Complements and modifiers: Implications for typologies of pronouns

Ivona Ilić*

Abstract. This paper argues for a distinction between two categorially distinct types of personal pronouns in natural language. It demonstrates that overt nominal content surfaces as (i) a complement or (ii) a modifier of a personal pronoun. The distinction in the way nominal content merges is reflected in two types of pronouns. Pronouns taking nominal complements are full-fledged determiners, while pronouns surfacing with nominal modifiers are pronouns proper, i.e., pronominal forms that do not exhibit the determiner syntax. Four novel diagnostics underlying the complement-modifier distinction are introduced: (i) binding, (ii) genericity requirement, (iii) availability of pro-drop, and (iv) size of the pronoun. The paper contributes to a long-standing debate on the representation of nominal content in pronouns and a close connection between pronominal forms and determiners.

Keywords. pronouns; adnominal pronouns; binding; complements; modifiers; definite determiners

1. Point of departure. Natural language has at its disposal so-called adnominal pronouns (1), i.e., construals where a pronoun co-occurs with a noun (Postal 1969; Pesetsky 1978; Abney 1987; Cardinaletti 1994; Longobardi 1994; Déchaine & Wiltschko 2002; Ackema & Neeleman 2013; Höhn 2017).

(1) We linguists work hard.

Adnominal construals we linguists informed syntactic and semantic theory in two crucial ways. Distributional properties of pronouns and the restriction on the co-occurrence of definite articles and pronouns in English gave rise to the view that pronouns are definite determiners since the two compete for insertion into the same head, as proposed in Postal (1969) and widely accepted in syntactic theory. Abney (1987) proposes that what distinguishes pronouns from definite articles is that pronouns should be considered ‘intransitive determiners’ in contrast to articles that are ‘transitive determiners’, taking overt NP complements.

It is precisely we linguists construal that is taken as a direct support for the proposal that pronouns are definite descriptions in disguise. Namely, in the context of a broader discussion on the inventory of definite descriptions referring to individuals, Elbourne (2005, 2013) proposes that pronouns are definite determiners obligatorily taking an NP complement that is present at LF and undergoes PF-deletion (see also Ahn (2019) for treating pronouns as belonging to a broader set of referring expressions).

1.1. COMPLEMENTS AND MODIFIERS: WAYS TO REALIZE A NOUN. In this paper, I propose two ways in which overt nominal content can appear in the context of a pronoun. Namely, overt

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nouns surface as (i) complements and (ii) modifiers/adjuncts of a pronoun. The way nominal content merges determines the type of a pronoun.1

In adnominal construals, e.g., we linguists, the pronoun and the noun constitute a single DP. The overt noun merges as a complement of the pronoun.

(3) a. We linguists submit our papers on time.
   b. You mathematicians always arrive early.

With non-adnominal, i.e., stand-alone pronouns, nominal content can be overtly realized (enclosed in square brackets in the examples below). However, its syntactic status is significantly different as it merges as a modifier/adjunct in an appositive form.

(4) a. She, [the professor], is very smart.
   b. He, [the athlete], seems well-trained.

<table>
<thead>
<tr>
<th>a. Complement</th>
<th>DP</th>
<th>b. Modifier</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>...</td>
<td>...</td>
<td>π</td>
</tr>
<tr>
<td>we</td>
<td>linguists</td>
<td>you and me</td>
<td>we</td>
</tr>
</tbody>
</table>

Table 1. Two ways of realizing nominal content

The distinction in the way nominal content merges with a pronoun results in two types of pronouns. Pronouns taking nominal complements are full-fledged determiners, while pronouns surfaceing with modifiers are pronouns proper, i.e., pronominal forms that do not surface with the determiner syntax.

The two forms are illustrated in the table above. Pronouns exhibiting the syntax of definite determiners occupy the D head, taking a noun as its complement. Pronouns proper do not occupy the D head of a complex DP, and the nominal content merges as a modifier. For ease of exposition, I will represent this type of pronoun as π, standing for PERSON feature.

In this paper, I introduce four novel diagnostics for the complement-modifier distinction that corresponds to the two types of pronouns: (i) adnominal pronouns cannot be bound, (ii) adnominal pronouns take generic nouns as their complements, (iii) languages show differences in the availability of adnominal pronoun drop, that is crucially distinct from the canonical pro-drop, (iv) size of the determiner.

The paper is organized as follows. In Section 2, I introduce the debate on the structural representation of adnominal pronouns, including the two prominent views on pronouns proposed in

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1 It is important to note that many co-occurrences of pronouns and nouns can be considered adnominal uses of a pronoun, as is the case with possessors (i). In the present discussion, my focus is not on such cases but on the construals of the we linguists type.

(i) I found my bag.
the syntactic and semantic theory. Section 3 presents the four diagnostics that differentiate between two types of pronouns. In Section 4, I show how the proposed structures account for all properties. Section 5 summarizes.

2. Pronouns and nominal content. In this section, I will summarize the existing proposals for the representation of adnominal pronouns, as well as two views argued for in the literature that are central to the discussion on whether pronouns surface with the nominal content, i.e., pronouns as definite determiners and pronouns as definite descriptions.

2.1. Adnominal pronouns. One of the central questions in the syntax of adnominal pronouns is whether these construals involve apposition or not. Though the implementations differ, two lines of thought may be identified in the literature: (i) adnominal pronouns do not involve apposition (Postal 1969, Pesetsky 1978, Abney 1987, Déchaine & Wiltshko 2002, Panagiotidis 2002, Höhn 2016, 2017), (ii) adnominal pronouns are DPs with the nominal component in the apposition (Cardinaletti 1994, Cardinaletti & Starke 1999, Ackema & Neeleman 2013).

While the focus in the literature has been primarily on the parallels between adnominal pronouns and definite articles, the question that received less attention is whether adnominal pronouns should receive a unified analysis with pronouns proper. Typically, the behavior of adnominal pronouns is used to make inferences about non-adnominal ones, i.e., all pronouns. This tradition stems from Postal (1969) and the literature that builds on this view. Thus, there is a long-standing tradition where the criterion for the presence of the noun in the structural representation of pronouns is that it can appear adnominally.

Under a view that assumes a unified analysis of pronouns and adnominal pronouns (Déchaine & Wiltshko 2002, Panagiotidis 2002, among others) structural representation of the two is essentially the same with the NP remaining unrealized in the former (∅) or overtly realized in the latter case. Under Déchaine & Wiltshko’s (2002) implementation, the fact that first and second person pronouns optionally co-occur with a noun, which is taken as the main evidence for their pro-DP status in the proposed typology, extends to all first and second person pronouns in English, i.e., they are uniformly DPs. Panagiotidis (2002) argues that the unified analysis is a conceptually preferable option, putting forth the proposal that a semantically expletive noun [eN] devoid of any descriptive content (e.g., boy, girl, chair, window) is present in the structural representation of pronouns. Note, however, that this proposal is in fact non-unified. While the silent noun is placed in order to achieve structural parallelism, the two forms still fundamentally differ precisely in this domain, as adnominal pronouns surface with semantically contentful material which is absent in pronouns. This view is illustrated in the representation below.

2 Under pronouns proper, I have in mind stand-alone pronouns, as opposed to adnominal ones. In the rest of the paper, I will use the term pronoun, while its occurrence in the adnominal position will be explicitly indicated as an adnominal pronoun.
Under the non-unified analysis of adnominal pronouns and pronouns, the two are considered distinct syntactic objects. Cardinaletti (1994) proposes that only adnominal construals involve an NP part. The pronoun (*we*) is generated in N and undergoes DP-internal N-to-D movement, while the nominal component (*linguist*) merges as an adjunct, thus instantiating an appositive construction. It is important to note that the presence of the NP component is different from the one described above, as the pronoun itself is base-generated in the NP. A non-unified analysis on slightly different grounds has been entertained by Choi (2014). In contrast to Cardinaletti (1994), Choi (2014) argues that adnominal construals do not involve apposition being a single DP. However, pronouns and adnominal pronouns are distinct, the main difference residing in $\phi$-features and the number feature in particular. Namely, while pronouns come with all their $\phi$-features in place, adnominal pronouns surface only with the person feature, while the number feature is acquired via the nominal concord from the plural noun (*linguists*).

In this paper, I argue against appositive analysis of adnominal contruals. The distinction between complements and modifiers demonstrates that appositive forms merged as modifiers are available to all pronouns, but crucially absent with adnominal ones that exhibit the syntax of determiners. Furthermore, I show that *we linguists* construals are not a reliable test for the presence of a silent noun with all pronouns, as the two show fundamental syntactic differences. In other words, observations made on the basis of the behavior of pronouns surfacing in the determiner position should not be used to infer about all pronouns.

2.2. PRONOUNS AS DEFINITE DESCRIPTIONS. In semantic theory, there is a long tradition of treating pronouns as definite descriptions involving silent descriptive content. This idea has initially been entertained for so-called *donkey anaphora* (Geach 1962; Cooper 1979; Evans 1977, 1980; Heim 1982, 1990; Heim & Kratzer 1998; Elbourne 2005, 2013). In (6), the pronoun *it* is argued to have the representation and semantics of the definite description *the donkey*.

(6) Every farmer who owns a donkey beats *it*.

$\rightsquigarrow$ Every farmer who owns a donkey beats *the donkey (that he owns)*.

The presence of the silent descriptive content has also been proposed for bound pronouns in focus environments (Sauerland 2007, 2008) and referential pronouns (Sauerland 2004; Elbourne 2005, 2013). Furthermore, it has been demonstrated that virtually any pronoun can be replaced with a noun (Elbourne 2013), and in disambiguation contexts in particular (Schlenker 2005). Finally, not only pronouns but also traces in movement chains have been argued to be definite descriptions involving silent lexical content (Sauerland 1998; Fox 1999, 2002).

The view that pronouns involve descriptive content triggers implications for their structural representation. Pronouns are viewed as (i) $\phi$-heads taking DP complements (Sauerland 2004)
or (ii) definite determiners taking NP complements (Elbourne 2005, 2013). The unifying idea in both views is that all semantic types of pronouns have silent content and involve some type of DP/NP deletion.

It is important to note that *pronouns as definite determiners* and *pronouns as definite descriptions* are in fact two different views. Treating a pronoun as a determiner does not immediately imply the presence of the silent noun. Likewise, the view that pronouns involve a silent noun does not impose a requirement for a pronoun to be a definite determiner. These considerations, however, have an origin in a long-standing discussion in the literature on the categorial belonging of pronouns. Namely, there is a tendency to subsume pronouns under a general umbrella of some other category and consider them as determiners or full DPs.

In this paper, I argue that natural language has two ways to realize the nominal content surfacing with the pronoun. The way the noun merges comes with a set of syntactic and semantic consequences, while the type of merge provides direct insights into which types of syntactic objects can act as bound variables. Thus, there is a distinction between true adjuncts and nouns that appear in the complement position of the pronoun that closely correlates with the type of a pronoun.

3. **Diagnostics.** This section introduces four novel diagnostics for distinguishing between adnominal pronouns and pronouns proper. In contrast to pronouns proper, adnominal pronouns impose restrictions on binding, require generic complements, cannot be omitted, and need to be of particular size. These facts point towards a non-uniform syntax of the two types of pronouns.

3.1. **Adnominal Pronouns Cannot Be Bound.** Evidence that a pronoun and an adnominal pronoun are not the same syntactic object differing only in the realization of the NP component, with the noun being silent in the former but overt in the latter case, comes from binding. Condition A pronouns cannot act as determiners with overt NP complements and require the nominal component to be obligatorily silent.

(7) a. *We linguists see ourselves linguists in the mirror.

   LF: We linguists \( \lambda x.x \) see our \( x \)elves linguists in the mirror

b. We linguists see ourselves in the mirror.

   LF: We linguists \( \lambda x.x \) see our \( x \)elves in the mirror

As demonstrated in the example (7-a), the co-occurrence of a bound variable pronoun and an overt nominal is ruled out. Namely, a bound pronoun cannot co-occur with a noun within the same DP, even if its binder is an adnominal pronoun. The impossibility of adnominal bound pronouns in Condition A environments transparently shows that binding is impossible in adnominal environments, i.e., a pronoun that occupies a position of the definite determiner cannot act as a bound variable.

This pattern is not restricted to Condition A pronouns but extends to other cases of variable binding. The nominal component (*linguists*) has to be silenced, and the possessive form of both the pronoun (*our*) and the nominal (*linguists’*) is ruled out (8-a). Again, with adnominal construals as binders, the bindee consistently appears in the form without the nominal component, preserving only the pronominal part.
(8)  a. *We linguists like our linguists’ books.
   LF: We linguists λx.x like x’s linguists’ books
   b. We linguists like our books.
   LF: We linguists λx.x like x’s books

The data in (9) might potentially lead to a conclusion that our and linguist’s cannot both occupy the possessor position, which rules out one of them. However, the following example illustrates that DPs with multiple possessive forms are possible as long as the nominal content is different and the noun in the complement position of the pronoun that acts as a binder is silent with the bindee.

(9) We Americans admire our athlete’s achievements.

Binding facts have implications for the view that pronouns involve NP-deletion at the PF. Namely, overt realization of the elided material does not lead to ungrammaticality (10), as is the case with overt realization of the noun with bound variable pronouns.

(10) I visited Paris and Mary did too.
   I visited Paris and Mary did (visit Paris) too.

In sum, when an adnominal construal acts as a binder, the only possible realization of a bound pronoun is the one in which the nominal component is dropped. This furthermore suggests that in English, irrespectively of the syntactic structure of the binder, the bindee has only one morphological realization at its disposal.

In sharp contrast to the data considered above, nominal content may appear together with a bound pronoun if it is merged as an adjunct. As the example (11) shows, adjuncts appear in the form of definite plurals.

(11)  a. We linguists see ourselves, the linguists, in the mirror.
       b. We linguists like our, the linguists’, books.

3.2. ADNOMINAL PRONOUNS TAKE GENERIC COMPLEMENTS. The second property that sets adnominal pronouns apart is the Genericity Requirement. Only generic nouns appear in the complement position of a pronoun. Genericity is compositionally derived by applying \( i \)-operator to a plural noun (Chierchia 1998, Dayal 2004). In (12) bare plural generics surface in complement positions of pronouns.

(12) we linguists, we athletes, we Americans

Languages, however, differ in the realization of genericity. Cross-linguistic differences in adnominal construals are predicted to correlate with distinctions in the realization of genericity. In Greek, \( i \)-operator is overtly realized (Alexiadou et al. 2007, Lazaridou-Chatzigoga & Alexiadou 2019), thus the overt definite determiner and the noun merge in the complement position.
On the other hand, nouns merged in apposition as modifiers do not obey the genericity requirement. In fact, definiteness in this case is not only possible but a preferable option.

(14) a. She, the professor, has arrived.
    b. He, the athlete, is likely to win.

It is important to note in which direction this diagnostic is expected to go. Namely, I propose that when a noun surfaces in the complement position of a pronoun it will be realized in its generic form. I do not predict and entertain the idea that pronouns freely take generic complements. For instance, in a language with singular kinds, such as Turkish (Sağ 2022), singular pronouns taking singular kind nouns as their complements are not predicted (e.g., *I linguist).

3.3. PRONOUN OVERTNESS REQUIREMENT. Pronouns surfacing in adnominal construals cannot be omitted. In English, this is observable from the absence of binding if the pronoun was deleted. In the absence of an overt noun, generic plural DP linguists cannot bind the first person pronoun in reflexive (15-a) and possessive environments (15-b). Furthermore, (15-b) would be acceptable only if linguists submit our papers instead of us, where we refers to an independent group of individuals that are not linguists, thus resulting in an unbound pronoun, while (15-a) is plainly out.

(15) a. *Linguists$_i$ see ourselves$_i$ in the mirror.
    b. *Linguists$_i$ submit our$_i$ papers on time.

This requirement is even more transparent in pro-drop languages. Namely, Italian and Ser-bian are full pro-drop languages that can omit pronouns without restrictions. However, dropping the pronoun that appears adnominally yields ungrammatical forms (16-17). Verbal morphology inflected for first person plural in the examples below cannot agree with bare plurals in the absence of an overt pronoun.

(16) *(Noi) ballerine amiamo i vestiti.  (17) *(Mi) balerine volimo haljine.
    we ballerinas love.1PL the dresses we ballerinas love.1PL dresses

    ‘We ballerinas love dresses.’  ‘We ballerinas love dresses.’

This suggests that the pronoun must be in a structurally different position where the omission is not licensed. In sum, an overt noun in the complement position blocks the drop of the pronoun in full pro-drop languages, where the pronominal omission is otherwise always licensed. An exception to this requirement arises in so-called unagreement construals, attested in languages like Greek and Spanish, where verbal morphology inflected for the first or second person plural co-occurs with the external argument in the form of nominative definite plural DP (Hurtado 1985; Suñer 1988; Stavrou 1995, Torrego 1996; Villa-García 2010; Mancini et al. 2011; Ackema & Neeleman 2013; Torrego & Laka 2015; Höhn 2016; Ilić 2024). The pronoun in unagreement construals is omitted for independent reasons, as argued in various approaches to this phenomenon.
3.4. **Size of the Argument.** Finally, adnominal construals impose a restriction on the size of an adnominal component. Namely, conjunction of two pronouns cannot occupy the adnominal position (18) and constitute a single DP with the nominal *linguists*.

(18) a. *[&P You and I] linguists like languages.
    b. *[&P You and them] linguists like languages.

On the other hand, a syntactic object of smaller size (*we*) may freely merge in the determiner position, pointing out to a determiner status of adnominal pronouns.

(19) We linguists like languages.

With a complex DP involving conjunction, the nominal component can only merge outside the DP in a modifier position (20).

(20) You and I, the linguists, like languages.

3.5. **Nominal and Feature Matching.** In the preceding sections, I provided four diagnostics that distinguish pronouns proper from pronouns occupying determiner positions in adnominal construals. While pronouns surfaceing with overt nominal complements exhibit a set of restrictions, nominal material in adjuncts can freely attach to any pronoun. Syntax and semantics of appositions have been extensively discussed in the literature (Doron 1994, De Vries 2006, Citko 2008, Heringa 2012, Ott 2016, among others). This section focuses on the properties of an apposition attaching to a pronoun.

I demonstrate that the material in the apposition of a pronoun matches the features of a pronoun it adjoins to. The same holds for lexical material, testable in the case of *we linguists* construals. Namely, when an adnominal construal acts as a binder the noun in the complement position of a binder and the noun in the apposition of the bound pronoun have to be matched. It has been demonstrated that parallelism is a reliable diagnostic for investigating the nature of LF structures (Fox 2002). Applying the apposition as a test, I show that pronouns impose restrictions on the material that appears in their apposition. I will provide evidence from Condition A that parallelism in the nominal content is required.

3.5.1. **Feature Matching.** Feature specification in the adjunct has to match the features of the pronoun it attaches to. For clarity, appositions are enclosed in square brackets in the examples below. In both inclusive (21-a) and exclusive (21-b) first person plural, first person feature has to be present in the apposition. Thus, personal pronouns demonstrate that there is an agreement requirement that has to be satisfied. It is important to note that the pronoun is not interpreted twice, which is expected if there is Agree between the two.

(21) a. We, [you and me], are going to the theatre.
    b. We, [John and me], are going to the theatre.

The example (22) further illustrates this point. If the first person pronoun surfaces with the apposition, first person feature cannot be excluded from the appositive construal (22-a). Likewise, second and third person pronouns rule out first person features from their apposition (22-b/c).
(22)  a. *We, [you and John], are going to the theatre.
   b. *You, [Mary and me], passed the exam.
   c. *They, [you and me], met the Prime Minister yesterday.

3.5.2. Nominal matching. As noted above, adnominal construals make it possible to test the parallelism in the nominal content too. In the adjunct position, the nominal component has to match the one in the antecedent. This is illustrated by the following example where mismatches in the nominal content are ruled out. This suggests that the nominal content in the adjunct is dependable on the noun that appears in the complement position of the pronoun that acts as its binder.

(23)  a. *We linguists see ourselves, [the physicists], in the mirror.
   b. *We Americans see ourselves, [the linguists], in the mirror.

In contrast, in the absence of an overt noun, it seems that any noun can surface in the apposition of the bound pronoun (24). What these data show is that nominal content in the apposition of a bound pronoun can serve as a window into the nominal content of the binder. This applies also to cases when the pronoun appears as a pronoun proper and not in a determiner position.

(24) We see ourselves, the physicists, in the mirror.

4. The two structures. Natural language has at its disposal two types of pronouns. As demonstrated above, pronouns in adnominal construals surface with a particular set of properties. Namely, they block binding and require genericity in the complement position. Importantly, these pronouns cannot be omitted, even in pro-drop languages such as Italian and Serbian. This is expected if the pronoun surfaces in the position of the definite determiner, as there is no article-drop in contrast to pro-drop, i.e., omitting the entire constituent in the latter case. Finally, the fact that we but not the conjunction you and me can appear in an adnominal position, suggests that a constituent of smaller size (D) is required in this position rather than a phrasal element (DP). I argue that all these properties follow if pronouns in adnominal construals reside in the D head, while the overt noun merges in the complement position. Thus, they exhibit the properties of definite determiners.

Pronouns demonstrate radically different behavior. An overt nominal content can be established with all pronouns and merged as a modifier. In contrast, languages show substantial restrictions with respect to person and number of the pronoun that merges in the D position of adnominal pronouns and cases of first person singular pronominal determiners are rare across languages.3 Pronouns without an overt noun can enter binding relations and act as bound variables. Furthermore, in pro-drop languages, regular pronouns can be freely omitted. At the same time, this indicates that pro should be considered a regular pronoun and not a determiner. In addition, pronouns without overt complements can freely undergo conjunction with other pronominal and nominal forms.

3 For instance, I linguist forms are severely degraded cross-linguistically. Exceptionally, this form may surface as a compound. For an overview of number and person restrictions in adnominal construals across languages see Höhn 2017.
To account for the observed properties, I propose that nominal content can merge with a pronoun in two ways: (a) as a complement and (b) as a modifier. The type of merge is directly related to the categorial status of pronominal forms.

a. Complement DP  
\[
\text{D} \quad \text{we} \quad \text{linguists}
\]

b. Modifier ...  
\[
\text{... you and me \atop \pi we}
\]

Table 2. Two ways of realizing nominal content

The difference between pronouns proper and adnominal pronouns does not stem from the overtness of the NP that remains silent in the former but overt in the latter. The four properties discussed above demonstrate that the two involve substantial syntactic differences, which would be unexpected if the distinction resided in the NP deletion that applies at PF. Under the NP deletion analysis, evidence for the silent descriptive content is that the respective noun is always recoverable. Under the analysis argued for here, re-establishing the descriptive content in terms of a paraphrase is one side of the problem, while something quite different is the actual realization of the nominal material in the context of a pronoun. I discussed two empirical possibilities for overt nominal content to appear with the noun. Thus, the fact that we linguists construals involve an NP occupied by an overt noun does not suggest that all pronouns surface with an empty NP.

5. Summary. In this paper, I addressed the following questions: (i) How do adnominal construals inform the idea that pronouns surface with silent descriptive content?, (ii) How should the descriptive content be represented?, (iii) How does the study of adnominal pronouns inform our understanding of structural building blocks in the composition of pronouns more generally?

I demonstrated that adnominal pronouns differ from pronouns proper on the basis of a set of properties. These distinctions closely correlate with the way nominal content merges with a pronoun. Namely, while a noun can merge with all pronouns, in the case of adnominal construals it merges as a complement triggering several restrictions. In contrast, regular pronouns can always surface with the noun merged as a modifier. These differences point towards a categorial distinction between pronouns and pronouns in determiners positions.

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