Referential and impersonal *you*: A syntactic perspective

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Abstract

This paper explores the morphosyntax of the English pronoun *you* in its referential and impersonal readings. In the former, *you* refers to the addressee(s) in the context of utterance or to a group containing the addressee, while in the latter it has an interpretation similar to that of the impersonal pronoun *one*. We apply a battery of syntactic tests and show that the behavior of *you* exhibits interesting differences in the two readings, including whether or not it can be followed by a noun, bind plural reflexives, co-occur with plural nominal predicates and be coordinated. We provide a syntactic analysis that views *you* as a DP in both readings. Moreover, we argue that referential *you* has an NP complement, which determines whether it is singular or plural, whereas impersonal *you* does not take an NP complement and is always syntactically singular. Though some impersonal pronouns have been argued to lack a DP layer (Egerland 2003 a.o.), we show that impersonal *you* has a DP-layer (see Gruber 2017, Alhailawani et al. 2022 for other impersonal pronouns) but lacks an NP.

Keywords: impersonal pronouns, referential pronouns, DP, NP, Number.

1 Introduction

It is common to think of 1st and 2nd person pronouns primarily as indexical elements. As an indexical, English *you* refers to an individual or plurality of individuals who are the speaker's addressee(s), or to a group to which the addressee belongs. This is the referential reading of *you*, exemplified in (1):

(1) *You* played very well last night.

However, *you* can also have an impersonal reading.[1] This reading is possible in generic sentences, which express statements that hold true in general of people

[1]Different works refer to this reading of *you* with different terms: 'impersonal *you*' (Kitagawa and Lehrer 1990, Egerland 2003; Siewierska 2004; van der Auwera et al. 2012; Malamud 2012; Zobel 2014; Gast et al. 2015; Deringer et al. 2015), 'generic *you*' (Huddleston 1984; Kamio 2001; Gruber 2013, 2017) or 'generalized *you*' (Stirling and Manderson 2011).

in certain situations or with certain properties. In the impersonal reading of *you*, we interpret the sentence in (2) as asserting that, in general, if there's a situation of handling fire, people in that situation should be careful.[2] This is similar to the meaning of the sentence in (3), with impersonal *one*:

(2) *You* should be careful when handling fire.

(3) *One* should be careful when handling fire.

There is also another context where *you* may have a non-referential interpretation, as discussed in Kratzer (2009) (building on an observation made in Partee 1989:fnt.3). Consider the sentence in (4):

(4) Only you eat what *you* cook.

Here, the first instance of *you* is associated with focus and gives rise to a set of alternatives. The sentence conveys that only the addressee eats what they cook and everybody else (in the contextually relevant set) doesn't. The second instance of *you* is interpreted as a variable that ranges over the set of alternatives generated by the first *you* (you eat what you cook, x doesn't eat what x cooks, y doesn't eats what y cooks, etc.). Kratzer calls it a 'fake indexical.' Note that it differs from impersonal *you* both in interpretation and in distribution as 'fake indexical' *you* can occur both in generic (4) and in episodic sentences, like (5):

(5) Only you enjoyed what *you* ate.

We mention this reading for the sake of thoroughness, but will not discuss it further in this paper for reasons of space.

In this study, we focus on referential *you* and impersonal *you*. Specifically, we raise and seek to answer the following questions:

- Do referential and impersonal *you* exhibit morpho-syntactic differences?
- If so, what is the analysis of their syntactic structure that can best capture their different syntactic behavior?

By addressing these questions we aim to sharpen our understanding of *you* and of pronouns more generally, which is important for several reasons.

First, there is a gap that we aim to fill. There are studies that focus on impersonal *you*, and some of them mention or discuss certain syntactic differences between the referential and the impersonal reading of the pronoun (Whitley 1978; Bolinger 1979; Kitagawa and Lehrer 1990; Moltmann 2006; Malamud 2012; Gruber 2013, 2017; Gast et al. 2015; Zobel 2012, 2014; Kirkpatrick and Knobe 2024). However, most of these studies are devoted to providing a characterization of the semantic and pragmatic properties of impersonal *you*. Our work contributes

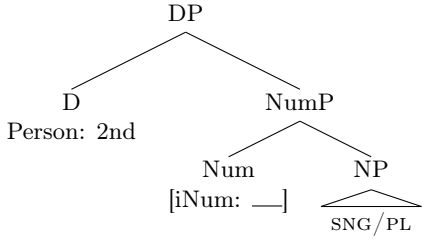
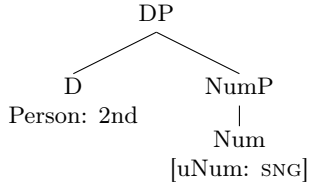
[2]The fact that a 2nd person pronoun can have both a referential and an impersonal reading is not unique to English. See Alonso-Ovalle (2002) for Spanish; Egerland (2003) for Icelandic; Rezac and Jouitteau (2016) for French; Spyropoulos (2025) for Greek; Kitagawa and Lehrer (1990), Malamud (2006, 2012), Gruber (2013), Zobel (2014), Gruber (2017) and Ackema and Neeleman (2018), a.o., for German, Dutch and English. Siewierska (2004:210-213) provides an overview.

to this body of literature by focusing on the syntactic side and thus is complementary to existing scholarship. We gather in one place the morpho-syntactic similarities and differences exhibited by English *you* in its referential and impersonal use – some already observed in the literature and some observed by us – and make a proposal concerning the internal syntactic structure of the pronoun in the two readings. In this way we differ from other studies in the syntactic literature that focus on one difference between the referential and impersonal use of a pronoun, e.g. the syntactic encoding and the interpretation of the person feature, or the nature of the number feature (cf. Ackema and Neeleman 2018 for Dutch *je* and Egerland 2003 for impersonal 2nd person pronouns in other languages).

Second, in the pragmatics literature (e.g.,Gast et al. 2015)[3], impersonal and referential *you* are sometimes viewed as one and the same pronoun, and the different interpretations are said to depend exclusively on the context in which they occur. Our study leads us to a different conclusion: the two readings of the pronoun correspond to two minimally distinct internal structures for referential *you* and impersonal *you*. That is, even though they exhibit the same morphological form, they differ in their internal syntactic structure.

Building on the rich literature on the syntax of pronouns,[4] we investigate the internal syntactic structure of referential and impersonal *you*. We argue that *you* has a DP-layer and a 2nd person feature on a D head in both readings. However, a striking difference that has not been discussed in the previous literature is that referential *you* takes an NP complement and can be syntactically singular or plural; in contrast, impersonal *you* does not take an NP-complement and behaves syntactically like a singular pronoun, as shown in Table 1.

Table 1: Referential vs impersonal *you*

Referential *you*	**Impersonal *you***
	

Various studies have argued that impersonal pronouns are deficient compared to referential pronouns, in that they lack the higher layers of structure and consist of either only ϕP and N, or of only a bare N.[5] We reach a different

[3]Specifically, Gast et al. (2015:149) suggest that foolowing:"...personal and impersonal uses of the second person are not distinguished at a lexical or grammatical level."

[4]Cf. Postal (1969); Abney (1987); Ritter (1995); Cardinaletti and Starke (1999); Déchaine and Wiltschko (2002); Harley and Ritter (2002); Fenger (2018); Hall (2020) a.o.

[5]For various instantiations of this idea, see Déchaine and Wiltschko (2002);

conclusion regarding English impersonal *you*, namely that it has a DP layer (in line with the proposal made for the impersonal pronoun *waħaad* in Jordanian Arabic by Alhailawani et al. 2022). Moreover, we suggest that it lacks a lexical layer, namely an NP or an N, thus differing from referential *you*.

The paper is organized as follows. In sections 2 and 3 we provide an overview of referential and impersonal *you*, respectively. In section 4 we apply to them a number of diagnostic tests (to check their behavior with respect to binding, coordination, co-occurrence with appositives and depictives, etc.), which reveal that they have different syntactic properties. In section 5 we provide our proposal on how to capture the morpho-syntactic differences that we have observed. In section 6 we conclude and raise issues for further research.

2 Referential *you*

In this section, we discuss two key properties of referential *you* with the goal of highlighting how it differs from impersonal *you*.

1. Interpretation. Referential *you* refers to the addressee(s) of the utterance context or to a group that includes the addressee.[6] The latter reading is often called the *associative reading* of referential *you* (Zwicky 1977; Noyer 1992; Corbett 2000; Cysouw 2009; Siewierska 2004; Kratzer 2009, a.o.).

   Referential *you* is an indexical element, that is, an element whose interpretation depends on the parameters of the context (see Kaplan 1989; Schlenker 2003; Anand and Nevins 2004; a.o.).[7] To see this, suppose that, as the speaker, I utter the sentence in (6) to my friend Marcy; *you* would then refer to Marcy. But if I uttered the same sentence to my friend Jenny, *you* would refer to Jenny:

   (6) *You* brought a delicious salad.

   This context dependence is the defining property of indexical elements.

   In many languages, indexical pronouns can only refer to the speaker and addressee of the utterance and cannot refer to the speaker and addressee of the reported speech event. English is one such language and referential *you* exhibits this behavior. To see this, suppose that I uttered the sentence in (7) with Laura as my addressee; *you* refers to Laura:

Ackema and Neeleman (2018); Gruber (2013, 2017); Fenger (2018); Šereikaitė (2022).

[6] In this work, we take the addressee of the utterance to be the individuals or plurality of individuals who are the target of the utterance and are part of the utterance context. There is another notion of addressee, as the individual or set of individuals who are the target of the utterance but are not part of the context of utterance (for example, the government, in a demonstration where people chant slogans against the government), cf. Pak et al. (2024). In this paper, we don't discuss that notion of addressee.

[7] Indexicals include 1st person pronouns, whose reference depends on who the speaker is; 2nd person pronouns, whose reference depends on who the addressee is; adverbs of time or place (like *now, tomorrow, here, there*), whose interpretation depends on when and where the sentence is being uttered.

(7) *You* are a wonderful writer. (said to Laura)

If I want to report what I said to Laura in (7) to Tom, I cannot do so with the sentence in (8), because in this new context *you* would only refer to Tom, the addressee of the new utterance, and cannot refer to Laura, the addressee of the reported speech event. In order to refer to the addressee of the reported speech, *Laura*, a 3rd person pronoun, is needed, as in (9):

(8) I told Laura$_i$ that *you*$_{*i}$ are a wonderful writer. (said to Tom)

(9) I told Laura$_i$ that *she*$_i$ is a wonderful writer.

As we will see in Section 3, impersonal *you* differs from referential *you*: its interpretation does not depend on the utterance context and remains the same in the case of reported speech.

2. Distribution. Referential *you* can occur both in a sentence that makes a generic statement, like (10), and in one that does not, like (11):

(10) *You* always act kindly.

(11) Yesterday I gave *you* a book.

In contrast, impersonal *you* is restricted to occurring in sentences that make generic statements, as we'll see in Section 3.

So far we have discussed examples where referential *you* refers to an individual or a plurality of individuals who are the speaker's addressee. We now turn to the associative reading of referential *you*, in which it refers to a group that includes the addressee. As an example of this reading, imagine that my interlocutor is a student who has been organizing interesting events on campus. I could utter a sentence like (12), with *you* referring to the group of student organizers to which my interlocutor belongs:

(12) *You* should publicize these events as much as possible.

As another example, consider the one in (13), from Kitagawa and Lehrer (1990). When uttered to an addressee who is a US citizen, *you* can be interpreted as referring to the United States, the country to which the addressee belongs:[8]

(13) *You* joined World War II after Pearl Harbor.

In the associative reading, *you* exhibits the same properties we highlighted above for the cases when it refers to the adddressee or plurality of addressees. First, the set of individuals that it picks out varies depending on who the addressee of the utterance is. For example, if (13) is uttered to a US citizen, *you*

[8]Kitagawa and Lehrer 1990 use the term *vague you* for this reading. They point out that it is compatible with an appositive like *I don't mean you personally*, as illustrated in (i):

(i) *You're* – I don't mean you personally – *you're* going to destroy us all in a nuclear war. (Kitagawa and Lehrer 1990:743)

refers to the United States (and the sentence is true); if it is addressed to a Polish citizen, it refers to Poland (and the sentence is false). Second, as also pointed out in Kitagawa and Lehrer (1990), in embedded clauses it always refers to a group associated with the addressee of the utterance and cannot refer to one associated with the addressee of the reported speech. Suppose that I said (13) to Laura, who is a US citizen, and now I want to report to Anya, who is a Polish citizen, what I said to Laura. I cannot do so with the sentence in (14). In such a context, *you* can only refer to a group or entity (like Poland) associated with Anya, the addressee of the utterance, and cannot refer to a group or entity associated with Laura, the addressee of the reported speech.

(14) I told Laura$_i$ that *you*$_{*i}$ joined World War II after Pearl Harbor.

If we want to use a pronoun to refer to a group associated with Laura while addressing Anya, we need a 3rd pronoun, as in (15):

(15) I told Laura that *they* joined World War II after Pearl Harbor.

This is parallel to what we saw in the examples in (8) and (9) above.

Finally, in its associative reading *you* can be found in sentences that make both generic and episodic statements, as shown in (16), and (17):

(16) *You* take good care of your forests.

(17) Spain defeated *you* in the World Cup in 2010.

In the remainder of this paper, as we compare referential *you* with impersonal *you*, we will use examples with the reading of referential *you* that refers to the speaker's addressee(s), rather than with the associative reading, as they make the contrast with impersonal *you* easier to see.

3 Impersonal *you*

We start this section by discussing two properties of impersonal *you* that highlight how it differs from referential *you*: its interpretation and its distribution.

1. Interpretation. In the impersonal reading, *you* doesn't refer to an individual or a group of individuals but rather is interpreted as similar in meaning to the impersonal pronoun *one*.[9] Consider the following examples:

   (18) *You* shouldn't drink and drive. (Gast et al. 2015)

   (19) In church, *you* usually speak softly.

   With the impersonal reading of *you*, (18) means that, in general, given an individual x in a situation of driving, x shouldn't drink and drive, and

[9] Kitagawa and Lehrer (1990) and Zobel (2014) argue (for English and German, respectively) that the dedicated impersonal pronoun and the 2nd person pronoun in its impersonal interpretation are truth-conditionally equivalent.

(19) conveys that, usually, given an individual x in a situation of being in church, x speaks softly.

Unlike in the case of referential *you*, the interpretation of impersonal *you* remains the same in reported speech, as observed in Kitagawa and Lehrer (1990:744). I could say (19) to Laura and then report what I told her to someone else. As shown in (20), impersonal *you* retains the interpretation it has in the root clause, as a variable ranging over individuals in church:

(20) I told Laura that, in church, *you* usually speak softly.

This shows that impersonal *you* is not sensitive to the fact that the addressee of the utterance has changed. Since denoting the value of the context parameters is the definitional property of indexical elements, the lack of it suggests that impersonal *you* does *not* behave like an indexical in this respect.[10]

2. Distribution. The impersonal reading of *you* is available only in generic sentences, i.e. those that express a state of affairs that holds true in general. It is not available in episodic sentences, which express a state of affairs that only holds true at a particular time. Consider a sentence in the present tense, which can give rise to a generic statement, as in (21):

(21) In that restaurant, *you* eat well without spending too much.
(referential ✓, impersonal ✓)

Here *you* can have a referential reading; in such case, it makes a statement about something that holds true of the addressee(s) of the utterance, namely that they usually eat well without spending too much in the restaurant under discussion.[11] It can also have an impersonal reading, so that the sentence is interpreted as making a statement that is true in general of people eating at that restaurant. Consider what happens if, instead of the simple present, the sentence has a form of the past tense, as in (22):

(22) In that restaurant, *you* ate well without spending too much.
(referential ✓, impersonal *)

The sentences (22) makes an episodic statement. The referential reading of *you* is possible, while the impersonal reading is not.

We follow the literature on impersonal pronouns that views them as variables bound by an abstract generic operator or an overt adverb of quantification, like *usually* (cf. Condoravdi 1989; Cinque 1988; Chierchia 1995a,b; Alonso-Ovalle 2002; Egerland 2003; Malamud 2006, 2012; Moltmann 2006; Gruber 2011, 2013,

[10]Malamud (2012) argues that impersonal *you* can be used indexically, but is not a typical indexical. We refer the interested reader to Malamud's work for a full discussion.

[11]This is sometimes also called a habitual statement, as it states something that holds generally true of an individual.

2017; Zobel 2014; Ritter and Wiltschko 2019; Spyropoulos 2025, a.o.) From the assumption that impersonal *you* is bound by a Generic operator, it follows that it is interpreted as a variable and that its occurrence is restricted to generic sentences. Thus the two characteristic properties of impersonal *you* just discussed can be seen as two sides of the same coin.

3.1 Brief background on genericity

The literature on genericity is vast and deep, starting with Carlson (1977, 1989), Condoravdi (1989), Partee (1991), Carlson and Pelletier (1995), Chierchia (1995a,b), Krifka et al. (1995). The existence of a generic operator proposed in these seminal works has been adopted in many studies of impersonal pronouns across a number of languages, as in Cinque (1988), D'Alessandro and Alexiadou (2002), Moltmann (2006), Malamud (2006, 2012), Sigurðsson and Egerland (2009), Zobel (2014), Gruber (2011, 2017), Ackema and Neeleman (2018), Spyropoulos (2025), a.o. Proposals concerning the generic operator differ on what they take its exact semantics to be, as discussed in Zobel (2014). In the remainder of this section we will not summarize or go over the details of the various proposals, but simply discuss three observations about generics that we find particularly helpful in understanding impersonal *you*, drawn from Chierchia (1995a).

The first observation is that generic sentences are similar to sentences that contain adverbs of quantification like *always* or *usually*. For example, both sentences in (23) make a generic statement:

(23) a. Fred usually smokes.
b. Fred smokes.

Chierchia captures their similarity by suggesting that all sentences contain a situation variable. While in (23a) the situation variable is bound by the overt adverb of quantification, *usually*, in (23b) it is bound by something akin to a silent adverb of quantification: a Generic operator. Since the Generic operator binds the situation variable, the sentence is interpreted as saying that Fred is in the habit of smoking: generally, in a contextually relevant situation s, Fred smokes in s (cf. Chierchia 1995a:189,Krifka et al. 1995:16-18).

The second observation is that genericity is tied to the aspectual system of a language (cf. Dahl 1985). Generic sentences denote states of affairs that are permanent or last for a while, like habits, dispositions, routines or laws; they require a type of aspect compatible with this notion of permanence. To capture this connection, Chierchia suggests that the generic operator is located in an Aspect Phrase whose value is habitual aspect.

The third observation relevant for our discussion is that a Generic operator can bind more than one variable. For example, in a sentence like (24), with a singular indefinite in subject position, the Generic operator can bind both the situation variable and the variable provided by the indefinite subject:

(24) A bird flies.

The sentence is interpreted as saying that, given any contextually relevant situation (i.e. a situation in which the conditions for flying are met) and any x that is a bird, x usually flies in that situation.

With these three points in mind, we can see why both referential and impersonal *you* can occur in generic sentences. Assume that generic sentences, like (18) or (19) repeated below, contain a generic operator:

(25) *You* shouldn't drink and drive. (Gast et al. 2015)

(26) In church, *you* usually speak softly.

If the Generic operator binds only the situation variable, *you* has a referential reading and the sentences are interpreted as saying something that usually holds true of the addressee of the utterance: in any contextually relevant situation of drinking and driving, the addressee shouldn't drink and drive; in any contextually relevant situation of being in church, the addressee speaks softly.[12] In contrast, if the Generic operator binds both the situation variable and the variable provided by *you*, *you* has an impersonal reading. The sentences are interpreted as saying something that typically holds of individuals in that situation: in any contextually relevant situation s of drinking and driving, when x is in s, x shouldn't drink and drive; in any contextually relevant situation s of being in church, when x is in s, x speaks softly.

Before we conclude this section, we provide a brief overview of the type of sentences that can make generic statements and yield the impersonal reading of *you*. We have just seen a sentence with a modal (25) and one with present tense (26). The impersonal reading of *you* can also arise in the presence of a number of other elements that provide information on how the domain over which the variable ranges should be restricted. For example, a locative PP, a temporal PP, a *when* and an *if* clause can all contribute to the restriction for a generic statement:

(27) a. In England, *you* drive on the left side of the road.
b. During a storm, *you* worry about branches falling off trees.
c. When/if *you* walk into a house of worship, *you* speak more softly.

As-phrases also contribute to the restriction, i.e. specify the set of individuals to which the generic statement applies:[13]

(28) a. As a cancer survivor, *you* have a heightened appreciation of life.
b. As a human being, *you* suffer when you see others suffer.

In the rest of the paper, we will look at the different types of generic sentences just introduced to discover the syntactic properties of impersonal *you*.

[12] Some studies in the literature capture this by proposing the existence of a habitual operator (see Rimell 2004; Boneh and Doron 2013; Zobel 2024; a.o.).

[13] Kirkpatrick and Knobe (2024) point out that they have a special reading, in which the property denoted by the predicate is taken to be an intrinsic property of the category introduced by the *as*-phrase. For example, a sentence like 'As a teacher, you give feeedback to your students' has a prescriptive component of meaning: it conveys that giving feedback to students is what a good teacher does. See also Gast et al. (2015:160).

3.2 Impersonal *you* versus *one*

In some cases, native speakers of American English find sentences with impersonal *you* and with the impersonal pronoun *one* equally natural, as in (29):

(29) a. *One* might think that everyone would be concerned.
b. *You* might think that everyone would be concerned.

However, readily accepting sentences with *one* in colloquial English seems to be limited to examples with a restricted set of verbs, like *think*. In most other cases, native speakers judge *one* to belong to the formal register and *you* to be the more natural form in conversation. When we check whether *you* can be replaced by *one*, as a way to test its impersonal interpretation, we must therefore abstract away from this difference in level of formality.

Another difference between impersonal *you* and *one* that has been pointed out in the literature concerns the notion of perspective. Moltmann (2006, 2010), focusing on impersonal *one* and arbitrary PRO, suggests that an impersonal pronoun involves the speaker identifying with a certain category of individuals or with an individual in a certain situation, or "putting oneself in the shoes of anyone meeting the relevant conditions." Her view of the impersonal pronoun *one* is that it is "a first-person oriented generic pronoun in the sense that it does not stand for the speaker's actual person, but rather for a range of individuals that the speaker identifies with or simulates" (Moltmann 2010:440). Pearson (2023) provides an interesting discussion of what she calls the 'sensitivity' of impersonal pronouns to first person perspective and surveys other impersonal pronouns (like German *man*, French *on*, Italian *si*, etc.) to see to what extent they provide evidence for this perspective.

Other works in the literature, like Malamud (2006, 2012); Gast et al. (2015); Deringer et al. (2015), apply the concept of simulation to impersonal *you*. They suggest that, by using impersonal *you*, the speaker invites the addressee to imagine being in a certain situation ('participant simulation') or belonging to a certain group or category ('category simulation'). The examples given in (27) above are instances of participant simulation, where the addressees are invited to imagine themselves in a particular situation. The examples in (28) with *as*-phrases are instances of category simulation, in which the addressees are invited to self-ascribe properties that they do not have.

In this paper, we abstract away from issues of register or perspective and simply mention replacement by *one* as a possible diagnostic tool to test the presence of an impersonal interpretation of *you*.

4 Syntactic differences

In this section we show that referential *you* and impersonal *you* do not exhibit identical syntactic behavior. We provide a careful discussion of a number of differences and similarities, some observed by us and some drawn from the literature (Whitley 1978; Bolinger 1977; Kitagawa and Lehrer 1990; Moltmann 2006; Malamud 2012; Gruber 2013, 2017). They are summarized in Table 2.

	Referential *you*	Impersonal *you*
can take an NP complement	✓	*
can be coordinated	✓	restricted
allows an appositive	✓	restricted
can be singular and plural	✓	restricted
can be stressed	✓	restricted
can occur in argument positions	✓	✓

Table 2: Similarities and differences

4.1 NP complements

The most striking (and perhaps the most overlooked) difference between referential and impersonal *you* concerns their ability to co-occur with a noun: referential *you* can, impersonal *you* cannot.

Postal (1969) suggested that pronouns should be analyzed as determiners (not as nouns), in particular as determiners followed by a noun which, depending on the environment, can be overt, deleted or realized as *one*. One piece of evidence he mentioned is that, in the plural, 1st and 2nd person pronouns can co-occur with a noun, as in *we men, you children, us Americans.*[14] Another is that they can co-occur with *one* in the presence of an adjective (*you great ones, we religious ones*) and, in some varieties of English, even without an adjective, as in *we'uns, us'uns, you'uns.*

Postal discussed only plural forms and only the referential reading of the pronouns. We'd like to add two observations. The first one is that, in its referential reading, *you* can also co-occur with a singular noun:

(30) a. *You Dani* sit by the tree, *you Gabriel* stand by the door![15]
b. We'll take care of this task, *you Susan* deserve a break.

The second observation is that referential *you* differs strikingly from impersonal *you* in its ability to co-occur with a noun. In a generic sentence, *you* alone can have either a referential or an impersonal reading. But when it co-occurs with a noun, it can only have a referential reading. The impersonal reading is not available, as we see in the following examples:[16]

(31) a. *You* must accept what life has in store for you.
(referential ✓, impersonal ✓)

[14] Postal (1969:191) provides three reasons against view these forms as derived from appositive relatives clauses (e.g. *we who are men*), as Jespersen (1961) did. We will discuss cases with appositives in section 4.3.

[15] See Zanuttini (2008), building on Downing (1969); Davies (1986); Potsdam (1998).

[16] The same type of constraint holds for impersonal *one*. It cannot co-occur with a noun and have an impersonal reading, as illustrated in (i-ii):

(i) From the top of the mountain, *one* can get a nice view. (impersonal: ✓)

(ii) From the top of the mountain, *one person* can get a nice view. (impersonal: *)

b. *You soldiers* must accept what life has in store for you.
(referential ✓, impersonal *)

(32) a. *You* should take care of your health.
(referential ✓, impersonal ✓)

b. *You people* should take care of your health.
(referential ✓, impersonal *)

In Section 5 we will capture this difference in syntactic terms by proposing that the internal structure of referential *you* contains a lexical NP, whereas the internal structure of impersonal *you* does not.

4.2 Coordination

A second difference between referential *you* and impersonal *you* that has received almost no attention in the literature concerns coordination: referential *you* can be freely coordinated with DPs of different types, impersonal *you* can only be coordinated with a restricted set of conjuncts.

Referential *you* can be coordinated with other pronouns as well as with lexical DPs, as illustrated in (33):

(33) a. Yesterday *you* and I expressed different opinions. (referential ✓)

b. *You* and Sue's brother have been getting along well. (referential ✓)

In contrast, impersonal *you* cannot occur in most types of coordination.[17] The impersonal interpretation of *you*, available in (34), disappears in a coordinate structure, as shown in (35):

(34) *You* should exercise on a regular basis. (referential ✓, impersonal ✓)

(35) a. *You* and I should exercise on a regular basis.
(referential ✓, impersonal *)

b. *You* and Sue's brother should exercise on a regular basis.
(referential ✓, impersonal *)

c. *You* and young people in general should exercise on a regular basis.
(referential ✓, impersonal *)

However, we observe that impersonal *you* is not entirely banned from coordinate structures: it is possible when the second conjunct contains *your* (cf. Bolinger 1979:196 for a related observation). We can see this in (36):

(36) a. In general, *you* and *your* partner should have common interests.

b. It's helpful for *you* and *your* doctor to have the same general approach to medical care.

[17] This was briefly mentioned in Whitley (1978:25), who provided the following example to show that, when coordinated, *you* can only have a referential interpretation:

(i) John and *you*/We and *you* never used to backtalk when Mary was young.

Why do referential and impersonal *you* differ in this way?[18] We think that it is because of general constraints on coordination. It has long been observed that only conjuncts of the same syntactic category can be coordinated.[19] Moreover, Schachter (1977) has shown that, in order for two phrases to be coordinated, they must also be semantically similar. For example, it is ungrammatical to coordinate a clause that makes a generic statement with one that makes an episodic statement (Zhang 2009:188):

(37) *Dogs are mammals and are barking right now in front of my window.

We think that the restrictions on coordination exhibited by impersonal *you* derive from the need for the conjuncts to match both syntactically and semantically. This need is satisfied by conjuncts like *your parents, your doctor*. How?

Following Abney's (1987) and much of the subsequent literature, we view *you* as a DP headed by *you* and a constituent like *your partner* as a DP headed by *your*. Hence in (36) we have two constituents of the same syntactic type being coordinated. We take the contrast between (35) and (36) to arise from a semantic restriction. The examples in (35) do not allow an impersonal reading of *you* because the second conjunct (e.g., *Sue's brother*) is a referential DP. It is not possible to conjoin a DP with a referential interpretation and one with an impersonal interpretation. In the grammatical examples in (36), in contrast, the second conjunct contains a variable whose value varies along with the value of the first conjunct, that is, impersonal *you*. (The conjoined DPs are interpreted as meaning that, in general, for any x, x and x's partner should have common interests, or x and x's doctor should have the same approach to medical care.) We suggest that the fact that both contain a variable is what makes the two conjuncts semantically parallel and satisfies the requirement on coordination.[20]

[18] *One* resembles impersonal *you* when it comes to coordination: though it cannot be coordinated with a lexical DP (i), it can be coordinated when the second conjunct contains a variable that it binds (see example (ii), provided by a reviewer):

(i) **One* and young people in general should exercise on a regular basis.

(ii) Such investments put *one* and *one's* family at great risk.

[19] Cf. Chomsky (1957:36), Williams (1978); Larson (1990); Munn (1993); Johannessen (1998), a.o. For example, while it is possible to coordinate two PPs as in (i), it is not possible to coordinate a PP and a CP as in (ii):

(i) the scene [$_{PP}$ of the movie] and [$_{PP}$ of the play]

(ii) *the scene [$_{PP}$ of the movie] and [$_{CP}$ that I wrote]

Examples of coordination that violate this restriction have been noted, cf. Peterson (1981); Sag et al. (1985); Bayer (1996); Patejuk and Przepiórkowski (2023).

[20] A reviewer points out that it is possible to coordinate a CP that makes a generic statement and one that introduces an exception to it, as in (i). However, when coordination is at the level of DP, the impersonal reading of *you* is impossible, as shown in (ii):

(i) *You/one* can park here, but Jane cannot because she has special needs.

(ii) *You* but not Jane can park here. (**One* but not Jane can park here.)

In our view, this is because impersonal *you* cannot be coordinated with a referential DP. This restriction does not hold in (i) because coordination is at the CP-level and is not sensitive to the nature of the constituents it contains.

In sum, we have observed that impersonal *you* can only be coordinated with a conjunct that contains *your*. We take this to result from the requirement that the two conjuncts be of the same syntactic and semantic type.

4.3 Appositives

A third difference between referential *you* and impersonal *you* that has gone unnoticed concerns modification by appositives: referential *you* can occur with different types of appositives, while impersonal *you* exhibits clear restrictions, which parallel the ones we observed in coordination contexts.

Heringa (2012a,b) distinguishes three types of appositional relations: identificational appositions, which provide an alternative description of the referent; attributional appositions, which modify the referent; and inclusion appositions, which provide an example or a subset of the entity denoted by the referent:[21]

(38) a. My only brother, *Pieter*, is a member of the student council.
(identificational apposition; Heringa 2012b:557)

b. His girlfriend, *a modest person*, laughs about that.
(attributional apposition; Heringa 2012b:557)

c. A zoo, *such as the Apenheul*, costs a lot of money.
(inclusion apposition; Heringa 2012a:28)[22]

All three types of appositives are possible with referential *you*, as shown below:[23]

(39) a. *You*, Laura Anderson, are a member of the student council.
(identificational apposition)

b. *You*, a hard working student, always reach your milestones on time.
(attributional apposition)

c. *You*, graduate students in particular, need to apply for funding.
(inclusion apposition)

In contrast, most appositives are incompatible with impersonal *you*. This is not surprising when it comes to identificational appositions: since impersonal *you* is not referential, it doesn't pick out an entity that can be alternatively identified or described. However, we may expect other appositives to be possible, as they could contribute to the restriction of a generic statement. What we observe is that, whether plural (40) or singular (41), appositives force a referential reading of the pronoun:

(40) a. *You*, human beings, are easily moved by tragedies.
(referential ✓, impersonal *)

b. *You*, hard working creatures, need a lot of sleep.
(referential ✓, impersonal *)

[21] For similar semantic classifications, see Quirk et al. (1985); Hannay and Keizer (2005).

[22] The original example was provided in Dutch by Heringa (2012a).

[23] For (39c), imagine that *you* denotes a group that includes faculty and graduate students; the inclusion apposition specifies a subset of this group.

(41) a. *You*, a human being, are easily moved by tragedies.
(referential ✓, impersonal *)

b. *You*, a hard working creature, need a lot of sleep.
(referential ✓, impersonal *)

Interestingly, appositives are compatible with impersonal *you* only when they contain *your*:[24]

(42) a. *You*, especially *your* children, should think about the environment.

b. *You*, especially *your* sense of safety, can be shaken by images of war.

This observation parallels what we have observed with coordination. Just as impersonal *you* can only be coordinated with a DP that contains possessive *your*, it can also only be modified by an appositional DP that contains possessive *your*, a bound variable. The examples in (42) are interpreted as saying that, in general, x and especially x's children should think about the environment; and that x and especially x's sense of safety can be shaken by images of war. The parallelism of these observations is not surprising given that appositives have been argued to involve a relation of coordination between the anchor (the DP being modified) and the apposition (the string that modifies the anchor), cf. Quirk et al. (1985); de Vries (2006, 2009); Heringa (2012a,b).

In sum, we have shown that while referential *you* can be freely modified by appositives, impersonal *you* can only be modified by appositives that contain a co-varying variable. This restriction parallels the one we have observed in coordination.

4.4 Number

We now turn to a fourth difference: referential *you* can be either singular or plural; impersonal *you* is always syntactically singular. We will see that, despite being syntactically singular, impersonal *you* is compatible with semantic plurality, a property that is also attested for impersonal pronouns in other languages (Hoekstra 2010; Malamud 2012; Ackema and Neeleman 2018).

Three pieces of evidence show that impersonal *you* is syntactically singular:[25]

1. Binding of anaphors. Referential *you* binds both singular and plural anaphors:

[24] We find the same pattern with *one*:

(i) a. *One*, especially *one's* children, should think about the environment.

b. *One*, especially *one's* sense of safety, can be shaken by images of war.

[25] One test often used to identify the number feature of a DP is verbal agreement. However, referential *you*, whether singular or plural in reference, always triggers the same type of verbal agreement. For example, in the present tense of a regular verb, it never co-occurs with verbal *-s*, but always with the bare verbal form; with forms of *be*, it always co-occurs with the unmarked form *are*. The same is true of impersonal *you*. We take verbal agreement with *you* to reflect the presence of a 2nd person feature (and not of a number feature). We view verbal *-s* as the spell out of singular number feature in the absence of 1st and 2nd person. See Nevins (2007:283) for one way to capture this intuition.

(43) Did *you* see *yourselves/yourself* in the mirror? (referential ✓)

In contrast, as noted by Kitagawa and Lehrer (1990:744), impersonal *you* can only bind a singular anaphor, as shown in their example in (44). The minimal pairs in (45) show the same contrast.

(44) Two hundred years ago, *you* used to go into the forest when *you* wanted firewood for *yourself/*yourselves*.

(45) a. To survive in this world, *you* have to believe in *yourself*. (referential ✓, impersonal ✓)

b. To survive in this world, *you* have to believe in *yourselves*. (referential ✓, impersonal *)

These observations suggest that impersonal *you* is syntactically singular, whereas referential *you* can be either singular or plural (see Egerland 2003 for treating impersonal *you* in various languages as a singular pronoun).

2. Nominal predicates. Referential *you* is compatible with both singular and plural nominal predicates. Impersonal *you*, in contrast, can only co-occur with a singular nominal predicate. This was pointed out in Malamud (2012:10) with the examples below, which show that the impersonal reading is available only when the nominal predicate is singular:

(46) a. In those days *you* could be *a good person* and still win elections. (impersonal ✓)

b. In those days *you* could be *good people* and still win elections. (impersonal *)

We provide additional examples to establish the distinction: (47a), with a plural nominal predicate, allows only the referential reading; (47b), with a singular nominal predicate, allows both.

(47) a. *You* should be *good role models*. (referential ✓, impersonal*)

b. *You* should be *a good role model*. (referential ✓, impersonal ✓)

The incompatibility of plural nominal predicates with an impersonal reading suggests that impersonal *you* is syntactically singular in number.

3. *As*-phrases. Sentences with an *as*-phrase represent a third context showing the difference between referential and impersonal *you* with respect to number. In episodic sentences with referential *you* (48), an *as*-phrase provides information about the addressee. Both singular and plural *as*-phrases are possible, which is consistent with referential *you* being singular or plural:

(48) a. *As a responsible teacher*, *you* acted properly in confronting the issue right away. (referential ✓)

b. *As responsible teachers*, *you* acted properly in confronting the issue right away. (referential ✓)

In sentences with impersonal *you*, an *as*-phrase restricts the set of individuals the generic statement is about. In such cases the *as*-phrase must be singular:

(49) a. *As a responsible member of society*, *you* shouldn't drink and drive. (impersonal ✓)

b. *As responsible members of society*, *you* shouldn't drink and drive. (impersonal *)

When the *as*-phrase is plural, as in (49b), the sentence is felicitous only if *you* is interpreted referentially This type of evidence once again shows that impersonal *you* is singular in number, whereas referential *you* is not so restricted.[26]

Given the evidence suggesting that impersonal *you* is singular, it might seem surprising that it can bind the reciprocal *each other*, given that reciprocals are usually licensed by plural antecedents. This was pointed out by Malamud (2012:10) and is shown in her example below:[27]

(50) In those days, you_i couldn't talk to *each other*$_i$ in the street.

It is well known that collective nouns, which are singular group-denoting noun phrases, can share properties with plural noun phrases. In British English and some American English varieties, they can bind the reciprocal *each other*, but only when the verbal agreement is plural, as in (51):

(51) The committee$_i$ were able to talk to each other$_i$. (Malamud 2012:10)

This pattern has been taken to suggest that the antecedent of the reciprocal does not have to be syntactically plural: what is required for binding *each other* is that it be *semantically* plural (cf. McCloskey 1986; Munn 1999). Following this reasoning, we propose that impersonal *you* is syntactically singular but allows a semantically plural interpretation, similarly to hybrid nouns like *committee*.[28]

[26]We also note that referential *you* can co-occur with a numeral modifier, whereas impersonal *you* cannot, as in (i-ii):

(i) *You two* suffer when you see others suffer. (referential ✓, impersonal*)

(ii) *You both* suffer when you see others suffer. (referential ✓, impersonal*)

Though this difference also suggests that impersonal *you* is singular, we do not use it as a diagnostic because it might be due to the fact that impersonal *you* exhibits restrictions on what can modify it (see section 4.3).

[27]Malamud (2012:11) noted that impersonal *one* cannot bind the reciprocal *each other* (*?One$_i$ used to say hello to *each other*$_i$.) A reviewer points out that the example improves with the reciprocal *one another* (One$_i$ should not pass judgment on *one another*$_i$). Alhailawani et al. (2022:13) show that in Jordanian Arabic the pronoun *waaħad* cannot bind a reciprocal when it is used as an impersonal pronoun.

[28]The second person singular impersonal pronoun *je* in Dutch can also bind a reciprocal:

The fact that impersonal *you* is compatible with semantic plurality is confirmed by its ability to occur with collective predicates. It can be the subject of collective predicates like *gather* and *meet*, as in (52a) and (52b):

(52) a. There were times *you* would *gather* together to plot and strive for the things you were going to do the next day.[29]

b. In those days, *you* would *meet* around 5pm.

It is noteworthy that these predicates are also compatible with collective nouns that are syntactically singular, as in (53):

(53) The committee is *meeting/gathering* tomorrow to discuss these issues.

A reviewer points out that impersonal *you* contributes a variable whose value is taken from a domain that may contain singular individuals or pluralities. They provide (54) as a case where the domain contains singular individuals, since only one individual can be elected President:

(54) If you are elected President, that means you already signed a social contract with the general populace.

In section 5.2, we will propose that impersonal *you* has a syntactic number feature whose value is singular, which allows us to account for the fact that it can only bind singular anaphors and can only co-occur with singular nominal predicates and singular *as*-phrases. This syntactic feature is uninterpretable, to allow for the fact that impersonal *you* is compatible both with predicates that require a semantically plural and those that require a semantically singular subject.

4.5 Stress

The fifth and last difference between referential and impersonal *you* concerns stress.[30] At first sight, it seems that *you* can bear contrastive stress only when it has a referential reading (cf. Whitley 1978:24). Consider (55), where all caps indicate stress:

(55) YOU should always be kind. (referential✓, impersonal*)

The sentence conveys that the addressee(s) or a group to which the addressee belongs should be kind, as opposed to other individuals not explicitly mentioned.

(i) In dit land geef *je* elkaar cadeautjes met de kerst. (Dutch)
in this country give you each.other presents with the Christmas
'In this country, one gives one another presents on Christmas.'

Ackema and Neeleman (2018:123) analyze it as semantically plural. See Hoekstra (2010:43) for similar facts in Frisian.

[29] https://bplonline.contentdm.oclc.org/digital/collection/p15099coll2/id/57/, accessed on May 9th, 2022.

[30] See Partee (1991) for a general discussion of how stress affects the interpretation of generic sentences.

The impersonal interpretation of *you* is not available, even though the sentence makes a generic statement.

This does not seems surprising given that impersonal pronouns in other Indoeuropean languages are often phonologically weak or null: some 3rd person impersonal pronouns are clitics (e.g. Italian *si*, French *on*) and some 2nd person pronouns with an impersonal interpretation are obligatorily null (cf. Alonso-Ovalle 2002 for Spanish, Gruber 2011 for Bavarian German and Spyropoulos 2025 for Greek). Moreover, similarly to what we just observed for English, Zobel (2014:44) observes that the 1st and 2nd person pronouns in German cannot bear stress when interpreted impersonally.

Nevertheless, the claim that English impersonal *you* cannot be stressed faces some challenges. One is due to Bolinger (1979:195):

(56) You can't expect sympathy if YOU do it, only if somebody ELSE does it

We don't think that (56) necessarily shows that impersonal *you* can bear contrastive stress. This is because there are two types of *you* in this sentence: the subject of the matrix clause, which is bound by a Generic operator, and the subject of the *if*-clause, which is bound by the subject of the matrix clause. The former cannot bear stress; only the latter can. Thus, (56) only shows that an instance of *you* bound by a previous occurrence of *you* can bear stress.

Another challenge to the claim that impersonal *you* cannot bear stress is due to Gruber (2017:213). Comparing English impersonal *you* with the Dutch 2nd person impersonal *je*, Gruber observes that English *you* can bear stress as in (57), while Dutch *je* cannot:[31]

(57) In the States *you* hire someone to do your taxes. In Europe, YOU have to do them.

Some of the native speakers we consulted find this example grammatical with the impersonal reading of *you* (roughly meaning that, in the US, people typically hire someone to do their taxes, whereas in Europe people typically have to do their taxes on their own).[32] This shows that, at least for these speakers, there is no ban on impersonal *you* bearing stress. Similarly, a Reviewer noted that Ackema and Neeleman (2018:302) give an example in Dutch, with an impersonal subject bearing stress, which is also possible in English:

(58) The problem with being world champion is that YOU are always at the centre of attention while your opponents are not.

The question arises, then, why can *you* have an impersonal reading and bear stress in some cases, like (57) and (58), but not in others, like (55)? We think that the difference has to do with the amount of linguistic material that

[31] Because the two pronouns have the same type of interpretation, Gruber (2017) analyzes them as having the same syntactic structure and suggests that the fact that only one of them can bear stress must be due to differences in their morphophonological form.

[32] Other native speakers report that they interpret this sentence with the second *you* bound by the first *you* (roughly meaning that, in the US, a person hires someone to do their taxes, whereas in Europe that same person would do their taxes themselves).

is necessary to build the contrast required by the presence of contrastive stress. In the case of (55), it is easy to interpret the sentence with referential *you*: it contrasts the referent(s) of *you* with other individuals (either everyone else or a contextually salient set of individuals). It is hard to interpret it with impersonal *you*, which doesn't refer; we need to know what type of entities constitute the domain of quantification in order to create a contrast, but the sentence doesn't give us sufficient information to that effect – so the impersonal reading of *you* is not possible. However, the sentences in (57) and (58) are different: in (57), the PPs tell us that we are contrasting people in the US with people in Europe; in (58), the first clause tells us that we're making a generalization about a set of individuals who are world champions in contrast with individuals who aren't. In other words, the impersonal reading of *you* requires the presence of overt linguistic material that makes it possible to form the restriction and contrast entities in different domains of quantification.

We conclude that impersonal *you* can be stressed, but only in a more restricted set of contexts than referential *you*. We will return to this issue in section 5.1, where we discuss how the presence versus absence of an NP complement correlates with the interpretation of the two pronouns.

4.6 Case

Both referential and impersonal *you* can occur in argument positions, as discussed in Soares (2021). Referential *you* can also occur as a vocative, while impersonal *you* cannot.

We have already seen that impersonal *you* can occur as the subject of a finite clause, a nominative case position. It can also occur in non-nominative case environments: as a direct object (59a) and as the subject of an infinitival clause (59b), with accusative case; and in indirect object position (59c). Lastly, it can be a derived subject, i.e. the subject of a passive (59d):

(59) a. People hug *you* on your birthday. (Soares 2021)
(referential ✓, impersonal ✓)

b. Employers want *you* to work hard. (referential ✓, impersonal ✓)

c. Sometimes people give *you* the best present without realizing it.
(referential ✓, impersonal ✓)

d. In this country, *you* could be arrested for anything.
(referential ✓, impersonal ✓)

This distribution is noteworthy because, across languages, we find two classes of impersonal pronouns. Those of one class (Icelandic *maður*, Frisian *men*, English *one*) occur in multiple case positions and allow only a generic reading. Those of the other class (Italian *si*, Swedish *man* and Dutch *men*) can only occur in nominative case positions and allow both a generic and an existential reading. In this reading, they are interpreted similarly to an indefinite like *someone* or *some people* (Cinque 1988; Egerland 2003; Fenger 2018). For example, Dutch *men* can have both a generic (60a) and an existential reading (60b):

(60) a. Wanneer *men* in Italië is, eet *men* pasta. (Dutch)
when IMP in Italy is, eat IMP pasta
'When people are in Italy, they have the habit of eating pasta.'

b. *Men* heeft voor je gebeld, maar ik weet niet waar het over
IMP has for you called, but I know not what it about
ging.
went
'Someone has called for you, but I don't know what it was about.'
(Fenger 2018:292,297)

In other words, there is a correlation between having a restricted distribution and allowing an existential reading. English impersonal *you* patterns like the pronouns of the first class: it is not restricted to nominative case positions and it does not allow an existential reading (cf. Egerland 2003; Malamud 2006; Zobel 2014; Fenger 2018). As we see below, neither the counterpart of (60b) nor an example in the present tense allow an existential reading of *you*:

(61) a. You called, but I don't know what it was about.

b. You always call, I don't know why.

The lack of an existential reading also characterizes 2nd person impersonal pronouns in other languages (see Siewierska 2004:212; Egerland 2003:81).[33]

4.7 Section summary

In this section, we have discussed the syntactic properties of impersonal *you* and referential *you* and emphasized the following:

- Impersonal *you* cannot co-occur with a noun. Referential *you* can.
- Impersonal *you* can be coordinated only if the second conjunct also contains *your*. Referential *you* does not exhibit this restriction.
- Impersonal *you* can be modified by an appositive only if it contains *your*. Referential *you* does not exhibit this restriction.
- Impersonal *you* behaves syntactically like a singular pronoun. Referential *you* can be either singular or plural.
- Impersonal *you* can bear stress only when the sentence provides enough information to create a contrast between the sets of individuals to which the generalization applies. Referential *you* does not exhibit this restriction.

[33] Several works have suggested that pronouns whose distribution is restricted are structurally deficient (see Cinque 1988; Chierchia 1995b, a.o. for Italian *si*). More recently, building on Egerland (2003), Fenger (2018) proposes that pronouns whose distribution is unrestricted (Icelandic *maður*, Frisian *men*, English *one*) have at least a ϕP layer, whereas those whose distribution is restricted (Swedish *man* and Dutch *men*) lack both a DP and a ϕP layer. However, as we mentioned in footnote (55), Fenger also entertains the possibility that Dutch *men* might be a DP whose D-layer is featurally deficient.

- Impersonal *you* can occur in all argument positions, but not as a vocative. Referential *you* can occur in all argument positions and also as a vocative.
- Impersonal *you* lacks an existential (or 'arbitrary') interpretation. It differs from other impersonal pronouns that have a restricted distribution and allow an existential interpretation.

5 Syntactic analysis

In this section we flesh out the internal structures of referential and impersonal *you*. A number of studies have argued that impersonal pronouns are deficient in that they lack the higher layers of structure and consist of only ϕP and N, or only a bare N (see Egerland 2003; Hoekstra 2010; Ackema and Neeleman 2018; Fenger 2018; Šereikaitė 2022). We provide evidence that an impersonal pronoun can have a DP layer.[34] We argue that referential *you* and impersonal *you* differ not in the higher, but in the lower levels of structure: only the internal structure of referential *you* comprises an NP. We also propose that they differ in their number feature.

5.1 Presence or absence of a structural core

We propose that a fundamental difference between referential and impersonal *you* has to do with their inner structure: referential *you* has an NP at the core of its structure, whereas impersonal *you* does not, as shown in Table 3.

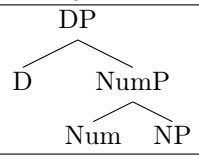
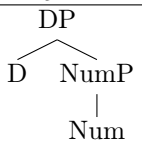
Referential *you*	**Impersonal *you***
	

Table 3: Presence vs absence of an NP complement

The empirical evidence that supports this proposal is quite clear, as we discussed in section 4.1: only referential *you* can occur with an overt noun; impersonal *you* cannot. When a noun is present, as in (35), *you* cannot have an impersonal interpretation.[35]

[34] Though this is not the prevalent view for impersonal pronouns, this type of analysis has been proposed for the impersonal pronoun *waħaad* in Jordanian Arabic (Alhailawani et al. 2022), German *du* (Ritter and Wiltschko 2019), and impersonal *man* in Multicultural London English (Hall 2020).

[35] We are not saying that a DP can be bound only if it lacks a lexical NP. It is well known that indefinites containing an NP can be bound by a quantifier. Moreover, as pointed out by a Reviewer, in Thai an R-expression that contains a lexical noun can be bound by another R-expression, as shown in Lasnik 1989. However, there might be a one-way implication: a DP must be bound when it lacks an NP complement.

5.1.1 Lack of Lexical Content

If we are correct that impersonal *you* lacks an NP, we should expect it to behave differently from other elements that can be bound by a generic operator but contain an NP – like *a person*, for example. This is indeed the case, as shown by the following three observations.

First, consider the contrast in (62) between a generic sentence with *a person* and one with impersonal *you*. The former is fine, the latter is infelicitous, as noted in Kirkpatrick and Knobe (2024):[36]

(62) a. A person has a nose.
b. #You have a nose.

We attribute this difference to the presence of a noun in the indefinite *a person* and its absence in *you*. The NP contributes a predicate (cf. Szabolcsi 1987; Stowell 1989; Longobardi 1994, a.o.); so (62a) conveys that, generally, given an individual x who is a person, x has a nose. The impersonal pronoun *you* only provides a variable, no predicate; (62b) doesn't contain enough material to build the restriction, which leads to the difficulty in interpreting the sentence (generally, given an individual x who is ???, x has a nose). Note that adding lexical material helps:

(63) You have a nose in order to breathe.

The additional material (*in order to breathe*) contributes to the restriction (x is an entity who needs to breathe) and thus to the interpretation of the sentence.

Second, Kirkpatrick and Knobe (2024:8) discuss another interesting difference between an indefinite singular and impersonal *you*, shown in (64):

(64) a. *A trained barista* makes coffee like this.
b. *An Israeli* makes coffee like this.
c. *You* make coffee like this.

They note that the examples with an indefinite singular subject convey that something holds of an entity by virtue of it being an entity of a certain type – for example, a trained barista, or an Israeli. In contrast, those with *you* assert something about an action, abstracting away from any information about specific kinds of entities. This interesting observation can be nicely captured by our proposal that impersonal *you* does not contain an NP in its internal structure: because it lacks an NP, on its own it cannot specify what kind of entities constitute the domain of quantification.

Finally, let us consider again the ability to bear stress discussed in section 4.5. We observed that, when *you* bears contrastive stress, it is difficult to get the impersonal reading; additional overt linguistic material is needed to make the restriction explicit and allow the contrast between entities in two domains

[36] Kirkpatrick and Knobe (2024) build on Moltmann (2010:264), who noted this contrast comparing the bare plural *people* and the impersonal pronoun *one*:

(i) *People* have noses. / ??*One* has a nose.

of quantification. We suggest that this is also related to the presence vs absence of a NP: contrastive stress generates sets of alternatives; impersonal *you* doesn't contribute enough information to build the restriction and figure out which sets are being contrasted. We view the inability to contribute enough information to form the restriction as due to the fact that impersonal *you* does not have an NP at the core of its structure.

In sum, we have seen three differences that follow from the presence of a lexical NP in indefinites and its absence in impersonal *you*. Each of them suggests that impersonal *you* does not provide a predicate that can contribute to the domain restriction. We see this as support for the idea that impersonal *you* does not have an NP at the core of its structure.

Before we proceed, we should ask why, if our syntactic analysis is correct, the referential reading of *you* goes with the presence of an NP complement and the impersonal reading with the absence of an NP complement. Could it have been the other way around? As a Reviewer phrased it, why can't a noun phrase like *you linguists* be bound by a Generic operator? Clearly the presence of a lexical NP doesn't prevent a noun phrase from being bound, as we see in the examples with singular indefinites just discussed. This means that lack of an NP complement might be a sufficient condition, but is certainly not a necessary condition for a noun phrase to function as a bound variable.

What we contribute is the observation that the presence of the NP in co-occurrence with *you* yields only a referential reading. We do not show how exactly the syntactic structures that we propose map to the two different readings of *you*, a major task that would be beyond the goals of this paper. However, we will make two remarks. First, our analysis is not compatible with proposals that view D as the element responsible for making a noun phrase referential: the syntactic tests that we apply lead us to the conclusion that both referential and impersonal *you* have a D-layer (see section 5.4). Second, the correlation that we observe leads us to suggest that the presence of an NP complement makes it possible for *you* to refer. Intuitively, it is because the NP provides descriptive content; it is a predicate that provides the set of entities denoted by the DP (for example, in (31b), the entities are soldiers). When the NP is not present, there is no predicate, and *you* cannot refer; it simply provides a variable that links the predicate in the restriction and the one in the nuclear scope. It doesn't even contribute to the domain restriction of the operator, which is provided by other elements; for example, as we mentioned in section 3.1, locative and temporal PPs, *if/when* clauses, *as*-phrases. (So, a way to restrict the domain to soldiers, would be: "As soldiers, you must accept what life has in store for you.") In other words, the lack of an NP at the core of the structure restricts *you* to serving as a variable.[37] The only semantic contribution that impersonal *you* makes to the

[37] There is an interesting body of literature that suggests that the variable is a type of index feature present in the syntactic representation of a DP (Nunberg 1993; Elbourne 2008; Schwarz 2009; Simonenko 2014; Hanink 2018, 2021; Jenks and Konate 2022, a.o). Some analyses put it in the specifier of DP, others in its own separate projection. The semantic role of this index is to link the DP to discourse or contextual referents. Thus, when it comes to referential *you* with an NP, as in *you linguists*, this feature will act as a variable that is applied to an NP

domain restriction is its person feature.

5.1.2 Is there an N?

We have proposed that impersonal *you* lacks an NP complement, based on the fact that it cannot co-occur with a noun and that it behaves differently from singular indefinites like *a person*, which can be bound by a generic operator and contain a noun. The question arises of whether impersonal *you* may contain a different type of nominal category at the core of its structure, for example an N with functional features but no lexical content.

A number of analyses of impersonal pronouns have suggested that they contain an N (with or without a ϕ-layer on top), for example Egerland (2003), Gruber (2017), Ackema and Neeleman (2018) and Fenger (2018) for impersonal pronouns, and Déchaine and Wiltschko (2002) for a larger set of pronouns. For example, Fenger (2018) analyzes English *one* and Dutch *men* as follows:

(65) a. English *one*

b. Dutch *men*

N

Both Ackema and Neeleman (2018) and Fenger (2018) assume that N does not stand for the usual N with lexical content and view it as simply the "base" of the pronoun, an index that corresponds to a variable. Similarly, Kratzer (2009), who examines so-called 'fake indexical' *you*, proposes that the internal structure of the pronoun contains an *n*, which is merely an index, not a lexical category. So we see that these analyses contain an idea similar to ours, namely that, when *you* functions as a variable, it lacks a lexical layer at its core. However, they postulate that it contains an N, while we are proposing that there is no NP at all (the index is associated with the DP).

If we were to assume that impersonal *you* contains an N, we should ask what features it would have. One possibility is that N hosts a [+human] feature (cf. Egerland 2003). We know that many impersonal pronouns are restricted to a human interpretation (Italian *si*, Dutch *men*, Swedish *men*, the Lithuanian null impersonal pronoun, etc.). It is not entirely clear whether or not impersonal *you* is restricted in this way,[38] but some authors argue that is it. Ackema and Neeleman (2018:130) illustrate this restriction for English *one* and

predicate: *you* with an index will pick out the maximal plurality of linguists (for a lexical entry, see Jenks and Konate 2022:21).

[38] Malamud (2012:22) points out that impersonal *you* is not necessarily restricted to humans, based on sentences like "If *you*'re in SpecIP, then *you*'re ... crashing the whole derivation." (see also Little 2024). One reviewer finds this sentence very marginal, and it is possible that the speakers who accept it might be anthropomorphizing the referent. Another example where *you* can denote non-human entities is given in (i), a sentence in which the entities in the restriction are mammals, not necessarily human beings:

(i) If *you* are a mammal, no matter if *you* are a human, mouse, tiger, or whale, *you* have seven vertebrae in your neck. (internet example)

impersonal *you* with (66), where the impersonal pronouns can be interpreted as ranging over heavy people but not over heavy luggage:

(66) a. One is not allowed on board if one weigh(s) too much.
b. You are not allowed on board if you weigh too much.

However, the [+human] feature, if present, does not necessarily have to be on N. It could be on the functional head D.[39] It could be a restriction associated with the operator, as suggested in Ackema and Neeleman (2018:131) for the case of existential readings of 3rd person pronouns. It might also not be part of syntactic representation and simply follow from the fact that *you* has a 2nd person feature, which implies a human restriction.

We should note that a number of studies have proposed that NP or N are not a necessary component of a pronoun. For example, Cardinaletti and Starke (1999) propose that 'weak pronouns' consist solely of a ϕP, with no further internal structure. Despić (2026) provides an analysis of Serbian second-position clitics in which they lack a nominal root and are composed solely of unvalued ϕ-features that must undergo evaluation.[40] However, thinking in terms of Grimshaw's (2000) notion of extended projection, we might think that N is necessary as the nominal core whose extended projection is a DP. This would be a theoretical consideration in favor of postulating the presence of N at the core of impersonal *you*. We could postulate an N that carries a nominal feature and has no lexical content. The lack of lexical content would mean that N doesn't provide a predicate, and so we could capture the differences the impersonal *you* exhibits with respect to noun phrases that do, like *a person*.[41]

In sum, we propose that impersonal *you* lacks an NP at the core of its structure. This accounts for the observations that it never co-occurs with a noun and that it behaves differently from other noun phrases bound by a generic operator that contain a noun. In our view, the nominal property of impersonal *you*, which allows it to occur wherever a noun phrase can occur, is encoded in D; hence, there is no need to postulate an N at its core to encode it.

5.2 Number

Turning now to the next layer of structure, we propose that both referential and impersonal *you* have a Num(ber)P, whose head has a number feature.[42]

[39] Some analyses of impersonal pronouns put a [+human] feature in a ϕ-layer of structure, along with other ϕ-features (see Sigurðsson and Wood 2021; Alhailawani et al. 2022, a.o.).

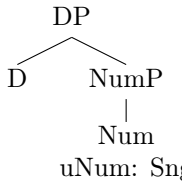
[40] There are also other instances of DPs that have been analyzed as not having NP or N. One is found in Kayne's (1994) analysis of relative clauses where D takes a CP as a complement. Another is the D that can take a CP complement in Korean infinitival clauses (Bogal-Allbritten et al. 2024), a TP complement in Spanish verbal infinitives, or an AspP complement in Romanian supines (Alexiadou et al. 2011).

[41] Diachronically, a number of impersonal pronouns have developed from a noun, often meaning *man* (see Egerland 2003). This suggests a process by which the lexical noun has lost its meaning and come to be interpreted simply as a variable, a stand-in for an entity with human properties.

[42] Because *you* is not marked for gender, our discussion of its ϕ-features will only cover number and person.

As observed in Section 4.4, referential *you* can be either singular or plural, whereas impersonal *you* is syntactically singular: it can bind only singular anaphors and is compatible only with singular nominal predicates and singular *as*-phrases. This leads us to propose that the two pronouns differ as follows: impersonal *you* has a number feature whose value is restricted to singular, whereas referential *you* can have either value for number. Building on Smith (2021), we propose that impersonal *you* has an inherent uninterpretable singular feature:

(67) Impersonal *you*



Along with much of the literature, we assume that impersonal *you* supplies the value for the number feature to a reflexive that is binds (directly or indirectly, cf. Kratzer 2009; Reuland 2011, a.o.), resulting in the singular form *yourself*. Similarly, when impersonal *you* co-occurs with a nominal predicate, it provides the value singular to the unvalued number feature of the nominal predicate (see e.g., Corbett 1979, 1991, 2006 for discussion of predication reflecting morphosyntactic agreement). Lastly, we view *as*-phrases as instances of adjunct predication (see Szabó 2003), similarly to depictives, which are controlled by impersonal *you* in the matrix clause.

The fact that impersonal *you* is syntactically singular has an effect on phenomena that involve morpho-syntactic agreement, like the ones we just mentioned, but doesn't constrain it to a singular interpretation. As discussed in section 4.4, impersonal *you* is a variable whose value may range over singular individuals or pluralities or both. Hence it can bind reciprocals like *each other* (50) and is compatible both with predicates that require a semantically singular subject and with those that require a semantically plural subject ((54) vs (52)).

Typologically, impersonal *you* is similar to the 2nd person pronoun *je* in Dutch, which has an impersonal reading and also behaves like a semantically plural pronoun, despite being morphosyntactically singular (Ackema and Neeleman 2018). Impersonal pronouns in a number of languages are compatible with either a singular or plural interpretation (see e.g., McCloskey 2007 for the Irish autonomous construction, also Egerland 2003 for Germanic and Romance languages, Šereikaitė 2022 for Lithuanian).

The question arises about how to encode the notion of semantic plurality and the fact that impersonal *you* may be, but does not have to be, semantically plural. There are multiple ways of dealing with it. One option would be to say that impersonal *you* has a number feature, but this is a semantic feature, not a syntactic one. For example, Kratzer (2009) suggests that a variable can be born with a semantic number feature (either singular or what she calls group feature) that is not active in syntax. This determines whether the variable is interpreted as a singular individual or a sum/plurality of individuals. Other studies also discuss cases where semantic plurality is not encoded in the syntax. For example,

Dayal (2004:429–430) suggests that, in a sentence with a generic subject like "The lion gathers near acacia trees when it is tired" the predicate *gather* can co-occur with a syntactically singular subject (*the lion*) because it is interpreted as referring to lions as a kind. The fact that the notion of kind is semantically plural allows the licensing of a collective predicate.[43] Though impersonal *you* is not a kind-denoting DP[44], following this literature we could suggest that semantic plurality is what allows impersonal *you* to license collective predicates and the binding of reciprocals.

Another alternative would be to suggest that semantic plurality can be encoded as a feature in the syntactic representation, as in Smith (2021) and Messick (2023). Smith (2021) suggests this type of approach for hybrid nouns like *committee* or *government*, which are semantically plural but can behave like singular nouns syntactically, triggering singular verbal agreement. In his analysis, hybrid nouns have two values for number: i) an interpretable number feature whose value is reflected in semantic agreement and ii) an uninterpretable number feature whose value is reflected in morphosyntactic agreement.[45] Along these lines, we could suggest that impersonal *you* has two number features: a singular feature that is morpho-syntactically active and triggers agreement with reflexives, nominal predicates and *as*-phrases; and a semantic feature that doesn't have a morphological reflex but licenses collective predicates like *gather* and reciprocals like *each other*. In this type of approach, both morphological and semantic features trigger agreement. However, according to these studies, once semantic features enter an agreement relation, the morphological features are no longer accessible. Given this, we would expect the plural reflexive *yourselves* to be possible with impersonal *you* when the semantic features are targeted for agreement. This prediction is not borne out: impersonal *you* cannot co-occur with a plural reflexive. We can see this in the following example, provided by Troy Messick (p.c.):

(68) In those days, *you* couldn't talk to *each other* and *yourself/*yourselves*.

In this paper we assume that, though impersonal *you* can be semantically plural, semantic plurality is *not* encoded in the syntax.[46]

Turning now to referential *you*, we have seen that it can refer to a single individual or a plurality of individuals who are the speaker's addressees, or to a group to which the addressee belongs. Syntactically, it can be singular or plural, as shown by its behavior with respect to reflexives, nominal predicates,

[43] Cf. Krifka et al. (1995:89–90). Dayal also notes that the property of being syntactically singular and yet allowing collective predicates is shared by other elements, like *everyone*, as in *"Everyone could gather on the street."*

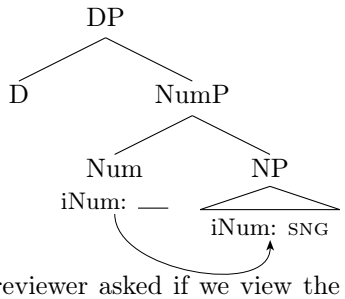
[44] See Moltmann (2006:260), Chierchia (1995b:108) for a similar observation made for other impersonal pronouns.

[45] Also see Wechsler and Zlatić (2000) for yet another approach, which distinguishes different types of features, some of which do or do not have an effect on interpretation.

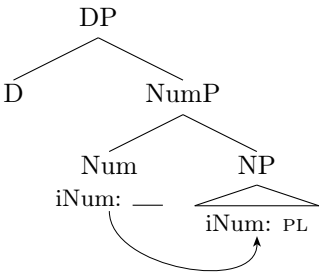
[46] Another logical possibility is that impersonal *you* could be underspecified for number, i.e., lack any semantically interpretable number features (see Egerland 2003, McCloskey 2007). However, we leave this option aside because we have strong evidence that impersonal *you* is syntactically singular, and therefore cannot be completely underspecified for number.

as-phrases and reciprocals (see Section 4.4). We propose that its NumP has an interpretable number feature that enters the derivation unvalued, as in (69-70). The value for this feature will be supplied by the NP complement, which has an interpretable number feature (see Kouneli 2019; Thoms 2019 for number features appearing simultaneously on two distinct heads). When the complement is not overtly expressed, we assume that there is a null NP projected in the structure. This null NP complement provides the number feature for the Num head.[47]

(69) Singular referential *you*



(70) Plural referential *you*



A reviewer asked if we view the syntactic representations for singular and plural referential *you* as distinct, even though morphologically they are syncretic. We propose that they differ in whether or not that have an NP at core of the structure and in the value of number feature. In standard English, their surface forms are identical despite the difference in the value for number.[48] If we assumed Distributed Morphology, we would say that the number feature gets deleted post-syntactically, and these pronouns are left with the 2nd person feature, which is paired with the same phonological exponent, namely *you*. There are varieties of English where the different value of the number feature is manifested in the morphological form, e.g. as *y'all* or *yous/youse* (hence is not deleted post-syntactically). As noted in Malamud (2012:footnote 5), in such cases only the singular form of the pronoun can be used impersonally.

5.3 Person

The morpheme *you* in English is only attested in 2nd person pronominal forms (*you, your, yours, y'all, yourself, yourselves).* Given this, along with the rest of the literature (Malamud 2012; Zobel 2014; Ackema and Neeleman 2018, a.o.),

[47] We leave for future research a discussion of the exact nature of the NP that is at the core of the structure of referential *you*. Postal (1969) argues that English *you* and *we* are followed by a noun that is deleted. Gruber (2017:203) proposes that *you* contains a phonologically null noun, MAN, which stands for a sentient entity (similar to Elbourne's 2005 silent ONE, a predicate over individuals.) Cf. Ritter and Wiltschko (2025:340) for a survey of the types of analysis that have been proposed for the internal structure of different pronouns across languages.

[48] This is reminiscent of Collins & Kayne's 2023:19) analysis of English *they*, where the same surface form stems from minimally different syntactic structures: one that contains a null masculine morpheme (MASC) and one that contains a null feminine morpheme (FEM):

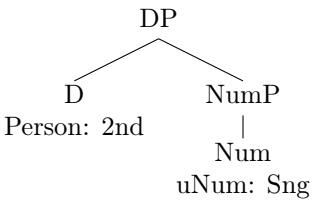
(i) $[_{DP}$ th- $[_{\#P}$ -ey $[_{GenP}$ MASC NP]]]

(ii) $[_{DP}$ th- $[_{\#P}$ -ey $[_{GenP}$ FEM NP]]]

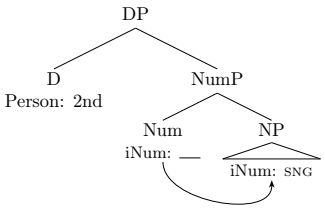
we assume that both referential *you* and impersonal *you* have a 2nd person feature, which determines their morphological form.[49]

There are multiple proposals concerning where the person feature is encoded in the structure of a pronoun, both across languages and within a single language. Some studies put it on D only in the case of 1st and 2nd person pronouns (cf. Ritter 1995; Baker 2008), while others in the case of all pronouns (cf. Bernstein 2008a,b for English, Longobardi 2008 for a more general claim).[50] Some studies situate it in a functional head ϕ that also contains number and gender (Déchaine and Wiltschko 2002; Gruber 2017; Fenger 2018, a.o.), while others put it in D in the case of indexical pronouns and in ϕ in the case of bound pronouns (Déchaine and Wiltschko 2010, cited in Gruber 2013). We encode person as a feature on D and provide the following schematic representations:[51]

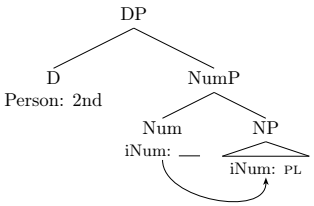
(71) Impersonal *you*



(72) Singular referential *you*



(73) Plural referential *you*



Given the presence of a 2nd person feature, we might expect that impersonal *you* makes a generalization over a set of addressees. But this is not the case; impersonal *you* makes a generalization about individuals who are in the domain identified by the restriction (not individuals who are addressees). Intuitively,

[49]There are two prominent views in the literature concerning 1st and 2nd person. One is that it is inherently specified in the featural make-up of a pronoun (cf. Halle 1997; Harley and Ritter 2002; Sigurðsson and Egerland 2009; Nevins 2007, a.o.). Another is that person is a feature on a pronoun whose value is not inherently specified, but rather acquired through binding by an operator, in particular a Speaker and an Addressee operator for 1st and 2nd person respectively (cf. Tsoulas and Kural 1999; Speas and Tenny 2003; Sigurðsson 2004; Bianchi 2006; Baker 2008; Kratzer 2009, a.o.). The choice between these two approaches is tangential to the issues discussed in this paper.

[50]We do not assume that D encodes definiteness, nor that person and definiteness go together, as in Lyons (1999).

[51]The notion of person has been handled differently in different studies. For example, a 1st person pronoun can be seen as having the features [+participant, +author], whereas a 2nd person pronoun as being [+participant, −author] (Halle 1997, Nevins 2007). Alternatively, person can be analysed as having two possible values: speaker for 1st person and addressee for 2nd person (Harley and Ritter 2002, Sigurðsson and Egerland 2009, a.o.). Because these distinctions do not play a role in our discussion, we simply represent the value as "Person: 2nd."

the contribution of the 2nd person feature in the impersonal pronoun seems to be that the domain of quantification includes the addressee; in other words, the generalization holds of people in a certain situation/with certain properties, including the addressee(s) (cf. Stirling and Huddleston 2002).

Is the addressee always included in the domain of the generic operator? In terms of truth-conditions, not necessarily. For example, (74) could be uttered to an addressee who is not a cancer survivor:

(74) As a cancer survivor, *you* have a heightened appreciation of life.

Even if the addressee is not in the domain of the generic operator, the intuition is that the generalization includes them, or at least would include them, if they were. How do we reconcile the fact that the addressee might not be in the domain of quantification and yet the generalization seems to apply to them?

Building on Moltmann (2006), works like Zobel (2014), Gast et al. (2015) and Deringer et al. (2015) have argued that impersonal pronouns with a 2nd person feature invite the addressee to imagine having the properties of the individuals in the restriction (for example, being cancer survivors). Gast et al. (2015) also invoke the notion of empathy: with impersonal *you*, the addressee is invited to empathize with the people about whom a generalization is made.

Zobel (2014:274–284) addresses the issue of the contribution of 2nd person feature in her analysis of German impersonal *du*. She proposes that the semantic contribution of a 2nd person impersonal pronoun is the same as that of other impersonal pronouns, namely a variable that is bound by a generic operator. However, impersonal *du* also contributes a meaning component that is part of pragmatics, namely the participant-oriented component of inviting the addressee to simulate being part of the domain of quantification. Ackema and Neeleman (2018) also provide a detailed formal analysis of the contribution of 2nd person in pronouns, arguing that the features of which they are composed (DIST and PROX) apply in sequence in the case of referential pronouns and in parallel in the case of impersonal pronouns, giving rise to different interpretations. We will not delve into these issues any further here, but point the reader to the interesting literature that addresses them in depth, like Ackema and Neeleman (2018); Malamud (2006, 2012); Zobel (2014).

Having a second person pronoun with an impersonal reading is not an accident of English. Crosslinguistically, we find a number of languages where the second person pronoun can have both a referential and an impersonal reading (see the references in footnote 2). We might wonder why 1st person pronouns with impersonal readings seem to be less common than 2nd person pronouns.[52]

[52]For examples of 1st person pronouns used with an impersonal reading, see Kitagawa and Lehrer (1990); Zobel (2014, 2024, 2023:741). As we mentioned in section 3.2, Moltmann (2006) analyzes impersonal pronouns like PRO or English *one* as having a speaker orientation, that is as standing for a range of individuals that the speaker identifies with or simulates. If this is correct, third person impersonal pronouns are doing what an impersonal pronoun in the 1st person pronoun might do, namely forcing inclusion of the speaker in the domain of quantification and possibly enforcing the speaker's perspective. See D'Alessandro and Alexiadou (2002) for inclusion of the speaker in the case of Italian *si*.

Zobel (2014:106) sees the difference between the 2nd person and the 1st impersonal pronoun in German as follows: "The impersonal use of second person singular pronouns aims to build closeness between the speaker and the addressee by inviting the addressee to empathize with the individuals generalized over. In contrast, the impersonal use of German first person singular *ich* is used by the speaker to distance herself from other individuals in the context."

5.4 DP

Various studies have suggested that bound pronouns lack the outer layers of structure that referential pronouns have. For example, Egerland (2003), Gruber (2017), Fenger (2018), Ackema and Neeleman (2018) and Šereikaitė (2022) have made this claim for impersonal pronouns. Wiltschko (1998) divides German personal pronouns between those that have and those that don't have a D-layer. Because she assumes that D is the locus of definiteness, in her analysis the pronouns that are DPs are referential and cannot be bound, while those that lack the D-layer can be bound variables. Wiltschko (2002) made a similar claim for Halkomelem, arguing that the pronouns that are DPs cannot be bound.

In contrast, in this work we argue that both referential and impersonal *you* have the outer layers of structure, namely a D- and a Num-layer. Here, we highlight several pieces of evidence that support the presence of a DP layer for impersonal *you*:

1. In sections 4.2 and 4.3, we showed that impersonal *you* can be coordinated with certain DPs (e.g. *your partner*, *your children*) and can occur with certain appositives (e.g. *especially your sense of safety*). We take the fact that impersonal *you* can be coordinated with other DPs and allow appositives as evidence that it is also a DP.

2. In section 4.4, we showed that impersonal *you* can bind a reflexive anaphor. Landau (2010:378–380) analyzes the ability to bind reflexives as a property of DPs. He notes that weak implicit arguments in English that lack a DP-layer, such as implicit objects, cannot bind but can control PRO, given that these arguments are projected syntactically. He assumes an Agree-based version of the binding theory building on Reuland (2001). Under this view, anaphors have a D feature and ϕ-features, and enter into Agree relation with the binder. The anaphor needs its D feature to be checked by the binder and thus, the binder must have a D feature. This accounts for the difference between strong implicit arguments, which are DPs, and can bind, and weak implicit arguments, which are ϕ-Ps, and cannot bind. If correct, the ability of impersonal *you* to bind a reflexive anaphor constitutes additional evidence for the presence of a DP-layer.[53]

3. In section 4.6, we showed that impersonal *you* may occur as a subject, a direct object, or an indirect object. Being compatible with multiple case

[53] See footnote (55) for the implications of adapting Landau's diagnostics to the analysis of Dutch *men*.

positions is a property of DPs (for tying case to the presence of a D layer, also see Danon 2006; Landau 2010). Impersonal pronouns that are deficient i.e., lack the DP and ϕ-layers, are compatible only with a nominative case position (Fenger 2018), which has been argued to be a non-case position (see e.g., Falk 1991; Bittner and Hale 1996; Kornfilt and Preminger 2015; Fenger 2018).

Now we would like to add yet another piece of evidence in favor of viewing impersonal *you* as DP: the fact that it can co-occur with a depictive predicate. The examples in (75) show that the depictive predicates *sober* and *alone* can co-occur with both referential and impersonal *you*:[54]

(75) a. *You* should always drive *sober*. (referential: ✓, impersonal: ✓)
b. In a big city, *you* should not walk *alone* at night.
(referential: ✓, impersonal: ✓)

Landau (2010:360) proposes that secondary predicates like these must be predicated of DPs. In his proposal, if an expression lacks a DP-layer, it won't saturate a syntactic predicate. Building on Longobardi (1994), he argues that strong implicit arguments like PRO or *pro* allow secondary predicates, and therefore they have a D feature and project a DP-layer. For example, in English, PRO can control a depictive as in (76).

(76) They expected [PRO to leave the room *angry*]. (Landau 2010:359)

Landau shows that weak implicit arguments like implicit objects or implicit agents in passives, despite being syntactically projected, cannot control depictives. According to him, these arguments lack a DP layer, but have a ϕ-layer. This is illustrated in (77b) and (78).

(77) a. *They ate *raw*.
b. They ate the meat *raw*. (Landau 2010:359)

(78) a. We$_i$ left the room *angry*$_i$.
b. *The room was left *angry*.

Following Landau's (2010) analysis, we suggest that the availability of depictives with impersonal *you* provides further evidence that it is a DP.[55] Overall, our finding that impersonal *you* is a DP is in line with a recent study on the

[54]The fact that *you* can have an impersonal reading in these examples is confirmed by the fact that it can be replaced by impersonal *one*:

(i) *One* should always drive *sober*.

(ii) In a big city, *one* should not walk *alone* at night.

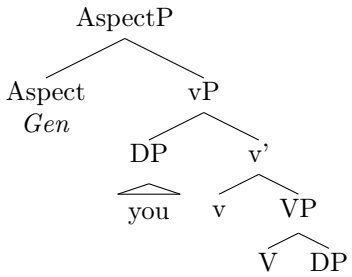
[55]A reviewer points out that depictives can be predicated of the Dutch impersonal pronoun *men*, which has been argued to be N in Fenger (2018). If Landau is correct, then Dutch *men* must be a DP. This is in fact a possibility that Fenger (2018) entertains in footnote 23, where she suggests that, if we conclude from Landau's diagnostics that Dutch *men* is a DP, we may say that the D-layer is present but deficient. The same reviewer also points out that Dutch *men* does not allow an NP complement. The Dutch facts require further investigation, which is outside the scope of this paper.

Jordanian Arabic impersonal pronoun *waħaad*, which is also a DP according to Alhailawani et al. (2022:3). Specifically, this pronoun has an overt D element, in addition to having ϕ-features. Gruber 2017 has also argued that some pronouns like German *du* and English *you* have a DP-layer.

5.5 Generic vs. Existential reading

We have adopted the view that the generic reading of *you* can be captured by postulating the presence of a Generic Operator (Section 3). We assume that it is located in a structural position higher than the layer where both external and internal arguments are introduced.[56] Specifically, we adopt the proposal from Chierchia (1995b) and D'Alessandro and Alexiadou (2002) that places it in the Aspect phrase:[57]

(79) Impersonal *you*



It is well known that, in some languages, impersonal pronouns can also have an existential reading (see Section 4.6). We provided an example with Dutch *men* in (60). Such a reading is not available with impersonal *you* (cf. Egerland 2003; Malamud 2006; Zobel 2014; Fenger 2018). Why?

There are at least two lines of work in the literature that attempt to understand the presence and absence of the existential reading in impersonal pronouns. One suggests that it is related to aspect. For example, in the case of Italian *si*, imperfective aspect gives rise to the generic reading and perfective aspect to the existential reading (see Cinque 1988; D'Alessandro and Alexiadou 2002). As we can see in the example below from D'Alessandro and Alexiadou (2002:35), in (80b), with perfective aspect, *si* has an existential reading (there are people, the speaker included, who ate well in that restaurant):

(80) a. In quel ristorante *si* mangiava bene. (Italian)
in that restaurant si ate-IMPF well
'People used to eat well in that restaurant.'

b. In quel ristorante *si* è mangiato bene.
in that restaurant si is eaten-PF well
'We have eaten well in that restaurant.'

[56] See Ackema and Neeleman (2018) for an alternative analysis in which the generic operator is merged at the constituent level, together with the pronoun.

[57] We leave aside VoiceP for simplicity.

This reading is not possible with English *you* regardless of the aspectual properties of the sentence.

Another proposal that attempts to understand the absence and presence of the existential reading is offered in Ackema and Neeleman (2018) and Fenger (2018). They adopt Harbour's (2016) insight that a Person node works as a function over sets: it takes a set of entities as input and gives a set as output. They propose that the pronouns that consist of ϕ-features and N, like English *one*, have a person node, as in (81).[58] In contrast, pronouns that lack ϕ-features entirely, like Dutch *men*, do not have a person node, as in (82). For them, when Person is present without feature specification, the result is that speaker, addressee, and others are included in the output set, and the existential reading is not possible. It is only when pronouns lack Person entirely that they can have an existential reading, which excludes speaker and addressee.

(81) Pronouns with only a generic reading

(82) Pronouns with both existential and generic readings

N

Impersonal *you* has a person feature with a specified value, namely 2nd person, so it's not like the pronouns with a generic reading that Ackema et al. (2018) discuss, which lack a specified value for person. Still, if we understand their system correctly, it predicts that *you* should be incompatible with an existential reading, because the addressee would be included in the output set. This prediction is correct. More generally, their system captures the correlation between the presence of a person feature and the lack of an existential reading.[59]

6 Summary and further issues

In this article we have focused on two questions: Do referential and impersonal *you* exhibit morpho-syntactic differences? If so, what is the analysis of their syntactic structure that can best capture them?

Addressing these questions has allowed us to make a number of contributions. On the empirical side, we have provided a thorough discussion of differences and similarities between referential and impersonal *you*, some stemming from new observations and some gathered from the literature (see Table 2). The

[58] This is a simplified version of their proposal, adapted from Fenger (2018:308).

[59] A reviewer points out that the puzzle is still left open: if *you* can be a variable, technically it should be able to be bound by an existential quantifier. To ensure that it is not bound by an existential quantifier, we could include an uninterpretable [+generic] feature, as proposed by Moltmann (2006:262) for *one* and Malamud (2012) for *you*. The role of this feature would be to ensure that the impersonal pronoun can only be bound by a generic operator, which would have the same type of feature. However, we're not entirely sure whether this feature is necessary. If *you* were bound by an existential quantifier, its reading ('there is an x and x is the addressee of the context, and x is fixing the road') would be difficult to distinguish from its referential reading ('you are fixing the road').

differences we have focused on concern the ability to co-occur with a lexical noun; restrictions on coordination and in modification by appositives; the ability to bind singular or plural reflexives and to co-occur with singular or plural nominal predicates and *as*-phrases; and the conditions for bearing contrastive stress.

On the analytical side, we have proposed that the internal structure of referential and impersonal *you* differs as follows:

- Referential *you* has an NP complement at the core of its structure. Impersonal *you* does not.
- Referential *you* has an interpretable number feature that can be valued as singular or plural. In contrast impersonal *you* has an uninterpretable number feature whose value can only be singular.

This is a new take on the notion of structural deficiency: while many impersonal pronouns have been analyzed as deficient in lacking an outer layer of structure (DP or a ϕP), we analyze impersonal *you* as lacking its inner structural layer, the NP. We wonder if other impersonal pronouns, like Dutch *men*, may be reanalyzed as lacking the inner layer and having a DP layer if we were to apply the same diagnostics we used in this paper.

Our paper also makes a methodological contribution by providing a comprehensive list of diagnostic tests that highlight the differences between the pronouns under investigation. For example, appositives and coordination have not yet received much attention in the literature on impersonal pronouns. We trust that these tests, some novel and some already present in the literature, constitute a set of tools that will prove useful to other researchers investigating pronouns that look alike morphologically but differ syntactically.

Our approach suggests a correlation between the syntactic structure and the semantic function of *you*: when *you* contains an NP, whether null or overt, it has a referential reading; when *you* lacks a lexical NP, it is interpreted as a variable bound by a generic operator. Having observed this correlation allows us to raise a number of important questions about the mapping between syntax and semantics. For example, do all pronouns bound by a generic operator lack an NP complement at the core of their structure? More generally, we can also ask, is lack of a lexical NP a necessary property of *all* bound pronouns? Answering these questions, though beyond the scope of this paper, is likely to sharpen our understanding of the complex nature of pronouns.

Thinking about how our proposal relates to others in closely related subfields, we note that, in the pragmatic literature, Gast et al. (2015) assume that referential and impersonal *you* are the same lexical element. Our close inspection of their syntactic properties reveals that they exhibit a number of differences, which we capture through minimal differences in their internal structure. Our analysis comes closer to the ones we find in the semantic literature, in particular in Gruber (2013, 2017), who argues that referential and impersonal *you* differ in their internal structure. It also recalls the proposals in Kratzer (2009) and Malamud (2012), which argue that referential *you* differs minimally from bound instances of *you* in terms of their semantic features. Putting our observations

together with those in Kratzer (2009), we see the need to distinguish three types of *you*: (i) Referential *you*, an indexical that refers to the addressee(s) of the utterance context or to a group that includes the addressee; it can occur in both generic and episodic sentences. (b) Impersonal *you*, interpreted as a variable ranging over a set of individuals that typically includes the addressee; it can occur only in generic sentences. (c) The 'fake-indexical' *you*, a bound variable that can occur in both generic and episodic sentences. This paper has focused on the morpho-syntactic differences between referential *you* and impersonal *you*. Further work can extend the analysis to a three-way comparison.

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