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Nominal speech act structure: Evidence from the structural deficiency of impersonal pronouns

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Abstract

In this paper, we propose that there is a speech-act structure in the nominal spine, just as there is in the clausal spine. Its function is to encode what we do when we utter a nominal: that is, we name, describe, or track individuals. Thus, speech-act structure establishes a link between the discourse referent and the speech-act situation. The evidence we discuss comes from nominals that lack this speech-act structure, namely impersonal pronouns. We argue that impersonal pronouns have in common that they lack nominal speech-act structure but are not otherwise a natural class: they vary in syntactic structure. Thus, we propose a novel formal typology of impersonal pronouns.

Keywords: impersonal pronouns, nominal speech acts

Résumé

Dans cet article, nous proposons qu'il existe une structure d'actes de parole dans l'épine nominale, tout comme dans l'épine clausale, dont la fonction est de coder ce que nous faisons lorsque nous prononçons un nominal : nous nommons, décrivons ou gardons une trace d'un individu. Ainsi, la structure de l'acte de parole établit un lien entre le référent dans le discours et la situation de l'acte de parole. Les preuves dont nous discutons proviennent de nominaux dépourvus de cette structure d'actes de parole, à savoir les pronoms impersonnels. Nous soutenons que les pronoms impersonnels ont en commun l'absence de la structure nominale

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d'actes de parole, mais qu'ils ne constituent pas une classe naturelle : ils présentent plusieurs structures syntaxiques différentes. Nous proposons donc une nouvelle typologie formelle des pronoms impersonnels.

Mots-clés: pronoms impersonnels, actes de parole nominales

1. INTRODUCTION

Dedicated impersonal pronouns like German *man* are structurally deficient. Evidence for this comes from the observation that they lack phi-features. Consider for example the contrast in (1). In (1a), *man* receives a plural interpretation, as shown by the fact that it can be the antecedent of the reciprocal *einander;* however, the ungrammaticality of (1b) indicates that it is not morphosyntactically associated with a plural feature: it cannot bear overt plural marking and it does not trigger plural agreement on the verb.

(1) a. In Österreich gib-t **man** **einander** zu Weihnachten Geschenke.
in Austria give-3SG IMPERS RECP to Christmas presents[1]
'In Austria people give each other gifts at Christmas.'

b. *In Österreich geb-en **man(*en)** **einander** zu Weihnachten Geschenke
in Austria give-3PL IMPERS(PL) RECP to Christmas presents
'In Austria people give each other gifts at Christmas.'

We assume that 3rd person singular agreement on the verb in (1a) is simply a default value that arises in the absence of phi-features on the subject.

It is well known that, in addition to dedicated impersonal pronouns we also find impersonal uses of personal pronouns, as illustrated in (2). The 2nd person pronoun *du* is impersonal in (2a): it is used to make a general statement about what people do in Austria. Impersonal *du* in (2a) does not establish a link to the current speech-act situation; that is, it does not refer to the current addressee. It is for this reason that the continuation in (2b), where *du* receives a personal interpretation and does pick out the addressee, is felicitous.

(2) a. In Österreich gib-st **du** deinen Freunden zu Weihnachten
in Austria give-2SG IMPERS.2SG your friends to Christmas
Geschenke…
presents…
'In Austria people give their friends gifts at Christmas.'

b. …Wenn **du** in Wien bist, sollt-est **du** das also
…when you in Vienna be-2SG.PRES should-2SG you that therefore
auch tun.
also do
'So when you are in Vienna, you should do that, too.'

[1]The following abbreviations are used in this article: 1/2/3: first/second/third person; ACC: accusative; AUX: auxiliary verb; DAT: dative; FUT: future; IMPERS: impersonal; INF: infinitive; M: masculine; PART: participle; PST: past; PL: plural; PRT: particle; PRES: present; RECP: reciprocal; SA: speech act; SG: singular; USH: Universal Spine Hypothesis.

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Notice that in both (2a) and (2b), *du* triggers 2nd person singular agreement on the verb, which indicates that, unlike *man,* impersonal *du* has inherent phi-features, specifically 2nd person singular. As a consequence, default 3rd person agreement on the verb in (3a) is ungrammatical.

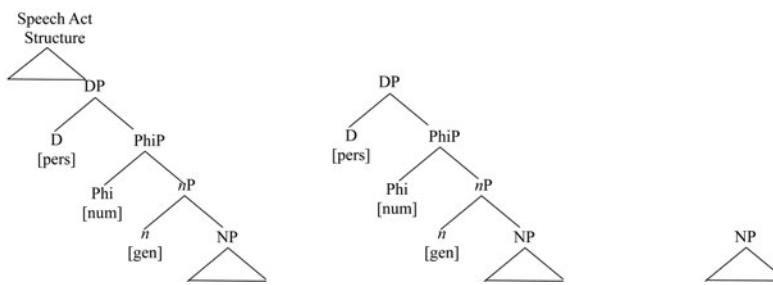
(3) a. *In Österreich gib-t **du** deinen Freunden zu Weihnachten
in Austria give-3SG IMPERS.2SG your friends to Christmas
Geschenke…
presents…
'In Austria people give their children gifts at Christmas.'

b. … Wenn **du** in Wien bist, sollt-est **du** das also
… when you in Vienna be-2SG.PRES should-2sg you that therefore
auch tun.
also do
'So when you are in Vienna, you should do that, too.'

It is widely assumed that the impersonal interpretation of dedicated impersonal pronouns reduces to a structural deficiency (Cardinaletti and Starke 1999). This structural deficiency also accounts for their lack of phi-features. The question we address in this paper is whether the impersonal interpretation of *personal* pronouns is also attributable to a structural deficiency. Given that even in their impersonal use, these pronouns have phi-features, it follows that their structural deficiency must be of a different kind from that of impersonal pronouns, such as *man.*

We propose that nominals that refer to specific individuals have speech-act structure, as in (4a), and that this is crucially missing in *du*-type impersonal pronouns, which are simply DPs, as in (4b). We hypothesize that DP pronouns have a full set of phi-features, but that they cannot directly establish a link to the speech-act participants or the speech-act situation more generally, precisely because of their structural deficiency. *Man*-type impersonals are even more structurally deficient, in that they lack not only speech-act structure, but also the functional categories responsible for phi features: DP, PhiP, and *n*P, as in (4c).[2]

(4) a. personal *du* b. impersonal *du* c. *man*



[2]The structure in (4) contrasts with the nominal structure proposed by Harbour (2016), who argues that number is higher than person. Our analysis is supported by the facts of Hebrew (see section 4 and Ritter 1995 for discussion).

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Essentially this hypothesis can be reduced to two claims: First, all impersonal pronouns are structurally deficient in that they lack speech-act structure.[3] Second, impersonal pronouns can vary in the degree of structural deficiency they manifest – some lack only speech-act structure, while others lack additional layers of functional structure.

The rest of the paper is organized as follows: Section 2 provides additional arguments in support of the analysis schematized in (4) above for *man*, impersonal *du,* and personal *du.* In section 3, we motivate speech-act structure on theoretical and empirical grounds. In section 4, we develop a typology of structure deficiency for impersonal pronouns. We conclude in section 5 with a summary of the paper.

2. Degrees of structural deficiency in impersonal pronouns

The goal of this section is to demonstrate that both *man* and impersonal *du* are structurally deficient. In section 2.1, we provide additional arguments in support of the claim that *man* is a bare NP; in section 2.2, we discuss a range of similarities and differences between personal and impersonal *du*, offering additional arguments for the claim that impersonal *du* is a DP, and that it is nevertheless structurally deficient because it lacks speech-act structure, which is present in personal *du.*

2.1 Structural deficiency #1: *man*-type impersonals

In section 1, we demonstrated that the impersonal pronoun *man* cannot bear a plural suffix or trigger plural agreement on the verb. We interpreted these facts as evidence that the phrase headed by *man* lacks number specification. The most straightforward explanation for the lack of number specification is that the functional category associated with number features; that is, PhiP,[4] is simply not present. In the remainder of this subsection, we summarize arguments first introduced in Ritter and Wiltschko (2016) that *man* also lacks person and case specification, due to the absence of other nominal functional categories, notably DP and PhiP. We also assume that *man* is genderless. However, this claim has no empirical consequences as nouns are not marked for gender, and German predicates do not inflect for gender either. The only way to detect gender is on the basis of determiners and nominal modifiers (adjectives and numerals), which crucially cannot co-occur with *man.*

The claim that *man*-type impersonal pronouns lack inherent person features has been well established in the literature (see Egerland 2003 for Swedish, Ackema and Neeleman 2018 for Dutch, among others). One argument in support of this claim is

[3]We adopt the commonly used term Speech Act (SA) structure for the purposes of this paper. However, we submit that this is a misnomer since speech acts are not a primitive, but rather are decomposable into at least two interpretive functions – grounding and responding. Here we focus only on the grounding component of speech-act structure.

[4]Following Déchaine and Wiltschko (2002), we use the label PhiP for the functional category associated with number specification (singular, plural, etc.). This category is sometimes labelled NumP. Nothing in our analysis hinges on this distinction.

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based on examples like (5), where the referent of *man* includes the speaker (1st person), the addressee (2nd person), as well as other humans (3rd person). This is evident from the fact that the speaker in this example asserts that a particular prohibition applies to both interlocutors as well as everyone else.

(5) In ein-em vornehm-en Restaurant tut **man** das nicht –
in a-DAT sophisticated-DAT restaurant do.3SG IMPERS that not
ich nicht, und *du* nicht, und sonst auch *niemand*.
I not and you not and otherwise also nobody
'In a sophisticated restaurant, one doesn't do that – not me, not you, and no one else.'

We assume that person specification is associated with D; thus, the fact that *man* is personless indicates that it lacks DP.

Man is also caseless. This can be deduced from the fact that *man* can function neither as an accusative case-marked direct object, as in (6a), nor as the oblique case-marked object of a preposition, as in (6b). The only position where *man* is licit is the subject of a tensed clause, as illustrated in (1) and (5) above.

(6) a. *Ein Blinder kann **man** nicht sehen. *ACCUSATIVE
a blind.man can IMPERS not see.INF
'A blind man cannot see one.'

b. *Es wird von **man** gepfiffen. *OBLIQUE
It AUX by IMPERS whistle.PART
'Whistling was done by someone.'

Following Bittner and Hale (1996), McFadden and Sundaresan (2010), Preminger (2011, 2014), and Kornfilt and Preminger (2015), we assume that, at least for German, nominative case is in fact the *absence* of case. The reason for the ungrammaticality of the examples in (6) is that *man* cannot appear in positions that require structural (accusative) or lexical (oblique) case. Hence *man* can only occur in caseless positions, and is spelled out with the default morphological form.

On independent grounds, we know that German default case is nominative: it is morphologically unmarked, and in the absence of a case-assigner, nominals are realized as nominative.[5]

(7) Q: Wer will komm-en?
who want.3SG come-INF
'Who will come?'

[5]In this respect, German differs from English, where the default case seems to be accusative, as evidenced by the use of accusative case forms in sentence fragment answers, as in (i), and predicate position, as in (ii).

(i) Q: Who wants to come? A: Me/*I

(ii) a. It was me/us/him/her/them.
b. */???It was I/we/he/she/they.

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(8) A: Ich/*mich
I/me[6]

A final piece of evidence for the claim that *man* is a bare NP comes from coordination. As illustrated in (9), *man* cannot be coordinated with a full DP such as *seine Gäste* 'his guests'.[7,8]

(9) *In ein-em vornehm-en Restaurant tut **man** **und seine Gäste**
in a-DAT sophisticated-DAT restaurant do.3SG IMPERS and his guests
das nicht.
that not
'In a sophisticated restaurant, one and one's guests don't do that.'

Assuming that coordination requires categorial identity of the two conjuncts, the ungrammaticality of (9) follows on the assumption that *man* is a bare NP while the possessed nominal, *seine Gäste,* is minimally a DP. Similarly, *man* cannot be coordinate with a bare plural, which we assume is a PhiP.

(10) ***Man** **und** **Tiere** brauchen Nahrung zum Überleben.
IMPERS and animals need food to.the survival
'People and animals need food to survive.'

Thus, the evidence supports our claim that *man* is structurally deficient. More specifically, we conclude that *man* is a bare NP lacking all functional projections. As a consequence of this structural deficiency, *man* lacks all nominal features (person, number, and case) and cannot be coordinated with nominals that include functional categories.

2.2 Structural deficiency #2: impersonal *du* vs. personal *du*

We now turn our attention to the structure of *du*, on its impersonal use. The goal here is to establish that impersonal *du* is structurally deficient as compared to its personal use. However, the argument will have to proceed differently than in the case of *man.* This is because *du*-type impersonals do not behave like *man*-type impersonals. Notably, unlike *man,* impersonal *du* triggers subject-verb agreement (2nd person

[6]An anonymous reviewer points out that if sentence fragment answers are due to ellipsis then there might be a deleted nominative case assigner in (8), accounting for the unacceptability of the accusative pronoun. However, such an account incorrectly predicts that the English counterpart should also require a nominative pronoun (*Who wants to come? Me/*I*).

[7]While the possessive pronoun cannot be anaphorically linked to *man* due to the fact that *man* lacks person specification, it may be interpretable as referring to a 3rd person individual previously established in the discourse.

[8]An anonymous reviewer points out that the coordination of unlike categories is sometimes acceptable, cf. Bayer (1996) and references cited therein. We note that the evidence discussed above is consistent with other arguments in this section. Moreover, other examples of coordination of nominals of different structural complexity are similarly downgraded, both in English and in German:

(i) ???He interviewed [students and me]. PhiP and DP

(ii) ???Er hat [Studenten und mich] befragt. PhiP and DP

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singular) as illustrated in (11). Note also that (11) is ambiguous between a personal and an impersonal reading.

(11) **Du** darf-st beim Autofahren nicht text-en.
You may-2SG at.the car-driving not text-INF
= i) You must not text while driving.'
= ii) 'One must not text while driving.'

Another difference between *man* and impersonal *du* concerns case. Unlike *man*, and like personal *du*, impersonal *du* is not restricted to the subject position of a tensed clause, which indicates that it can bear structural (or lexical) case. Moreover, the pronoun is morphologically marked for case (*du* is nominative, *dich* is accusative).

(12) Beim Autofahren kann **dich** das Texten ablenk-en.
at.the car-driving can you.ACC the texting distract-INF
= i) 'Texting distracts you when you're driving.'
= ii) 'Texting distracts one while driving.'

The fact that impersonal *du* has case and phi-features points to the conclusion that it is (at least) a DP, and hence not structurally deficient in the same way as *man*. This leads to the prediction that unlike *man*, impersonal *du* can be coordinated with a full DP. This prediction is borne out as illustrated by the following example:

(13) Wenn **du und deine Kinder** immer nur an eure Bedürfnisse
when you and your children always only about your needs
denkt, werden sie auch später nur an sich denken
think.2PL will.3PL they also later only about self think
'If you and your children are always thinking only of your own needs, then later they will also think only of themselves.'

The evidence adduced above establishes that impersonal *du* behaves like a DP, which in turn raises the question as to whether it is structurally deficient, and if it is, what the nature of its structural deficiency might be. A first indication that it is indeed structurally deficient comes from differences in the interpretation possibilities of strong and weak 2nd person pronouns in Dutch. As first discussed by Gruber (2013), the weak version may be interpreted as either a personal or an impersonal pronoun, but the strong version is necessarily personal, as illustrated below.

(14) a. In Nederland leer **je** fietsen zelfs voordat **je** leert lopen
in Netherlands learn you_{weak} cycle even before you_{weak} learn walk
'In the Netherlands $you_{indexical}$/one learn(s) to ride a bike even before $you_{indexical}$/one learn(s) to walk.'

b. In Nederland leer **jij** fietsen zelfs voordat **jij** leert lopen
in Netherlands learn you_{strg} cycle even before you_{strg} learn walk
'In the Netherlands $you_{indexical}$/*one learn(*s) to ride a bike even before $you_{indexical}$/*one learn(*s) to walk.' (Gruber 2013: 131)

Our hypothesis is that the contrast between (14a) and (14b) is due to the fact that strong pronouns are structurally more complex, and specifically, that they are dominated by a speech act structure. Weak pronouns, which lack speech act structure, may be considered structurally deficient, even if they are full DPs. Note, however, that

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structural complexity cannot always be deduced from form. As an anonymous reviewer points out, in both Russian (15) and Georgian (16), overt and null pronominals (*pro*) can be used impersonally.

(15) inogda ty/*pro* sidiš doma i skučaeš
sometimes you/*pro* sit.PRES.2SG home and bore.PRES.2SG
'Sometimes you/one sit(s) at home and (you/one) are/is being bored.'

(16) xandaxan šen/*pro* q'velaperi g-axsendeba
sometimes you/*pro* everything 2-remember
"Sometimes you (start) remember(ing) everything."

We interpret this fact as evidence that the difference between overt and covert pronouns does not directly reflect structural complexity. Given that the pronouns in these languages can be used as impersonals, we predict that they may lack speech act structure.

A related fact, pointed out by a second anonymous reviewer, is that in Dutch when a 2nd person impersonal pronoun is used contrastively, it is spelled out as the strong form (*jij*), as shown in (17).

(17) Het probleem met wereldkampioen zijn is dat **jij** altijd in het middelpunt van de belangstelling staat en je tegenstanders niet.
'The problem with being world champion is that you are always the centre of attention and your opponents aren't.'

We interpret this to mean that there are two routes to the spellout of a "strong" pronoun: either via structural complexity or via prosodic weight. Significantly, *jij* must be stressed when used as an impersonal pronoun, though it need not be when it is used as a personal pronoun. We submit that despite the phonological similarity, the structural contrast remains, that is, the former is still a DP while the latter contains the speech-act layer.

In sum, we have argued that *man* is structurally deficient: it lacks all phi-features, a deficiency which we propose is due to the lack of functional super-structure. As a consequence, it is restricted to subject position. We have also argued that impersonal *du* is a full DP, based on the fact that it has all phi-features and is not restricted to subject position. The question then arises as to whether there is a common source for the impersonal interpretation found with both *man* and impersonal *du.* In what follows, we argue that there is. More specifically, we argue that the structure of those personal pronouns that refer to the current speech-act participants must include a nominal speech-act structure, and that personal pronouns interpreted impersonally lack this layer of structure. In other words, we hypothesize that the distinguishing property shared by all impersonal pronouns is their structural deficiency. *Man*-type impersonals lack all nominal functional categories, while *du*-type impersonals lack those functional categories that make up the speech act structure.

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3. Motivating nominal speech act structure

In this section, we elaborate on how the presence of speech-act structure correlates with the personal interpretation of personal pronouns, and on why all types of impersonal pronouns lack this layer of structure. In section 3.1, we offer theoretical motivation for a speech-act structure in the structure of referential nominals. In section 3.2, we introduce our hypothesis regarding the contents of nominal speech-act structure. Specifically, we extend Wiltschko's (2017) model for speech-act structure to nominals, and provide empirical evidence that this layer is absent in impersonal pronouns.

3.1 Theoretical motivation for nominal speech act structure

Ever since Chomsky (1970), some degree of parallelism between nominal and clausal syntactic structure has been assumed. Chomsky observed similarities in the argument structure of related nouns and verbs, and attributed this to category-neutral phrase structure rules (i.e., X-bar Theory). Subsequent work introduced the idea that these same phrase structure rules apply to clausal functional categories, notably COMP and INFL (generalized X-bar Theory, Travis 1984, Chomsky 1986). And indeed, just as there is evidence for a parallel between the lexical projections of VP and NP, there is also evidence that such parallelism exists in the functional architecture of the nominal and clausal spines. For example, in his development of the hypothesis that determiners host their own functional category (DP), Abney (1987) suggests that DP is the nominal counterpart of the clausal functional category IP (later re-conceptualized as TP; Pollock 1989). The structural and functional parallel between the nominal and the clausal spine has since been widely adopted, with a variety of empirical and conceptual arguments (e.g., Szabolcsi 1994, Lobeck 1995, Chomsky 2015).

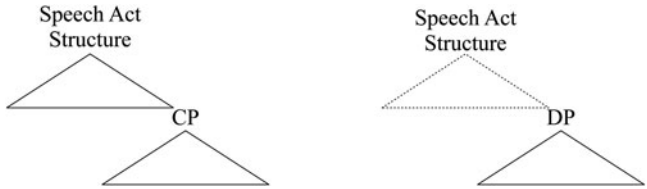
For the purposes of this paper, we adopt the Universal Spine Hypothesis (henceforth USH, Wiltschko 2014) which asserts that Universal Grammar contributes a set of hierarchically organized, abstract categories defined by their interpretive function. For the USH, the parallel between nominals and clauses follows from the assumption that language-specific categories are derived from the interpretive spinal functions and language-specific units that give these abstract categories further substantive content. Crucially, the universal spinal functions are neutral with respect to whether they apply to lexical categories denoting eventualities (verbs) or individuals (nouns), and hence are category-neutral: they define both the extended verbal phrase (i.e., the clause) and the extended nominal phrase. This leads to the expectation that all functionally defined categories in the clausal domain will have an analogue in the nominal domain, and vice versa.

In the last couple of decades, a significant body of research has explored the syntactic representation of elements of the speech act, notably the speaker and addressee (e.g., Benincà 2001; Speas and Tenny 2003; Garzonio 2004; Tenny 2006; Hill 2007a, 2007b; Haegeman and Hill 2013; Zu 2013, 2018; Haegeman 2014), or the beliefs and intentions of the speaker and addressee (Wiltschko and Heim 2016, Wiltschko 2017). Though the proposals differ in their details, they all converge on the idea that elements of the speech act are represented in the functional architecture at the top of the clausal spine. In other words, the speech act structure makes up the topmost

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layer of the sentence. Combining the assumption that the structural parallel between clauses and nominals is due to the USH with the assumption that the clausal structure contains a speech-act structure, we are led to postulate speech-act structure in nominals as well. This is schematized in (18).

(18) Parallel clausal and nominal structure?



Much of the work that focuses on clausal speech act structure takes as its point of departure Ross's (1970) performative hypothesis; that is, the hypothesis that the speaker and addressee, along with illocutionary force, are syntactically represented. Ross proposes that even declarative clauses are explicitly performative in that they encode what the speaker is doing with the utterance, namely "telling the addressee the proposition". In his analysis, the Deep Structure[9] of every declarative sentence contains a matrix clause with the speaker as the agent (subject), the addressee as the goal (indirect object) and the utterance content as the theme (direct object). The representation of the speech act is subsequently deleted so that only the proposition itself is represented at Surface Structure, as illustrated in (19).

(19) Deep Structure: I tell you that prices slumped
Surface Structure: Prices slumped.

The performative hypothesis was criticized from the very outset. One consequential problem is that it is not clear how to stop an infinite regress with examples like (19), where each performative layer would be embedded in another performative layer (*I tell you that I tell you that I tell you that ...*). Given counter-arguments such as this, and with the demise of the generative semantics framework that Ross (1970) assumed, the performative hypothesis was fully abandoned. However, many of the observations that Ross's proposal aimed to capture were then left without explanation.

With the rise of functional architecture, the door was opened to analyse Ross's speech-act structure as part of the functional architecture, thus overcoming the problem of infinite regress. Starting in the mid 1990s, several researchers re-analysed the performative hypothesis in terms of functional architecture, re-interpreting Ross's matrix clause structure as follows: speaker and addressee are assumed to be speech

[9]Ross's (1970) analysis was couched within the theoretical framework of generative semantics. In that framework Deep Structure is the level of syntactic representation where all meaning is encoded. It is distinguished from Surface Structure, which is the level of representation that is derived by the application of syntactic transformations (insertion, deletion, and movement operations) to Deep Structure.

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act roles, associated with one or more functional speech act heads. The functional heads that introduce these roles replace the verb of communication proposed by Ross (*tell* in (19)). Take, for example, Speas and Tenny's (2003) version of this analysis: they assume that speech-act structure makes use of the same formal primitives as argument structure. To introduce an assertoric speech act of the sort "*I tell you that"*, they assume that the structure is akin to a double-object construction with an articulated speech act shell as in (20).

(20) $[_{saP}$ Spkr [sa $[_{SAP}$ Utt [SA Hearer]]]

Wiltschko and Heim (2016) refer to this recasting of Ross's original proposal as the neo-performative hypothesis. The problem with this particular implementation of the idea that there is a speech-act structure dominating the clause is that it adopts the version of speech act theory that was prevalent at the time Ross first introduced the idea, namely the version proposed by Austin (1962) and Searle (1969). However, since then, speech act theory has developed in various ways (see Clark and Brennan 1991 for a recent overview). What emerges from the more recent literature is that one cannot ignore the role of the addressee. In particular, even an assertion conveyed by a declarative with falling intonation cannot be regarded as successful transfer of information from the speaker to the addressee. The felicitous performance of an assertion is dependent both on the speaker *giving* the addressee the content of an utterance, (i.e., a piece of information), and on the addressee *receiving* and *accepting, rejecting* or further *discussing* this piece of information. It is only after the addressee accepts this information that the proposition can be added to the common ground (in the sense of Stalnaker 2002). This process of ensuring mutual understanding between two interlocutors defines dialogical interaction. It is what Clark and Brennan (1991) refer to as *grounding*. Crucially, natural languages have forms dedicated to managing grounding in this sense, such as confirmationals which are specifically used to request acceptance of the host utterance into the common ground (*I have a new dog,* ***eh?****)*, as well as response markers which are used to indicate acceptance (***Yeah,*** *I know!*) or rejection (***No!*** *You're wrong!*).

To accommodate the interactive dimension of meaning, Wiltschko and Heim (2016) and Wiltschko (2017) develop a framework within which to explore the syntax of interactional language. They propose that the speech act structure consists of two layers, each associated with an abstract spinal function. The *grounding* layer (GroundP) is responsible for encoding the speaker's attitude towards what is being said. This layer can be articulated to further encode the speaker's assessment of the addressee's attitude. The *responding* layer (RespP) is responsible for encoding what the speaker wants the addressee to do with what is being said (i.e., respond or not respond). In English, the request for a response is typically realized with intonational tunes. Evidence for the assumption that speech act structure includes representations of the speaker's and addressee's attitude (i.e., that it realizes the relation of the proposition to the interlocutors' *Ground*), rather than the speech-act roles, comes from the fact that speech act modifiers, such as confirmationals, modify the speech act participants' attitudes rather than the speech act participants themselves. For example, within and across languages we find confirmationals that differ in

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terms of the timing of belief (i.e., whether the speaker came to believe the proposition before or during the time of the conversation) or in terms of the robustness of belief (i.e., how strongly the speaker believes the proposition). This type of modification is precisely what we would expect if the relevant functional category represents the speech-act participants' grounds. The interactive structure dominating the propositional structure encodes what we do when we utter sentences.

3.2 The speech-act structure of nominals

The conceptual argument introduced in the previous section leads us to expect a nominal speech-act structure. In this section, we show that this expectation is borne out. Specifically, we provide empirical evidence that grounding applies not only to propositions but also to individuals (section 3.2.1). Furthermore, we argue that impersonal pronouns, precisely because they are not part of the common ground, lack a grounding structure (section 3.2.2).

3.2.1 Grounding of nominals

According to Bavelas et al. (2012: 1), grounding is the "fundamental, moment-by-moment conversational process by which speaker and addressee are constantly establishing mutual understanding." The goal of a conversation is to establish common ground so that the interlocutors know what they each believe, and sometimes also why they believe what they do, how they came to these beliefs, how strongly they hold them, and their status in the common ground. Thus, the common ground contains propositions and the interlocutors' attitudes towards these propositions (i.e., *propositional attitudes*). Crucially for our purposes, the common ground contains not only propositions but also discourse participants, the individuals we talk about (Karttunen 1976, Webber 1979). And just as with propositions, interlocutors will establish who it is they are talking about, sometimes how they relate to these individuals, and their status in the common ground. These are the interlocutor's attitudes towards these referents and we suggest that these constitute the interlocutors' *referential attitudes*.

Different types of DPs express different referential attitudes. For example, the difference between definite and indefinite DPs can be characterized as encoding whether or not a particular discourse referent is new or old relative to the common ground, a difference that clearly mirrors the above-mentioned encoding of timing of belief. Thus, we might expect that similar mechanisms for managing the grounding of referents can be found in the nominal domain. And this is in fact so, as the following conversation illustrates.

(21) A: … well I was the only one other than than the […uhm tch] **Fords**[?], [uh] **Mrs. Holmes Ford?** You know […uh…][the] **the cellist?**
B: [Oh yes.] [She's…] **she's the cellist**.
A: Yes. Well, **she** and her husband were there.
(Sacks and Schegloff 1979: 18; Clark and Bangerter 2004: 36)

This conversation illustrates that reference is a collaborative act between interlocutors. What appears to be a disfluency in A's contribution is in fact an act of

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requesting confirmation that the individuals under discussion are in the common ground. That is, A wants to say something about Mr. and Mrs. Ford, but first must establish that B knows who A is talking about. In order to do so, A uses a pause, rising intonation and hesitation particles (*uhm tch*) to indicate that they are seeking confirmation that B knows who the Fords are, and in particular who Mrs. Ford is. A begins by naming the individuals under discussion, and then follows this with a description of the focal individual, and asks specifically if B knows who A is talking about – the cellist, Mrs. Holmes Ford. B responds in the affirmative, and then uses a pronoun to refer back to this individual, and to confirm that they know who she is. Having established the identity of the persons under discussion, A can proceed to tell B something about them. We propose that the three strategies used by A and B in this conversation, that is, *naming, describing, and tracking* constitute nominal speech acts, and that they are typically expressed by different kinds of nominals – proper names, common noun phrases, and pronouns, respectively.[10] We propose that like clausal speech acts, nominal speech acts are syntactically represented. In other words, we expect a dedicated layer of structure to encode what we do when we utter nominals. Recall, however, that the main focus of this paper is to demonstrate that impersonal pronouns are structurally defective in that they lack at least speech-act structure. We contend that the contrast between impersonal pronouns and other types of nominals provides us with indirect evidence for a speech-act structure in the nominal spine. In the next section, we provide empirical evidence that this is the essence of the structural deficiency in all impersonal pronouns.

3.2.2 *Grounding of impersonal pronouns*

One of the key functions of speech-act structure is to manage turn-taking, in that it marks the request for a response from the interlocutor. This implies that utterances that make up turns have to be dominated by speech-act structure, which in turn predicts that phrases without speech-act structure, for example impersonal pronouns, cannot be complete turns.

Evidence that this is indeed the case comes from answers to wh-questions. At least in English, the most natural answer to a wh-question asking about an individual person or object is just a nominal that names, describes, or refers to the individual, as in (22). Thus, a fragment answer consisting of a nominal only (A1) is preferable to a full sentence answer (A2).[11] Note that our interest here is not in the preference for A1 over A2, but in the well-formedness of A1.

[10]The difference between nominal speech acts may shed light on the classic philosophical discussion about the difference between referential and attributive uses of definite descriptions (Donellan 1966). The former may be an act of naming whereas the latter might be an act of describing (Lavi Wolf, p.c.). We leave an exploration of this issue for future research.

[11]The judgement given in A2 is for a full sentence uttered without contrastive stress. The sentence improves significantly if the object (i.e., the answer to the wh-question) is contrastively stressed. The sentence fragment answer in A1 acceptable either with or without contrastive stress.

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(22) Q: Who did you see?
A1: John/my little brother/him
A2: (#)I saw John/my little brother/him.
A3: *You$_{\text{IMPERS}}$/one.

In (22), names, definite descriptions, and pronouns are well-formed answers because they can serve as turns, and thus, by hypothesis, they have speech-act structure in their syntactic representation.

Interestingly, while most types of nominals are completely acceptable as sentence fragment answers to English wh-questions (22, A1), impersonal pronouns are not (22, A3). This is also true for German, where all types of noun phrases except impersonal pronouns can serve as answers to a wh-question, as shown in (23).

(23) Q: Wer würde das schon tun?
Who would that PRT do.INF
'Who would actually do that?'
A1: Johann/mein kleiner Bruder/(nur) du/jeder/niemand
Johann/my little brother/(only) you/everyone/(any) somebody/nobody
A2: *man/*du$_{\text{impersonal}}$
IMPERS/IMPERS.2SG

Note, however, that even in full answers, impersonal pronouns are not always possible.

(24) a. Q: Who should do that?
A: *One/you$_{\text{imp}}$ should do that.
b. Q: Who on earth would do that?
A: Well, one/you just doesn't/don't do that.

It seems that impersonal pronouns are only possible in answers to questions that are clearly generic, and perhaps rhetorical. (We thank an anonymous reviewer for this observation.) Furthermore, an appropriate answer seems to require the negation of the proposition. Significantly, the same generalization holds for fragment answers: impersonal pronouns are not possible, but other types of nominals are.[12]

(25) Q: Who on earth would do something like that?
A1: Well, *not one/*you$_{\text{imp}}$
A2: Well, not John/not my little brother/not me/not you$_{\text{pers}}$/not him

Summarizing the discussion in this section, we have introduced the idea that there is a speech-act structure in the nominal spine, parallel to the speech-act structure in the clausal spine. Impersonal pronouns provide empirical motivation for this hypothesis to the extent that their defective distribution can be attributed to the absence of this layer of nominal structure. What this means is that impersonal pronouns cannot be used to perform nominal speech acts because they do not name, describe, or refer to specific individuals, and thus, they cannot function as sentence fragment answers.

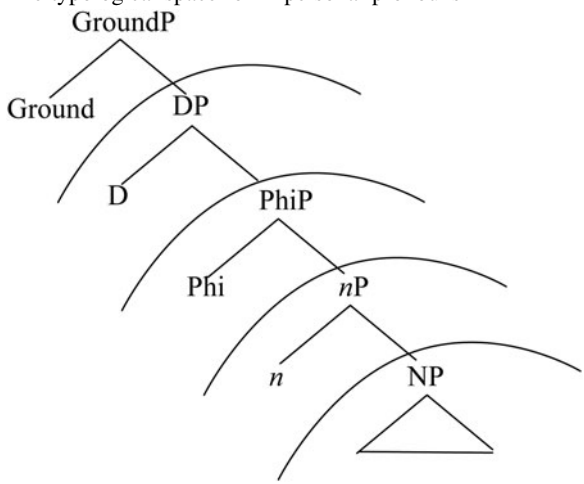
[12]The contrast between (24b) and (25, A1) provides evidence against an ellipsis analysis of fragment answers. See also footnote 6.

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4. A TYPOLOGY OF STRUCTURAL DEFICIENCY IN PERSONAL PRONOUNS

The defining property of impersonal pronouns is that they do not relate to the speech act participants. We propose that this property derives from the lack of speech-act structure. Thus, we propose that impersonal pronouns are characterized by structural deficiency. However, there is – in principle – no reason to assume that their structural deficiency would be limited to the lack of speech-act structure. In this section, we demonstrate that all logical possibilities are attested. Assuming that a structurally complete nominal has the full structure in (26), then we expect that impersonal pronouns can be deficient in several ways.[13] Hence, we expect to find *DP-impersonals* that lack only GroundP; *PhiP-impersonals* that lack GroundP and DP; *nP-impersonals* that lack GroundP, DP, and PhiP; and finally, *NP-impersonals* that lack all functional categories – GroundP, DP, PhiP, and *n*P. These options are indicated by the arcs in (26).

(26) The typological space for impersonal pronouns



We have already seen that impersonal *du* and impersonal *you* are DP-impersonals, and that *man*-type impersonals are NP-impersonals. Below we provide evidence for PhiP-impersonals and *n*P impersonals, in turn.

In Ritter and Wiltschko (2016), we discuss the distribution of Modern Hebrew impersonal *pro* as seen in (27).

[13]The range of variation we identify rests on two assumptions that are implicit in much work that explores issues in phrase structure. First, we assume that there is no variation in the hierarchical order of categories in the nominal constituent (i.e., GroundP universally dominates DP, which universally dominates PhiP, etc.). Second, we assume that all nominals contain the lexical layer (NP). As a consequence, a structurally deficient nominal can be characterized as a nominal that lacks one or more of the functional categories at the top of the nominal spine.

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(27) a. *pro* šotim hamon mic ba-'arec
pro drink.PRES-PL a lot juice in.the-country
'People drink a lot of juice in Israel.'

b. *pro* šatu hamon mic ba-yamim hahem
pro drink.PST.3PL a lot juice in.the-days those
'People drank a lot of juice in those days.'

c. im eyn bira ba-misiba, az *pro* yištu mayim o mic.
if not beer at.the-party, then *pro* drink.FUT.3PL water or juice
'If there is no beer at the party, then people will drink water or juice.'

The first thing to note is that Hebrew impersonal *pro* triggers plural agreement on the verb. Assuming that the locus of plural marking is PhiP, this would indicate that Hebrew impersonal *pro* is minimally a PhiP. Significantly, impersonal *pro* is available in all tenses (present, past, and future), as illustrated in (27). However, in Hebrew referential *pro* is only available in past and future tense, as shown in (28).

(28) a. ani/*pro*$_i$ axal-ti glida
I/*pro* eat.PST-1SG ice cream
'I ate ice cream.'

b. ani/ata/hu/**pro*$_i$ oxel glida
I/you/he/**pro* eat.PRES.M.SG ice cream
'I am/you are/he is eating ice cream.'

c. ani/*pro*$_i$ oxal glida
I/pro eat.FUT.1SG ice cream
'I will eat ice cream.'

The tense restriction on referential *pro* is widely attributed to the fact that in Hebrew, past and future verbs are inflected for all phi features (person, number, and gender), while present tense verbs are inflected for number and gender, but crucially not for person. This is exemplified in (25) and in the verb paradigms in Tables 1–3.

We assume that Phi is the locus for number and that D is the locus for Person. The facts of Modern Hebrew thus provide striking evidence that impersonal *pro* is a PhiP; it is specified for number (and gender), but not for person, and thus instantiates the PhiP-impersonal in the typological space predicted by our analysis.

Evidence for the fourth type of impersonal pronouns (*n*P-impersonals) comes from a comparison of Standard German *man* and its Austrian German cognate *ma*. Both *man* and *ma* can have a universal interpretation, that is, they can both be used to refer to all possible persons, as illustrated in (29)–(30).

(29) In ein-em vornehm-en Restaurant tut **man** das nicht.
in a-DAT sophisticated-DAT restaurant do.3SG IMPERS that not
'In a sophisticated restaurant, one doesn't do that.'

(30) In am gspitztn Restaurant tuat **ma** des net.
In a-DAT sophisticated-DAT restaurant do.3SG IMPERS that not
'In a sophisticated restaurant, one doesn't do that.'

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Past 'ate'	Singular		Plural	
	masculine	feminine	masculine	feminine
1	*axalti*		*axalnu*	
2	*axalta*	*axalt*	*axaltem*	*axalten*
3	*axal*	*axla*	*axlu*	

Table 1: Verbal agreement for past tense

Future 'will eat'	Singular		Plural	
	masculine	feminine	masculine	feminine
1	*oxal*		*noxal*	
2	*toxal*	*toxli*	*toxlu*	*toxalna*[14]
3	*yoxal*	*toxal*	*yoxlu*	*toxalna*

Table 2: Verbal agreement for future tense

Present'is eating'	Singular		Plural	
	masculine	feminine	masculine	feminine
—	*oxel*	*oxelet*	*oxlim*	*oxlot*

Table 3: Verbal agreement for present tense

However, the two dialects differ in that Standard German allows for an existential interpretation of the impersonal, but Austrian German does not. In other words, Standard German *man* can be used to refer to an individual who is not identified in the discourse, but Austrian *ma* cannot. (In Austrian German, the wh-word that functions as an indefinite pronoun is used instead.) There are two cases to be considered. First, in (31a) and (32a), the impersonal/indefinite pronoun is used to refer to one specific individual who the speaker cannot or will not identify. Second, in (31b) and (32b), the impersonal/indefinite pronoun is used as a variable over individuals that co-varies with events. In these examples, for every instance of the speaker's visiting Vienna, there is an individual who steals their bike.

(31) a. Gestern hat **man** angerufen.
Yesterday has IMPERS called.
'Somebody called yesterday.'

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b. Immer wenn ich in Wien bin stiehlt **man** mir mein Rad.
Always when I in Vienna am steals IMPERS me my bike
'Whenever I'm in Vienna, somebody steals my bike.'

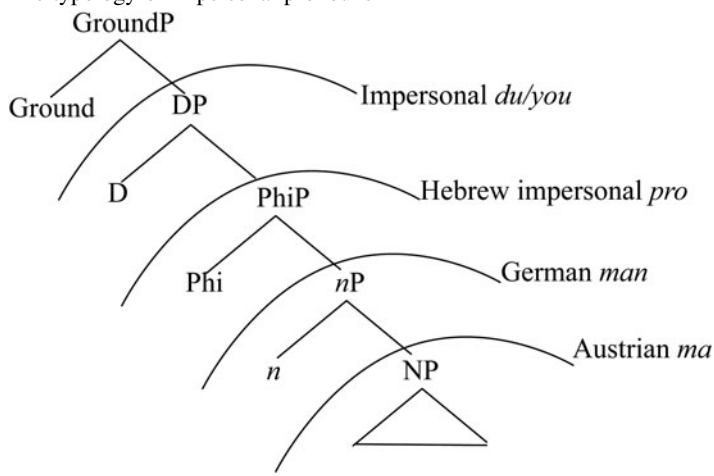
(32) a. Gestern hot **wea/*ma** õgruafn.
Yesterday has INDEF/*IMPERS called.
'Somebody called yesterday.'

b. Imma wonn I in Wien bin stühlt ma **wea/*ma** mei Ral.
Always when I in Vienna am steals me INDEF/*IMPERS my bike
'Whenever I'm in Vienna, somebody steals my bike.'

We assume that the existential interpretation requires a contextual variable to be associated with the nominal reference, whereas the universal interpretation is not contextually restricted. Following Wiltschko (2013), we further assume that contextual variables are associated with *n*P. We propose that the contrast between the two varieties of German can be attributed to a categorial difference between *man* and *ma*: *man* is an *n*P-impersonal, and thus is associated with a contextual variable; *ma* is an NP-impersonal, and thus lacks a contextual variable. As a consequence, only *man* can be used existentially.

In sum, we have now seen that impersonal pronouns come in several different guises. What they all have in common is that they lack speech act structure (GroundP) as they cannot be linked to the speech act participants. However, all other possibilities are attested: impersonal *du/you* instantiates DP-impersonals, Hebrew *pro* instantiates PhiP-impersonals, Standard German *man* instantiates *n*P impersonals, and Austrian *ma* instantiates NP-impersonals. This typology is represented in (33).

(33) The typology of impersonal pronouns



Note that in our small sample of impersonal pronouns, PhiP-impersonals stand out as they are instantiated by *pro* rather than an overt pronoun. There is nothing in our proposal that would predict this to be the case, and thus it is an empirical question

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whether we might also find overt PhiP-impersonals and similarly, whether there are null versions of the other types of impersonal pronouns.

5. Conclusion

The goal of this paper was to introduce the idea that there is a speech act structure in the nominal spine, just as there is in the clausal spine. Its function is to encode what we do when we utter a nominal: we name, describe, or track individuals. In this way, the speech-act structure establishes a link between the discourse referent and the speech-act situation. The evidence discussed in this article comes from nominals that lack this speech-act structure, namely impersonal pronouns. Specifically, what all impersonal pronouns have in common is that they lack the ability to connect to the speech-act participants; they do not name, describe, or track discourse referents. However, impersonal pronouns are otherwise not a natural class. They vary in syntactic category and as a consequence, they differ in morphosyntactic features, and in distribution. Note that it has long been established that there is variation in the structure of personal pronouns (e.g., Ritter 1995, Cardinaletti and Starke 1999, Déchaine and Wiltschko 2002) and hence, it comes as no surprise that impersonal pronouns also differ structurally.

As pointed out by an anonymous reviewer, cross-linguistically, it is the second person singular that often can be used impersonally, and, it appears, never the first person singular or the third person singular. At this stage, our analysis has nothing to say about this intriguing contrast and we will leave it for future research.

The hypothesis that nominals, like clauses, have speech-act structure fits squarely within current investigations of the syntax-pragmatics interface. It allows for a novel approach to the discourse properties of nominals, which goes beyond their role as thematic arguments and modifiers of predicates. As such, it opens up a new research agenda with a plethora of new research questions regarding the syntax, semantics, and pragmatics of different types of nominals.

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