as a lexical category it has the syntax of a predicate. As a semantic constant, it cannot function as a bound variable, accounting for its apparent ‘‘operator-free’’ status. And because *kare* has residual semantic content, it can support coreference, accounting for its discourse-bound property.

#### 2.4 Summary

Before we illustrate how this analysis extends to the pronominal inventory of English and French, let us summarize the results so far. We have argued that different pronoun types are best analyzed as belonging to different syntactic categories: pro-DP, pro- $\phi$ P, and pro-NP. We have further argued that these different categories correspond to differences in the internal as well as the external syntax of proforms. In addition, we claim that binding theory is sensitive to categories, in that R-expressions (nominal expressions subject to Condition C) are defined as DPs and variables (nominal expressions that are subject to Condition B) are defined as  $\phi$ Ps. NPs are undefined with respect to binding theory; their behavior is determined by their inherent semantics as constants. This is summarized in (24).

<sup>10</sup> Gender may be, but is not necessarily, a  $\phi$ -feature. For example, in German *das Mädchen* ‘the girl’ is grammatically neuter but nevertheless denotes a [FEMALE] individual. Such examples establish that lexical gender features need not coincide with grammatical gender. We assume that the [MALE] feature associated with *kare* is lexical gender.

(24) *Examples of proforms and their properties*

| Example                  | Halkomelem independent pronouns   | Shuswap independent pronouns  | Japanese <i>kare</i> |
|--------------------------|-----------------------------------|-------------------------------|----------------------|
| Proform                  | pro-DP                            | pro- $\phi$ P                 | pro-NP               |
| Internal syntax          | D syntax; morphologically complex | neither D syntax nor N syntax | N syntax             |
| Distribution             | argument                          | argument or predicate         | predicate            |
| Semantics                | definite                          | —                             | constant             |
| Binding-theoretic status | R-expression                      | variable                      | —                    |

As for the distinction between predicates and arguments, we depart from Longobardi’s (1994) claim that all argument expressions are DPs. We claim, as Longobardi does, that a DP must be an argument (25a) and an NP must be a predicate (25b). However, we also claim that  $\phi$ P is type flexible; it can be an argument or a predicate. Consequently, not all argument expressions are DPs (25c), and not all nominal predicates are NPs (25d).

- (25) a. DP → Argument
- b. NP → Predicate
- c. Argument → DP,  $\phi$ P
- d. Nominal predicate → NP,  $\phi$ P

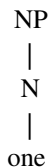
**3 The Pronominal Inventory of English**

We now turn to the pronominal inventory of English and consider how different English pronouns are to be analyzed within the present proposal. We argue that in its anaphoric use, *one* is a pro-NP.<sup>11</sup> We further propose that the English person pronoun inventory consists of pro-DPs (1st and 2nd person pronouns) and pro- $\phi$ Ps (3rd person pronouns).

*3.1 English One as a Pro-NP*

Following Postal’s (1966) proposal, we show that English *one* has the syntax and semantics of a true pronoun and as such is to be analyzed as a pro-NP.

(26) *NP-structure*



<sup>11</sup> The proform *one* is distinct from the numeral *one*, as illustrated in (i).

(i) the three large cars and the [<sub>NUM</sub> one] small [<sub>NP</sub> one] . . .

Evidence for analyzing *one* as a pro-NP comes from the following considerations. First, pro-NPs are expected to have the syntax of nouns. Consistent with this is the fact that *one* may follow a determiner, a quantifier, or a modifier.

- (27) a. the *one*  
 b. *someone*  
 c. the real *one*

Second, there is crosslinguistic evidence for treating *one* as a pro-NP. In contexts where languages such as French allow a null elliptical noun, English requires an overt proform in the form of *one*.

- (28) a. La grande [*fil*]<sub>i</sub> ne peut pas supporter la petite [∅]<sub>i</sub>.  
 the tall girl NEG can NEG support the small  
 b. La [*voiture*]<sub>i</sub> rouge est plus chère que la [∅]<sub>i</sub> jaune.  
 the car red is more expensive than the yellow
- (29) a. The large [*girl*]<sub>i</sub> can't stand the small [*one*]<sub>i</sub>.  
 (Postal 1966:202, (2))  
 b. The red [*car*]<sub>i</sub> is more expensive than the yellow [*one*]<sub>i</sub>.

Let us now turn to the binding properties of *one*. Recall that pro-NPs are undefined with respect to binding theory and that their binding properties follow from their inherent semantics. With this in mind, consider the status of *one* with respect to bound variable anaphora. The inherent semantics of a pro-NP is that of a constant. Because constants cannot function as bound variables, *one* (like Japanese *kare*) cannot function as a bound variable.

- (30) a. \**[Everybody]*<sub>i</sub> thinks [*one*]<sub>i</sub> is a genius.  
 ≠  $\forall x$ , x thinks that x is a genius  
 b. \**[Everybody]*<sub>i</sub> loves [*one*]<sub>i</sub>'s mother.  
 ≠  $\forall x$ , x loves x's mother

Even though as pro-NPs, English *one* and Japanese *kare* are both defined as constants, these two instances of pro-NP differ in their referential properties. As noted earlier, *kare* has residual referential content and is therefore able to support coreference. In contrast, English *one* is a pure spell-out of N and so has no referential content. Since referential content is a prerequisite for coreference, it follows that *one* cannot support coreference and so cannot be bound by an antecedent. This results in apparent Condition C effects.

- (31) a. \**[Mary]*<sub>i</sub> thinks [*one*]<sub>i</sub> is a genius.  
 b. \**[Mary]*<sub>i</sub> loves [*one*]<sub>i</sub>'s mother.

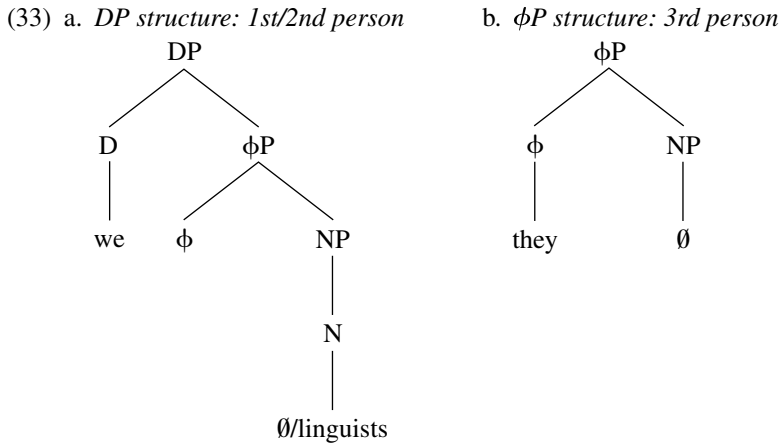
Having established that English *one* is analyzable as a pro-NP, we now turn to the properties of English personal pronouns, arguing that they instantiate pro-DP and pro-φP.

3.2 English Personal Pronouns: Pro-DPs and Pro- $\phi$ Ps

English personal pronouns are not a syntactically homogeneous group (see, e.g., Ritter 1995). One example of this heterogeneity is the fact that, in Standard American English, while plural 1st and 2nd person pronouns can function as determiners (i.e., precede nouns), 3rd person pronouns cannot (see Postal 1966).<sup>12</sup>

- |         |                         |                         |  |
|---------|-------------------------|-------------------------|--|
| (32) a. | <i>we</i> linguists     | <i>us</i> linguists     | <i>Standard American English</i><br>( <i>dialect A</i> ) |
| b.      | <i>you</i> linguists    | <i>you</i> linguists    |  |
| c.      | * <i>they</i> linguists | * <i>them</i> linguists |  |

We propose that the contrast in (32) is a reflex of the different category (and thus structure) associated with each of these proforms (see Ritter 1995 for a similar approach). In particular, we argue that 1st and 2nd person pronouns instantiate DPs and 3rd person pronouns instantiate  $\phi$ Ps, as shown in (33).



We observe that while pro-DPs (1st and 2nd person pronouns) make an overt NP subconstituent available, pro- $\phi$ Ps do not.

In some varieties of American English, it is also possible for 3rd person plural *them* (but not *they*) to combine with N, as illustrated in (34) and (35).

- |         |                         |                       |                  |
|---------|-------------------------|-----------------------|------------------|
| (34) a. | <i>we</i> linguists     | <i>us</i> linguists   | <i>dialect B</i> |
| b.      | <i>you</i> linguists    | <i>you</i> linguists  |                  |
| c.      | * <i>they</i> linguists | <i>them</i> linguists |                  |

<sup>12</sup> We have no account for the impossibility of combining a singular pronoun with a lexical noun: \**I linguist*, \**you linguist*, \**him linguist*.



remainder of the discussion, we concentrate on the difference between 1st/2nd person pronouns (as pro-DPs) and 3rd person pronouns (as pro- $\phi$ Ps), as this contrast appears in both dialects. We start by considering the binding properties of 3rd person pronouns.

3.2.1 *English 3rd Person Pronouns Are Pro- $\phi$ Ps* Since  $\phi$ Ps are defined as variables, we predict that 3rd person pronouns (as pro- $\phi$ Ps) will participate in bound variable anaphora, which is indeed the case.

- (38) [*Every candidate*]<sub>i</sub> thinks that [*he*]<sub>i</sub> will win.  
 $\forall x$ , candidate(x), x thinks that x will win

In addition, 3rd person pronouns support coreference, in that they may be bound outside their local domain.

- (39) [*John*]<sub>i</sub> thinks that [*he*]<sub>i</sub> will win.

It is the intersection of these two properties—the ability to function as a bound variable and the ability to support coreference—that corresponds to the classical Condition B pronoun.

3.2.2 *English 1st/2nd Person Pronouns Are Pro-DPs* As discussed above, the distributional evidence suggests that 1st and 2nd person pronouns are pro-DPs. If so, and if DPs are defined as R-expressions, this makes two predictions. First, 1st/2nd person pronouns should not be able to function as bound variables. Second, 1st/2nd person pronouns should be subject to Condition C.

The first prediction is borne out. Consider the following sentence and its potential interpretations:

- (40) I<sub>i</sub> know that John saw *me*<sub>i</sub>, and Mary does too.  
 = a. ‘I know that John saw me, and Mary knows that John saw me.’  
 $\lambda x$  [x knows that John saw me] &  $\lambda y$  [y knows that John saw me]  
 $\neq$  b. ‘I know that John saw me, and Mary knows that John saw her.’  
 $\lambda x$  [x knows that John saw x] &  $\lambda y$  [y knows that John saw y]

The sentence in (40) involving VP-ellipsis can receive a strict identity reading (a), but not a sloppy identity reading (b). This indicates that the 1st person pronoun (*me*) cannot be construed as a bound variable, as predicted by the present analysis.

Turning to the second prediction—namely, that 1st/2nd person pronouns will be subject to Condition C—we immediately face a problem. The following examples show that 1st and 2nd person pronouns can be nonlocally bound.

- (41) a. I<sub>i</sub> said that John saw *me*<sub>i</sub>.  
 b. You<sub>i</sub> said that John saw *you*<sub>i</sub>.

But if 1st and 2nd person pronouns are DPs, and if DPs are defined as R-expressions, then why do they differ from names? In particular, the latter cannot be nonlocally bound.

- (42) \**She*<sub>i</sub> said that John saw *Mary*<sub>i</sub>.

If we adopt a standard binding theory, where R-expressions are subject to Condition C, then 1st and 2nd person pronouns (as R-expressions) should be ungrammatical in sentences like (41a–b), contrary to fact.<sup>14</sup> In the next section we show that this problem is not an artifact of the present analysis, and we sketch a possible solution that is compatible with our general proposal.

*3.2.3 The Condition C Problem with ‘Full DPs’* The problem we have noted for English 1st and 2nd person pronouns has also been identified for full DPs by Demirdache (1997a). She shows that full DPs in Lillooet, a Northern Interior Salish language, have the following properties. First, they cannot function as bound variables.

- (43) [Swat]<sub>i</sub> ku zwát-en-[as]<sub>\*i/j</sub> kw-s xwey-s-[as]<sub>i</sub> k-Wany?  
 who LINK know-TRANS-3SG.SUBJ DET-NOML love-TRANS-3SG.SUBJ DET-Wany  
 a. \*‘Who<sub>i</sub> does he<sub>i</sub> know t<sub>i</sub> loves Wany?’  
 b. ‘Who<sub>i</sub> does he<sub>j</sub> know t<sub>j</sub> loves Wany?’  
 (adapted from Demirdache 1997a:60, (15))

(43) shows a standard strong crossover (SCO) violation and thus establishes that full DPs cannot function as bound variables. Second, Lillooet DPs do not seem to obey Condition C: they can be nonlocally bound.

- (44) Sqwál’-en-[as]<sub>i</sub> s-Bucky kw-s nilh s-[Wany]<sub>i</sub> ta qwatsáts-a.  
 say-TRANS-3SG.SUBJ NOM-Bucky DET-NOML FOC NOML-Wany DET leave-DET  
 ‘She<sub>i</sub> told Bucky that it’s Wany<sub>i</sub> that left.’ (Demirdache 1997a:54, (6))

Demirdache’s (1997a) analysis of the Lillooet binding facts is as follows. She argues (following Reinhart 1986) that grammar only regulates bound variable anaphora. In addition, she assumes that English DPs are quantificational and consequently undergo quantifier raising (QR). As a result, classical Condition C effects are analyzed as SCO violations.

- (45) a. \*I know he<sub>i</sub> loves Oscar<sub>i</sub>.  
 b. LF: \*[Oscar]<sub>i</sub> [I know he<sub>i</sub> loves t<sub>i</sub>]

In contrast to English DPs, Lillooet DPs are not quantificational (Matthewson 1998) and so do not undergo QR. Demirdache argues that it is the nonquantificational status of Lillooet DPs that is responsible for the apparent Condition C violations: Lillooet DPs never undergo QR, so they never induce SCO violations.

*3.2.4 The Analysis of English 1st/2nd Person Pronouns* As Demirdache points out, it is not the case that all English DPs are quantificational. Rather, English focused DPs and deictics, like Lillooet DPs, do not exhibit SCO violations. The inherently deictic nature of 1st and 2nd person pronouns implies that they too are not quantificational. As a consequence, 1st and 2nd person pro-DPs do not undergo QR and therefore do not induce SCO violations.

<sup>14</sup> A pragmatically based analysis such as Reinhart’s (1986) also fails to account for crosslinguistic differences between proforms that do not support coreference (e.g., Halkomelem pro-DPs that show Condition C effects) and proforms that do support coreference (e.g., English 1st and 2nd person pro-DPs that do not show standard Condition C effects).



- (46) a. I<sub>i</sub> said that you saw me<sub>i</sub>.  
 b. LF: I<sub>i</sub> said that you saw me<sub>i</sub>

This immediately accounts for the lack of Condition C effects with 1st and 2nd person pronouns and allows us to maintain the claim that they are pro-DPs.

Demirdache's proposal provides a more nuanced picture of coreference effects. As mentioned above, we follow Reinhart (1986) in taking bound variable anaphora to be the essence of binding theory. However, following Demirdache (1997a), we claim that coreference is regulated in one of two ways. First, it may fall within the domain of bound variable anaphora, in which case disjoint reference is a by-product of SCO violations. This only arises if the relevant DPs undergo QR, for example, English nonfocused nondeictic DPs. Second, if the relevant DPs do not undergo QR—for example, English focused DPs and deictics, English person pro-DPs, and all Lillooet DPs—the coreference possibilities are determined by pragmatic coreference.

### 3.3 On the Predicative Status of English Pro- $\phi$ Ps

We now turn to English pro- $\phi$ Ps. We claim that pro- $\phi$ Ps can be arguments or predicates, while pro-DPs can only function as arguments. This leads us to expect that English 3rd person pronouns, which we analyze as pro- $\phi$ Ps, should occur in a wider range of contexts than pro-DPs.

English 3rd person pronouns can function as arguments.

- (47) [*He*]<sub>ARG</sub> saw [*her*]<sub>ARG</sub>.

The ability of pro- $\phi$ Ps to function as predicates is confirmed by the contrast in (48). While a 3rd person pronoun ( $\phi$ P) can occur in predicate position, a bare demonstrative (DP) cannot.

- (48) a. That's [*her*]<sub>PRED</sub>.  
 b. \*She's [*that*]<sub>PRED</sub>.

We acknowledge that (48) does not provide conclusive evidence for the predicative status of English 3rd person pronouns. In particular, it is also possible for 1st/2nd person pronouns—which we analyze as pro-DPs—to occur in postcopular position.

- (49) a. That's [*me*].  
 b. \*I'm [*that*]<sub>PRED</sub>.

- (50) a. That's [*you*].  
 b. \*You're [*that*]<sub>PRED</sub>.

Tentatively, we suggest that (49a) and (50a) are well formed as equative structures involving two DP expressions.<sup>15</sup>

<sup>15</sup> The English data are confounded by the fact that English intonational focus provides a mechanism for overriding the “normal” subject-predicate order. In languages where this strategy is not available (e.g., Salish and French), the predicate status of  $\phi$ Ps can be more clearly established.

A further argument for the predicate status of English 3rd person pronouns comes from the fact that such pronouns can participate in word formation.

- (51) a. [*she*]-male  
       [*she*]-society  
       [*she*]-oak  
       b. [*he*]-goat  
           a real [*he*]-man  
           [*him*]-bo (vs. bimbo)  
       c. The [*hes*] would quarrel and fight with the females.  
           (Jonathan Swift, cited in Webster's *Third International Dictionary*)

Such examples establish that pro- $\phi$ Ps can be property denoting, consistent with our analysis. Note moreover that we need not invoke any special mechanism (e.g., semantic type-shifting) to account for the predicative nature of pro- $\phi$ Ps. In the present proposal 3rd person pronouns are analyzed as  $\phi$ Ps and  $\phi$ Ps are type flexible: they can function as predicates or as arguments.

Crucially, there are no examples involving English 1st/2nd person pronouns as parts of nominal compounds.

- (52) a. \*[*me*]-male  
       b. \*[*you*]-goat

In our analysis the impossibility of (52a–b) follows from the pro-DP status of English 1st/2nd person pronouns.<sup>16</sup>

Summing up the results for English, we conclude that the syntax and semantics of the pronominal inventory support the D/ $\phi$ /N partition, with pro-DP corresponding to 1st/2nd person pronouns, pro- $\phi$ P to 3rd person pronouns, and pro-NP to *one*.

#### 4 French Clitic Proforms

We now turn to the pronominal inventory of French. We have so far abstracted away from the distinction among phrasal pronouns, clitics, and agreement. As we will show, the D/ $\phi$ /N distinction that we are postulating cuts across these pronominal types. In particular, Romance clitic pronouns show a division between pro-N and pro- $\phi$  that is predicted by our theory. Although the data are drawn from French, to our knowledge most of the properties that we discuss hold across Romance. We first show that French *en* has all the properties of a pro-N clitic. We then establish that all other pronominal clitics are pro- $\phi$ .

<sup>16</sup> As pointed out by an anonymous reviewer, expressions such as *a me-first attitude* are apparent counterexamples to the claim that 1st/2nd person pronouns do not participate in compounding. We take such examples to be phrasal compounds (see Di Sciullo and Williams 1987). As a result, any XP, including functional categories, may participate in these compound structures.

- (i) a. a [holier-than-thou] attitude  
       b. an [I-don't-give-a-flying-fuck] attitude

#### 4.1 *En as a Pro-N Clitic*

That at least some occurrences of the clitic *en* correlate with N syntax is widely recognized in the literature (Kayne 1975, Postal 1994, Pollock 1998).<sup>17</sup> For example, *en* may substitute for a lexical noun in the context of adjectival (weak) quantifiers, as well as modifying adjectives.<sup>18</sup>

(53) a. J'ai vu trois/un livre(s).  
I have seen three/one book(s)

b. J'en ai vu trois/un.  
I *en* have seen three/one

(54) a. J'ai vu plusieurs livres.  
I have seen several books

b. J'en ai vu plusieurs.  
I *en* have seen several

<sup>17</sup> Pollock (1998) identifies three contexts for clitic *en*: adverbial, adnominal, and quantitative. Examples of each are given in (i)–(iii). In this article we discuss only quantitative *en*.

(i) a. De ce fait, Jean a avalé son chapeau.  
of this fact Jean has swallowed his hat (Pollock 1998:300, (1b))

b. Jean *en* a avalé son chapeau.  
Jean *en* has swallowed his hat (Pollock 1998:300, (1a))

(ii) a. J'ai lu le premier chapitre de ce livre.  
I have read the first chapter of this book

b. J'en ai lu le premier chapitre.  
I *en* have read the first chapter

(iii) a. J'ai lu trois livres.  
I have read three books

b. J'en ai lu trois.  
I *en* have read three

<sup>18</sup> Note the following contrast between French *en* and English *one*:

(i) a. J'ai acheté une voiture rouge, et Marie *en* a acheté une jaune.  
I have bought a car red and Marie *en* has bought a yellow

b. J'ai acheté la voiture rouge, et Marie a acheté la jaune  $\emptyset$ .  
I have bought the car red and Marie has bought the yellow

c. \*J'ai acheté la voiture rouge, et Marie *en* a acheté la jaune.  
I have bought the car red and Marie *en* has bought the yellow

(ii) a. I bought a red car, and Mary bought a yellow one.

b. I bought the red car, and Mary bought the yellow one.

Whereas English *one* can appear with either a definite or an indefinite phrase, French *en* can appear only with an indefinite. In the presence of a definite determiner, pro-N is null. We suggest that this has to do with the restriction on moving out of a definite DP (Diesing 1992). This is consistent with the fact that *en* cannot be construed with strong quantifiers.

(iii) a. \*J'en ai vu tous.  
I *en* have seen all

b. \*J'en ai vu chacun.  
I *en* have seen each

- (55) a. J'ai vu un grand livre.  
I have seen a large book  
b. J'en ai vu un grand.  
I en have seen a large

Consistent with the claim that *en* is a pro-N clitic, observe that, similar to English *one*, it cannot function as a bound variable, nor can it support coreference. These facts are illustrated in (56) and (57), respectively.

- (56) a. \*[*Chacun*]<sub>i</sub> pense que Jean [*en*]<sub>i</sub> a vu.  
each.one thinks that Jean *en* has seen  
b. \*[*Quelqu'un*]<sub>i</sub> pense que Jean [*en*]<sub>i</sub> a vu.  
someone thinks that Jean *en* has seen
- (57) a. \*[*Marie*]<sub>i</sub> pense que Jean [*en*]<sub>i</sub> a vu.  
Marie thinks that Jean *en* has seen  
b. \*[*Des étudiants*]<sub>i</sub> pensent que Jean [*en*]<sub>i</sub> a vu.  
some students think that Jean *en* has seen

#### 4.2 French Clitics as Pro- $\phi$

Having established that *en* is a pro-N, we now consider the other pronominal clitics, which we analyze as pro- $\phi$ . In this respect we again depart from standard treatments, which date back to Postal 1966. Such proposals often invoke the parallel between clitics and articles as a reason to treat clitics as belonging to the category D. Although we agree that Romance clitics and articles are categorically the same, we treat them as belonging to the category  $\phi$  (rather than D). We argue that this accounts for the distribution of pronominal clitics on the one hand, and for the referential defectiveness of Romance articles on the other hand (Vergnaud and Zubizarreta 1992).

The discussion proceeds in two steps. We first show that 3rd person clitics (*l*-clitics) have the attributes of pro- $\phi$ , and we then extend the analysis to 1st/2nd person clitics.

**4.2.1 *l*-Clitics** In light of the present proposal, it is significant that French *l*-clitics can be pro-arguments or pro-predicates (Déchaine 1993). Their pro-argument status is illustrated in (58), and their pro-predicate status in (59).

- (58) a. Jeanne *la* voit.  
Jeanne her sees  
b. Jeanne *le* voit.  
Jeanne him sees
- (59) a. Marie est une avocate, et Jeanne *le/\*la* sera aussi.  
Marie is a lawyer(FEM) and Jeanne it will.be too  
b. Jean est un avocat, et François *le* sera aussi.  
Jean is a lawyer(MASC) and François it will.be too

A pro- $\phi$  analysis captures the fact that *l*-clitics can function as pro-arguments or as pro-predicates: argumental pro- $\phi$  inflects for gender; predicative pro- $\phi$  does not.<sup>19</sup> Consequently, there is no need to stipulate the existence of two homophonous *le* clitics.<sup>20</sup>

The French *l*-clitics confirm our claim that  $\phi$ Ps can freely occur in predicate or argument position. This departs from analyses that treat all pronominals as DPs, which can only be argument-type expressions.

Also consistent with the  $\phi$ P analysis of *l*-clitics is the fact that they can function as bound variables.

- (60) a. [*Chaque homme*]<sub>i</sub> pense qu'[*il*]<sub>i</sub> est intelligent.  
           each man thinks that he is intelligent  
       b. [*Chaque homme*]<sub>i</sub> pense que Marie [*l*]<sub>i</sub>'a vu.  
           each man thinks that Marie him has seen

If we take seriously the fact that the *l*-clitics have the same form as articles in French, then we expect that the latter will also be  $\phi$ Ps. This predicts that French articles (as  $\phi$ Ps) will differ in both their syntax and their semantics from English-type articles (as DPs). This is consistent with the fact that Romance articles appear in a broader range of contexts than articles in other languages do (e.g., English, German). Vergnaud and Zubizarreta (1992) propose that there is a crosslinguistic difference regarding whether a determiner can have an expletive use or not. For example, the French *l*-article does not have a fixed interpretation. In some contexts it may be construed as a definite, (61a); in other contexts it is ambiguous between a generic and a definite construal, (61b).

- (61) a. Jean a acheté le vin.  
           Jean has bought DET wine  
           'Jean bought the wine.'  
       b. &Jean aime le vin.  
           Jean likes DET wine  
           = i. 'Jean likes wine.'  
           = ii. 'Jean likes the wine.'

<sup>19</sup> That the pro-predicate clitic *le* does not inflect for gender might reflect the implicational relation between Case and agreement: if Case, then agreement. If so, then a pro-argument clitic should show agreement (since it requires Case), whereas a pro-predicate clitic should not.

<sup>20</sup> In our analysis the parallel between pro-predicate and pro-argument clitic is not accidental: they both show nominal agreement, which we identify with  $\phi$ P. Thus, the agreement morphology associated with nouns and adjectives has the same formal basis as the agreement morphology associated with clitics: all instantiate  $\phi$ P, as in (i). Accordingly, we adopt an analysis where N and A are both defined as [+N] and may both be contained in a  $\phi$ P projection: [ <sub>$\phi$ P</sub> . . . ]<sub>[+N . . . ]</sub>.

(i) *l-es*    *bell-es*            *fill-es*  
       DET-PL beautiful-FEM.PL girl-FEM.PL  
       'the beautiful girls'

It is the ambiguity of (61b) that distinguishes French articles from their English counterparts. This in turn reflects a categorical difference between English and French articles: the former belong to the category D, the latter to the category  $\phi$ . As members of  $\phi$ , French articles do not have a fixed referential value; this accounts for why they are not inherently definite.<sup>21</sup>

4.2.2 *1st/2nd Person Clitics* We now turn to French 1st/2nd person clitics, arguing that they are also pro- $\phi$ . One of the striking properties of Romance 1st/2nd person clitics is that the same forms can be used for disjoint reference, (62a), or for coreference, (62b).<sup>22</sup>

|  |  |
|--|--|
| (62) a. Marie <sub>i</sub> m <sub>j</sub> 'a vu. | b. Je <sub>i</sub> me <sub>i</sub> suis vu.    |
| Marie me has seen                                | I me am seen                                   |
| 'Marie saw me.'                                  | 'I saw myself.'                                |
| Marie <sub>i</sub> t <sub>j</sub> 'a vu.         | Tu <sub>i</sub> t <sub>i</sub> 'es vu.         |
| you-SG   | you-SG   |
| Marie <sub>i</sub> nous <sub>j</sub> a vu.       | Nous <sub>i</sub> nous <sub>i</sub> sommes vu. |
| us   | us   |
| Marie <sub>i</sub> vous <sub>j</sub> a vu.       | Vous <sub>i</sub> vous <sub>i</sub> êtes vu.   |
| you-PL   | you-PL   |

We take the possibility of local binding to reflect the pro- $\phi$  status of French 1st/2nd person clitics.<sup>23</sup> If these French pronominals are pro- $\phi$ s, then they should be able to have a bound variable interpretation, (63).<sup>24</sup>

<sup>21</sup> Following Longobardi (1994), we take the definite construal to reflect the presence of a null D position, (i). When the D superstructure is absent, the generic reading becomes available, (ii).

- (i) [<sub>D</sub>  $\emptyset$  [ <sub>$\phi$</sub>  le [<sub>NP</sub> vin]]] = 'the wine'  
 (ii) [ <sub>$\phi$</sub>  le [<sub>NP</sub> vin]] = 'wine'

<sup>22</sup> We do not take the selection of the auxiliary *avoir* in (62a) and *être* in (62b) to indicate transitivity and intransitivity, respectively. As evidence for this, note that the question of what determines auxiliary selection is independent of binding. As is common in Romance, auxiliary selection correlates with unaccusative versus unergative syntax, (i). However, this distinction is not (entirely) lexically determined, given minimal pairs such as (ii). (See Borer 1994 for further discussion.) In the 3rd person, in addition to a difference in auxiliary selection, there is suppletion: the *l*-clitic marks disjoint reference, while the *s*-clitic marks local binding, (iii). Traditional descriptions often treat the *s*-clitic as inherently anaphoric, but this is clearly an oversimplification, as it can also mark impersonal subjects (e.g., Italian, Spanish) and 3rd person possessors (e.g., *son livre* 'his/her book').

- |                        |                           |
|------------------------|---------------------------|
| (i) a. Elle a ri.      | b. Elle est arrivée.      |
| she has smiled         | she is arrived            |
| 'She smiled.'          | 'She arrived.'            |
| (ii) a. Elle a tombé.  | b. Elle est tombée.       |
| she has fallen         | she is fallen             |
| 'She fell.' (agentive) | 'She fell.' (nonagentive) |
| (iii) a. Elle l'a vu.  | b. Elle s'est vue.        |
| she him has seen       | she herself is seen       |
| 'She saw him.'         | 'She saw herself.'        |

<sup>23</sup> If the possibility of locally binding 1st/2nd person pronouns is a diagnostic for  $\phi$ P, then the following languages arguably have pro- $\phi$ P: Haitian (Déchaine and Manfredi 1994), Guadeloupéen (Bernabé 1983:918–920), Seychellois (Corne 1977), Mauritian (Corne 1988), Niuean (Seiter 1980:78–79), Chamorro (Chung 1989:149), and German.

<sup>24</sup> Not all speakers accept the bound variable construal. Similarly, Bouchard (1984) observes that 1st/2nd person

- (63)  $\&[Je]_i$  pense que la police  $[m]_i$ 'a vu, et Marie le pense aussi.  
 I think that the police me have seen and Marie it thinks also  
 = a. 'I think that the police saw me, and Marie thinks that the police saw me.'  
 $\lambda x$  [x thinks that the police saw me]  $\& \lambda y$  [y thinks that the police saw me]  
 = b. 'I think that the police saw me, and Marie thinks that the police saw her.'  
 $\lambda x$  [x thinks that the police saw x]  $\& \lambda y$  [y thinks that the police saw y]

Note crucially that a bound variable interpretation is unavailable for English 1st/2nd person.

- (64)  $[I]_i$  think that the police saw  $[me]_i$ , and Mary does, too.  
 = a. 'I think that the police saw me, and Mary thinks that the police saw me too.'  
 $\neq$  b. 'I think that the police saw me, and Mary thinks that the police saw her too.'

In the present analysis the impossibility of (64b) reflects the pro-DP status of English 1st/2nd person.

Another argument in favor of the pro- $\phi$  status of French 1st/2nd person clitics is that they may participate in word formation, as in (65). Again, there is a contrast between English and French in this regard.

- (65) a. tutoy-er 'you-ing' (i.e., addressing someone with *tu*)  
 vousvoy-er 'plural you-ing'  
 b. tutoie-ment 'you-ment'  
 vousvoie-ment 'plural you-ment'

These crosslinguistic differences establish that 1st/2nd person pronouns are not inherently pro-Ds or pro- $\phi$ s.

The logic of the D/ $\phi$ /N distinction has led us to propose a novel analysis of French pronominal clitics and articles. Rather than reducing clitics to their corresponding "determiners," we have argued that clitics are pro- $\phi$ s, as are their corresponding articles. For clitics, this has the advantage of automatically deriving their distributional and binding properties.<sup>25</sup> For articles, their  $\phi$  status correlates with their defective referential properties.

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clitics have both strict and sloppy identity interpretations in gapped VPs.

- (i) Je me trouvais bête et ma soeur aussi.  
 I me found stupid and my sister too  
 = a. 'I considered myself stupid and my sister considered me stupid.'  
 $\lambda x$  [x consider me stupid]  $\& \lambda y$  [y consider me stupid]  
 = b. 'I considered myself stupid and my sister considered herself stupid.'  
 $\lambda x$  [x consider x stupid]  $\& \lambda y$  [y consider y stupid]  
 (adapted from Bouchard 1984:60, (131))

<sup>25</sup> We have no account for the suppletion of 3rd person in the possessor paradigm, where *son* appears instead of the *l*-based *\*lon*, as discussed in Kayne 2000. While our proposal accounts for the possibility of local binding with 1st/2nd person (*Je me vois* 'I see myself', *Tu te vois* 'You see yourself'), Kayne's proposal does not (Kayne 2000:162, fn. 82). The two proposals converge on the conclusion that 1st/2nd person clitics are not pro-Ds. However, Kayne treats *l*-clitics as pro-Ds, while we treat them as pro- $\phi$ s.

## 5 Extending the Analysis: Obviation and Switch-Reference

The D/ $\phi$ /N distinction provides a way of understanding how properties that are usually viewed as unrelated to each other—the definiteness of certain pronouns, the morphological complexity of certain pronouns, the distribution of certain pronouns, and the binding properties of different kinds of pronouns—can be captured in a nonstipulatory fashion. We now consider two cases of reference tracking: obviation and switch-reference. Stirling (1993) observes that such devices are functionally similar inasmuch as they signal disjoint reference. In a language that exploits obviation marking, an obviative-marked argument is obligatorily disjoint from a proximate-marked argument, (66a). In a switch-reference system, if the subject of a dependent clause is distinct from the subject of a main clause, then this is obligatorily coded by different-subject marking, (66b).

(66) a. *Obviation*

... , kâ-wâpamâ-[t]<sub>i</sub> êh-kitôwêhkwâmi-[yit]<sub>j</sub>. *Plains Cree*  
 COMP-see-3.PROX COMP-snore-3.OBV  
 ‘... , he<sub>i</sub>(PROX) saw that he<sub>j</sub>(OBV) was sound asleep and snoring.’  
 (Long 1999:98, (17), from P:80-23)

b. *Switch-reference*

nya-isvar-m iima-k *Mojave*  
 when-sing-DS dance-TNS  
 ‘When he<sub>i</sub> sang, he<sub>i</sub> danced.’  
 (Munro 1980:145, (4); as cited in Stirling 1993:3, (3))

Stirling notes that any attempt to reduce these reference-tracking systems to a single cause is confronted with the fact that the mechanisms that force disjoint reference are formally quite disparate. We argue that the D/ $\phi$  distinction makes available a more principled treatment and helps to derive the formal properties of reference-tracking systems (a notorious problem for standard binding theory) without having to invoke construction-specific statements.

Recall that the categorical distinction between D and  $\phi$  correlates with differences in their semantics and their binding-theoretic status, as summarized in (67).

(67) *Properties of D and  $\phi$*

|                          | D            | $\phi$   |
|--------------------------|--------------|----------|
| Semantics                | definite     | —        |
| Binding-theoretic status | R-expression | variable |

In principle, the D/ $\phi$  distinction holds of phrasal proforms (pro-DP vs. pro- $\phi$ P), of clitics (pro-D clitics vs. pro- $\phi$  clitics), and of X<sup>0</sup>-agreement (D<sup>0</sup>-agreement vs.  $\phi$ <sup>0</sup>-agreement). In extending our proposal to obviation and switch-reference, it will be necessary to appeal to the D/ $\phi$ -agreement distinction. More generally, in our analysis the binding properties of obviation and switch-reference reflect the D/ $\phi$  distinction.



(68) *Formal properties of reference-tracking systems*

|        | Obviation   | Switch-reference    |
|--------|-------------|---------------------|
| D      | “obviative” | “different-subject” |
| $\phi$ | “proximate” | “same-subject”      |

We propose that the disjoint reference effects found in obviation and switch-reference reflect the presence of D-agreement, which predictably obeys Condition C and so triggers disjointness.

5.1 *Obviation*

Obviation is a discourse-sensitive mechanism that distinguishes 3rd person participants from each other. For example, if a verb has more than one 3rd person argument, one of them is assigned proximate status, and all others are marked for obviation. In Plains Cree (Central Algonquian), obviation marking occurs on overt DP arguments in the form of the suffix *-(w)a*, (69). Obviation marking is also obligatory on possessed nouns, (70).

(69) a. . . êkota kâ-wâpamâ-cik iyâhciyiniwak ôhi nêhiyaw-a.  
 there COMP-see-3PL.PROX Blackfoot.PROX these Cree-OBV  
 ‘. . . there the Blackfoot caught sight of the Cree.’  
 (adapted from Long 1999:96, (12))

b. Miyê-w misatim-wa ôhô kisêyini-wa êwakô.  
 give-3SG.PROX horse-OBV that old.man-OBV this  
 ‘He(PROX) gave a horse(OBV) to the old man(OBV).’  
 (adapted from Long 1999:93, (3))

(70) aw îskwêw o-nâpem-a  
 this woman.PROX 3.POSS-husband-OBV  
 ‘this woman’s husband’  
 (adapted from Long 1999:93, (4))

We propose that obviation markers are categorically D; as such, they respect Condition C. This immediately predicts obligatory disjointness.

(71)  $DP_i \dots DP_j\text{-OBV}$

This proposal is consistent with Grafstein’s (1984) analysis of obviation as a kind of “disjoint reference” marking. However, it departs from treatments that view obviation marking as a Condition B effect (Aissen 1997, Déchaine 1999). A Condition B analysis incorrectly predicts that pronominal agreement should obligatorily encode obviation distinctions, and it must stipulate that full DPs are marked for obviation. Note that in (69) the verb bears pronominal agreement only for the proximate argument; it is the overt DP that is marked for obviation. This asymmetry is captured by a Condition C analysis, which predicts that D-expressions—here full DPs—will be the primary locus of obviation marking. A Condition C account also generalizes to examples

such as (70): obviation marking is obligatory on possessed nouns because they always involve the presence of two DPs. A Condition B account does not predict this.

A Condition C analysis of obviation also leads us to expect that when there is pronominal obviation agreement, it will be an augment of “normal” pronominal agreement (Blain 1997). This is because pronominal agreement is  $\phi$ -agreement, and obviation agreement is D-agreement.

- (72) a. [V-stem]- $\phi$   
 b. [V-stem]- $\phi$ -D

The expectation is fulfilled by examples such as (73a–b), where *-w* is  $\phi$ -agreement, and *-yiwa* is obviative D-agreement, which is an extended form of  $\phi$ -agreement.

- (73) a. *Sêkihê-w*.  
 frighten-3SG.PROX  
 ‘He(PROX) frightens him.’ (Déchaine 1999:64, (94a))  
 b. *Sêkihê-yiwa*.  
 frighten-OBV.3  
 ‘He(OBV) frightens him.’ (Déchaine 1999:64, (95))

D/ $\phi$ -agreement differ from each other with respect to the discourse contexts that can felicitously host them. Proximate  $\phi$ -agreement is associated with the salient discourse referent and marks topic continuity (Goddard 1990, Russell 1991), (74a). Obviative D-agreement signals that the discourse referent is distinct from the proximate topic, (74b).

- (74) a. *Kîwê-[w]<sub>i</sub> mistanask; kostê-[w]<sub>i</sub> wâkayôs-[a]<sub>j</sub>.*  
 go.home-3SG.PROX badger.PROX fear-3SG.PROX bear-OBV  
 ‘Badger<sub>i</sub> went home; he<sub>i</sub> was afraid of Grizzly<sub>j</sub>.’  
 (adapted from Long 1999:94, (7))  
 b. . . . , *kâ-wâpamâ-[t]<sub>i</sub> êh-kitôwêhkwâmi-[yit]<sub>j</sub>.*  
 COMP-see-3SG.PROX COMP-snore-3SG.OBV  
 ‘. . . , he<sub>i</sub>(PROX) saw that he<sub>j</sub>(OBV) was sound asleep and snoring.’  
 (Long 1999:98, (17), from P:80-23)

The claim that obviation marking is a kind of D-agreement accounts for both grammatically conditioned obviation (i.e., local disjoint reference) and discourse-conditioned obviation. This is a classical Condition C effect: DPs do not corefer.

## 5.2 *Switch-Reference*

The D/ $\phi$  distinction also provides insight into switch-reference systems, which are characterized by overt marking of disjoint reference.

[Switch-reference] consists simply in the fact that a switch in subject or agent . . . is obligatorily indicated in certain situations by a morpheme, usually suffixed . . . (Jacobsen 1967:249)

For example, Mojave (Yuman) encodes whether the subject of a dependent clause is coreferential or noncoreferential with the subject of a main clause, as in (75). Obligatory coreference is marked by same-subject agreement; obligatory noncoreference is marked by different-subject agreement.

- (75) a. *nya-isvar-k iima-k*  
 when-sing-SS dance-TNS  
 ‘When he<sub>i</sub> sang, he<sub>i</sub> danced.’  
 b. *nya-isvar-m iima-k*  
 when-sing-DS dance-TNS  
 ‘When he<sub>i</sub> sang, he<sub>j</sub> danced.’  
 (Munro 1980:145, (4); as cited in Stirling 1993:3, (3))

The essence of our proposal is that different-subject agreement is D-agreement, while same-subject agreement is  $\phi$ -agreement. This categorical distinction is supported by the morphosyntactic and binding properties of different-subject versus same-subject markers.

5.2.1 *Morphosyntactic Evidence* In several switch-reference languages there is a transparent morphological relation between different-subject and same-subject markers. This is illustrated in (76) for Amele (Papuan).

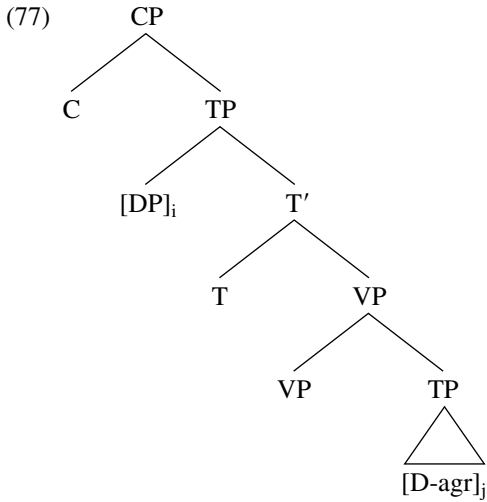
(76) *Amele switch-reference markers* (adapted from Stirling 1993:202)

|   | Singular     |                   | Dual         |                   | Plural       |                   |
|---|--------------|-------------------|--------------|-------------------|--------------|-------------------|
|   | Same subject | Different subject | Same subject | Different subject | Same subject | Different subject |
| 1 | -ig          | -igin             | -u/∅         | -wan              | -b           | -qon              |
| 2 | -g           | -gan              | -si          | -sin              | -ig          | -gin              |
| 3 | -i           | -n                | -si          | -sin              | -ig          | -gin              |

Suppletions aside, we observe a regular relationship between the same-subject and different-subject markers: the latter are augmented versions of the former. For example, in (76) the Amele 1st person same-subject marker is *-ig*, and the corresponding different-subject marker is *-igin*. In our theory pro-DP contains pro- $\phi$ P as a subconstituent, so we predict that D-agreement (different-subject marking) should likewise contain  $\phi$ -agreement (same-subject marking) as a subpart. This prediction is borne out by the data. We now show how the binding properties of these two types of agreement follow from their categorical status as D and  $\phi$ .

5.2.2 *Switch-Reference Is Mediated by Tense* As D-agreement, different-subject markers are predicted to be obligatorily disjoint in reference. This is precisely the nature of different-subject marking. Relative to another R-expression, D-agreement predictably respects Condition C and therefore is disjoint in reference from any other antecedent, as shown in (77).<sup>26</sup>

<sup>26</sup> We abstract away from the linear order of the dependent clause, which usually precedes the main clause in switch-



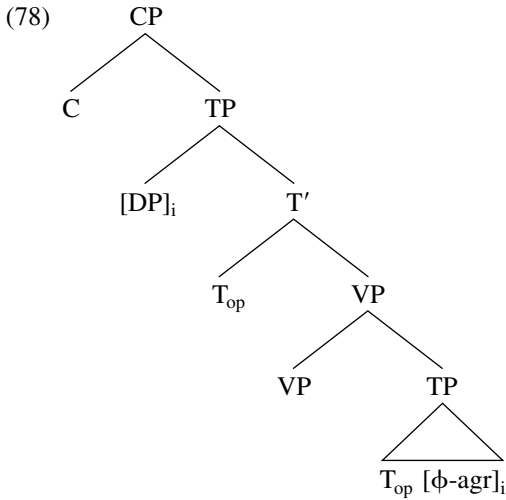
However, by itself the D-agreement analysis does not predict the subject orientation of switch-reference markers. Unlike obviation marking, which can mark disjoint reference of an argument independent of grammatical function, one of the characteristics of switch-reference is that it is restricted to subjects; that is, there is no distinct-object or same-object marking in switch-reference languages. As pointed out by Stirling (1993), switch-reference depends on tense, and we argue that this tense dependency is responsible for the subject orientation.

To see how tense dependency derives subject orientation, consider how  $\phi$ -agreement will work in such a system. If same-subject markers are  $\phi$ -agreement, we expect that they can be bound, and this is so. Two properties remain to be accounted for. First, why is  $\phi$ -agreement obligatorily coreferential with an argument in the main clause? Second, why must that argument be a subject? We show that both of these properties reduce to obligatory operator binding of  $\phi$ -agreement and that the relevant  $\bar{A}$ -operator is Tense (Finer 1985, Stirling 1993). Thus, the licensing context for same-subject  $\phi$ -agreement is shown in (78). Reading the tree in (78) from the bottom up, the lower Tense operator  $\bar{A}$ -binds the  $\phi$ -agreement. The same-subject effect is the result of a conspiracy. First, the lower Tense operator is anaphorically dependent on the matrix Tense.<sup>27</sup> Second, each subject is coindexed with its respective Tense via specifier-head agreement, thereby deriving the subject orientation. Third, by transitivity the matrix and nonmatrix subjects are coindexed, resulting in obligatory coreference.

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reference systems. We assume that the dependent TP raises to sentence-initial position, and we leave open the nature of the mechanism that triggers this displacement. What is crucial for our analysis is that the matrix Tense c-commands the dependent Tense. Evidence for a c-command relation stems from the fact that the tense of the dependent clause is anaphoric on the tense of the main clause. See Stirling 1993 for further discussion.

<sup>27</sup> Our analysis predicts that a necessary and sufficient condition for same-subject marking is that the tenses of the matrix and nonmatrix clauses be coreferential. This is consistent with Stirling's (1993) observation that same-subject marking does not always encode strict coreference.



This analysis generalizes to different-subject D-agreement, which is predictably subject to Condition C, hence the disjoint reference effect. In addition, we predict that the disjoint reference forced by D-agreement should go hand in hand with the independence of the lower Tense operator relative to the matrix tense. This captures an important difference in the temporal properties of different-subject and same-subject marking.<sup>28</sup> Remarking on this property, Stirling makes the following observation:

Where absolute tense distinctions are marked, they are more likely to be marked on DS [different-subject] morphemes than on SS [same-subject] morphemes, which reflects a general tendency for DS marked clauses to show a greater resemblance to independent clauses than SS marked ones. (Stirling 1993:43)

By hypothesis, different-subject markers are D-agreement. As such, they have the status of R-expressions, which are referentially independent. In our analysis of switch-reference, and consistent with Stirling’s generalization, referential independence is parasitic on temporal independence. If true, this leads us to expect that in switch-reference languages that have absolute tense distinctions, DPs will be temporally independent (see Musan 1995, Demirdache 1997b for related discussion). This remains to be confirmed.

Our analysis also sheds light on one of the differences between switch-reference and obviation. While switch-reference is subject oriented, obviation is not. For us, the subject orientation of switch-reference is a by-product of the fact that it is parasitic on tense. If correct, this predicts

<sup>28</sup> Another analysis of switch-reference that invokes binding theory is proposed by Finer (1985), who extends the anaphor/pronoun distinction to the  $\bar{A}$ -domain and treats same-subject markers as  $\bar{A}$ -anaphors and different-subject markers as  $\bar{A}$ -pronouns. The advantage of our analysis is that it accounts for the fact that switch-reference is temporally conditioned, and also derives the morphologically transparent relation between different-subject markers (as D-agreement) and same-subject markers (as  $\phi$ -agreement). In Finer’s analysis both of these properties are accidental.

that in a system that is not tense dependent, disjoint-reference marking should cease to be subject oriented. We suggest that this is precisely what happens with obviation agreement: it is simply disjoint reference of two DP arguments independent of their grammatical function.

### 5.3 Reference-Tracking Systems: Summary

Recognizing the D/ $\phi$  distinction yields promising results for the analysis of reference-tracking systems. Obviative systems are the effect of the categorical difference between D and  $\phi$ . Switch-reference systems also exploit the D/ $\phi$  distinction, but are subject to an additional restriction: they must be operator bound by Tense, which in turn derives the subject orientation of different-subject and same-subject marking.

#### (79) Formal properties of reference-tracking systems

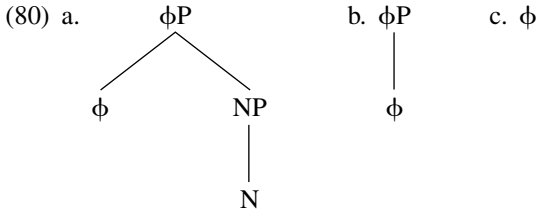
|             | Obviation     | Switch-reference        |
|-------------|---------------|-------------------------|
| D           | ‘‘obviative’’ | ‘‘different-subject’’   |
| $\phi$      | ‘‘proximate’’ | ‘‘same-subject’’        |
| Restriction | —             | operator bound by Tense |
| Consequence | n/a           | subject orientation     |

## 6 Conclusion and Prospects

The central claim of the proposed analysis is that the notion ‘‘pronoun’’ is not a primitive. We have argued—on the basis of evidence from predicate/argument asymmetries, distributional tests, and binding-theoretic properties—that it is necessary to differentiate at least three types of proforms: pro-DP, pro- $\phi$ P, and pro-NP. These three proforms stand in a transparent morphological relation to each other in that pro-DPs include  $\phi$ Ps and/or NPs as subconstituents. This provides a solution to the problem that arises when pronouns are uniformly treated as DPs. A consequence of adopting a finer-grained syntax for proforms is that it becomes possible to formalize the similarities and differences between obviation and switch-reference.

Previous analyses have argued for the existence of different pronoun types, with most positing a DP shell, making it impossible to distinguish pronouns on the basis of their external syntax. To our knowledge, the only other proposal that distinguishes pronouns from each other in terms of their categorical identity is that of Cardinaletti and Starke (1999), who identify three pronoun types: strong pronouns, weak pronouns, and clitic pronouns. Tentatively, we suggest that Cardinaletti and Starke’s proposal can be reformulated in our approach in the following way. Their three pronoun classes might all be pro- $\phi$ s, differing from each other only internally. Accordingly, ‘‘strong pronouns’’ might be  $\phi$ P with the NP constituent providing the range, (80a); ‘‘weak pronouns’’ might be phrasal  $\phi$ Ps with no internal structure, (80b); and ‘‘clitic pronouns’’ might be simplex  $\phi$ s, (80c).<sup>29</sup>

<sup>29</sup> Logophoric pronominal systems (e.g., Yorùbá) may instantiate such tripartite  $\phi$ -systems; see Déchaine and Wiltschko, in press.



Since we identify (at least) three syntactic layers within nominal expressions, each one of which can occur independently, we expect that this should generalize beyond pronominals. In particular, the same three-way distinction that holds of proforms should also hold of other nominal types, including reflexives, *pro*, agreement, and full XPs.

Regarding the possibility that the D/ $\phi$ /N distinction holds of reflexives, note that at a conceptual level our treatment of proforms is similar in spirit to analyses of anaphora that distinguish *se*-anaphors from *self*-anaphors on the basis of their morphosyntax (e.g., Burzio 1991, Reinhart and Reuland 1993, Safir 1996). Both approaches take as a starting point the idea that elements such as ‘‘anaphors’’ and ‘‘pronouns’’ do not constitute a uniform syntactic class and that their binding-theoretic properties follow from their morphosyntax. On independent grounds we have argued that Romance *se*-anaphors are  $\phi$ . As for *self*-anaphors, our proposal is consistent with two possible analyses: either they are DPs that are ‘‘anaphorized’’ (Pica 1987), or they are nominal constants contained within a DP shell.

As for *pro*, in principle we expect (at least) three types: *pro*’s that have the syntax and semantics of DP, of  $\phi P$ , or of NP. Tomioka (2000) observes that Japanese null *pro* has a wide range of semantic functions, including referential *pro*, bound variable *pro*, indefinite *pro*, and property-denoting *pro*. The existence of these different types of *pro* is expected if *pro* instantiates different syntactic categories. In such a theory it is not necessary to invoke type-shifting rules. Rather, the semantics can be read directly from the syntax.

Regarding inflectional agreement, again we expect (at least) three kinds: agreement that has the syntax and semantics of D, of  $\phi$ , or of N. We have already shown evidence for distinguishing D-agreement from  $\phi$ -agreement (section 5). N-agreement is arguably attested in Plains Cree in the form of indefiniteness agreement, which is in complementary distribution with incorporated nominal constants (Hirose 2000).

Finally, full XPs should also show the D/ $\phi$ /N distinction. We argued in section 4 that whereas English definite articles are associated with a DP structure, French articles are introduced at the  $\phi P$  level, with predictable syntactic and semantic consequences. Within English there are reasons to think that indefinites (*a girl*) and bare plurals (*girls*) instantiate  $\phi P$ . For example, they can function as both arguments and predicates.<sup>30</sup>

<sup>30</sup> Stowell (1989) similarly observes that a nominal predicate may be a noun by itself, a projection of N (our  $\phi P$ ), or a full DP.

- (i) They elected her [<sub>N</sub> *president*].
- (ii) They consider him [ <sub>$\phi P$</sub>  *a rascal*].
- (iii) They consider her [<sub>DP</sub> *the strongest candidate*].

- (81) a. [<sub>φP</sub> Astronauts]<sub>ARG</sub> take risks.  
 b. [<sub>φP</sub> An astronaut]<sub>ARG</sub> floated across the TV screen.
- (82) a. John and Mary are [<sub>φP</sub> astronauts]<sub>PRED</sub>.  
 b. Mary is [<sub>φP</sub> an astronaut]<sub>PRED</sub>.

The layered analysis that we have proposed for pronouns—and that possibly extends to all nominal expressions—has its counterpart in the verbal domain. It is well established that CP, IP, and VP all function as independent categories. In light of this, it would be surprising if evidence were not found for layered syntax in the nominal domain as well. Once the D/φ/N distinction is recognized, then a number of seemingly unrelated properties of pronouns fall into place.

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