Agreement, case and locality in the nominal and verbal domains

Edited by

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Introduction

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1 Opening remarks

The past two decades or so have seen a considerable amount of investigation into the nature of syntactic dependencies involving the operation Agree. In particular, there has been much discussion of the relations between Agree and its morphological realisations (agreement and case), and between Agree and other syntactic dependencies (e.g., movement, binding, control). The chapters in this volume examine a diverse set of cross-linguistic phenomena involving agreement and case from a variety of theoretical perspectives, with a view to elucidating the nature of the abstract operations (in particular, Agree) that underlie them.[1] The phenomena discussed include backward control, passivisation, progressive aspectual constructions, extraction from nominals, possessives, relative clauses and the phasal status of PPs. In this introductory chapter, we provide a brief overview of recent research on Agree, and its involvement in other syntactic dependencies, in order to provide a background for the chapters that follow. We do not aim to give an exhaustive treatment of the theories of Agreement and Case

[1]The chapters in this volume derive from a workshop organised by the editors, entitled 'Local and Non-Local Dependencies in the Nominal and Verbal Domains' (Faculdade de Ciências Sociais e Humanas (FCSH), Universidade Nova de Lisboa, 13 **November2015**).

here, as there already exist more comprehensive overviews, to which we refer the reader (e.g., Bobaljik & **Wurmbrand2008**; Polinsky & **Preminger2014**).

2 Case and agreement: Their location, interrelation and realisation

Our starting point – because of its relative familiarity – is the treatment of case and agreement in more recent versions of Minimalism (esp. **Chomsky2000**, 2001; Pesetsky & **Torrego2001**, 2007). As in earlier GB and Minimalist approaches (e.g., **Chomsky1980**; 1981; 1995), both Case and Agreement (which we capitalise here to distinguish them from the relevant morphological notions) are 'abstract' in the sense that, while they do bear a relation to the morphological phenomena of case and agreement, this relation is only indirect. In other words, Case and Agreement within Minimalism are concerned primarily with the distribution of DPs, rather than with morphology (cf. Bobaljik & **Wurmbrand2008**). The basis of the approach is the operation Agree, which relates a head (a 'probe', such as T or *v*) bearing uninterpretable (and/or 'unvalued') phi-features to a 'goal' DP, c-commanded by the probe, that bears counterparts of one or more of those features. This results in deletion at LF of the uninterpretable/unvalued features on the probe, ensuring 'legibility' at LF. Thus, in a transitive sentence the functional heads T and *v*, both bearing uninterpretable phi-features and Case, initiate Agree with the DPs they most immediately c-command, the subject and direct object respectively:

(1) $[_{\text{TP}}$ Sue $\text{T}_{[u\varphi\ \text{Nom, EPP}]}$ $[_{v\text{P}}$ $\text{Sue}_{[u\varphi,\ \text{Nom}]}$ $v_{[u\varphi,\ \text{Acc}]}$ $[_{\text{VP}}$ likes $\text{cake}_{[u\varphi,\ \text{Acc}]}]]]$

The assumption here is that the checking of Case features, which are uninterpretable and hence must be deleted, is dependent on the Agree relation established by the phi-feature sets of the functional head and the DP (cf. the discussions of 'Person Case Constraint' effects in **Anagnostopoulou2003**; **Rezac2008**). That is, under this view case is simply a reflex of phi-feature-checking that appears on nominal constituents. As it is presented in (1), Chomsky's proposal only directly covers nominative and accusative (reflexes of phi-feature checking on T and *v* respectively). As for oblique cases such as dative, it has recently been argued that these are checked by a functional head such as Appl (e.g., **Cuervo2003**; Pylkkänen 2008). More specifically, one possibility is that datives/obliques are simply the reflex of phi-feature agreement between Appl and a DP (see Marchis Moreno & **Franco2017**).

An important difference between the model in (1) and previous GB and Minimalist models is that movement to the specifier of TP, previously held to be crucial for feature-checking (**Chomsky1995**), is now triggered by a distinct feature (an EPP-feature) on the probe. Thus, Agree need not entail the movement of the goal to the probe's specifier, but merely makes this movement available in principle via the EPP-feature that it licenses (cf. Pesetsky & **Torrego2001**, who treat EPP as a 'subfeature' of an uninterpretable feature). The Agree relation is thus intended to account for the distribution of DPs in two senses: a DP must at some point be local enough to an appropriate probe in order for Agree to be established and the relevant uninterpretable features to be checked, and Agree additionally allows for movement of the DP to the probe's specifier if an EPP-feature is present.

One recent debate about Agree has concerned the directionality of the operation; that is, whether Agree must always be 'downward', as in the above presentation (e.g., **Chomsky2000**, 2001; **Preminger2013**), or whether it may or must operate upwards (e.g., **Zeijlstra2012**; Ackema & Neeleman in press). A further debate has concerned the extent to which Agree is involved in mediating other grammatical dependencies. For example, **Reuland2001**, **Hicks2009** and Rooryck & Vanden **Wyngaerd2011** argue that Agree plays a central role in anaphoric relations (though see **Safir2014** for a dissenting view). **Landau2000** argues that the control relation is mediated by Agree relations between the controller, PRO and one or more functional heads in the clause. This approach can be contrasted with the movement-based approach to control (**Hornstein1999**; Hornstein & Polinsky eds. 2010). One piece of evidence favouring an Agree-based approach is the existence of partial and finite control, which had proven problematic for previous approaches (**Landau2013**: 65ff.).

Under the approaches outlined above, Case and Agreement are both 'narrow-syntactic' phenomena that may or may not have an effect at the PF interface, resulting in morphological case and agreement respectively. This view can usefully be contrasted with an approach that was first proposed by **Marantz1991** and has since had considerable influence (e.g., **Harley1995**; Schütze 1997; Mc**Fadden2004**; **Bobaljik2008**; Baker & **Vinokurova2010**; **Titov2012**). Marantz argues that generalisations about C/case, such as Burzio's generalisation (**Burzio1986**) and certain restrictions on ergative case assignment in languages such as Georgian and Hindi, are about morphological case (m-case), not about Abstract Case. Furthermore, he argues on the basis of Icelandic 'quirky case' (cf. Zaenen et al. 1985) that there is no relation between the positional licensing of DPs and the morphological case that they bear. His overall message is that DP-licensing is not

about case, and hence that Abstract Case should be eliminated from the theory of syntax. Instead, DP-licensing should be handled entirely by the mapping between thematic roles and argument positions, supplemented by the Extended Projection Principle.

Under Marantz's model, m-case, as well as agreement morphemes, are assigned at a level of 'Morphological Structure' (MS) intervening between S-Structure and PF. Thus, in this model both case and agreement are 'post-syntactic' phenomena that do not enter into the licensing of DP/NPs. M-cases are assigned according to a case hierarchy (cf. Yip et al. 1987); at the top of the hierarchy are the 'lexically governed' cases (e.g., 'quirky' and inherent cases), followed by the dependent cases (accusative, ergative), followed by the unmarked cases (nominative or absolutive in clauses; genitive in DP/NP). Finally, there is a 'default' case (e.g., accusative in English) that applies when no other case realisation is possible. Indeed, Marantz emphasises that the provision of a default form when no other form is available is characteristic of morphology; a sentence will never be ungrammatical because no features are assigned to a case affix. Case "merely interprets syntactic structures and does not filter them" (**Marantz1991**). Marantz suggests that a similar hierarchy applies in the determination of agreement, but he allows for a relatively flexible relation between case and agreement in order to account for certain case-agreement 'mismatches' that are found in split ergative systems.

Bobaljik2008 takes up the question of how agreement is determined in the context of Marantz's proposal. His main idea is in a sense the opposite of Chomsky's (2000, 2001), namely that agreement is parasitic on case (cf. Bittner & **Hale1996**). Thus, if Marantz's argument that m-case is post-syntactic is correct, then agreement must also be post-syntactic. More specifically, Bobaljik argues that the finite verb (or other head) agrees with the highest 'accessible' NP in its 'domain', where 'accessibility' is defined in terms of the case hierarchy proposed by Marantz (see also Mc**Fadden2004**). In the spirit of **Moravcsik1974** (who stated the hierarchy in terms of grammatical functions rather than cases), the unmarked cases (nominative or absolutive in clauses; genitive in DP/NP) are said to be maximally accessible, with the dependent cases (accusative, ergative) being less accessible, and the 'lexically governed' (e.g., 'quirky' and inherent cases) being the least accessible. Among other things, this hierarchy accounts for the fact that, in nominative-accusative languages, if a verb agrees with any DP, it at least agrees with subjects (e.g., **Moravcsik1974**; **Gilligan1987**), while in ergative-absolutive languages, if a verb agrees with any DP, it at least agrees with absolutive DPs (e.g., **Croft1990**). Further evidence comes from mismatches between case and

grammatical function in Icelandic, where it is case, not grammatical function, that turns out to determine the agreement controller (Sigurðsson 1993). Finally, long-distance agreement in languages such as Tsez (Polinsky & **Potsdam2001**) suggests that there is no need for a particular grammatical relation with the agreement target beyond locality (i.e., only 'accessibility' and 'domain' are relevant).

Other 'post-syntactic' treatments of case and agreement can be found in Embick & **Noyer2006** and Marchis Moreno (2015, 2018). These authors argue that case and agreement nodes/features are added after syntax in accordance with language-specific requirements, and are never essential to semantic interpretation. One advantage of this type of approach is that it could explain certain mismatches at the syntax-morphology interface that arise with certain word categories that are in complementary distribution, such as denominal relational adjectives and prepositional genitives in Romance. Semantically and syntactically, these are nouns, but morphologically they instantiate different word categories with different case assignment requirements (Marchis **Moreno2018**). In the spirit of Embick & **Noyer2006**, Marchis Moreno (2015, 2018) argues that the Case features of the underlying nouns in the structure of thematic relational adjectives are relevant only at PF, and that their countability (or lack thereof) in the syntax conditions the choice of Vocabulary Items expressing Case. That is, their underspecification for number triggers deficient Case features on thematic relational adjectives that are valued only at PF, determining the introduction of an Agreement node (AGR) that turns the noun into an adjective through suffixation, instead of introducing the Genitive Case feature, spelled out as the preposition *de* in Romance languages.

An interesting contrast is provided by the work of **Preminger2014**, who argues against the 'post-syntactic' view of agreement and case, but agrees with Bobaljik that phi-agreement is sensitive to morphological case. Preminger notes that Marantz's argument for a post-syntactic treatment of case is based on the purported absence of grammatical processes that refer to case. Preminger argues, however, that the distinction between 'quirky-subject' and 'non-quirky-subject' languages with respect to raising and agreement over experiencers exemplifies such a process. More specifically, he argues that movement to subject position is 'case-discriminating' in languages such as English and French, and hence that case must be part of syntax proper. Nevertheless, Preminger makes crucial use of Marantz's case hierarchy, which he attempts to derive from independently established principles of syntactic structure-building.

A quite different approach to case and agreement is found in the work of

Manzini & **Franco2016**, Franco & **Manzini2017** and Manzini et al. (this volume). These authors question the idea of an 'accessibility hierarchy' of cases, arguing that such a hierarchy has no special advantage over a pure stipulation of the facts, such as the VIVA (Visibility of Inherent Case to Verbal Agreement) parameter of Anand & **Nevins2006**. Furthermore, they argue that it is both unnecessary and unprofitable to define Agree in terms of (un)interpretable and (un)valued features (cf. **Brody1997**). Finally, they argue that certain types of case are unsuited to treatment in terms of uninterpretable features, as they actually have inherent semantic content. For example, they propose that 'oblique' cases should be analysed in terms of what they call an 'elementary relator' with a 'part/whole' semantic content. The general approach proposed in these works is adopted in **Reeve2018**, which argues that extraction from DP/NP cross-linguistically is dependent on the Agree operation, where Agree relates sets of interpretable features as in the above works. However, Agree is only possible where the language independently shows overt evidence of agreement. This accounts for the observation that languages with left-branch extraction tend to be languages with overt agreement in DP/NP (cf. **Ross1967**: 237-238; **Horn1983**: 188). (See Mensching's chapter for an alternative analysis of extraction from DP/NP.)

A final prominent issue in research on case and agreement is the analysis of syncretism – the phenomenon whereby two morphosyntactically distinct categories may receive identical morphophonological realisations. Case syncretism has been analysed in terms of implicational hierarchies of the type discussed above with respect to Marantz's (1991) proposal. **Blake2001** proposes the implicational hierarchy in (2), such that cases on the right are progressively less likely to occur. **Caha2009** modifies Blake's hierarchy (not taking ergative into account) as in (3), conceived of as an f-sequence in the Nanosyntactic framework. His main reason for adopting this particular hierarchy is that it can account for possible syncretisms between cases, given a constraint blocking non-accidental syncretism between non-adjacent categories (cf. the *ABA constraint of **Bobaljik2012**).

(2) **(Blake2001)**
NOMINATIVE > ACCUSATIVE / ERGATIVE > GENITIVE > DATIVE > LOCATIVE > ABLATIVE/INSTRUMENTAL > OTHER

(3) **(Caha2009)**
NOM > ACC > LOC1 > GEN/PART > LOC2 > DAT > LOC3 > INS/COM

A related approach is that of **Calabrese2008**, who adopts the tenets of Distributed Morphology (Halle & **Marantz1993**, Embick & **Noyer2006**, among oth-

ers). Calabrese is specifically interested in absolute syncretism – i.e., in the fact that certain cases or case oppositions are missing altogether in some languages. He assumes that functional categories are represented by abstract feature clusters in syntax, which are only realised by actual exponents at the PF interface. His key proposal is that there is a markedness hierarchy of cases, not unlike the descriptive hierarchies in (2)–(3). Following **Blake2001**, lower cases in the hierarchy are more likely to be blocked. If they are, the corresponding feature cluster cannot surface at PF, but must be readjusted by the morphological component (including the key rule of Impoverishment) yielding surface syncretism.

In a series of recent works, Manzini & **Savoia2011**, Manzini & **Franco2016** and Franco & **Manzini2017** reject these approaches, arguing that they leave the traditional cases, and the traditional notion of case itself, unanalysed. The latter series of works instead analyses (oblique) case as the inflectional realisation of elementary predicative content ('includes'/'is included by') on a noun. Correspondingly, there is no externally imposed hierarchy ordering the relevant primitives, but rather a conceptual network determined by the primitive predicates we use and the relations they entertain with each other. These authors argue that neither Calabrese's markedness hierarchies nor Caha's nanosyntactic functional hierarchies are necessary, because syncretism depends essentially on natural class (Müller 2007). Seen from this perspective, case hierarchies essentially reduce to a binary split between direct case (reduced to the agreement system; **Chomsky2001**) and oblique case, reducing to part-whole operators. Other so-called cases are analysable into a case core (typically oblique) and some additional structure, yielding something similar to the internally articulated PPs of **Svenonius2006**.

Syncretism has also been shown to have effects on other aspects of the grammar. For example, it has been reported to have the property of repairing violations of syntactic constraints; for example, with agreement (Schütze 2003; Bhatt & **Walkow2013**) or case-matching (**Citko2005**; van **Craenenbroeck2012**; Hein & **Murphy2016**). On the face of it, this property of syncretism appears to pose a challenge to post-syntactic views of morphology such as DM. **Citko2005** and **Asarina2011** attempt to maintain a DM view by appealing to underspecification. However, Hein & **Murphy2016** argue on the basis of Polish data that underspecification approaches cannot account for the repair effect of syncretism on violations of the case-matching requirement in Across-the-Board (ATB) constructions, and that the problem for DM remains.

3 Issues arising in this volume

We will now outline a few issues in the syntax of case and agreement that have become prominent in the literature and are discussed in one or more contributions to the present volume. Our aim here is to identify a number of common issues and perspectives among the chapters, which on the face of it are quite diverse in their content.

The first such issue is the question of what the relation is between A/agreement and C/case. As we have seen, in Chomsky's probe-goal system Case-checking/valuation is dependent on the application of Agree, while in approaches such as **Bobaljik2008** and **Preminger2014**, agreement depends on the output of C/case-assignment. In other approaches, such as **Baker2015** and Manzini & **Franco2016**, C/case and A/agreement are essentially independent. A number of contributions to this volume could be said to argue in favour of a tight relation between case and agreement. Marchis Moreno's chapter argues that backward object control in Brazilian Portuguese occurs only in the presence of an inflected infinitive, and that this inflection diagnoses the percolation of default nominative case onto embedded T, which must then be assigned to an overt DP in SpecTP. Such an analysis is only feasible if C/case and agreement go hand in hand. Giurgea's chapter argues that the 'person constraint' on *se*-passives in Romanian can be accounted for if a person feature intervenes to block case-assignment by V to its internal argument. Again, this presupposes that person features are of the 'same type' as Case features, in the sense that one can block an operation targeting the other.

Other chapters argue for or suggest that the relation between case and agreement goes in one or the other direction. Łęska's chapter focuses on the nature of 'Case attraction' in Polish relative clauses, arguing that the Agree relation occurring between a numeral quantifier and a relative pronoun may optionally result in transmission of the numeral quantifier's Case onto the relative pronoun. On the other hand, because agreement (full vs. default) on the relative clause predicate depends on whether Case transmission has taken place, Agree must be able to detect the output of Case attraction; in other words, agreement must be parasitic on C/case, as in the work of **Marantz1991** and **Preminger2014**. By contrast, Mensching's chapter argues that Agree (in the Chomskyan sense) is crucially involved in licensing extraction from nominals, in that an XP must undergo Agree with D in order to be extracted from DP. In particular, he argues that the argument/adjunct asymmetry in extraction can be accounted for if arguments undergo Agree with D to value Case, while adjuncts cannot. Thus, extraction depends on Case, which depends on Agree(ment). Finally, Manzini, Franco &

Savoia argue that, while the so-called 'direct cases' (e.g., nominative, accusative) are parasitic on agreement, as in Chomsky's work, 'oblique cases' (dative, genitive, instrumental) are a different type of phenomenon. They argue that it is problematic to adopt an Agree approach to 'concord' within DP (e.g., **Carstens2001**), involving one goal (N) checking multiple probes (agreeing determiners and modifiers). Instead, as noted above, they propose that oblique involves an 'elementary relator' with a 'part/whole' semantic content.

A second prominent topic in this volume concerns the extent to which the operation Agree is crucially involved in establishing other grammatical dependencies. Alexiadou & Anagnostopoulou and Marchis Moreno both argue that backward control (in Greek and Brazilian Portuguese respectively) relies on an Agree relation between a head in the control predicate's clause and a head in the clause embedded by that predicate. This relation enables the realization of either the higher copy in forward control or the lower copy in backward control. Lorusso argues that agreement in aspectual constructions coincides with the semantic operation of event identification, which is responsible for a number of syntactic and semantic properties of these constructions, as compared with similar constructions lacking agreement. Mensching argues – following the general framework of Chomsky (2000; 2001) – that Agree, and the Case-valuation that goes along with it, are crucially involved in movement dependencies, specifically extraction from nominals. Manzini, Franco & Savoia argue that Agree is also involved in the mediation of thematic dependencies. They focus on what is often called 'concord' – agreement in the nominal domain – arguing that this type of agreement is a morphological equivalent of Higginbotham's (1985) theta-binding relation. Finally, a contrastive perspective is provided by Weingart's chapter, which argues that null possessive pronominals in Portuguese should not be derived in terms of Agree (pace **Hicks2009**) or Move (pace Floripi & **Nunes2009**; **Rodrigues2010**).

Locality conditions on Agree play an important role in several chapters in this volume. Mensching argues, in common with a number of other authors (e.g., **Svenonius2004**; Bošković 2005; **Heck2009**; **Reeve2018**), that DP is a phase, which means that extraction from DP is blocked unless the moving item first moves to SpecDP. In particular, Mensching argues that this, in conjunction with the proposal that SpecDP is only accessible to items that agree with D, can account for the often-observed argument/adjunct asymmetry in extraction from DP. Gallego argues that PP is a phase (**Abels2003**; 2012), and that this normally blocks Agree between a verb and a DP within PP. As well as accounting for the general lack of overt agreement, this can account for the ban on preposition-stranding and pseudopassives in the majority of languages, including (most) Spanish (**Law2006**).

However, Gallego argues that cases of agreement between V and PP's complement in certain dialects of Spanish can be accounted for if P incorporates with the verb (cf. Hornstein & **Weinberg1981**; **Law2006**). Ackema & Neeleman's chapter can be seen as providing something of a contrast, in that it argues for a relatively reduced role for locality in restricting agreement possibilities. In particular, they argue against Preminger's (2014) claim that the phenomenon of 'omnivorous agreement' is regulated by relativised minimality conditions on Agree. Instead, they argue that it is necessary for both syntactic and morphological accounts of agreement to postulate cross-linguistic distinctions in feature hierarchies; thus, the syntactic account has no special advantage here. Similarly, Weingart's chapter argues that null possessive pronouns in Portuguese are not restricted by locality conditions, as part of her overall argument that they should not be derived in terms of Agree or Move.

Another prominent topic in this volume is the specific nature of the features related by Agree. One issue already touched on here is the question of whether phi-features are uninterpretable features, as in most of the contributions here, or interpretable features, as Manzini, Franco & Savoia argue. They also argue against the idea, developed in particular in **Chomsky2000** and Pesetsky & **Torrego2007**, that features should be distinguished in terms of whether they enter the derivation as valued or unvalued. The structure of phi-features is also the central topic of Ackema & Neeleman's chapter, which focuses on distinctions between person and number: in particular, that agreement conflicts between third person and first/second person result in ungrammaticality, while conflicts between singular and plural number do not, but result in a default. Mensching's chapter crucially proposes a particular feature structure for Ds that license extraction from DP, involving an unvalued phi-set that probes the head noun, together with an optional second probe with a case-assigning property, enriched with an unvalued operator feature associated with an EPP-feature.

Finally, the issue of syncretism, discussed at the end of §2, becomes relevant in two chapters in this volume. In their discussion of omnivorous agreement, Ackema & Neeleman note that although feature clashes between the phi-features of the subject and object may prevent the realisation of agreement in such systems, the problem may be averted if the two feature-sets give rise to identical morphophonological realisations. (They give examples from agreement with nominative objects in Icelandic and agreement with the focus in Dutch clefts.) In Łęska's chapter, case syncretism between a relative operator and a numeral quantifier is a precondition for Case transmission from the numeral to the relative operator, resulting in default agreement on the relative clause predicate.

4 Summary of the chapters

We now provide a summary of each chapter in this volume. In the first chapter, Alexiadou & Anagnostopoulou discuss an asymmetry between backward subject and backward object control in Greek: backward subject control is fully productive, while backward object control is limited. They argue, following **TsakaliEtAl2017**, that backward control in Greek is derived not through movement, but through the formation of a chain between the phi-features of the controller (and ultimately the head licensing it) and those of a functional head in the matrix clause. While a chain can be formed between matrix T and the embedded subject and T, allowing for backward subject control, chain-formation between a higher Voice/*v*Appl and the embedded subject is generally impossible, presumably because T has pronominal phi-features while Voice does not. Backward object control is thus normally ruled out in Greek. This restriction, however, can be overridden in cases where an experiencer argument in the embedded clause is doubled by a dative or accusative clitic and matrix Voice also hosts a dative or accusative clitic (i.e., in cases of 'resumption'). The authors hypothesise that this is due to a condition on Backward Agree requiring it to apply to heads of the same type – T in the case of backward subject control; dative/accusative clitics in the case of backward object control.

In the same vein, Marchis Moreno focuses on backward object control, providing evidence that such control is possible in Brazilian Portuguese because both the external and internal copies are marked with default nominative case; hence there is no case mismatch and no case competition. Specifically, the paper argues that the inflected infinitive can be regarded as a diagnostic for backward object control patterns, because the percolation of default nominative case from the matrix T to the embedded T requires a local checking relation with an overt DP in the absence of a preposition. The overt realization of the lower copy in backward control is made possible by the loss of the [+person] feature. According to **Cyrino2010**, the absence of the [+person] feature both in finite and non-finite domains allows nominative subjects to occupy the Spec of the inflected infinitival T, just as in finite clauses.

The relation between person and case features constitutes the focus of Ion Giurgea's chapter. He shows that the 'person constraint' on *se*-passives in Romanian and other Romance languages can be accounted for on the basis of the intervening person feature associated with the external argument. Giurgea documents the crosslinguistic variation in 'impersonal' *se* constructions in Romance and shows that Romanian only allows a *se*-passive construction where the verb

agrees with the internal argument and the accusative cannot be assigned. Building on **Cornilescu1998**, Giurgea provides additional evidence that the person constraint on *se*-passives does not exclusively involve [+participant] pronouns (1st or 2nd person), but also affects DPs that require differential object-marking and are high on the person/animacy/definiteness hierarchy. From this, Giurgea derives an intervention-based account of passive *se* according to which the person feature triggered by the external argument (syntactically projected as a null arbitrary PRO in *se*-passives) intervenes in the case-licensing of internal arguments bearing a [Person] feature. By contrast, *by*-phrases do not count as interveners, as they do not have a Case to check.

Ackema & Neeleman's chapter discusses the feature structure of agreement and, in particular, a curious difference between person and number: while both third person and singular number may behave as defaults, third person gives rise to feature clashes that singular does not. The authors argue that this difference can be accounted for if third person has feature content while singular number does not (see also **Nevins2007**, 2011). Specifically, third person is characterised by a feature DIST that is shared with second person (which also bears PROX, a feature shared with first person). What allows third person to act as a default is that it can deliver an empty set of referents: this follows if DIST operates on the set of discourse referents, eliminating the speaker and addressee and their 'associates', leaving a subset that only optionally contains referents. As singular number lacks features imposing a cardinality on the output of the person system, it may also deliver an empty set and hence act as a default. Ackema & Neeleman show that this difference in feature content between third person and singular number can account for cases of omnivorous number agreement in languages such as Dutch, Icelandic and Eastern Abruzzese, and they argue that their account also has advantages over a locality-based Agree account (e.g., **Preminger2014**) with respect to capturing omnivorous person agreement in languages such as Ojibwe and Kaqchikel. Their contribution thus bears on both the feature makeup of agreement and the morphosyntactic mechanisms that give rise to agreement.

The effects of person and number features on agreement patterns also constitute the main topic of Lorusso's paper, which explores the patterns of agreement with progressive aspect in Apulian dialects. In many of these varieties, the present continuous is expressed through an aspectual inflected construction formed by an inflected stative verb, an optional prepositional element and a lexical verb that either appears in a present indicative form, agreeing in person and number with the matrix verb, or in a non-agreeing infinitival form. Lorusso argues that both constructions involve a locative derivation, but that

in the inflected construction the preposition selects a full IP, while in the uninflected construction the preposition selects an 'indefinite CP' (CP_I in the terms of Manzini & **Savoia2003**). He uses this syntactic difference to account for a number of differences between the two constructions (e.g., placement of frequency adverbs). The inflected construction seems to involve an instance of event identification (**Kratzer1996**) between the auxiliary and the lexical verb, and shows a number of properties in common with restructuring or serial verb constructions (e.g. clitic-climbing). By contrast, the uninflected construction gives rise to a frequentative reading which is not found with genuine progressive constructions (**Chierchia1995**), and shows properties in common with control/aspectual verbs. The author further describes and discusses person splits and number asymmetries that occur in the inflected construction, suggesting an analysis along the lines of **Bobalijk2008** and Manzini & Savoia (2007, 2011).

The tight link between case and agreement proposed in Chomsky's (2000, 2001) probe-goal system is the focus of Mensching's contribution. He reopens a topic that has been debated ever since Ross's 1967 dissertation: how to constrain extraction from nominals. The empirical focus is on PP-extraction from DP in French, and specifically on the question of why certain types of *de*-PPs can be extracted from DP, while other types of *de*-PP, along with adjunct PPs, cannot. For example, if a DP contains both a Possessor *de*-PP and an Agent *de*-PP, only the Possessor can be extracted. His solution is based on Kolliakou's (1999) proposal that extraction is restricted by the semantics of the *de*-PP, which has the consequence that if there are two *de*-PPs, only one can be an argument; the other must be an adjunct. The argument/adjunct distinction in extraction is then accounted for in terms of case-valuation: DP-internal arguments have their case feature valued as genitive under Agree with D, while DP-internal adjuncts do not enter into case-valuation. Given the idea that SpecDP is an 'escape hatch' for movement that only accommodates XPs that enter an Agree relation with D, only arguments will be able to move to SpecDP and hence out of DP. Mensching's paper can thus be seen as an an argument in favour of the probe-goal theory of Case and Agree in terms of its ability to constrain extraction.

The topic of possessives is also discussed in Weingart's paper, but from a very different perspective. Weingart shows, on the basis of a full set of clear diagnostics, that null (and simple) possessive pronouns in Portuguese have apparently contradictory properties that argue against analyses in terms of Agree (e.g., **Hicks2009**) or Move (e.g., Floripi & **Nunes2009**; **Rodrigues2010**), or in terms of an operation on predicates (e.g., **Reinhart2006**). Specifically, null possessives appear to have something in between a bound variable and an indexical interpre-

tation. Weingart thus suggests that they should be classified as logophoric *pro*, and outlines a syntactic proposal, based on the semantic analysis of **Partee1997**, to account for their restriction to relational nouns.

Łęska's paper analyses the patterns of subject-verb agreement resulting from the interaction of Genitive of Quantification (GoQ) and relativisation in Polish. She shows that relative clauses modifying GoQ head nouns show distinct agreement patterns depending on whether the head noun is a subject or an object. When it is a subject, GoQ forces default agreement on the relative clause predicate (cf. Łęska 2016), but when it is an object, agreement may vary between default and full agreement, depending on the type of relative clause (introduced by *który* vs. *co*) and the gender of the head noun. Łęska argues that the option of default agreement is due to 'Case attraction' (Bader & **Bayer2006**): provided the morphological form of the relative pronoun is compatible with the case required by the numeral, the Case feature of the quantifier may be shared with the relative pronoun (or null operator), resulting in default agreement on the relative clause predicate. Because such extension is only seen when the head noun is a subject, however, the mechanism of case attraction must be restricted so that it does not overgenerate.

Gallego's chapter focuses on dialects of Spanish that exhibit long-distance agreement between T and a DP inside a PP. Given the standard assumption that phi-probes cannot probe inside a PP in Spanish, which is held to be responsible for the ban on preposition-stranding and pseudopassives (cf. **Law2006**), the existence of such long-distance agreement is unexpected. Gallego compares this phenomenon with similar evidence concerning the differential object marker *a* (e.g., **Torrego1998**; López 2012), arguing that there are three types of prepositions: P is merged external to TP; P is inserted at PF; P is reanalysed with V. While the differential object marker *a* is plausibly of the first type, allowing T to probe the DP object directly, this and the second option are less plausible for prepositions with a more 'semantic' flavour. Gallego thus suggests that such prepositions may reanalyse or incorporate with the verb, allowing the DP to be probed by T. His findings have implications for the typology of prepositions in Spanish, and more generally for the interaction of micro- and macro-parameters.

Almost all of the authors discussing the tight relation between case and agreement acknowledge that oblique case represents a distinct phenomenon, with no syntactic theory offering a satisfactory analysis. Manzini, Franco & Savoia attempt to fill this gap, offering an overview of oblique case and a set of phenomena discussed in the typological literature under the label of 'Suffixaufnahme'. The theoretical focus of the contribution is on the Minimalist operation Agree

and the notion of case, specifically oblique case. The authors question the necessity of referring to [interpretable] and [valued] features in the formulation of Agree. They suggest that a more primitive syntactic notion underlies the descriptive label 'oblique', specifically that of an elementary relator with a part/whole content. Thus, a DP embedded under a genitive case morpheme or adposition is interpreted as a possessor or 'whole' with respect to a local superordinate DP (the possessum or 'part'). They argue that case/agreement-stacking in languages such as Lardil (also discussed in Łęska's chapter) corresponds crosslinguistically to the presence of a partial copy of this second argument within the phrasal projection of the relator.

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Chapter 2

Default person versus default number in agreement

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In this paper, we compare the behaviour of the default in the person system (third person) with the default in the number system (singular). We argue, following Nevins (2007; 2011), that third person pronouns have person features, while singular DPs lack number features. The evidence for these claims comes from situations in which a single head agrees with multiple DPs that have contrasting person and number specifications. In case the number of morphological slots in which agreement can be realized is lower than the number of agreement relations established in syntax, such contrasting specification may prove problematic. As it turns out, conflicts between singular and plural do not result in ungrammaticality, but conflicts between third person and first or second person do. Such person clashes can be avoided if the morphological realization of the relevant person features is syncretic. Alternatively, languages may make use of a person hierarchy that regulates the morphological realization of conflicting specifications for person. The argument we present is rooted in, and supports, the theory of person developed in Ackema & Neeleman (2013; to appear).

1 Introduction

The problem addressed in this paper is an apparent paradox involving singular number and third person. On the one hand, there is evidence that in the person system the default is third person, while in the number system the default

is singular. For example, dummy pronouns and verbs that fail to agree (as in impersonal passives) show up in the third person singular:

(1) a. I
t seems that a solution is hard to find.
b. * I
/you/they seem(s) that a solution is hard to find.

(2) Dutch
Nog jaren is/*ben/*bent/*zijn naar een oplossing gezocht.
still years be-3SG/be.1SG/be.2SG/be.PL for a solution searched
'People searched for a solution for many years.'

On the other hand, singular agreement can be overwritten by plural agreement in certain contexts, but in those same contexts third person remains robustly in place. For example, in (3) the expected singular agreement with the subject pronoun is replaced by plural agreement if the clefted constituent is plural, but not by first person or second person agreement if the clefted constituent is a first person or second person pronoun.

(3) () Dutch
a. PL overwrites SG Het zijn zij die de whisky gestolen hebben.
it are.PL they who the whisky stolen have
'It's them who stole the whisky.'
b. 1st clashes with 3rd
* Het ben ik die de whisky gestolen heeft.
it am I who the whisky stolen has
'It's me who stole the whisky.'
c. 2nd clashes with 3rd
* Het ben jij die de whisky gestolen heeft.
it are.SG you.SG who the whisky stolen has
'It's you who stole the whisky.'
d. No overwriting
Het is hij die de whisky gestolen heeft.
it is he who the whisky stolen has
'It's him who stole the whisky.'

Nevins (2007; 2011) argues that singular is the absence of plural, while third person is not the absence of person but does in fact have a feature specification (see also **Kerstens1993**; **Halle1997**; contra **Forchheimer1953**; **Kayne1993**; Harley & **Ritter2002**; Béjar & **Rezac2003**; **Cysouw2003**; **Anagnostopoulou2005**; Adger & **Harbour2007**). We agree with this (see Ackema & **Neeleman2013**; to appear). But if there is this asymmetry between singular number and third person, the question arises how can we account for the fact that both singular and third person are defaults. This would follow naturally from the idea, rejected here, that third person, like singular, is a name for the absence of information.

In this paper we will account for the fact that the default in the person system has feature content while the default in the number system does not. We will show that our proposal captures data from various languages that involve the realization of a single agreement slot when there is agreement with multiple arguments, as in the examples in (3). The paper is organized as follows. In §2, we introduce a system of privative person features, in which third person has a specification. In §3, we introduce a system of privative number features, in which singular has no specification. We set out our theory of defaults in §4. We will argue that the default is that feature specification that allows reference to the empty set. In §5 and §6 we confront this theory with data in which multiple arguments agree with a single verbal head. §7 concludes.

2 The person system

Our starting in exploring the person system is a generalization about the pattern of syncretisms found in the morphological realization of person. The relevant generalization was noted by **BaermanEtAl2005** and Baerman & **Brown2011** and is given in (4)

(4) () 1-2 and 2-3 syncretisms are far more common than 1-3 syncretisms.

The asymmetry expressed in (4) suggests that the system of person features is organised as in (5) (compare **Kerstens1993**; **Halle1997**; Bennis & Mac**Lean2006**; Aalberse & **Don2009**; 2011):

()	*First person*	*Second person*	*Third person*
	$[F_1]$	$[F_1\ F_2]$	$[F_2]$

In line with this, we propose in Ackema & **Neeleman2013** that there are two person features, PROX and DIST. PROX is shared by first and second person; DIST is shared by second and third person. Following insights in **Harbour2016**, we

interpret these features as functions. Both operate on an input set to deliver a subset as output.

The basic input set for the person system, which we call S_{i+u+o}, contains a subset S_{i+u}, which in turn contains a subset S_i. S_i contains the speaker, which we will represent as *i*, and any associates of the speaker, represented as a_i. S_{i+u} additionally contains the addressee(s), represented as *u*, and any associates of the addressee (a_u). Finally, S_{i+u+o} contains additional members that are neither associates of the speaker nor of the addressee(s); these other members are represented as *o*.[1] The only obligatory members of S_{i+u+o} are one *i* and one *u*:

(5) ()

draw circles

a. ***i*** (a_i)

S_i ***u*** (a_u)

S_{i+u} (o)

S_{i+u+o}

b. PRED(S_{i+u+o}) = S_{i+u}

c. PRED(S_{i+u}) = S_i

d. PROX(S) = PRED(S)

e. DIST(S) = S − PRED(S)

The two person features are defined in terms of a function PRED (for 'predecessor') given in (6b,c). PROX, whose definition is given in (6d), discards the outer layer of the input set; applied to S_{i+u+o} it delivers S_{i+u}. DIST, whose definition is given in (6e), selects the outer layer; applied to S_{i+u+o} it delivers S_{i+u+o} [F02D?] S_{i+u}.

We now consider how first, second and third person readings are derived, starting with the singular. The specification of the third person singular is straightforward: it should be [DIST], as this feature will give S_{i+u+o} [F02D?] S_{i+u}, a set that excludes the speaker and any addressees.

The first person singular is derived by two applications of PROX. It first applies to S_{i+u+o}, delivering S_{i+u}; it then applies to the latter set, delivering S_i. The only

[1]For the purposes of this paper, the difference between associates and others is irrelevant. A detailed discussion of this distinction can be found in Ackema & Neeleman (to appear).

obligatory member of S_i is the speaker, yielding the correct interpretation in the singular:

(6) PROX(PROX(S_{i+u+o}))
= PROX(S_{i+u}) by (6d)
= S_i by (6d)

The second person singular is generated by applying both PROX and DIST. PROX is applied first, so that S_{i+u} is selected. Applying DIST to this set removes S_i, leaving a set with *u* as the only obligatory member:

(7) DIST(PROX(S_{i+u+o}))
= DIST(S_{i+u}) by (6d)
= S_{i+u} [F02D?] S_i by (6e)
= S_u

Note that the opposite order of function application (first DIST, then PROX) is not coherent. DIST applied to S_{i+u+o} yields S_{i+u+o} [F02D?] S_{i+u}. But as this set is not layered, PROX cannot apply to it.

We assume that the 'person space' in (6a) is introduced by a node we refer to as N_Π. Person features are introduced in a PRS node that selects N_Π. The basic semantics of this node is the identity function [F06C?]P.P, but this specification can be enriched through function composition if PROX and/or DIST are added. The order of function application is reflected in syntax. The notation we use for this is borrowed from feature geometry (Gazdar & **Pullum1982**; Harley & **Ritter2002**): features representing functions applied later are dominated by features representing functions applied earlier:

()

We now turn to plural pronouns. For now, we assume that number is encoded through an NMB node, which is merged above PRS and which can host a feature PL (but see §3). If this feature is present, the cardinality of the output set of the person system must be larger than one.

In the second and third person, the person specification in the plural is the same as the person specification in the singular. In the first person, however, there are two options. Suppose that the plural feature is simply added to the singular form in (6a), where PROX is applied twice. This delivers S_i, a set containing the speaker and in the plural also any contextually given associates, but no addressee. The result is an exclusive first person pronoun. Another option is to apply PROX only once. This delivers S_{i+u}, a set containing the speaker, at least one addressee, and any associates. The resulting pronoun is a first person inclusive:

()

Note that the option of applying PROX only once in the first person is incompatible with a singular reading. Such a derivation has as its output S_{i+u}, a set with two obligatory members.

The system just outlined exhausts the feature structures made available by the person system. No structures other than those in (9) and (10) deliver an interpretable output. Consider why. Both PROX and DIST require a layered input set. Given that S_{i+u+o} has only three layers, the number of possible feature combinations is restricted. If DIST is applied first, this delivers an unstructured set (S_{i+u+o} [F02D?] S_{i+u}), and hence neither PROX nor DIST can apply subsequently. If PROX is applied first, the output is a layered set (S_{i+u}). This leaves open three possibilities: (i) PROX applies again, which yields an unstructured set (S_i)), or (ii) DIST applies, which again yields an unstructured set (S_{i+u} [F02D?] S_i), or (iii) neither PROX nor DIST applies, which delivers the first person inclusive.

As a result, the following generalizations about person distinctions expressed in pronouns follow (adapted from **Bobaljik2008**):

(8) a. No language distinguishes pronouns expressing i+i and i+a_i.
b. No language distinguishes pronouns expressing u+u and u+a_u.
c. No language distinguishes pronouns expressing i+i+u, i+u+u and i+u+$a_{i/u}$.

In the system just outlined, the first person (inclusive or exclusive) does not form a natural class with the third person to the exclusion of the second person. Similarly, the first person inclusive does not form a natural class with the second person to the exclusion of the first person exclusive. This is relevant in view of the results of a large-scale study reported in **Harbour2016**. Harbour looked at which systematic patterns of syncretism are attested cross-linguistically, where a systematic pattern of syncretism is a syncretism characteristic of all paradigms of a given language. He found that no language had a systematic syncretism for first and third person, or for first person inclusive and second person. On the assumption that the distribution of systematic syncretisms reflects the underlying distribution of features, this shows that no set of features is shared uniquely by the relevant combinations of persons.

The absence of systematic syncretisms for first person inclusive and second person is line with a typological generalization discussed by **Zwicky1977**. Zwicky argues that in languages that lack the distinction between inclusive and exclusive first person pronouns, the inclusive reading is systematically expressed by the first person, rather than the second person plural pronoun – this despite the fact

that the inclusive reading covers both speaker and addressee. An account for this observation would be impossible if first person inclusive and the second person did form a natural class to the exclusion of the first person exclusive.[2]

For the purposes of this paper, the main characteristic of our person system is that third person has a person specification, namely [DIST]. We should note that this does not mean that there are no pronouns that lack person features. One would expect there to be such pronouns, especially in an analysis based on privative features. In Ackema and Neeleman (to appear), we argue that a particular type of generic pronoun should be analyzed in this way (see also **Egerland2003** and D'**Alessandro2007**). English *one*, West Frisian *men* (**Hoekstra2010**) and Icelandic *maður* (Sigurðsson & **Egerland2009**) are examples: in the absence of person features, the generic operator contained in them ranges over the entire person space (S_{i+u+o}).

()

3 The number system

We now turn to the number system. We will argue that, like the person system, it is based on privative features that are interpreted as functions. We will show that in this system there cannot be a feature that encodes singularity. Rather, singular is one of the interpretations that results from the absence of a number feature specification.

In languages that make a distinction between inclusive and exclusive first person pronouns, two types of number system are found. The difference between these systems involves the interpretation of number in the inclusive. In what we will call absolute number systems, the inclusive is always marked as either dual or plural. Maori provides an example:

() Maori pronouns

[2]Strictly speaking, in order to capture Zwicky's generalization, not only the syntactic feature system, but also the system of morphological realization (spell out) must be considered. In fact, there is a way of constructing grammars that violate the generalization in our system, namely by impoverishment of DIST in in the context of both PL and PROX (so in the second person plural). In a language that has distinct spell-out rules that apply to the feature structures [PROX] and [PROX–PROX], this will create a formal opposition between first person exclusive on the one hand, and first person inclusive and second person on the other. Interestingly, Sanuma appears to have a pronominal spell-out system of this type (see **Borgman1990**:149 and **Simon2005**:127; see Perri **Ferreira2013** for critical discussion of Borgman's observations). However, in the absence of the particular set of circumstances described above, we expect Zwicky's generalization to hold, and we therefore expect it to be valid at least as a statistical universal.

	Singular [ ]	Plural [PL]	Dual [PL MIN]
1 inclusive	-	tā-ua	tā-tou
1 exclusive	au	ā-ua	mā-tou
2	koe	kōr-ua	kou-tou
3	ia	rā-ua	rā-tou

As indicated, absolute number systems can in principle be analyzed using two features, PL (for 'plural') and MIN (for 'minimal'), which we take to be hosted by a dedicated functional head NMB. PL encodes that the cardinality of the set referred to, which we will represent as *n*, exceeds 1 (*n*>1). MIN selects the minimal plural (*n*=2).

There is a second type of number system, however, which we will refer to as a relative number system. In such a system, the interpretation of number marking seems dependent on person, with a shift in the inclusive that is absent in the other persons. In particular, the inclusive pronoun need not be inflected for number. If it is, its cardinality is larger than two, whereas in other pronouns, number marking implies a cardinality larger than one. The Rembarrnga paradigm in (14) illustrates the point:

() Rembarrnga pronouns

	Singular	Plural	Dual	Trial
1 inclusive	-	yukku	ngakorru	ngakorr-bbarrah
1 exclusive	ngunu	yarru	yarr-bbarrah	
2	ku	nakorru	nakorr-bbarrah	
3	nawu/ngadu	barru	barr-bbarrah	

Such number systems are typically analyzed using the MIN feature already mentioned and – instead of PL – a feature AUG for 'augmented' (see **Bobaljik2008** and **Cysouw2011**, and references mentioned there). AUG indicates that *n* is larger than the minimal cardinality allowed by the person system. Except in the inclusive, the minimal cardinality allowed by the person system is one, and so AUG delivers *n*>1. In the inclusive, however, the minimal cardinality allowed by the person system is two, so AUG delivers *n*>2. On this analysis, the Rembarrnga paradigm looks much more elegant:

() Rembarrnga pronouns

	Non-aug. [ ]	Augmented [AUG]	Unit-augmented [AUG MIN]
1 inclusive	yukku	ngakorru	ngakorr-bbarrah
1 exclusive	ngunu	yarru	yarr-bbarrah
2	ku	nakorru	nakorr-bbarrah
3	nawu/ngadu	barru	barr-bbarrah

If we were to accept both the feature systems in (13) and (15), the resulting proposal would model parametric variation between absolute and relative number systems as a choice between features (PL versus AUG). However, this would make the parametrization of the number system something of an oddity. Our impression is that in other cases where feature systems are parametrized, languages select more or fewer features from a fixed inventory, rather than choosing between features that cannot co-occur in the same grammar. We propose to fix this problem by assuming that AUG is universal and that PL does not exist. However, the effects of AUG are dependent on information from the person system. If AUG has no access to the person system, then its interpretation defaults to the interpretation normally assumed for PL. This idea can be worked out as follows.

The input set for the number system is $\mathbb{N}$. The features AUG and MIN select a subset from $\mathbb{N}$ in accordance with the definitions in (16a,b). The cardinality of the set delivered by the person system must be an element of this subset.

(9) a. () $\text{AUG}(S) = S', S' \subseteq S, n \in S' \iff n > n_R$

b. $\text{MIN}(S) = S', S' \subseteq S, n \in S' \iff n > 0 \wedge \nexists n', n' \in S \wedge n' < n$

As indicated in (16a), AUG refers to a reference number n_R, whose value is determined by the following procedure (S_{person} is the output of the person system):

(10) ()

a. $n_R = n_{person}$ iff n_{person} is accessible and $n_{person} > 0$; otherwise $n_R = 1$

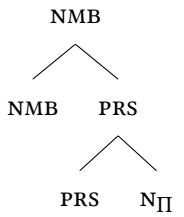
b. $n_{person} = |\text{strip}(S_{person})|$

c. $\text{strip}(S_{person}) = S', S' \subseteq S_{person}, p \in \{i, u\} \iff p \in S'$

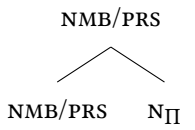
The accessibility of person information depends on the functional structure of the pronoun. We assume, following **Platzack1983** and others, that there is

parametric variation in whether certain functional heads project separately or conflate and project together. Applied to NMB and PRS, this gives the possible structures for pronouns in (18).

(11) a.



b.



two column mode

Our hypothesis is that n_{person} is accessible to AUG if and only if NMB and PRS conflate, so that AUG is located in the same node as the person features that deliver S_{person}. Given the definitions in (17), this means that only in (18b) can n_R assume a value other than 1.

Consider how this plays out in absolute and relative number systems, respectively. The situation in absolute number systems is straightforward, as n_R is always 1 (by default, as AUG has no access to person information):

(12)

Absolute number system – (18a)

- $n_R = 1$ (by default)
- NMB–AUG: $n > 1$
- NMB–AUG–MIN: $n = 2$

In relative number systems, AUG does have access to the person system, which means that n_R varies depending on person, along the following lines:

(13) *Relative number system* – (18b)

a. First person inclusive:

- n_{person} = |strip({*i*, a_{i}+, *u*, a_{u}+})| = |{*i*, *u*}| = 2
- n_{R} = n_{person} = 2
- NMB–AUG: $n > 2$
- NMB–AUG–MIN: $n = 3$

b. First person exclusive:
- n_{person} = |strip({*i*, a_{i}+})| = |{*i*}| = 1
- n_{R} = n_{person} = 1
- NMB–AUG: $n > 1$
- NMB–AUG–MIN: $n = 2$

c. Second person:
- n_{person} = |strip({*u*, a_{u}+})| = |{*u*}| = 1
- n_{R} = n_{person} = 1
- NMB–AUG: $n > 1$
- NMB–AUG–MIN: $n = 2$

d. Third person:
- n_{person} = |strip({o+})| = |{ }| = 0
- n_{R} = 1 (by default)
- NMB–AUG: $n > 1$
- NMB–AUG–MIN: $n = 2$

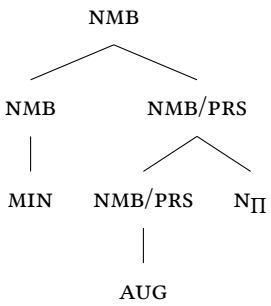
When the semantics of number in (18b) is computed, the value of n_{person} is accessible to AUG, because PRS is part of the same terminal node. This has an effect for the interpretation of number in the first person inclusive. Since applying PROX once delivers a set with *i* and *u* as obligatory members (see (10a)), n_{R} = n_{person} = 2 here. The consequence is that AUG requires that $n > 2$. When the semantics of the terminal containing AUG in the structures in (18a) is computed, however, the value of n_{person} is not accessible, because [PRS–PROX] is generated in a sister node. This means that n_{R} assumes its default value of 1, also in the first person inclusive, so that AUG now requires that $n > 1$.

Our analysis makes a crucial prediction about the morphological form of pronominal number. In absolute systems, plural can be either agglutinative or fusional. If the terminals introducing person and number are spelled out separately, an agglutinative number paradigm will emerge; if spell-out targets a string of terminals or a non-terminal node (on a par with {go past} [F0DB?] *went*), the number morphology will be fused with the person morphology. If person and number are introduced in the same terminal, however, as is the case in relative systems, they *must* be fusional (there is no position in which a distinct number morpheme

could be anchored).[3] We predict, then, that if number marking is agglutinative in pronouns, the number system must be of the absolute type. This prediction appears to be confirmed by the discussion in Cysouw (2003: 89, 263), where it is noted that languages that have a relative number system and are agglutinative for AUG are extremely rare, if they exist at all (see also **Greenberg1988**).

Note that it *is* possible for a relative number system to be agglutinating for MIN, as MIN need not have access to person information, but only to the output of AUG. Hence, a language can have an interpretable structure in which NMB and PRS are partially conflated, as in (21).

(14) ()



Languages with a relative number system that have agglutinative morphology for MIN indeed exist; the Rembarrnga paradigm in (15) provides an example.

In sum, the AUG feature is shared by all number systems, but its interpretive effects depend on whether or not it has access to information delivered by the person features, which in turn depends on the syntactic structure of pronouns. Notice that in this system singular and non-augmented must both equal the absence of AUG. There cannot be a contentful privative feature that characterizes singular and non-augmented number, given that the interpretation of these numbers as *n*=1 or *n*=2 is determined fully by the interpretation of AUG. Therefore, the default in the number system is characterized by the absence of a feature specification.

4 Defaults

If we are correct in assuming that singular is a non-number, while third person has a feature specification, the question arises why both are defaults. In order to

[3] This is under the assumption that an operation like fission, as used in Distributed Morphology (see Halle & **Marantz1993** and **Noyer1997**), either does not exist or must give rise to instances of multiple exponence, which is not at issue here.

address this question, we must first consider what a default is. There are several views of this; the following three are probably the most common. (i) Defaults are the most frequent forms. It is not clear what insight that can provide here. (ii) Defaults correspond to absence of features. This is an attractive idea, but it cannot work on our view of person, as the third person has feature content. (iii) Defaults correspond to feature structures that do not force an interpretation. This is the view we will defend.

Our core assumption is that only if a φ-feature structure may denote an empty set can it fail to be interpreted, and hence act as default. In the person system, [DIST] is the only feature structure that can deliver an empty set. DIST selects the outer layer in (6), discarding the only obligatory members of S_{i+u+o}, speaker and addressee. As *o* is optional, [DIST] may deliver an empty set. All other specifications deliver a set that contains either *i* or *u* or both and can therefore not act as a default. This holds, even, for a specification in which PRS does not contain person features, as this delivers a generic impersonal pronoun that ranges over the entire S_{i+u+o} input set, see (12).

In the number system, [ ] is the only feature structure that can deliver an empty set. [AUG] and [AUG–MIN] impose a positive cardinality on the output of the person system. However, [ ] does not, and is therefore compatible with a cardinality of 0 in both absolute and relative number systems, regardless of person specification.

5 Multiple agreement, single spell-out

We have argued that third person has a feature specification, as opposed to singular number, and explained why nevertheless both can function as defaults. We now show how the asymmetry in feature specification plays out in agreement.

Nevins2011 discusses so-called omnivorous number systems, in which a verb shows plural agreement when either subject or object is plural (see (22)).

(15) () Eastern Abruzzese (D'Alessandro & **Roberts2010**)

a. Giuwanne a pittate nu mure.
John has painted.SG a wall

b. Giuwanne e Mmarije a pittite nu mure.
John and Mary have painted.PL a wall

c. Giuwanne a pittite ddu mure.
John has painted.PL two walls

d. Giuwanne e Mmarije a pittite ddu mure.
John and Mary have painted.PL two walls

Like Nevins, we assume that data like (22) involve multiple agreement. We further assume that this leads to a situation in which one morpho-phonological agreement slot must realize two distinct feature bundles:

(16) a. DP_1 ... V-φ_1-φ_2 ... DP_2
b. V-φ_1-φ_2 ⊠ /V/-/affix/

In general, where one form realizes two feature bundles either unification is necessary or arbitration by rules of resolution. We begin by discussing unification. In the next section, we will discuss resolution rules.

We assume that unification is either unification of sets of syntactic feature structures or of phonological forms. The syntactic unifications relevant to the data in (22) are given below. These can all be realized without difficulty, as a singular form in (24a) and a plural form in (24b-d):

(17) ()
a. V-[ ]$_1$-[ ]$_2$ ⊠ V-[ ]$_{1+2}$
b. V-[AUG]$_1$-[ ]$_2$ ⊠ V-[AUG]$_{1+2}$
c. V-[ ]$_1$-[AUG]$_2$ ⊠ V-[AUG]$_{1+2}$
d. V-[AUG]$_1$-[AUG]$_2$ ⊠ V-[AUG]$_{1+2}$

Given that third person is different from singular in that it does have feature content, syntactic unification in parallel cases involving person can result in feature bundles with multiple person specifications:

(18) ()
a. V-[DIST]$_1$-[DIST]$_2$ ⊠ V-[DIST]$_{1+2}$
b. V-[DIST]$_1$-[PROX (...)]$_2$ ⊠ V-[DIST PROX (...)]$_{1+2}$

While realization of the output in (25a) is unproblematic, the feature specification in (25b) makes spell-out impossible, on the assumption that the process is blocked if a single agreement slot contains multiple feature bundles for the same class of φ-features.[4] This means that where the input contains conflicting person specifications, spell-out cannot proceed on the basis of syntactic unification.

[4]Note that there is a fundamental difference between the feature specification [DIST PROX] in (25b) on the one hand and the feature specification [PROX–DIST] (second person) on the other. The former contains two (simplex) feature bundles (for third and first person), with the result that spell-out is blocked.

Instead, phonological unification is necessary. Hence the structure in (25b) can be realized only if the spell-out rules for [DIST] and [PROX (…)] deliver the same phonological form:

(19) ()

a. {DIST} [F0DB?] /aaa/

b. {PROX (…)} [F0DB?] /aaa/

c. V-$[\text{DIST}]_1$-$[\text{PROX (…)}]_2$ [F0DB?] /V/-/aaa/

There are other situations in which a derivation converges if a single phonological element can realize multiple conflicting syntactic feature bundles; an example involves case morphology on free relatives in German, see Groos & Van **Riemsdijk1981**.

We will now discuss instances of (25) and (26). In particular, we will consider two structures in which a low DP must have the same person specification as imposed on the verb by the subject in a double agreement structure.[5] One is the Dutch cleft construction already introduced in (3). The other involves the well-known case of nominative objects in Icelandic. Let us start with the latter.

Agreement with nominative objects in Icelandic is possible when the subject carries quirky case. However, such agreement is usually impossible with first or second person objects:[6]

(20) () Icelandic (Sigurðsson & **Holmberg2008**)

a. *Honum líkum við.
him.DAT like-1PL we.NOM
'He likes us.'

[5] In contrast, there are no similar cases in which a low DP must have the same number specification as the subject. This follows from the fact that singular is absence of number features. **Nevins2011** proposes an analysis of relevant person-number contrasts along similar lines. His account assumes that the person system is built on bivalent features, while features in the number system are privative, with singular lacking number. The above preserves the insights of Nevins' proposal while avoiding this duality of design. Both the person system and the number system have privative features, and there is a principled reason why singular is featureless while third person has content.

[6] D'**Alessandro2007** shows that impersonal *si* constructions in Italian behave in a fashion parallel to the Icelandic examples discussed below: *si* triggers default third person singular agreement, and when the object is nominative the verb agrees in number with it. Crucially, in the latter case the object cannot be first or second person. Any adequate analysis proposed for Icelandic can therefore be extended to Italian impersonal constructions, as indeed argued by D'Alessandro.

b. *Honum líkið þið.
him.DAT like-2PL you.PL.NOM
'He likes you all.'

c. Honum líka þeir.
him.DAT like-3PL they.NOM
'He likes them.'

We follow a strand in the literature according to which the verb agrees with both the quirky subject and the nominative object (see **Burzio2000**, Schütze 2003, and **Ussery2013**). Thus, Icelandic agreement is regulated by two rules: (i) agree with the subject; (ii) agree with nominatives. Non-nominative DPs trigger default third person singular agreement, presumably because they differ from nominatives in having a Case shell which prevents access to their φ-features. Therefore, quirky subjects behave just like other categories that lack φ-features, such as clausal subjects. Indeed, in examples with a quirky subject in which the object is not nominative, the verb must carry third person singular inflection:

(21) Mig hefur/*hef/*hafa vantað mýts. (Schütze 2003)
me.ACC has-3SG/*1SG/*3PL lacked mice.ACC
'I have lacked mice.'

Structures like those in (27), which involve agreement with both a quirky subject and a nominative object, will then have a verb that carries two distinct φ-feature bundles, one of which will be [DIST] (KP stands for 'Case Phrase', in this structure the quirky subject):

(22) () KP_1 ... V-$[DIST]_1$-φ_2 ... DP_2

Whether or not (29) can be realized depends on the content of φ_2. Consider the various possibilities listed in (30).

(23) ()
a. KP_1 ... V-$[DIST]_1$-$[DIST]_2$ ... DP_2
b. KP_1 ... V-$[DIST]_1$-$[DIST\ AUG]_2$ ... DP_2
c. KP_1 ... V-$[DIST]_1$-$[PROX\ (...)]_2$ ... DP_2

Syntactic unification of feature bundles applied to these structures yields the following:

(24) ()

a. KP_1 ... V-$[\text{DIST}]_{1+2}$ ... DP_2
b. KP_1 ... V-$[\text{DIST AUG}]_{1+2}$ ... DP_2
c. KP_1 ... V-$[\text{DIST PROX (...)}]_{1+2}$ ... DP_2

The feature bundles in (31a) and (31b) are unproblematic as far as spell-out is concerned. The feature bundle in (31c) is not, however, as it contains contradictory values for person. This means that spell-out must proceed on the basis of the non-unified structure in (30c). But that will only meet the condition that there be a single affix if phonological unification is possible, which is only the case if the phonological realization of $[\text{DIST}]_1$ is identical to the phonological realization of $[\text{PROX (...)}]_2$.

Indeed, Sigurðsson (1996) observes that the person restriction on object agreement is lifted (for many speakers) when the first/second person form of the verb is syncretic with the third person form:[7]

(25)

(26) a. bored.at-3sg [F0DB?] /leiddist/ (Sigurðsson 1996)
b. *Henni leiddumst við.
her.DAT bored.at-1PL we.NOM
c. %Henni leiddust þið.
her.DAT bored.at-2PL you-PL.NOM
d. ?Henni leiddist ég.
her.DAT bored.at-1SG I.NOM
e. ?Henni leiddist þú.
her.DAT bored.at-2SG you-sg.NOM

Agreement with lower nominative DPs does not only occur in mono-clausal, but also in bi-clausal structures with a raising verb. In such structures, the same person restriction is observed as in mono-clausal structures (see (33)).

[7]Note that the fact that syncretism prevents the problem with conflicting person features indicates that the solution should not be sought in syntax proper. This rules out a number of accounts that attempt to deal with such data in terms of an intervention effect, such as Sigurðsson & **Holmberg2008**. While the relevant syncretism in Icelandic is a relatively rare phenomenon, we will see below that in a similar situation in Dutch clefts, syncretism indeed systematically ameliorates person clashes. An analysis should therefore not centre on a putative problem with syntactically establishing the agreement relation(s) in question, but on a problem with how these relations are expressed on the verb.

(27) ()

a. (Sigurðsson & **Holmberg2008**)
*Honum mundum virðast við (vera) hæfir.
him.DAT would.1PL seem we.NOM (be) competent

b. *Honum munduð virðast þið (vera) hæfir.
him.DAT would.2PL seem you.PL.NOM (be) competent

c. Honum mundu virðast þeir (vera) hæfir.
him.DAT would.3PL seem they.NOM (be) competent
'They would seem to be competent to him.'

Interestingly, many speakers allow suspension of agreement with the nominative in the bi-clausal construction. Crucially, the person restriction disappears in that case (see (34)). This is as expected: if there is only agreement with the quirky subject, there cannot be conflicting feature bundles in the verb.

(28) () (Sigurðsson & **Holmberg2008**)

a. Honum mundi virðast við (vera) hæfir.
him.DAT would.3SG seem we.NOM (be) competent

b. Honum mundi virðast þið (vera) hæfir.
him.DAT would.3SG seem you.PL.NOM (be) competent

c. Honum mundi virðast þeir (vera) hæfir.
him.DAT would.3SG seem they.NOM (be) competent

Sigurðsson & **Holmberg2008** observe that there is considerable variation in whether suspension of agreement is allowed, preferred or required. In one variant (their Icelandic C), agreement with low nominatives is dispreferred in general, even in mono-clausal constructions. We predict that in that variant there should not be a person restriction on nominative objects at all. This appears to be in line with Sigurðsson and Holmberg's assessment of the relevant data.

Dutch clefts show almost the same pattern of core observations as Icelandic quirky subject constructions (see also Den **Dikken2014**). They have the following properties. (i) Number agreement with a clefted nominative is obligatory (see (35)). (ii) If there is unambiguous person agreement, first and second person nominatives cannot be clefted (see (36)). (iii) Some speakers allow suspension of person agreement with clefted nominatives. In that case, there is no person restriction (hence the %-sign on the variants with third singular *is* in (36a,b)). (iv) Where the verb forms triggered by the pronoun in subject position (*het* 'it') and

by the clefted nominative DP are identical, the person restriction is lifted for all speakers. This is the case with some modal verbs and in the past tense (see (37)).

(29) () Dutch
Het zijn/*is zij die de whisky gestolen hebben.
it are.PL/is they that the whisky stolen have
'It's them who stole the whisky.'

(30) ()

a. Het %is/*ben ik die de whisky gestolen heeft.
it is/am I that the whisky stolen has
'It's me who stole the whisky.'

b. Het %is/*ben(t) jij die de whisky gestolen heeft.
it is/are.SG you.SG that the whisky stolen has
'It's you who stole the whisky.'

c. Het is hij die de whisky gestolen heeft.
it is he that the whisky stolen has
'It's him who stole the whisky.'

(31) ()

a. Het zal ik/jij wel geweest zijn die de whisky gestolen heeft.
it will I/you.SG indeed been be who the whisky stolen has
'It is likely that it was me/you who stole the whisky.'

b. Het was ik/jij die de whisky gestolen heeft.
it was I/you.SG who the whisky stolen has
'It was I/you who stole the whisky.'

These data allow an analysis similar to that proposed for Icelandic. Dutch requires agreement with the subject and (usually) agreement with nominatives. If the clefted constituent is a nominative DP, this yields the following representation:

(32) het_1 … V-[DIST]$_1$-φ_2 … DP_2 [$_{CP}$ (Op_2) … t_2 …]

This structure can be realized without problems if the syntactic unification of [DIST]$_1$ and φ_2 delivers a feature bundle that does not contain multiple person specifications (i.e. when φ_2 is [DIST (AUG)]). Where syntactic unification does not lead to such a feature bundle, the derivation may converge under phonological

unification (i.e. when /[DIST]$_1$/ = /φ_2/). If neither type of unification allows spell-out, the derivation crashes. This accounts for the person restriction observed in (36). Some speakers allow agreement with the clefted nominative to be suspended under these circumstances (through deletion of φ_2). For those speakers, first and second person singular clefted nominatives may show up with a third person singular copula:[8]

(33) *het*$_1$ ... V-[DIST]$_1$ ... DP$_2$ [$_{CP}$ (*Op*$_2$) ... t_2 ...]

There is an interesting twist in the plural. Here, all speakers require number agreement, but there are no effects of the person restriction:

(34) Het zijn/*is wij/jullie die de whisky gestolen hebben.
it are.PL/is we/you.PL that the whisky stolen have
'It's we/you who stole the whisky.'

These data have no parallel in Icelandic quirky subject constructions and cannot be accounted for through phonological unification, since the third person singular form of the copula is *is* and the first/second person plural form is *zijn*. However, in contrast to Icelandic, Dutch shows full neutralization of person distinctions in the plural, as illustrated for the copula in (41). This fact can be accounted for in terms of two rules of impoverishment that delete person features in the context of AUG, as in (42).

(35) ()
a. Ik ben even weg.
I am momentarily away
'I am out at the moment.'

[8]In Icelandic clefts, there is always full agreement between the copula and the clefted constituent. In contrast to sentences with a quirky subject and nominative object, there is no evidence for a person clash (Jóhannes Jónsson, Sigríður Sigurjónsdóttir and Höskuldur Þráinsson, p.c.):(i) Í gær varst það þú sem tókst bókina. yesterday was.2SG it you that took.2SG book.DEF 'Yesterday it was you who took the book.'Apparently, then, Icelandic clefts also permit deletion of one of the φ-feature bundles in the verb before spell-out, but as opposed to the relevant variety of Dutch, it is the agreement with the subject that is suppressed in Icelandic, rather than the agreement with the nominative predicate. This gives rise to the question why the same deletion is not allowed in quirky subject constructions. One possibility is that this is related to the fact that the agreement induced by such a subject is default agreement. Arguably, default agreement cannot be deleted because it is not recoverable, as opposed to regular agreement, which reflects features of the controller.

b. Jij bent even weg.
you are momentarily away

c. Hij is even weg.
He is momentarily away

d. Wij/jullie/zij zijn even weg.
we/you.PL/they are momentarily away

(36) ()

a. PROX ⟶ Ø / ___ [AUG]

b. DIST ⟶ Ø / ___ [AUG]

If the rules in (42) apply to the output of syntactic unification of the two feature bundles on the verb, they will remove the conflicting person specifications, leaving only [AUG], and therefore the structure will be realized with the plural form of the copula. We give the derivation for a case with a clefted first person plural pronoun in (43).[9]

(37) ()

a. *het*$_1$ ... V-[dist]$_1$-[PROX AUG]$_2$ ... DP$_2$ [$_{CP}$ (*Op*$_2$) ... t_2 ...] (syntactic output)

b. *het*$_1$ ... V-[DIST PROX AUG]$_{1+2}$ ... DP$_2$ [$_{CP}$ (*Op*$_2$) ... t_2 ...] (after unification)

c. *het*$_1$ ... V-[AUG]$_{1+2}$ ... DP$_2$ [$_{CP}$ (*Op*$_2$) ... t_2 ...] (after application of (42))

In summary, third person agreement can induce a person clash in cases of multiple agreement, while singular number agreement never induces a number clash. This confirms that third person has a feature specification, while singular number does not. However, not all cases of multiple agreement give rise to person clashes. Sometimes, conflicts in person specification are resolved by rules that operate before spell-out, which delete one of the problematic feature bundles. In the next section, we will explore such rules of resolution.

[9] The person restriction discussed above for Dutch clefts is also absent when the pronoun used as subject is not the weak pronoun *het* 'it' but the strong pronoun *dat* 'that'. Arguably, this is because the strong pronoun is a fronted (accusative) predicate, so that in this construction the postverbal DP (the subject) is the only agreeing element; see Ackema and Neeleman (to appear) for discussion.

6 6. Omnivorous person agreement

While we have seen that there is an asymmetry between person and number in that person clashes in agreement exist, but number clashes do not, it is not the case that multiple agreement for different persons necessarily leads to ungrammaticality. Some languages allow resolution of a potential clash on the basis of a person hierarchy: the feature structure highest on the hierarchy is realized, while the feature structure lower on the hierarchy is not.

A good example is the agreement system in Ojibwe, which is sensitive to a person hierarchy 2 > 1 > 3 (see **Valentine2001**, among others). The agreement morphology on the Ojibwe verb reflects features of both its subject and object. That there must be simultaneous subject and object agreement is clearest when considering the so-called theme sign on the verb. This is a suffix that expresses the relative position of subject and object on the person hierarchy. In particular, when the subject is higher on this hierarchy than the object, a 'direct' theme-sign appears, while an 'inverse' form appears when the object is higher on the hierarchy. The form of the theme sign is also determined by whether or not both arguments are 'local' persons (first or second) or only one of them is. Thus, the following distribution of theme signs obtains (adapted from **Lochbihler2008**).

(38) Ojibwe theme signs

	Subject outranks object on 2 > 1 > 3.	Object outranks subject on 2 > 1 > 3.
Both subject and object are 1 or 2.	*-i*	*-in(i)*
Either subject or object is 3.	*-aa*	*-igw* (and allomorphs)

This simultaneous sensitivity to the features of subject and object can only be accounted for under the assumption that both agree with the verb. Only if the features of both arguments are represented in the verb is it possible to have a spell-out system for the verbal agreement that is based on a comparison of their position on the person hierarchy. For the theme-sign suffixes, then, resolution of person clashes is achieved by spell-out rules that insert a single morpheme as the realization of pairs of feature bundles.

In addition to the theme-sign suffix, the Ojibwe verb also carries a prefix that expresses person agreement. Interestingly, this prefix shows omnivorous person effects: it expresses agreement with the argument that is highest on the person

hierarchy, regardless of whether this is the subject or the object (*g-* realizes second person, *n-* first person, *w-*/∅- third person). Given the discussion above, we know that the person features of both subject and object are represented in the verb. Hence, the behavior of the Ojibwe prefix shows that resolution of a person clash can also consist of non-realisation of the feature structure lower on the person hierarchy. The following examples illustrate the system (from **Valentine2001**, cited here from **Lochbihler2008**):

(39) Ojibwe

a. *n-waabm-aa*
1-see-DIR
'I see him.'

b. *n-waabm-ig*
1-see-INV
'He sees me.'

(40) a. *g-waabam-i*
2-see-DIR(local)
'You see me.'

b. *g-waabm-in*
2-see-INV(local)
'I see you.'

Not all languages that allow resolution of person clashes on the basis of a hierarchy make use of the same hierarchy. There is one cross-linguistic constant, though: third person is outranked by both first and second. The variation lies in the ranking of first and second person, as follows:

(41) a. 2 > 1 > 3 (example: Ojibwe, see above)
b. 1 > 2 > 3 (example: Nocte, see below)
c. 1,2 > 3 (example: Kaqchikel, see below)

We suggest that this cross-linguistic variation comes about through variation in weighting of the two conditions in (48). (For the purpose of (48b), a feature structure is less uniform if it contains instances of more features.)

(42) ()

a. PROX outranks DIST.

b. Less uniform feature structures outrank more uniform feature structures.

A constraint equivalent to (48a) is present in some form or other in most any theory of person hierarchies, sometimes expressed directly and sometimes expressed in the order of functional projections, or in the order of probing of features (see below). The constraint in (48b) may look unfamiliar, but it is an instantiation of the general idea that feature structures containing more features are marked compared to feature bundles containing fewer. The only innovation is that markedness is assumed not to increase with repetition of the same feature, as in the first person exclusive (characterized by [PROX–PROX], see §2).

If the first condition in (48) is more important than the second, the resulting hierarchy will be 1 > 2 > 3. This is because first person is maximally marked according to this principle, as it contains only instances of PROX. By contrast, third person is maximally unmarked, as it contains only DIST. Second person is in between, as it contains both PROX and DIST. If the second condition in (48) is more important, second person will be highest in the hierarchy, as this is the only person with a non-uniform feature structure. The relative ranking of first and third person is still determined by the first condition, so that the result is a hierarchy 2 > 1 > 3. Finally, if the two conditions are equally weighted, a hierarchy results in which first and second person are ranked equally, and are both ranked above third person.

Nocte is an example of a language that is like Ojibwe, but with first and second person reversed on the hierarchy (that is, it uses a 1 > 2 > 3 hierarchy). The following data (from De**Lancey1981**:641, cited here from **Croft2003**:172) illustrate this:

(43) () Nocte

a. Nga-ma ate hetho-ang.
1SG-ERG 3SG teach-1
'I will teach him.'

b. Ate-ma nga-nang hetho-h-ang.
3SG-ERG 1SG-ACC teach-INV-1
'He will teach me.'

c. Nang-ma nga hetho-h-ang.
2SG-ERG 1SG teach-INV-1
'You will teach me.'

d. Nga-ma nang hetho-e.
1SG-ERG 2SG teach-1PL
'I will teach you.'

As in Ojibwe, an inverse marker appears on the verb in case the object is higher on the person hierarchy than the subject, the only difference being that, since the hierarchy is 1 > 2 > 3 in Nocte, the inverse marker is used when the subject is second person and the object first person. As before, the presence of this kind of morphology can only be understood if there is double agreement, so that the features of both subject and object are represented in the verb. Also as in Ojibwe, there is a second morpheme, in this case a suffix, that agrees in person with that argument whose feature specification is highest on the hierarchy (the omnivorous person effect). There is an interesting twist when the subject is first person and the object second person, as in (49d). As expected, the person agreement shown by the relevant suffix is with first person. However, the number expressed is an unexpected inclusive plural, rather than the singular. We will not attempt to analyse this observation, but it is another indication that the agreement morphology reflects agreement with both subject and object.

The final possibility of the system outlined above is a person hierarchy in which first and second person are equally ranked. This should result in a language that allows resolution of clashes between third person and either first or second person, but not resolution of clashes between first and second person. An example of such a language is Kaqchikel, as discussed in **Preminger2014** (all Kaqchikel data below are taken from this source). In ordinary transitive clauses, the verb agrees with both subject and object, and this configuration of multiple agreement is reflected in two distinct agreement morphemes:

(44) Kaqchikel

a. rat x-Ø-aw-ax-aj ri achin.
you.SG COM-3SG.ABS-2SG.ERG-hear-ACT the man
'You heard the man.' ri achin x-a-r-ax-aj rat.
the man COM-2SG.ABS-3SG.ERG-hear-ACT you.SG
'The man heard you.'

The interesting twist in Kaqchikel is that there is a construction, known as the Agent Focus construction, in which the number of agreement slots on the verb is reduced to one. This, of course, creates a situation in which person clashes arise. When one of the arguments of the verb is third person and the other one

is not, the clash is resolved in favour of the non-third person argument. This is illustrated in (51) for a combination of a first person and third person argument, and in (52) for a combination of a second person and third person argument.

(45) ()

a. ja yïn x-in/*Ø-ax-an ri achin.
FOC me COM-1SG/*3SG.ABS-hear-AF the man
'It was me that heard the man.'

b. ja ri achin x-in/*Ø-ax-an yïn.
FOC the man COM-1SG/*3SG.ABS-hear-AF me
'It was the man that heard me.'

(46) ()

a. ja rat x-at/*Ø-ax-an ri achin.
FOC you.SG COM-2SG/*3SG.ABS-hear-AF the man
'It was you that heard the man.'

b. ja ri achin x-at/*Ø-ax-an rat.
FOC the man COM-2SG/*3SG.ABS-hear-AF you.SG
'It was the man that heard you.'

This indicates that there is a person hierarchy in Kaqchikel on which both first and second person outrank third person.[10] That first and second person are not ranked with respect to each other on this hierarchy is shown by the fact that, in the Agent Focus construction, no resolution is possible in case both arguments are local. As in Icelandic and elsewhere, unresolved clashes result in ungrammaticality. Thus, the following are impossible, regardless of the choice of agreement on the verb, whether first person, second person, or (default) third person.

[10]When both arguments in the Agent Focus construction are third person, the result is third person agreement. If one of the third person arguments is plural and the other singular, we get plural agreement (omnivorous number). This indicates that, as expected, when unification is possible, this is used as the strategy for determining the spell-out of a single agreement slot for two feature bundles. When one of the arguments is first or second person and the other argument is third person, the first or second person argument will be agreed with not only for person but also for number (no omnivorous number in this case; see **Preminger2014**:20). This shows that 'partial unification' is impossible: either there is unification for all φ-features, or no unification at all, and that, when unification fails, the person hierarchy determines which argument's features are realized. This is a property of unification in general: if there is a clash in any feature, it fails.

(47) a. *ja rat x-in/at/Ø-ax-an yïn.
FOC you.SG COM-1SG/2SG/3SG.ABS-hear-AF me
Intended: 'It was you that heard me.'

b. *ja yïn x-in/at/Ø-ax-an rat.
FOC me COM-1SG/2SG/3SG.ABS-hear-AF you.SG
Intended: 'It was me that heard you.'

Preminger2014 argues that it is undesirable to appeal to person hierarchies to deal with the Kaqchikel data. He proposes a syntactic account which he claims to be motivated independently, and which derives the effects of the person hierarchy. The account is based on a Probe-Goal system of syntactic agreement regulated by relativized minimality. In the Kaqchikel Agent Focus construction, there is one functional head that acts as a Probe for person features. This head specifically probes for a participant feature. Given relativized minimality, the highest DP that has a participant feature will act as the Goal. However, Preminger assumes, following Béjar & **Rezac2003**, that all first or second person features in DPs must be licensed by entering an agreement relation:[11]

() Person Licensing Condition (Béjar & **Rezac2003**)

Interpretable 1st/2nd person features must be licensed by entering into an Agree

relation with an appropriate functional category.

The consequence of this is that the lower DP in the Agent Focus construction cannot be licensed if it, too, is first or second person. In contrast, if the subject is third person, this is skipped in the Probe's search for a participant feature, and agreement will be with the first or second person object.

Whether or not an account that appeals to a person hierarchy is more stipulative than this syntactic account can only be evaluated properly when cross-linguistic variation in the effects of person hierarchies is considered. After all, we have seen that it is certainly not always the case that a clash between first and

[11] Bejar & **Rezac2003** invoke this condition in an account of the so-called Person Case Constraint (PCC). This is a constraint on the possible features of an accusative clitic or weak pronoun in the presence of a dative clitic or weak pronoun. There is language variation in what is prohibited, but a common form of the constraint is that the accusative pronominal cannot be first or second person in the context of any dative pronominal. We think that PCC effects should not be linked to agreement, however, simply because in most of the languages that show PCC effects, neither dative nor accusative objects agree with the verb. At the least, this shows that the Agree operation invoked in (54) cannot be equated with actual agreement, but it is the latter in which we are interested here. For accounts of the PCC that are not based on Agree, see **Haspelmath2004**, Runić 2013, and **Kiss2015**, among others.

second person results in ungrammaticality. In some languages, these clashes are resolved as well, sometimes in favour of first person and sometimes in favour of second person (see above). It seems to us that the only way in which the syntactic account just outlined can deal with such variation is by specifying the features that the Probe is searching for. However, the language variation implies that it is not sufficient to specify a fixed feature content for the Probe per language. Probes must be allowed to search for different features, and in addition the features searched for must be ordered such that agreement with some is preferred over agreement with others.

Consider a language with a 2 > 1 > 3 hierarchy, for instance. Given that second person defeats first person in a clash, the verbal head must probe specifically for a feature that is unique to second person, say addressee. Otherwise, it should not be able to skip a first person argument in its search. However, if the Probe is specified as addressee also in a context where there is a clash between a first person and a third person argument, the situation would be unresolvable. In order to explain why the third person is ignored in favour of the first person argument, the feature content of the Probe must be different. In particular, the Probe must search for a feature that distinguishes first and third person, that is, either a Speaker feature or a more general participant feature. But in the 1 vs 2 situation, the Probe cannot be permitted to search for either of these features. The implication is that there is a hierarchy that determines which features are preferably selected as the specification of the Probe. Clearly, this is simply the counterpart of the 2 > 1 > 3 person hierarchy. Given the attested language variation, it must be the case that this hierarchy of preferred feature content can vary from language to language. We conclude that there is no difference between the syntactic account and the morphological account proposed here in terms of the necessity of stipulating a language-particular feature hierarchy.[12]

[12]Preminger argues that the syntactic account, but not an account based on a person hierarchy directly, provides insight into the morphology of the agreement markers in Kaqchikel. In particular, first and second person agreement markers are reduced versions of strong pronouns, while third person agreement markers are not. Moreover, the third person marker is a number marker; third person singular is null. Preminger's account for this is that probing by the person head results in clitic doubling of the Goal, while probing by the number head does not. Since the person head does not probe a third person DP, we get only number agreement when a third person DP agrees, and therefore not a clitic. (This holds both in the Agent Focus construction and in ordinary transitive clauses, so is not related to the occurrence of a person clash.) Of course, the generalisation that agreement with first and second person takes the form of a clitic can be made in any theory that can generalise over first and second person. In our account, one could say that agreement for PROX takes the form of a clitic. Neither of these accounts provides insight for why this should be so. It is a well-known observation that in a

The main objection to the syntactic alternative, however, is that it fails to account for those situations in which third person DPs are involved in person clashes. As we have seen in the previous sections, the agreement data from Icelandic quirky subject constructions and Dutch clefts can be understood as the result of just such a clash. If the person clash in the Kaqchikel Agent Focus construction is the result of the Person Licensing Condition in (54), third persons should never lead to a similar problem. At the least, then, this implies that a unified account of all the data discussed in this paper is not possible on a syntactic account based on this particular constellation of assumptions.

7 Conclusion

In this paper we have shown that there is a fundamental distinction between default person and default number. Third person has a feature specification, while singular number does not. The argument is based on configurations in which two φ-feature bundles compete for spell-out. In the case of number, this never results in a clash. Instead, there will be omnivorous number: the verb shows plural agreement whenever at least one of the feature bundles is specified as plural. In contrast, in the case of person this situation can lead to a clash. This accounts for the impossibility of having a lower nominative with a different person specification than the subject in both Icelandic quirky subject constructions and Dutch clefts. Those cases where a verb does show omnivorous person agreement are the result of language-specific person hierarchies used for resolution. We have presented an account of such hierarchies that is in line with the assumption that third person is not feature-less.

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number of languages the morphology of first and second person agreement markers diachronically developed from pronouns, while the morphology of third person agreement markers did not (see Fuß 2005 and references mentioned there). This may not have anything to do with the internal logical of the person feature system, but rather with the high accessibility in discourse of first and second person, which **Ariel2000** argues favours reduction of the pronominal markers expressing these persons to clitics and subsequently to agreement markers.

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