Referential and impersonal *you*: A syntactic perspective

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Abstract

This paper explores the morphosyntax of the English pronoun *you* focusing on its referential and impersonal readings. Referential *you* refers to the addressee(s) in the context of utterance, while impersonal *you* has an interpretation similar to that of impersonal *one*. In the pragmatics literature, *you* is viewed as one and the same pronoun (Gast et al. 2015). Based on a battery of syntactic tests, we argue that the two readings of the pronoun correspond to two minimally distinct syntactic structures. Both are DPs and contain a ϕP; however, they have a partially different set of ϕ features. Moreover, the ϕ head of referential *you* can take an NP complement, whereas the ϕ of impersonal *you* cannot. Impersonal pronouns have been argued to be deficient in lacking a DP layer (Egerland 2003; Fenger 2018) and consist of either ϕP and bare N, or only N. We enrich this typology by showing that they can, in fact, have a DP-layer and lack inner layers like N.

Keywords: impersonal pronouns, referential pronouns, DPs, ϕ-features, genericity

1 Introduction

It is common to think of 1st and 2nd person pronouns primarily as indexical elements that refer to the speaker and addressee of the utterance context, respectively. As an indexical, English *you* refers to an individual or plurality of individuals who are the speaker's addressee(s). This is the REFERENTIAL READING of *you*, exemplified in(1):

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

However a different reading of *you* is possible in generic sentences: in addition to a referential reading, *you* can also have what is called an IMPERSONAL READING.[1] With the impersonal reading of *you*, we interpret the sentence in

[1]Different works in the literature refer to the impersonal reading of *you* with different terms. Some call it 'impersonal *you*' , as we do (Kitagawa and Lehrer 1990; Egerland

(2) as asserting that, in general, if there's a situation of handling fire, anyone in that situation should be careful. 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.

The fact that a 2nd person pronoun can have both a referential and an impersonal reading is not unique to English; it is attested in other languages as well; see Malamud (2012a); Zobel (2014); Ritter and Wiltschko (2019) for German *du*; Egerland (2003) for Icelandic *maður*; Rezac and Jouitteau (2016) for French *tu* and *vous*, a.o.

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). These are sentences like those in (4), where there are two instances of *you*, and the second one can be interpreted as a bound variable:

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

b. Only you enjoyed what *you* ate.

The second instance of *you* is what Kratzer calls a 'fake indexical,' because it doesn't refer to the addressee; it is a variable whose interpretation ranges over a set of entities: (4a) conveys that, for any x, no x eats the food that x cooks, and (4b) that, for any x, no x enjoyed what x ate. This type of *you* is bound by a previous instance of *you* and can occur both in generic (4a) and in episodic sentences (4b). It is different from the impersonal *you* that is the focus of our paper, which is not bound by another pronoun and can only be found in generic sentences.

In this study, we focus on referential *you* and impersonal *you*. Specifically, we raise and seek an answer for 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?
- How do the syntactic properties of impersonal *you* relate to the typology of impersonal pronouns across languages?

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 significant gap in the literature when it comes to analyzing syntactic differences between impersonal *you* and referential *you*. While a number of studies in semantics and pragmatics discuss the impersonal reading (Kitagawa and Lehrer 1990; Malamud 2012a; Gast et al. 2015; Kirkpatrick and

2003; Sigurðsson and Egerland 2009; van der Auwera et al. 2012; Zobel 2014; Malamud 2012a; Gast et al. 2015; Deringer et al. 2015). Others call it 'generic *you*' (Huddleston 1984; Kamio 2001) or 'generalized' *you* (Stirling and Manderson 2011).

Knobe 2024) and some syntactic differences between referential and impersonal *you* have been mentioned (Whitley 1978; Bolinger 1977; Kitagawa and Lehrer 1990; Moltmann 2006; Malamud 2012a), a thorough investigation has not yet been undertaken.

Second, in the pragmatics literature, *you* is typically viewed as one and the same pronoun, regardless of its reading; its different interpretations are viewed as depending exclusively on the context in which they occur (e.g., Gast et al. 2015). Our study leads us to a different conclusion: we show that the two readings of the pronoun correspond to two minimally distinct internal structures for referential *you* and impersonal *you*. Thus, even though they exhibit the same morphological form, they differ syntactically.

Building on the rich literature on the syntax of pronouns, (Déchaine and Wiltschko 2002; Egerland 2003; Fenger 2018; Hall 2020, a.o.), we provide a thorough investigation of the internal structure of referential and impersonal *you*. We argue that both pronouns have a DP-layer and a ϕ-layer with a 2nd person feature. However, their ϕ-layers differ when it comes to number feature: referential *you* can be syntactically singular or plural, whereas impersonal *you* syntactically behaves like a singular pronoun (see also Kitagawa and Lehrer 1990; Malamud 2012b). In addition, a striking difference that has not been discussed in the previous literature is that the two pronouns differ in their *internal* structural layers: referential *you* can take an NP complement, whereas impersonal *you* cannot, as shown in Table 1. We suggest that this syntactic property of impersonal *you*, i.e. lacking a lexical core, might be linked to its semantic function, which we see as that of being a variable bound by a Generic Operator (see Chierchia 1995b; Ackema and Neeleman 2018; Fenger 2018; Ritter and Wiltschko 2019 for discussion).

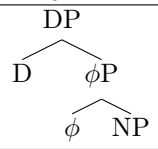
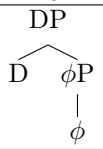
Referential *you*	**Impersonal *you***
	

Table 1: Internal structure

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 (for various instantiations of this proposal seeEgerland 2003; Hoekstra 2010; Ackema and Neeleman 2018; Fenger 2018; Šereikaitė 2022). For example, Icelandic *maður* has been viewed as a ϕP and Dutch *men* as a bare N.

We contribute to the typology of impersonal pronouns by adding a new type of element. We argue that English impersonal *you* contains a DP layer and a ϕP layer, in line with the proposal made for the impersonal pronoun *waħaad* in Jordanian Arabic by Alhailawani et al. (2022). However, *you* differs from impersonal pronouns in Dutch, Icelandic, and Jordanian Arabic in lacking

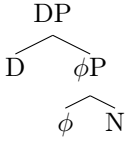
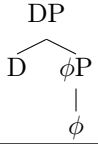
Jordanian Arabic *waħaad*	**Impersonal *you***	Icelandic *maður*	Dutch *men*
			N

Table 2: Different types of impersonal pronouns across languages

the innermost structural layer, N, as indicated in Table 2. Thus impersonal pronouns can be deficient within the internal layers of structure and not only in the external layers, as previously thought.

This paper is organized as follows. In sections 2 and 3 we provide an overview of referential and impersonal *you* and discuss properties that distinguish the two readings. In section 4 we apply a number of diagnostic tests (coordination, appositives, binding, depictives, etc.) to referential and impersonal *you* and show that they have different syntactic properties. In section 5 we provide our proposal concerning the syntactic differences between referential and impersonal *you*. In section 6 we discuss how our proposal enriches what we know about the typology of impersonal pronouns. In section 7 we conclude.

2 Referential *you*

In this section, we discuss some general properties of referential *you* with the goal of highlighting how it differs from impersonal *you*. In particular, we focus on two properties: referential *you* refers to the addressee(s) of the utterance (or to a group with which the addressee is associated) and it can occur both in episodic and generic sentences. In contrast, as we will see in section 3, impersonal *you* is interpreted as a variable that ranges over a set of entities and is restricted to occurring in generic sentences.

We take a context of utterance to consist of a speaker, an addressee, a time, a place and a world in which the utterance is uttered or signed. Though the literature often uses the terms *speaker* and *hearer* to refer to the originator and the target of an utterance, we use the terms SPEAKER for the individual who is speaking, writing or signing, and ADDRESSEE for the individual or set of individuals who are the target of the utterance being spoken, written or signed.[2]

Referential *you* has two characteristic properties that impersonal *you* lacks:

1. Referential *you* is an indexical element that refers to an individual, or plurality of individuals, who are the speaker's addressee in the context of

[2]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.

utterance. For example, suppose that I, the speaker, uttered the sentences in (5) to my friend Laura; *you* would refer to Laura. But if I uttered the same sentences to my friend Marcy, *you* would refer to Marcy. (6) shows that *you* can also refer to a plurality of individuals who are the speaker's addressees:

(5) *You* brought a delicious salad.

(6) Marcy and Laura, I saw *you* yesterday, but *you* didn't see me.

This context dependence is the defining property of indexical elements, whose interpretation is not fixed but depends on the parameters of the context (see Kaplan 1989; Schlenker 2003; Anand and Nevins 2004; a.o.).[3]

One characteristic of indexical pronouns is that, in many languages, they 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. For example, suppose that I uttered the sentence in (7) to Laura:

(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). This is because *you* can only refer to Tom, the addressee of the 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*, I'd need a 3rd person pronoun, 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 utterance context and remains the same in the case of reported speech.

2. The distribution of referential *you* is unrestricted. It can occur in all the positions where overt nominal constituents can occur in English (subject, object, indirect object, etc.) and in clauses with any tense and aspect. Some examples are provided below:

(10) a. *You* always act kindly.
b. Yesterday I gave *you* a book.
c. *You* haven't met my mother yet.

[3]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.

Referential *you* can occur both in generic sentences (like (10a), which states something that is generally true of the addressee) and in episodic sentences (like the ones in (10b)-(10c)). As we will see in Section 3, the unrestricted distribution of referential *you* is not shared by impersonal *you*.

Before we turn to impersonal *you*, let us point out that *you* doesn't always refer solely to the individual or individuals who are the speaker's direct interlocutor in the context of utterance. Sometimes it also refers to a group with which the addressee is associated in some way. For example, I might utter a sentence like (11) to invite to dinner not only my direct interlocutor(s), but their family members also. Similarly, suppose that a student mentions that there are many interesting student-run events happening on campus, some of which are sparsely attended. In response, I could utter a sentence like (12), with *you* referring not only to the student I'm talking to, but more generally to the students on campus, a group to whom my interlocutor belongs:

(11) I'd love to have *you* over for dinner.

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

Similarly, as pointed out in Kitagawa and Lehrer (1990), while talking about history, if the interlocutor is a US citizen, a speaker might utter the sentence in (13), and *you* can be interpreted as referring to the United States, the country with which the addressee is associated:

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

Kitagawa and Lehrer (1990:743) call this the *vague you*. It denotes a plurality of individuals that includes the direct interlocutor(s) and others with whom they are associated.

Vague *you* exhibits the characteristic properties of referential *you* mentioned above. 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* 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 vague *you* 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. For example, suppose that I said (13) to Laura, who is a US citizen, and now I want to report what I said to Anya, who is a Polish citizen. 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.

Third, we observe that vague *you* can occur in any position where overt nominals can occur in English, and it can be found in both generic and episodic sentences. This can be seen in the examples in (16), which have a vague reading of *you* (for example, they are easily interpreted as referring to the country with which the addressee is associated):

(16) a. *You* take good care of your forests.
b. *You* have made great progress towards peace.
c. Spain defeated *you* in the World Cup.

In sum, vague *you* patterns like referential *you*.

3 Impersonal *you*

Turning now to impersonal *you*, we show that it contrasts with referential *you* because it does not have the characteristic properties of an indexical element and it has a restricted distribution (3.1). We argue that these properties follow from the fact that impersonal *you* is a variable bound by a Generic operator (3.2). We provide a brief overview of the range of sentences that support an impersonal reading of *you* (3.3). We then note that, while in many instances impersonal *you* is interchangeable with impersonal *one*, the two pronouns exhibit interesting differences (3.4). Finally, we point out that impersonal *you* does not allow an existential (or 'arbitrary reading'), which is otherwise possible with a sub-set of impersonal pronouns across languages (3.5).

3.1 Two characteristc properties

Two properties provide a striking contrast with referential *you*:

1. The interpretation of impersonal *you* is that of a variable that ranges over a set of individuals. This is in line with other analyses that view impersonal pronouns as variables, such as e.g., Cinque (1988); Chierchia (1995b); Egerland (2003); Fenger (2018); Ritter and Wiltschko (2019). Consider the sentences below:

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

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

   In these sentences, *you* can have a referential reading and refer to the addressee of the utterance. It can also have an impersonal reading, in which case it is interpreted as a variable that ranges over a set of individuals. With the impersonal interpretation of *you*, (17) roughly means that, for any x in a situation of drinking and driving, x shouldn't drink and drive; (18) that usually, for any x, when x is in church, x speaks softly.

The interpretation of impersonal *you* remains the same in reported speech, as observed in Kitagawa and Lehrer (1990:744). I could say (18) to Laura and then report what I told her to someone else. As we see in (19), impersonal *you* can retain the interpretation it has in the root clause, as a variable ranging over individuals in church:

(19) 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 sensitivity to the context parameters is a key property of indexical elements, lack of it suggests that impersonal *you* does *not* behave like an indexical in this respect.[4]

2. The distribution of impersonal *you* is restricted. The impersonal reading of *you* is available only in generic sentences, i.e. in sentences that express a state of affairs that holds true in general. It is not available in episodic sentences, those that express a state of affairs that holds true at a particular time, but not generally. To see this, let's take a sentence in the present tense, which can give rise to a generic statement, as in (20):

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

Here *you* can have a referential reading and refer to the addressee of the utterance. In this interpretation, it makes a statement about something that holds true of the addressee, namely that they usually eat well without spending too much in the restaurant under discussion.[5] However, *you* can also have an impersonal reading and in that case the sentence is interpreted as making a statement that holds true in general of anyone who goes to that restaurant, namely that they usually eat well without spending too much. Consider now what happens if, instead of the simple present, the sentence contains a form of the present perfect, which is not compatible with a generic statement, as in (21):

(21) In this restaurant, *you*'ve eaten well without spending too much.
(referential ✓, impersonal *)

This sentence makes an episodic statement, one that denotes a state of affairs that has held true at certain times but is not true in general. Here only the referential reading of *you* is possible; the impersonal reading is not available.

[4]Malamud (2012a) 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.

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

The two characteristic properties of impersonal *you* just discussed can be seen as two sides of the same coin. We can capture both of them by making the hypothesis that the impersonal reading of *you* arises only when the pronoun is bound by a Generic operator. From this, it follows (a) that impersonal *you* is interpreted as a variable and (b) its occurrence is restricted to sentences that contain a Generic operator, namely generic sentences. This is indeed what we assume in this paper.

3.2 The presence of a Generic operator

The literature on genericity is vast and deep, starting with the seminal work of Carlson (1977, 1989); Carlson and Pelletier (1995), Partee (1991), Chierchia (1995a), Krifka et al. (1995), and we cannot even try to do it justice here. The existence of a generic operator was proposed in these seminal works and has been adopted in many studies of impersonal pronouns ever since, such as Cinque (1988), Chierchia (1995b), D'Alessandro and Alexiadou (2002), Moltmann (2006), Sigurðsson and Egerland (2009), Ackema and Neeleman (2018), a.o. Proposals concerning the generic operator differ on what exactly they take its exact nature 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. Instead we will 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 (22) make a generic statement:

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

Chierchia (1995a) captures their similarity by suggesting that all sentences contain a situation variable. While in (22a) the situation variable is bound by the adverb of quantification, *usually*, in (22b) 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, generally, in any contextually relevant situation s (one where the conditions for smoking are met), Fred smokes in s.

The second observation from Chierchia (1995a) 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 that is relevant for our discussion is that a Generic operator can bind more than one variable. For example, in a sentence like (23), with a singular indefinite in subject position, the Generic operator can bind both the situation variable and the variable provided by the indefinite subject:

(23) 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 (17) or (18) repeated below, contain a generic operator:

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

(25) 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.[6] 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 holds of anyone 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. In other words, if the Generic operator binds only the situation variable, we get the referential reading of *you*; if it binds both the situation variable and *you*, we get the impersonal reading. As we will argue in the rest of this paper, these two distinct readings of *you* correspond to two minimally distinct syntactic structures.

3.3 Generic sentences and impersonal *you*

In this section we provide a brief overview of the type of sentences that can make generic statements and yield the impersonal reading of *you*, drawing from the vast literature on this topic (Cinque 1988; Carlson and Pelletier 1995; Krifka et al. 1995; Malamud 2012a; Zobel 2014, 2021, a.o.). Sentences with a modal can support a generic statement, as we have seen above in (24) and (25). In the impersonal interpretation of *you*, these sentences are similar to their counterparts with *one* in subject position, as in (26):

(26) a. *One* shouldn't drink and drive.
b. In church, *one* usually speak softly.

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 or a temporal PP can contribute to the restriction for a generic statement, as in (27a) and (27b), and so can a *when* or *if* clause, as in (27c):

[6] Some studies in the literature capture this by proposing the existence of a habitual operator (see Rimell 2004; Boneh and Doron 2013; Zobel 2021; a.o.).

(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.

In all these cases the pronoun *you* may be interpreted referentially or have a generic reading. In the generic interpretation of *you*, these sentences are similar to their counterparts with *one*:

(28) a. In England, *one* drives on the left side of the road.
b. During a storm, *one* worries about branches falling off trees.
c. When/if *one* walks into a house of worship, *one* speaks more softly.

As-phrase, like those we can see in the examples in (29), can also specify the set of individuals to which the generic statement applies:

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

Here again *you* can have a referential or an impersonal reading and the sentences with the impersonal reading can be paraphrased with *one* instead of *you*:

(30) a. As a cancer survivor, *one* has a heightened appreciation of life.
b. As a human being, *one* suffers when one sees others suffer.

As-phrases 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. This is discussed extensively in Kirkpatrick and Knobe (2024), who provide example like (31a), and Gast et al. (2015:155), who discuss cases like (31b):[7]

(31) a. As a teacher, *you* give feedback to your students.
b. As a forward, *you* have to be selfish if you want to score goals.

These sentences also have a counterpart with *one*:

(32) a. As a teacher, *one* gives feedback to one's students.
b. As a forward, *one* has to be selfish if one wants to score goals.

In the rest of the paper, we will make reference to the different types of generic sentences introduced here to examine the syntactic properties of impersonal *you*.

3.4 Impersonal *you* versus *one*

In the previous subsection we have shown that impersonal *you* can usually be replaced by the designated impersonal pronoun *one*. Here we discuss some interesting differences between impersonal *you* and *one*.

In some cases, like in (33), native speakers of American English find sentences with *one* and with *you* equally natural:

[7] Kirkpatrick and Knobe (2024) argue that sentences like (31a) have a prescriptive component of meaning: giving feedback to their students is what a good teacher does.

(33) 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.

There is also another potential difference between impersonal *one* and impersonal *you* that we should mention, namely whether they involve the speaker and/or the addressee taking a certain perspective. Moltmann (2006, 2010), focusing on impersonal *one* and arbitrary PRO, put forth the idea that an impersonal pronoun involves 'generic simulation', that is, it involves the speaker identifying with a certain category of individuals or with an individual in a certain situation. For Moltmann, *one* involves "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.

In the pragmatics literature, Gast et al. (2015) and 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 (29) 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*. We will mention a few syntactic differences between *you* and *one* in Section 4.

3.5 Lack of an existential reading

Before we conclude this section we note that, across languages, many impersonal pronouns allow what is known as an existential (or arbitrary) 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/impersonal (34a) and an existential reading (34b):

(34) 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)

English impersonal *you* differs from other impersonal pronouns in this respect: it cannot have an existential interpretation. Thus, the sentence in (24) cannot be interpreted as meaning that there is someone who shouldn't drink and drive and the one in (25) is not interpreted as meaning that there is someone who usually lowers their voice in church. As far as we know, the lack of an existential reading also characterizes impersonal pronouns with second person features in other languages. We return to this in sections 4.6 and 5.5.

3.6 Section summary

In this section, we have shown that impersonal *you* is interpreted as a variable and is restricted to sentences that make generic statements. We have proposed that it is a variable bound by a Generic operator. We have also pointed out that impersonal *you* and *one* can often be used interchangeably, but they differ in register and perspective. Lastly, we have noted that impersonal *you* lacks an existential reading.

4 Syntactic properties

In this section we show that, even though referential *you* and impersonal *you* have the same morphological form, they do not exhibit identical syntactic behavior. Some syntactic differences between them have been mentioned in the literature (Whitley 1978; Bolinger 1977; Kitagawa and Lehrer 1990; Moltmann 2006; Malamud 2012a), but a thorough investigation has not yet been undertaken. We provide a careful discussion of a number of differences and similarities between the two pronouns, which are summarized in Table 3. In Section 5 we will provide our analysis of their structure.

While some of the diagnostics used here, like binding, have been discussed in previous studies (Whitley 1978; Kitagawa and Lehrer 1990; Moltmann 2006; Malamud 2012a), others, like coordination or appositives, have not yet received much attention in the literature.

Some of the pragmatics literature, like Gast et al. (2015), has assumed that *you* is a single pronoun with two distinct readings. However, the overall results of our diagnostic tests lead us to conclude that referential and impersonal *you* are both DPs, but *differ in terms of their internal structure*. We argue that,

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

Table 3: Similarities and differences

despite their identical morphological form, the two pronouns are syntactically distinct.

4.1 NP complements

The most striking difference between referential and impersonal *you* is that the former can take a full noun phrase complement, whereas the latter cannot.

We see this very clearly in the examples below. The pronoun *you* can have either a referential or an impersonal reading when on its own, as in (35a) and (36a). However, when it co-occurs with a noun phrase, only the referential reading is available, as in (35b) and (36b):[8]

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

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

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

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

This leads us to an analysis that views the internal structure of referential *you* as containing a lexical NP and the internal structure of impersonal *you* as lacking a lexical NP entirely:[9]

In Section 5 we propose that referential *you* has a ϕ head that takes an NP complement, whereas impersonal *you* has a ϕ head that is intransitive.

[8]Note that 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: *)

[9]Postal (1969) provides evidence against viewing phrases like *you people* as a pronoun modified by an appositive. He argues instead that they consist of a D followed by a noun phrase.

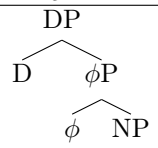
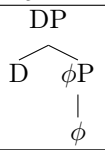
Referential *you*	**Impersonal *you***
	

Table 4: Presence vs absence of an NP complement

4.2 Coordination

Another difference between referential *you* and impersonal *you* is seen in coordination: while referential *you* can be coordinated with DPs of different types, impersonal *you* can only be coordinated with a restricted set of conjuncts. This contrast has received almost no attention in the literature.

Referential *you* can be coordinated with other pronouns as well as with lexical DPs, as illustrated in (37):

(37) 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, as briefly mentioned in Whitley (1978:25).[10] The impersonal interpretation of *you*, available in (38), disappears when in a coordinate structure, as in (39):[11]

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

(39) 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 *)

However, we observe that impersonal *you* is not entirely banned from coordinate structures: it can be coordinated when the second conjunct contains *your* (cf. Bolinger 1979:196 for a related observation). We can see this in (40):

(40) 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.

[10] The example that Whitley (1978:25) briefly discusses, showing that coordinated *you* can only have a referential interpretation, is provided in (i):

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

[11] *One* exhibits the same restriction on coordination:

(i) *One* should exercise on a regular basis.

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

The question is why impersonal *you* can be coordinated only in a limited set of contexts, whereas referential *you* is not subject to the same restriction. We think that this is because of general constraints on coordination. It has long been observed that only conjuncts of the same syntactic category can be coordinated (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 (41a), it is not possible to coordinate a PP and a CP as in (41b).[12]

(41) a. the scene [$_{PP}$ of the movie] and [$_{PP}$ of the play]
b. *the scene [$_{PP}$ of the movie] and [$_{CP}$ that I wrote]

However, Schachter (1977) showed that, in order for two phrases to be coordinated, they must not only belong to the same syntactic category but also be semantically similar. For example, it is ungrammatical to coordinate a generic predicate with an episodic one (Zhang 2009:188):

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

We suggest 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 *your parents, your doctor*. Let's see why.

Syntactically, the two conjuncts match, as they are both DPs. Following Abney's (1987) seminal work on the DP hypothesis, we view a constituent like *your partner* as a DP headed by *your*. We also view *you* as a DP, given that it can be coordinated with a DP.

We take the contrast between the examples in (39) and the ones in (40) to arise from a semantic restriction. The examples in (39) 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; this mismatch is what rules out the coordination. In the grammatical examples in (40), 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. This, we sugggest, is what makes the two conjuncts semantically parallel and satisfies the requirement on coordination.

In sum, the patterns and constraints observed in coordination lead us to conclude that impersonal *you* is a DP and confirm that it is a variable, which can only be coordinated with a conjunct that also contains a variable.

4.3 Appositives

Referential *you* can occur with different types of appositives. In contrast, impersonal *you* is restricted; in fact, it exhibits the same type of restriction that we

[12]Note that there are examples of coordination that violate this restriction, see Peterson (1981); Sag et al. (1985); Bayer (1996); Patejuk and Przepiórkowski (2023).

observe in coordination contexts, discussed above. This difference, overlooked until now, is not entirely surprising, given that appositives have been analyzed as a type of coordination (cf. Quirk et al. 1985; De Vries 2006, 2008; Heringa 2012b).

According to Heringa (2012a,b), three types of appositional relations can be found: 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:[13]

(43) 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)[14]

All three types of appositives are possible with referential *you*, as we see in (44):

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

b. *You*, my neighbour, always act so kindly.
(attributional apposition)

c. *You students*, 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 wonder whether other appositives are possible, as it is easy to imagine that they could contribute to the restriction of a generic statement. What we observe is that, whether plural (45) or singular (46), appositives force a referential reading of the pronoun:

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

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

(46) 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 *)

However, appositives seem to be compatible with the impersonal reading when they contain *your*:[15]

[13] For similar semantic classifications, see Quirk et al. 1985; Hannay and Keizer 2005.
[14] The original example was provided in Dutch by Heringa 2012a.
[15] We find the same pattern with *one*:

(47) 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 is consistent with what we have observed with coordination. Impersonal *you* can be coordinated with a DP that contains possessive *your*, interpreted as a bound variable. Similarly, impersonal *you* can be modified by an appositional DP that contains possessive *your*, interpreted as a bound variable. The examples in (47) are interpreted as saying that for any x, x and especially x's children should think about the environment; and that for any x, x and especially x's sense of safety can be shaken by images of war. This 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. De Vries (2006, 2008); Heringa (2012b:555).

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 variable. This restriction parallels the one we have observed in coordination. Overall, this finding provides additional evidence that impersonal *you* is a DP that functions as a variable. This is why it can co-occur with an appositive that matches it in syntactic structure (DP) and semantic function (variable).

4.4 Depictives

The evidence discussed in the two preceding sections has led us to conclude that impersonal *you* is a DP. This conclusion is also supported by evidence that comes from its co-occurrence with secondary predicates, like depictives.

Both referential *you* and impersonal *you* allow depictives. We see this in (48), where the depictives *sober* and *alone* are interpreted as predicated of the subject *you*.

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

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*, as in (49):

(49) a. *One* should always drive *sober*.
b. In a big city, *one* should not walk *alone* at night.

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

(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.

implicit arguments (whether PRO or *pro*), have a D feature and project a DP-layer. If Landau's (2010) analysis is correct, the availability of depictives with impersonal *you* provides further evidence that it is a DP.

4.5 Number

We now turn to testing the properties of referential and impersonal *you* with respect to number. First, we show that syntactically, impersonal *you* is singular and differs from referential *you*, which can be either singular or plural.[16] Then we turn to the observation that impersonal *you* is compatible with semantic plurality, a property that is also attested for impersonal pronouns in other languages (Hoekstra 2010; Ackema and Neeleman 2018).

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

1. Binding of anaphors. Referential *you* binds both singular and plural anaphors as in (50):

   (50) 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 (51). The minimal pairs in (52) also show the same contrast.

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

   (52) 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.

   As a side note, Landau (2010:378) mentions that the binding of reflexives is a property of DPs. If correct, the ability of impersonal *you* to bind a reflexive anaphor constitutes additional evidence for the presence of a DP-layer.

2. Nominal predicates. A second piece of evidence showing that impersonal *you* is different from referential *you* when it comes to number is provided by nominal predicates. Referential *you* is compatible with both singular and plural nominal predicates, as shown in (53) and (54).

[16] 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.

(53) *You* will be *a good role model/good role models* for your children during this difficult time. (referential ✓)

(54) *You* weren't *a good role model/good role models* yesterday. (referential ✓)

Impersonal *you*, in contrast, cannot co-occur with a plural nominal predicate. This was pointed out in Malamud (2012a:10) with the examples below, which show that the impersonal reading is available only when the nominal predicate is singular:

(55) 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: (56a), with a plural nominal predicate, allows only the referential reading; (56b), with a singular nominal predicate, allows both.

(56) 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. A third context showing the difference between referential and impersonal *you* with respect to number is in sentences introduced by an *as*-phrase. In episodic sentences with referential *you* (57), 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:

(57) 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 generic 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:

(58) 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 (58b), 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.[17]

Given the evidence suggesting that impersonal *you* is singular just discussed, the following might seem surprising: impersonal *you* can bind the reciprocal *each other*. This was pointed out by Malamud (2012a:10) and is shown in her example below:[18]

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

Malamud (2012a) notes that a similar type of pattern can be observed with collective nouns, which are singular group-denoting NPs. In British English and some American English varieties, such NPs can bind the reciprocal, but only when the verbal agreement is plural, as in (60):

(60) The committee$_i$ were able to talk to each other$_i$. (Malamud 2012a: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*.[19]

The fact that impersonal *you* is semantically plural is confirmed by its ability to occur with collective predicates. It can be the subject of collective predicates like *gather, meet* as in (61) and (62):

[17] 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).

[18] Note that impersonal *one* differs from impersonal *you* in this respect. It cannot bind a reciprocal, while impersonal *you* can, as noted in Malamud (2012a):

(i) *?One$_i$ used to say hello to each other$_i$. (Malamud 2012a:11)

Alhaılawani et al. (2022:13) also show that in Jordanian Arabic the pronoun *waaħad* cannot bind a reciprocal when it is used as an impersonal pronoun.

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

(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.

(61) There were times *you* would *gather* together to plot and strive for the things you were going to do the next day.[20]

(62) 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 (63):

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

We take this diagnostic to suggest that impersonal *you* is syntactically singular and yet compatible with semantic plurality.

4.6 Case

Impersonal *you* can occur in different structural positions, as discussed in Soares (2021). In this respect it patterns like referential *you* and unlike some impersonal pronouns that are structurally deficient (e.g., lack a DP layer and ϕ-features).

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 (64a) and as the subject of an infinitival clause (64b), with accusative case; and in indirect object position (64c). Lastly, it can be a derived subject, i.e. the subject of a passive (64d):

(64) 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. The pronouns of one class (Icelandic *maður*, Frisian *men*, English *one*, cf. Fenger 2018) occur in multiple case positions and allow only a generic reading; they have been analyzed as having at least a ϕP layer. The pronouns of the other class (Italian *si*, Swedish *man* and Dutch *men*, cf. Cinque 1988; Chierchia 1995b; Egerland 2003; Fenger 2018) can only occur in nominative case positions and allow both a generic and an existential reading; they have been analyzed as being structurally deficient, i.e. lacking both the DP and ϕP layer.[21] There seems to be 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.

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

[21] See example (34) for Dutch *men*, the impersonal pronoun that we provided to exemplify the existential reading of an impersonal pronoun.

4.7 Stress

This is the last point of our comparison between referential and impersonal *you*: the former can bear stress, whereas the latter cannot. In the following examples, where we use all caps to indicate stress, we see that when *you* bears stress it can only have a referential reading:

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

One may wonder whether this is due to the fact that it is hard to express a contrast in generic sentences. It is actually possible, as long as the contrast is provided by a noun phrase other than *you*. In (66), for example, the contrast is expressed by the *as*-phrase, which may bear stress. If *you* itself is stressed, the impersonal reading is not available, as we see in (67):

(66) As an ADULT, you need about 7 hours of sleep per night; as a TEENAGER, you need at least 8. (referential✓, impersonal ✓)

(67) As an older adult, YOU need about 7 hours of sleep per night; as a teenager, YOU need at least 8. (referential✓, impersonal*)

When *you* is stressed, it can only be interpreted referentially, not impersonally.[22]

The fact that only certain pronouns can bear stress has been noted in the literature. The inability to bear contrastive stress is often associated with structural deficiency. Cardinaletti and Starke (1999) argue that it correlates with the lack of certain functional projections, such as a DP layer. We argue that impersonal *you* has a DP layer, but it is deficient in other ways, namely, in its internal structure (see Section 5). This suggests that, if the inability to bear stress is related to structural deficiency, it must be sensitive not only to the lack of outer functional layers but also to lack of inner layers of structure.[23]

4.8 Section summary

In this section, we have established syntactic differences and similarities between impersonal *you* and referential *you*. Two main differences have emerged: (i) impersonal *you* cannot co-occur an NP complement, whereas referential *you* can; (ii) impersonal *you* syntactically behaves like a singular pronoun, whereas referential *you* can be either singular or plural. A more subtle difference has emerged with respect to coordination and modification by appositives: impersonal *you* can be coordinated or modified by an appositive, but only if the second conjunct contains a variable bound by *you*. Finally, impersonal *you* cannot bear stress,

[22] See Partee (1991) on how stress affects the interpretation of generic sentences.

[23] Bolinger (1979:195) offers an example that appears to challenge the generalization that impersonal *you* cannot bear contrastive stress:

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

Note that there are two types of *you* in Bolinger's example. The *you* in subject position of the matrix clause can have an impersonal reading (note that it can be replaced by *one*) and cannot bear stress. In contrast, the *you* in the *if*-clause is bound by the subject of the matrix clause and can bear stress.

whereas referential *you* can. We have also seen one respect in which impersonal *you* and referential *you* are similar: both of them can occur in various case positions; that is, impersonal *you* is not limited to nominative case positions, a restriction that holds for certain impersonal pronouns in other languages.

We have demonstrated that, despite having the same surface form, referential *you* and impersonal *you* exhibit interesting morpho-syntactic differences. This is somewhat surprising and goes against the underlying assumption that we find in the literature on impersonal *you*, where it is sometimes assumed to be the same as referential *you*.[24]

5 Syntactic analysis

In this section we flesh out the internal structures of impersonal and referential *you*, building on the rich literature on the syntax of pronouns (Cinque 1988; Egerland 2003; Fenger 2018; Hall 2020, a.o.). 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 depart from this tradition and provide evidence that an impersonal pronoun can have a DP layer.[25] We argue that referential *you* and impersonal *you* differ in the lower levels of structure: only the internal structure of referential *you* comprises an NP. We further propose that both referential and impersonal *you* have a ϕP, but with a different feature constellation, which explains the empirical differences we observed in Section 4.

5.1 Presence or absence of an NP

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 5.

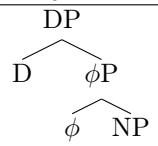
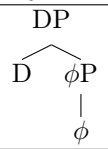
Referential *you*	**Impersonal *you***
	

Table 5: Presence vs absence of an NP complement

[24] See Gast et al. (2015:149): "We argue that personal and impersonal uses of the second person are not distinguished at a lexical or grammatical level."

[25] 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).

The empirical evidence that supports this proposal is quite clear: only referential *you* can occur with a lexical noun; impersonal *you* cannot. When a lexical noun is present, *you* cannot have an impersonal interpretation, as observed in (35) and (36) above.

Why should this be? As we discussed in section 3, we view impersonal *you* as a variable bound by a Generic operator, in line with other analyses of impersonal pronouns in the literature (Chierchia 1995b; Ackema and Neeleman 2018; Fenger 2018; Ritter and Wiltschko 2019). The lack of a lexical core might be related to the non-referential nature of impersonal *you*. Recall from our discussion that the set of entities over which the variable ranges (for example, individuals who are in church, see example (25)) is provided by the restrictor. Impersonal *you* only contributes a variable that establishes a relation between the predicate in the restriction and the one in the nuclear scope (for example, for any x that is in church, x speaks softly). We suggest that impersonal *you* lacks a lexical layer because it only provides a variable to the interpretation of the sentence.

Crosslinguistically impersonal pronouns have been analyzed as containing N (regardless of whether they include a ϕ-layer), as illustrated in the structure proposed for English *one* and Dutch *men* in (68) as proposed by Fenger (2018) (see also Ackema and Neeleman 2018 and Egerland 2003 for impersonal pronouns, and Déchaine and Wiltschko 2002 for a larger set of pronouns):

(68) a. English *one*

b. Dutch *men*

N

Interestingly, for Ackema and Neeleman (2018) and Fenger (2018), N is simply the "base" of a pronoun, which is a type of variable. In both studies, it is assumed that N does not stand for a true noun.[26]

One may wonder if impersonal *you* contains the N that we see in (68) and, if so, what functions it would have. We see two possibilities: N could be responsible for the nominal properties of the pronoun; or else N could host a [+human] feature, especially in the absence of a ϕ-layer (see e.g., Šereikaitė 2022). 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 to encode it. As for the feature [+human], it could be part of ϕ-layer, as has been suggested in other studies (cf. Alhailawani et al. 2022, Sigurðsson and Wood 2021). However, it is not even clear whether or not we need it. Malamud (2012a:22) points out that impersonal *you* is not necessarily restricted to humans, based on sentences like her (69) (see also Little 2024).

[26]Kratzer (2009), who examines cases where *you* is a variable bound by a previous instance of the pronoun, proposes an internal structure that contains n. In her analysis, this n is merely an index, not a lexical category. So again, we see that when *you* functions as a variable, it is analyzed as lacking a lexical layer at its core.

An additional example where *you* can denote non-human entities is provided in (70):

(69) If *you*'re in SpecIP, then *you*'re ... crashing the whole derivation.

(70) 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)

If an N is not needed for the interpretation of the pronoun nor for its distribution, it is likely not needed at all. Note that the proposal that N is not a necessary component of a pronoun is also found in other studies in the literature. For example, Cardinaletti and Starke (1999) propose that 'weak pronouns' consist solely of a ϕPs, with no further internal structure.

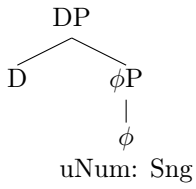
We return to the issue of the lack of NP in Section 5.6, where we show interesting contrasts between impersonal *you* and other expressions that can have a similar interpretation but contain a lexical noun.

5.2 Phi-Features: Number

Turning now to the next layer of structure, we propose that both referential and impersonal *you* have a ϕP. The ϕ-head consists of two features: number and person, which we discuss in turn.[27]

As observed in Section 4.5, 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* has no such restriction. Borrowing terminology from Smith (2021), we propose that impersonal *you* has an inherent uninterpretable singular feature:

(71) Impersonal *you*



This feature determines and restricts the agreement with anaphors and nominal predicates. An anaphor matches the features of its antecedent and we assume that this is a result of morphosyntactic agreement (along with much of the literature, cf. Kratzer 2009; Reuland 2011, a.o.): impersonal *you* supplies the value for the number feature to the reflexive anaphor resulting in the singular form *yourself*. Similarly, nominal predicates agree with their subject; as a result, the unvalued number feature of the nominal predicate is valued to singular

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

(see e.g., Corbett 1979, 1991, 2006 for discussion of predication reflecting morphosyntactic agreement). Lastly, we treat *as*-phrases as instances of adjunct predication (see Szabó 2003), similarly to depictives, which are controlled by impersonal *you* in the matrix clause.

Recall that impersonal *you* can occur with predicates like *gather* and can bind reciprocals like *each other*, which require the subject to be interpretable as semantically plural (see Section 4.5). Some studies suggest that this kind of plurality is not encoded in the syntax. For example, for a sentence with a generic subject (like "The lion gathers under acacia trees."), one view is that 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 notion of kind is semantically plural, and this is what allows the licensing of a collective predicate (for discussion see Dayal 2004:429–430; Krifka et al. 1995:89–90).[28] Following this literature on kind-denoting DPs we suggest that, despite being syntactically singular, impersonal *you* is semantically plural, and semantic plurality is what licenses collective predicates and the binding of reciprocals.[29]

Note that whether impersonal pronouns are singular or plural is subject to crosslinguistic variation. Some are number neutral, like impersonal *man* in Multicultural London English (Hall 2020); others are exclusively singular, like English *one*. We take this to mean that, while some impersonal pronouns are specified for number, others are not and thus are compatible with both singular and plural nominal and adjectival predicates (see Egerland 2003). Typologically, impersonal *you* patterns like the 2nd person pronoun *je* in Dutch,

[28] Veneeta Dayal (pc.) notes that the property of being syntactically singular and yet allowing collective predicates is shared by other elements, like *everyone*, as we see in (i):

(i) Everyone could gather on the street.

[29] An alternative approach 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. Along these lines, we could suggest that impersonal *you* has two types of features when it comes to number: a singular feature that is morpho-syntactically active and triggers agreement with anaphors and 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, an important discovery of this line of work is that, once semantic features enter an agreement relation, the morphological features are no longer accessible – hence the semantic features determine all subsequent agreement relations. Given this, we would expect plural anaphors like *yourselves* to be possible with impersonal *you* when the semantic features are targeted for agreement. This prediction is not borne out: an anaphor bound by impersonal *you* cannot be plural. We can see this in the following example, provided by Troy Messick (p.c.):

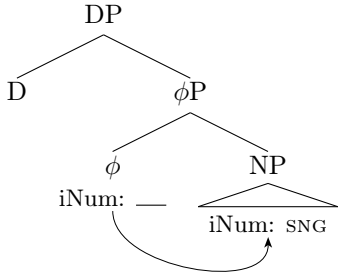
(i) In those days, *you* couldn't talk to *each other* and *yourself/*yourselves*.

In the approach that we adopt in this paper, this restriction can easily be derived, given that semantic plurality is *not* encoded in the syntax.

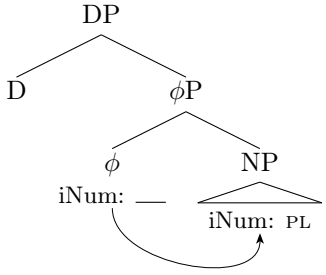
which has an impersonal reading and behaves like a semantically plural pronoun (Ackema and Neeleman 2018).

Turning now to referential *you* go, we have seen that it can refer to a single individual or a plurality of individuals. Syntactically it can be singular or plural, as shown by its behavior with respect to reflexive anaphors, nominal predicates, *as*-phrases and reciprocals (see Section 4.5). We propose that its ϕP has an interpretable number feature that enters the derivation unvalued, as in (72-73). 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 in the nominal domain). When the complement is not overtly expressed, we assume that there is a null NP that is projected in the structure. This null NP complement provides the number feature for the ϕ-head.

(72) Singular referential *you*



(73) Plural referential *you*



5.3 Phi-features: person

In many studies, impersonal pronouns are viewed as lacking person features (Egerland 2003; Nevins 2007; Ackema and Neeleman 2018; Fenger 2018). We argue that impersonal *you* is different from well-studied pronouns like English *one* or Dutch *men* in that it does have a person feature with a specified value: we take its surface form, *you* to reflect the presence of a 2nd person feature. The reason for this conclusion is that the morpheme *you* in English is only attested in 2nd person pronominal forms, like *you, your, yours, y'all.*[30]

Given that referential *you* and impersonal *you* have the same morphological form, we take them both to have a 2nd person feature. For concreteness, we represent person as part of the features of ϕP and provide the following schematic representations:[31]

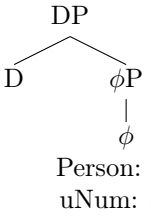
[30] Our proposal recalls Collins and Kayne's (2023:19) discussion of English *they*, where they argue that the same surface form can stem from different syntactic structures. They propose that the form *they* can arise from two minimally different syntactic environments: one that contains a null masculine morpheme (MASC) and one that contains a null feminine morpheme (FEM):

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

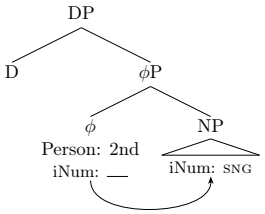
(ii) $[_{DP}$ th- $[_{\#P}$ -ey $[_{GenP}$ FEM NP]]]

[31] 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

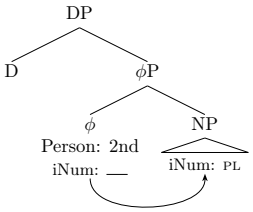
(74) Impersonal *you*



(75) Singular referential *you*



(76) Plural referential *you*



There are two prominent views in the literature concerning person, in particular 1st and 2nd. 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.). In this view, the fact that a 1st person pronoun refers to the speaker and a 2nd person to the addressee is derived via a presupposition, which is satisfied only if the 1st pronoun picks out the speaker and the 2nd person pronoun the addressee of the utterance. Another view is that person is a feature on a pronoun whose value is not inherently specified, but rather is 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 does not matter for the purposes of this paper. What matters is that both referential and impersonal *you* have a 2nd person feature.

Given the presence of a 2nd person feature we might wonder whether, when a generic statement has impersonal *you*, the addressee is always included in the set of individuals over which the generalization is made. The literature that has addressed this question suggests that this is indeed the case and that, even when the statement is made about a set of individuals to which the addressee does not belong, the addressee is invited to self-ascribe the properties that characterize that set. Gast et al. (2015) and Deringer et al. (2015) refer to such cases as 'simulation contexts.' According to them, if (77) is uttered to an addressee who is not a cancer survivor, the addressee is asked to imagine having the property of being a cancer survivor:

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

person pronoun as being [+participant, −author] (cf. Halle 1997, Nevins 2007). Another way of thinking about this is to analyze person as having two possible values, namely speaker for 1st person and addressee for 2nd person (cf. 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."

Gast et al. (2015) suggest that by using impersonal *you* a speaker invites the addressee to empathize with the people about whom a generalization is made.

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 Malamud (2012a); Zobel (2014); Ritter and Wiltschko (2019) for German *du*, Egerland (2003) for Icelandic *maður*, Rezac and Jouitteau (2016) for French *tu* (*you*, singular) and *vous* (*you*, plural). Why might this be? And why do we seem to find 2nd person pronouns with impersonal readings more often than 1st person pronouns?[32] The literature in pragmatics has argued that this is not an accident and that it is precisely because a 2nd person impersonal pronoun invites the addressee to emphatize.

5.4 DP

As mentioned earlier, various studies have suggested that impersonal pronouns differ from referential pronouns in lacking the outer layers of structure. In contrast, we argue that both referential and impersonal *you* have the outer layers of structure, namely the D- and the ϕ-layer. Here we will focus on the reasons for viewing impersonal *you* as a DP.

We have provided three pieces of evidence in support of impersonal *you* having a DP-layer in sections 4.2, 4.3 and 4.4. We showed that impersonal *you* can be coordinated with certain DPs (like *your partner*, *your children*) and can occur with certain appositives (like *especially your sense of safety*), which is a type of coordination. We take the fact that impersonal *you* can be coordinated with other DPs and allow appositives as evidence that it is also a DP. We also take the fact that impersonal *you* permits depictives as evidence that it is a DP: following Landau's (2010) work, only expressions with a D-layer can saturate a syntactic predicate. Finally, in section 4.5 we observed that impersonal *you* can bind a reflexive anaphor. Landau (2010) suggests that only antecedents with a D-layer can bind a reflexive anaphor, as he assumes an Agree-based version of the binding theory (Reuland 2001). Following this reasoning, we take the ability to bind an anaphor as another piece of evidence for viewing impersonal *you* as a DP.

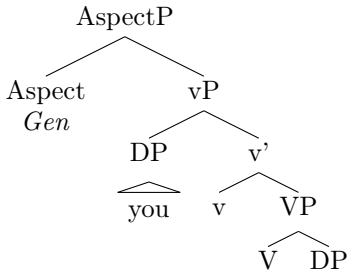
There is one more empirical observation that leads us to view impersonal *you* as a DP. We have seen in section 4.6 that it may occur as a subject, a direct object, or an indirect object. Being compatible with multiple case positions is a property of DPs. In contrast, impersonal pronouns that are deficient i.e., lack the DP and ϕ-layers, are compatible only with 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).

[32]For examples of 1st person pronouns used with an impersonal reading, see Kitagawa and Lehrer (1990); Zobel (2014, 2021, 2023:741).

5.5 Generic vs. Existential reading

We have suggested that the generic reading of *you* can be captured by postulating the presence of a Generic Operator (Section 3). We assume that the generic operator is located in a structural position higher than the layer where both external and internal arguments are introduced.[33] For the sake of concreteness, we adopt the proposal from Chierchia (1995b) and D'Alessandro and Alexiadou (2002) that places it in the Aspect phrase:[34]

(78) Impersonal *you*



As we mentioned in section 3, in some languages impersonal pronouns can also have an existential reading. We provided an example with Dutch *men* in (34). An existential reading is often said to involve an existential quantifier. However, such a reading is not available with impersonal *you*. Why?

There are at least two lines of work in the literature that attempt to understand the presence and absence of this 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 illustrated in (79b) below (D'Alessandro and Alexiadou 2002:35), in a sentence with perfective aspect *si* has an existential reading. The sentence is interpreted as saying that there are people, inclusive of the speaker, who ate well in that restaurant:

(79) 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.'

This reading of Italian *si* is not possible with English *you*. In the presence of perfective aspect, only the referential reading of *you* is available, as in (20), repeated below:

(80) In this restaurant, *you*'ve eaten well without spending too much.
(referential *you*: ✓, impersonal *you*: *)

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

[34] We leave aside VoiceP for simplicity.

In other words, perfective aspect does not give rise to the existential reading with impersonal *you* in English, the way it does with *si* in Italian.

Another proposal that attempts to understand the absence and presence of the existential reading is offered in Ackema and Neeleman (2018) and also found in 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 some pronouns that consist of ϕP features and N, like English *one*, have a person node as in (81).[35] In contrast, pronouns that lack ϕ features like Dutch *men* completely lack a person node, as in (82):

(81) Pronouns with only a generic reading

(82) Pronouns with both arbitrary and generic readings

N

For them, the presence of Person without specification means that speaker, addressee, and others are included in the output set. Only pronouns that lack person entirely can have existential reading, which excludes speaker and addressee.

We have suggested that impersonal *you* has a person feature with a specified value, namely 2nd person. So, in this respect, it is not like the pronouns with a generic reading that Ackema and Neeleman (2018) discuss, which are said to lack a specified value for person, (81). However, if we understand their system correctly, their claim is that only pronouns that lack person entirely can have an existential reading. Hence, their prediction is that, if a pronoun has a specified value for person, it should be incompatible with such a reading. This is indeed what we see with impersonal *you*: the presence of the 2nd person feature rules out the existential reading.

5.6 Impersonal *you* vs. other generic expressions

We have been using replacement by *one* as a way to test whether we have the impersonal reading of *you*. Impersonal *you* can also often be replaced by other expressions, like the bare plural *people* or the indefinite singular *a person*. In this section we show that they cannot always be used interchangeably and argue that this is to be attributed to the fact that impersonal *you* does not contain an NP, while a bare plural like *people* and an indefinite singular *a person* do. This further supports our analysis of the internal structure of impersonal *you*.

Some sentences with impersonal *you* can be paraphrased by replacing it with the bare plural *people* or the indefinite singular *a person*. This is expected, because bare plural and singular indefinites can be used to make generalizations. This replacement is possible in the examples with modals given in (24), repeated here with *people* and *a person* instead of *you*:

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

(83) a. *People* shouldn't drink and drive.
b. *A person* shouldn't drink and drive.

It is also possible in the examples with a locative or temporal PP and with an *if* and *when* clause:[36]

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

However, while *people* and *a person* may seem interchangeable with impersonal *you* in these examples, they also exhibit some interesting differences. A bare plural like *people* and an indefinite singular like *a person* can occur with predicates that give rise to a kind reading:[37]

(85) a. *People* are mammals.
b. *A person* is a mammal.

In contrast, impersonal *you* cannot occur in such contexts, as we see below:

(86) *You* are a mammal. (referential ✓, impersonal *)

Moreover, there are predicates that can occur with *people* and with indefinite singulars, but not with the impersonal pronouns *you* or *one*. For example, Moltmann (2010:264) points out cases like the ones below, where *people* is possible but *one* is not:

(87) a. *People* have a nose.
b. ??*One* has a nose.

(88) a. *People* have at least one passport.
b. ??*One* has at least one passport.

[36] We don't provide examples with a singular indefinite to save space.

[37] The fact that impersonal pronouns are not kind-denoting expressions has been discussed in various studies. For instance, Moltmann (2006:260) has pointed out that English impersonal *one* is not kind-denoting, as illustrated in (i). Chierchia (1995b:108) has made the same observation for Italian impersonal *si*. Neither of these works discussed impersonal *you*.

(i) #*One* could become rare.

Malamud (2012a) mentions that the plural *you* is compatible with kind-denoting predicates as illustrated in (ii) below. However, we think that this is an instance of vague *you*, not of impersonal *you*. This idea is supported by the fact that *you* in (ii) could occur with a noun phrase, as in *you human beings* or *you Americans*, and by the fact that *you* in this context is plural (see (iii)), whereas impersonal *you* is syntactically singular.

(ii) Some day, *we/you* will be extinct/widespread/everywhere. (Malamud 2012a:34)

(iii) Some day, *you yourselves* will be extinct.

Rezac and Jouitteau (2016:114) point out that French impersonal *on* and *tu* can be the subject of kind-reference predicates in *when*-clauses.

Like *one*, impersonal *you* is not possible in these sentences. As shown in (89), only referential *you* is available:

(89) a. *You* have a nose. (referential ✓, impersonal *)
b. *You* have at least one passport. (referential ✓, impersonal *)

Finally, Kirkpatrick and Knobe (2024:8) discuss another interesting difference between an indefinite singular and impersonal *you*. They focus on examples like the following:

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

They propose that the examples with an indefinite singular subject say 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, sentences with *you* assert something about an action abstracting away from any information about specific kinds of entities. We think that 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 a lexical noun, on its own it cannot specify what kind of entities constitute the domain of quantification.

In sum, these differences follow from the presence of an NP in bare plurals and singular indefinites and its absence in the structure of impersonal *you*.

6 Typological considerations

In this section, we provide a crosslinguistic overview of the featural make-up of impersonal and referential pronouns. We will show that each group has several distinct sub-classes that differ in terms of the amount of structure they have.

It has been claimed that impersonal pronouns across languages are deficient. For example, Dutch *men* has been analyzed as consisting of N only. Icelandic *maður* has been analyzed as structurally more complex than Dutch *men*, consisting of both N and a ϕP but lacking other layers of structure. The Jordanian Arabic impersonal pronoun *waħaad*, in contrast, has been analyzed as a full DP.

Our study enriches the typology of impersonal pronouns: we have argued that impersonal *you* in English has a DP layer but lacks N. Thus we are adding to the typology a pronoun that is deficient not in the outermost, but in the innermost layers of structure. Moreover, it has often been claimed that, when impersonal pronouns have a ϕP-layer, their features are underspecified. In contrast, we have argued that impersonal *you* has a ϕP layer that includes number and person features that are valued.

Alhailawani et al. (2022:3) suggest that a "radical feature deficiency approach to impersonals" needs re-thinking. They reach this conclusion because the Jordanian Arabic impersonal pronoun that they discuss, *waħaad*, has number and gender specification. We reach a similar conclusion because impersonal

you is specified for number and person. Hence the typology of impersonal pronouns needs to include the existence of those that have specified ϕ-features. Our overall view of the structural types of impersonal pronouns is given in Table 6:

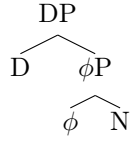
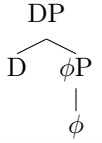
Jordanian Arabic *waħaad*	**Impersonal *you***	Icelandic *maður*	Dutch *men*
			N

Table 6: Different types of impersonal pronouns across languages

The typology established in Table 6 provides insights on when an impersonal pronoun can and cannot have an existential reading. Pronouns that consist of nominal features only, like Dutch *men* (viewed as a bare N in Fenger's analysis), can have both an existential and a referential reading. In contrast, pronouns that have a ϕ-layer disallow an existential reading and only allow a generic one. Thus, we observe that the presence of a ϕ-layer correlates with the absence of an existential reading.

Furthermore, it has been observed that impersonal pronouns that have both types of readings can occur only in nominative case positions (Fenger 2018). Looking at their structure, this means that pronouns that are bare Ns are restricted to nominative case positions, whereas pronouns that have a ϕ-layer can occur in all case positions. This shows a correlation between the presence of a ϕ-layer and the distribution of an impersonal pronoun.

Turning now to referential pronouns, they also come with different amounts of structure. This is shown in Table 7, based on Déchaine and Wiltschko (2002):

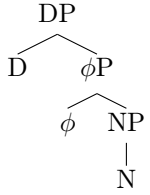
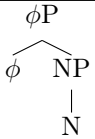
English *we*	English *they*	Japanese *kare*
		

Table 7: Different types of referential pronouns

Tables 6 and 7 show that both referential and impersonal pronouns may have different amounts of internal structure. If we were to draw a generalization concerning the structural difference that characterizes them, it would be the following: referential pronouns have a lexical NP at their core (whether overt or null), whereas impersonal pronouns do not. This view captures in a very intuitive way a fundamental difference between them: a referential pronoun refers to an entity, whereas an impersonal pronoun is a bound variable that ranges over entities in a set provided by the restrictor.

In this way of looking at things, the N that we see in Table 6 for the case of Dutch, Icelandic and Arabic, cannot be a lexical category. It might be a functional category that carries a categorial feature, making the projection nominal in nature, and possibly a [+human] feature. This is consistent with what Ackema and Neeleman (2018) and Fenger (2018) intend to convey, as they see N not as standing for a true noun, but rather as simply the "base" of a pronoun.

7 Summary and further questions

In this article we have focused on the pronoun *you* and asked the following broad question: does it have the same morpho-syntactic properties when it has a referential reading and when it has an impersonal reading? By addressing this question, we have made a number of contributions:

- We have observed that, while the referential reading arises in both episodic and generic sentences, the impersonal reading of *you* is restricted to generic sentences. We take this to be the result of binding by a Generic operator, extending an observation that has been made for a number of impersonal pronouns cross-linguistically (Cinque 1988; Chierchia 1995b; Egerland 2003; Fenger 2018, a.o.).
- We have shown that, despite their identical morphological form, referential and impersonal *you* have different syntactic properties. Our main findings can be summarized as follows:

    1. **Presence vs absence of an NP layer.** Referential *you* has an NP complement at the core of its structure; impersonal *you* does not. This is illustrated by the fact that impersonal *you* cannot occur with an overt noun or noun phrase, whereas referential *you* can.
    2. **ϕ-features.** Both referential and impersonal *you* have ϕ-features, which we encode in a ϕP layer. However, their featural make-up is different. When it comes to number, referential *you* can be singular or plural; in contrast impersonal *you* is always syntactically singular, as demonstrated by evidence from the binding of anaphors, co-occurrence with nominal predicates and *as*-phrases. Impersonal *you* is compatible with semantic plurality, as shown by its compatibility with collective predicates and binding of *each other*. Lastly, both have a 2nd person feature, which is reflected by their identical morphological form.
    3. **Presence of a DP layer.** Both referential *you* and impersonal *you* are DPs, as shown by the evidence from coordination, appositives, and depictives. However, we have observed a surprising restriction, namely that impersonal *you* can only be coordinated with a DP that contains a variable that it binds. We took this as evidence that impersonal *you* itself is a variable: as such, it has to be coordinated with a conjunct that is syntactically and semantically parallel.

- We have observed a correlation between the syntactic structure and the semantic function of *you*: referential *you* contains an NP, whether null or overt, and refers to the addressee of the utterance; impersonal *you* lacks a lexical NP and 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, one question we can now ask is: Do all pronouns bound by a Generic operator lack an NP complement at the core of their structure? Moreover, if we put the correlation that we observed together with Kratzer's (2009) proposal that *you* bound by a previous instance of the pronoun lacks an NP, we can ask: Is lack of NP a necessary property of *all* bound pronouns? Answering these questions, which is beyond the scope of this paper, is likely to further sharpen our understanding of the complex nature of pronouns.

- Our paper also makes a methodological contribution to the investigation of pronouns by providing a comprehensive list of diagnostic tests that clearly highlight the differences between the pronouns under investigation. For example, appositives and coordination as tests have not 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.

- Lastly, we have expanded the typology of impersonal pronouns by adding to the picture English impersonal *you*. While impersonal pronouns cross-linguistically have been noted to be deficient in lacking a DP layer or a ϕ-layer, we have shown that impersonal *you* is deficient not when it comes to its most internal structural layer, the NP. Typologically, it would be interesting to see if we can find impersonal pronouns that are only PhiPs, that is, have no DP layer and no NP layer. Nothing in our system should prevent us from having this type of pronouns.

Putting our observations together with those in Kratzer (2009), we see the need to distinguish three types of *you*. (a) Referential *you*, an indexical that refers to the addressee of the utterance context; it can occur in both generic and episodic sentences. (b) Impersonal *you*, a variable bound by a Generic operator; it can occur only in generic sentences. (c) The fake-indexical *you* discussed in Kratzer (2009), a variable bound by a previous instance of *you*; it can occur in both generic and episodic sentences. This paper has focused on the morpho-syntactic differences between referential and impersonal *you*. Further work can extend to a three-way comparison.

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