On the Symmetry of Case in Conjunction

Philipp Weisser*
August 1, 2017

Abstract

In this paper, I argue that all of the conjuncts in nominal conjunction always bear the same case. Apparent counterexamples, where conjuncts seem to differ with respect to morphological case marking, are claimed to be either due to a misanalysis of the underlying syntactic structure or due to superficial morphological processes that create the impression of a difference in case marking. Once we control for phenomena of this sort (namely &P-clitics, Suspended Affixation and Allomorphy), we find that case marking is always symmetric in nominal conjunction. This finding is in stark contrast to the phenomenon of ϕ -agreement which is known to exhibit asymmetry effects. Based on this observation, I show that the standard approach to case assignment according to which case arises only as a reflex of ϕ -agreement cannot account for this mismatch without stipulative assumptions. Under two more recent approaches to case marking, however, namely the Upward Agree approach as well as the Dependent Case Approach, the observed mismatch between case and agreement falls out as expected. Finally, I show that the generalization established in this paper can be used as a simple diagnostic to distinguish syntactic from morphological case marking alternations.

Keywords: Case Marking, ϕ -Agreement, Conjunction/Coordination, Suspended Affixation, Pronominal Allomorphy, Case Clitics

1 Introduction

Most theories agree that, functionally but also empirically to a certain extent, case marking and ϕ -agreement are mirror images of each other. According to Nichols (1986), case and agreement express the same relation, the only difference being whether the locus of marking is on the head or on its dependents. In Generative Grammar, the standard assumption (see e.g. Chomsky 1995 et seq.) is that agreement between the verb and its arguments has the result that the arguments' features end up on the verbal head and a case reflex occurs on the argument. In recent years, however, this view has been

^{*}This work was supported by the Alexander-von-Humboldt foundation (Projects: Case and Coordination and Consequences of the SOCIC generalization) as well as the National Science Foundation: Research Grant Number BCS-1451098, PI: Bobaljik

challenged in various ways. It has been argued that the operations responsible for case marking and agreement are fundamentally different (see e.g. Marantz 1991; McFadden 2004; Bobaljik 2008; Preminger 2011; Baker 2015) or that the agreement is parasitic on case marking and not vice versa (see e.g. Zeijlstra 2012; Wurmbrand 2014; Bjorkman & Zeijlstra submitted; Smith 2015)

In order to bring a new perspective into this discussion, it might be helpful to see how the two processes behave in less canonical environments. One such environment is the relation between a verb and a dependent that consists of several conjoined arguments. In recent years, quite a number of cases have been found where only the features of one - usually the closest - conjunct appear on the verb. Cases of so-called closest conjunct agreement (CCA) have been reported in quite a number of languages and language families: Arabic (see i.a: Bahloul & Harbert 1992; Aoun et al. 1994; Munn 1999), Biblical and Modern Hebrew (Doron, 2000), Dutch (van Koppen, 2005), English (Munn, 1999), Brazilian Portuguese (Schmitt, 1998; Munn, 1999), Hindi (Benmamoun et al. 2009; Benmamoun & Bhatia 2010; Bhatt & Walkow 2012), Tsez (Benmamoun et al., 2009), Irish (van Koppen 2007), Slavic languages (Citko 2004; Bošković 2009; Marušič, Nevins & Badecker 2015; Murphy & Puškar 2015) and many others (see e.g. Johannessen (1998) for an overview). An example of CCA with postverbal conjoined subjects is found in Old Norse. In (1), the clause-initial verb ϕ -agrees only with the first conjunct, i.e. the first person pronoun. The second conjunct, a third person plural full DP does not ϕ -agree with the verb.

(1) Hefi [ek ok mínir menn] haft alla þessa stund þat einu oss til Have.1SG I and my men had all this time that only we.DAT to framflutningar.

maintenance

'All this time have I and my men had only this for maintanance.'

Old Norse: Nygaard (1966) as cited in Johannessen (1998, 30)

Keeping in mind the many parallels between case and agreement, we might therefore ask the question whether a phenomenon like *Closest Conjunct Case* – a pattern in which only the linearly/structurally closest conjunct receives the syntactically expected case – also exists. Against the background of a theory according to which case assignment is merely a reflex of agreement, Closest Conjunct Case might even be an empirical phenomenon that is to be expected. And in fact, the literature contains occasional remarks that such cases are attested (see e.g. McCloskey 1986; Johannessen 1998; Walkow 2013) but so far, none of the alleged cases of Closest Conjunct Case has been investigated in detail. Contrary to these remarks, I will argue in this paper that none of the cases claimed to be Closest Conjunct Case withstands closer scrutiny. More specifically, I argue that the following generalization holds cross-linguistically:

(2) Symmetry of Case in Conjunction (SOCIC):

Case is always evenly distributed amongst all of the conjuncts in nominal conjunction.

The goal of this paper is twofold: In the first, empirical part, I want to show in detail

that the SOCIC generalization holds. As I will illustrate, there are various phenomena cross-linguistically that can create the impression of a violation of (2). Thus, a strong claim such as the one above must be accompanied by a great number of detailed case studies. Each of these case studies will show that claims in the previous literature about asymmetric patterns of syntactic case marking in NP conjunction are only apparent. The second major goal of this paper is to discuss how the various theories of case assignment (and the case-agreement relation) fare when it comes to deriving this generalization. I will show that the standard approach to case assignment, according to which case marking arises as a reflex of ϕ -agreement cannot derive the generalization without further ado whereas the generalization falls out as expected under two more recent approaches, namely the Upward AGREE approach and the Dependent Case approach.

I will proceed as follows: Section 2, which will be the main part of this paper, will discuss a great number of apparent counterexamples to the generalization in (2) and show that they should be explained in a way that is consistent with it. Each of the three subsections of Section 2 will be devoted to a different cross-linguistic phenomenon that obscures the crosslinguistic validity of the generalization in (2). Section 3 will wrap up the discussion of the previous section and evaluate its concrete consequences and formulate directly testable hypotheses. In Section 4, I will discuss that the generalization established in the previous sections proves to be problematic for the standard theory of case assignment. It will be shown however, that it can be easily derived if case assignment is seen as a purely syntactic phenomenon whereas ϕ -agreement can either be syntactic or postsyntactic. Finally, I will discuss two recent approaches that this finding is compatible with. Section 5 will show very briefly that the SOCIC generalization in (2) can be used as a concrete diagnostic to distinguish syntactic and morphological case marking alternations. Section 6 concludes.

2 Case Studies

As alluded to in the introduction above, there are a number of factors that obscure the generalization in (2). Most importantly, there are various morphological phenomena that can create the impression that a certain language has in fact asymmetric case assignment in coordination. In this section, I will discuss several phenomena from typologically diverse set of languages and show that the violations of (2) we find in these languages are only apparent. In doing so, I will classify apparent counterexamples into different groups and show that all of the languages claimed to have asymmetric case assignment in NP-coordination in the literature fall in one of these groups.

Before this can be done, however, some terms contained in the generalization above need clarification. Most importantly, a few words need to be said about the notion of case that will play a role during the discussion. The term case as used throughout this paper refers to the actual morphological realization (including non-realization in the case of \emptyset -affixes) of the affixes with the additional qualification that very superficial morphological processes such as deletion or allomorphy can obscure the actual case pattern. The claim at hand is that if one systematically analyzes all of the cases of deletion and allomorphy and investigates in which contexts they occur, then one can draw the conclusion that it

is only in these very cases that the morphological marking of two conjoined nouns may differ from each other.

Another factor that needs to be controlled for is 'nominal conjunction'. It must clearly be distinguished from comitative constructions as the latter quite frequently exhibit asymmetric case marking between the head noun and its comitative adjunct. For the purposes of this paper, the two constructions were distinguished using the criteria in Haspelmath (2007). The most straightforward ones of these criteria are: (i) Adjacency Requirement: Conjuncts usually must appear adjacent to the conjunction and each other whereas comitative phrases can (or even must) be dislocated. (ii) Distinct Events: Conjunction usually allows for a reading where the two conjoined nouns are present in different events. Comitative adjuncts must be present in the same event as their head noun. (iii) Multiple conjuncts: Conjunction is recursive (allows for an infinite number of arguments) whereas comitatives are often restricted to two (one head noun and one adjunct).

I will now turn to the concrete empirical phenomena that can create the impression of a violation of the SOCIC generalization.

2.1 Phrasal Affixes

One of the phenomena we need to take a look at is *phrasal affixes*, i.e. &P-clitics. Some languages mark the whole conjunction phrase with a case marker rather than every single conjunct. On the surface, this may create the impression of asymmetric case assignment. The pattern is abstractly illustrated in (3).

(3) $[Conj_1 \& Conj_2]$ -CASE

In in given language, the pattern in (3) can be hard to distinguish from something like (4).

(4) $*[Conj_1 \& Conj_2\text{-CASE}]$

Therefore we need concrete diagnostics that can distinguish between the structures in (3) and (4) and show that (4) is in fact crosslinguistically unattested. One of the more straightforward diagnostics is DP-internal agreement such as agreement of adjectives.

In Estonian, for example, the so-called CATE cases (comitative, abessive, terminative and essive) can optionally cliticize to the whole &P instead of every single conjunct. On the surface, this pattern looks like asymmetric case in conjunction as the non-final conjuncts bear the genitive.

(5) Ta jook-sis jõe ja puu-ni.
3SG run-3SG river.GEN and tree-TERM
'He went to the river and the tree.'

However, examples containing adjectives or determiners that agree with the respective head nouns show that all conjuncts bear the genitive and the CATE case markers are

Estonian: Hasselblatt (2008)

¹On comitatives, see Stassen (2000); Stolz (2001); Stroh et al. (2006) and, from a more theoretical perspective, Kayne (1994); Zhang (2007).

attached to the whole &P. Since the CATE cases are formed on the basis of the genitive stem, this may create the expression of two different case markers on two different conjuncts.

(6) Ta jook-sis jõe ja suu-re puu-ni.
3SG run-3SG river.GEN and big-GEN tree.GEN-TERM
'He went to the river and the big tree.' Estonian: Triinu Viilukas (p.c.)

The argument against asymmetric case assignment in Estonian is straightforward. The adjective modifying the second conjunct bears genitive as does the first conjunct. This strongly suggests that the structure is as in (7). An analysis in terms of asymmetric case assignment could hardly explain the concord morphology of the adjective.

(7) [NP₁.GEN & ADJ-GEN NP₂.GEN]-TERM

In a similar way, postnominal modifiers can show whether an affix is a phrasal clitic or whether it is really part of the last conjunct. However, if a given language does not allow for any postnominal modifiers and its adjectives do not agree in case, the scope of the affix/clitic in question can sometimes be determined by looking at the scope of other elements.²

In Udmurt, a Permic language, we find another case that appears to be a violation of (2), at least at first sight. (8) below illustrates two out of the three possibilities to conjoin noun phrases in Udmurt.³

- (8) a. Mon Petyr-en-les' Maša-jen-les' mözm-is'ko 1SG Peter-INS-ABL Masha-INS-ABL miss-1SG.PRES
 - b. Mon Petyr-en Maša-jen-les' mözm-is'ko
 1SG Peter-INS Masha-INS-ABL miss-1SG.PRES
 'I miss Peter and Masha.'

In these structures, Udmurt does not employ a conjunction. Rather, it marks every conjunct with the instrumental.⁴ In addition, speakers of Udmurt either mark every conjunct with the expected syntactic case (8-a) or the only the last one (8-b). Of interest to the investigation in this paper is, of course, (8-b), which is, again, ambiguous between a structure in which the ablative case attaches to the rightmost conjunct or to the conjunc-

²In Hindi, Butt & King (2005) provide evidence that case markers are actually clitics that attach to the phrase as a whole. Apart from conjunction, Butt & King (2005) provide evidence from several particles that can intervene between the case marker and the nominal element it attaches to.

³For a more detailed investigation of the three types of conjunction in Udmurt see Weisser (2016). All Udmurt examples were, unless otherwise stated, provided by Svetlana Edygarova (University of Helsinki).

⁴The instrumental case can also be used to encode a comitative relation as in (i). Nevertheless, comitatives can easily be distinguished as they (a) do not require the head noun to be marked with instrumental as well (b) do not trigger plural agreement (c) need not be adjacent to the noun they modify.

⁽i) Mon verašk-i todmo-en-im kud-ze uram-in pumita-j
1SG talk-PAST.1SG friend-INS-1SG REL-ACC street-INESS meet-PAST.1SG
'I talked with my friend, who I met on the street.' Udmurt: S. Edygarova (p.c.)

tion phrase as a whole. Udmurt is strictly head-final in the NP (i.e. it does not allow for NP-internal material to follow the head noun) and it does not have NP-internal concord like Estonian above, we must dig a little deeper to come up with an argument that the ablative is in fact an &P-clitic.

Udmurt has a peculiar alternation with possessor case.⁵ Possessors in Udmurt generally bear genitive case unless the head noun they modify bears accusative. In that case, the possessor bears ablative:

- (9) a. Mon Masha-leš apaj-z-e jarat-is'ko.

 1SG Masha-ABL sister-3SG-ACC love-PRES.1SG
 'I love Masha's sister'
 - Masha-len apaj-ez Petyr-ez jarat-e.
 Masha-GEN sister-3SG Peter-ACC love-PRES.3SG
 'Masha's sister loves Peter.'

Assmann et al. (2014)

Based on this observation, we can now compare the different cases of the possessors in the asymmetric conjunction construction. Interestingly, two narrow scope possessors as in (10) cannot bear ablative. With a wide scope possessor though, an ablative possessor is acceptable.

- (10) a. *Mon Maša-les' nil-ieni-z Petr-les' pi-jeni-z-e
 1SG Masha-ABL daughter-INS-3SG Petr-ABL son-INS-3SG-ACC
 ad'z'-is'ko.
 see-PRES.1SG
 - 'I see Masha's daughter and Peter's son.'
 - b. Mon Maša-les' nil-ieni-z pi-jeni-z-e ad'z'-is'ko.
 1SG Masha-ABL daughter-INS-3SG son-INS-3SG-ACC see-PRES.1SG 'I see Masha's son and daughter.'

In other words, if the possessor is part of one of the conjuncts, it seems to modify an instrumental DP (11-a). But a wide scope possessor which modifies the whole conjunction, modifies an element bearing accusative (11-b).

- (11) a. [& $_P$ Poss₁-GEN DP₁-INS Poss₂-GEN DP₂-INS]-ACC
 - b. Poss-ABL [&P DP₁-INS DP₂-INS]-ACC

The minimal pair in (10) receives a straightforward explanation under the assumption that the regular syntactic case marker in the "asymmetric" conjunction construction is actually attached to the whole &P. Under the assumption that it is actually the second conjunct which bears the accusative, the distribution of possessor cases is totally unexpected. We can thus state that the asymmetric conjunction construction obeys the SOCIC generalization.

Other examples of &P-clitics are found in other Finno-Ugric languages such as some local cases in Hungarian (see e.g. Trommer (2008)), in Hindi (Butt & King, 2005), in Welsh (according to the analysis in Roberts (2005)), in many Tibetan languages (Noonan,

⁵This alternation is extensively discussed in Assmann et al. (2014).

2.2 Suspended Affixation

The second major phenomenon that creates the impression of possible counterexamples to the SOCIC generalization is known as *Suspended Affixation* (SA).⁶ SA is found in a wide range of Eurasian languages from a number of different families. It is very common in Turkic languages (Lewis 1967; Kornfilt 1996; Good & Yu 2005; Kabak 2007; Broadwell 2008; Kornfilt 2012) as well as in Japanese (Ueda & Haraguchi 2008; Nishiyama 2012) and Korean (Yoon & Lee 2005). Furthermore, it is found in the Finno-Ugric language Mari (Luutonen 1997; Guseva & Weisser submitted), the Indo-Iranian languages, e.g. Ossetic (Erschler 2012) and in Armenian. It is reported in Nivkh (Gruzdeva 1998). Kiparsky (1968) reports that some cases of SA (or, in his terms, conjunction reduction) are also found in Vedic Sanskrit and Homeric Greek. Some examples of SA are given below.

- (12) alan ema dew-ej tarsten
 Alan.NOM and you-ABL be.afraid-PAST.1SG
 'I am afraid of Alan and you.' Digor Ossetic (Erschler, 2012, 157)
- (13) Yamada to Harada-tati-ga mat-ta.
 Yamada and Harada-COLL-NOM wait-PAST
 'Yamada with his associates and Harada with his associates waited.'

 Japanese, H. Saito (p.c.)
- (14) köy, kasaba ve kent-ler-imiz-den village town and city-PL-1PL.POSS-ABL 'from our villages, towns, cities.' Turkish: Göksel & Kerslake 2005, p.458

In the example in (13), it seems that the first conjunct bears nominative case and only the second one received ablative case, i.e. the case assigned by the verb *tarsten*. In Japanese, only the second conjunct bears nominative and in Turkish, only the third of three conjuncts bears the ablative.

On the surface, these examples do not look too different from the ones in the preceding section. However, unlike the cases in the previous section, we have good reasons to believe that the case markers in cases of SA are in fact part of the second conjunct rather than a phrasal affix. First, they show the morphophonological behavior of completely regular case markers in the languages in question. In Turkish, for example, the case markers undergo all the phonological processes that operate on the word level such as vowel harmony and consonant assimilation (for discussion see Kornfilt (1996, 2012)). In Meadow Mari, a Finno-Ugric language, we can observe that the suffixes in question do behave like regular case suffixes (and not like postpositions) with respect to stress assignment and vowel reduction as shown in (15) (see Johannessen (1998)).

⁶Other terms that have been used in the literature for this phenomenon are *Morphological Conjunction Reduction* or *Morphological Brachylogy*.

- (15) erge dene (16) ergə-žə-m son.NOM about son-3SG.POSS-ACC 'his son'
- (17) Anna-n [yder-žö den ergəž-ə-m]
 Anna-GEN daughter-3SG.POSS and son-3SG.POSS-ACC
 'Anna's daughter and son' Johannessen (1998)

If followed by an affix, underlying /e/ is reduced to a schwa. A postposition does not trigger the same effect. But as we can see in (17), the affix in an SA-configuration does.

Another argument for the fact that the case markers in SA constructions do belong to the second conjunct, comes from facts in Japanese and Meadow Mari, where, in some cases, material of the second conjunct can follow the case marker.

- (18) Hon issatsu to pen-o nihon kau.
 book one and pen-OBJ two buy
 'I will buy one book and two pens. Japanese: Johannessen (1998)
- (19) Üder mej-en uše-m den tej-en süm-ešte-t. girl 1SG-GEN mind-1SG and 2SG-GEN heart-INESS-2SG 'The girl is in my mind and in your heart.'

Meadow Mari: Guseva & Weisser (submitted)

In (18), the numeral-classifier complex of the second conjunct has been extraposed to the right edge of the conjunct. In (19), the possessive affix of the second conjunct follows the case marker that is suspended. In both cases, we can be sure that material following the case marker unambiguously belongs to the second conjunct. And in both cases, we can also be sure that this material has not been moved to a position outside of the &P because that would cause a violation of the Coordinate Structure Constraint. So, we have to conclude that, unlike with the phrasal affixes in the previous section, case markers in SA configurations are contained in the second conjunct.

However, I argue that cases of SA should nevertheless not be seen as instances of asymmetric case marking either. Rather, there are quite a number of good reasons to assume that SA should be conceived of as an ellipsis process. Under this assumption, SA deletes affixes on non-final conjuncts under identity with affixes on the final one. The example in (20) illustrates the intuition behind this analysis abstractly.

(20) $[Conj_1-CASE]$ & $Conj_2-CASE$

Under this analysis, the case markers on non-final conjuncts are present underlyingly but deleted before they are pronounced. As alluded to above, there are several good arguments for this analysis.

First and foremost, we can observe that SA is not just restricted to case markers. In the examples from Japanese and Turkish above, other affixes are deleted alongside the case marker. In the Japanese example in (13), the so-called collectivizing affix is deleted on the first conjunct as well. We can tell that, underlyingly, the collectivizer was also found on the first conjunct because one of the available interpretations is $Yamada_i$ and

 his_i associates and $Harada_j$ and his_j associates waited.' Even though the DP Yamada does not bear the collectivizing affix, it is interpreted as if it did. Similarly in the Turkish example in (14). Here, the non-final conjuncts are also interpreted as plural and under the scope of the possessive affix (at least under one possible interpretation). Furthermore, we find that SA is not restricted to the nominal domain. It can also apply in cases of VP-coordination.

(21) Taro-ga utai Ziro-ga odori-hazime-ta.

Taro-NOM sing Ziro-NOM dance-begin-PAST

'Taro began to sing and Ziro began to dance.' Japanese: Nishiyama (2012)

SA applies to all kinds of inflectional affixes throughout the grammar. If we assumed that case was assigned asymmetrically in Turkish, Ossetic, Japanese or Korean, we would need to assume that possessive affixes, plural affixes or all kinds of verbal affixes would be assigned asymmetrically as well. But since categories like number are usually not conceived of as assigned to the DP, this assumption would be very non-standard (and make all sorts of undesirable predictions).

A second, more straightforward, argument for the fact that the deleted case markers on non-final conjuncts is underlyingly present comes from allomorphy. In some languages, we can observe that the deleted case markers can trigger stem allomorphy. Consider the two examples from Meadow Mari and Ossetic. As one can see in the pronominal paradigms below the respective examples, the nominative form of the pronoun is based on a different stem that the other cases. And in both languages, we find that when one deletes a case marker under SA, the remnant of deletion still occurs in the non-nominative form. In Meadow Mari, the actual remnant of SA deletion is not even a form of the pronominal paradigm at all. It is merely the accusative pronoun minus the accusative case marker.

- (22) Pörjeng memna den nunem už-eš
 Man.NOM us.??? and them.ACC sees-3SG
 'The man sees us and them.' Meadow Mari Guseva & Weisser (submitted)
- (23) 1.Person Plural Pronoun in Mari:

NOM me
GEN memna-n
ACC memna-m
DAT memna-lan

Alhoniemi (1993)

- (24) dew/*du ema alan-ej tersun.
 you-OBL/NOM and Alan-ABL be.afraid.1SG
 'I am afraid of you and Alan.' Digor Ossetic (Erschler 2012)
- (25) 2nd Person Singular Pronoun in Digor Ossetic:

NOM du
OBL dew-en
dew-en

This strongly suggests that the case marker is underlyingly present even though we cannot observe it on the surface. If one assumed that case were assigned asymmetrically here, one would have a hard time finding an explanation for why the first conjunct undergoes stem allomorphy.⁷

So, to conclude, we have seen a number of reasons that distinguish that SA is not as it is often assumed phrasal cliticization. However, and this is more important for the claim of this paper, we have seen further that SA should neither be viewed as asymmetric case assignment. Rather, the data suggest that SA should be conceived of as an ellipsis phenomenon that deletes case markers on a late postsyntactic cycle. In other words, SA seems to be the word-internal counterpart of Right Node Raising.

This means that even though the surface forms of the case markers suggest otherwise, case is underlyingly symmetric in these cases as well. I therefore conclude that the SOCIC Generalization is not violated in these cases.

2.3 Allomorphies with Pronouns

In this section, I will discuss the final phenomenon that creates the impression that the SOCIC generalization can be violated. In some languages, most notably English, adjacency to a conjunction can trigger allomorphy with some pronouns. As a result, certain pronouns seem to exhibit unexpected forms and this may create the impression of asymmetric case assignment in NP conjunction. Since it is not clear per se that cases of allomorphy behave similarly, I will present three case studies from languages with pronominal allomorphy. I will show that even though the phenomenon of allomorphy is in itself characterized by its irregularity, the cases will be parallel to a certain extent. In the three languages, only an arbitrary set of pronouns will partake in the alternations. Also, the position of the specific pronouns relative to the conjunction will be relevant as expected under the assumption of allomorphy driving the alternation. Finally, I will show that, in some cases, the acceptance of the unexpected allomorph suddenly degraded when an adverb intervenes between the conjunction and the allomorph. This provides another strong argument for an explanation in terms of adjacency-driven allomorphy.

2.3.1 English

When proposing a generalization such as the one in (2) above, one of the immediate objections is of course the cases of conjoined pronouns in English. Even though there is not much of an elaborate case system in English, one can come up with a class of potential counterexamples such as the ones in (26):

⁷A third argument comes from cases in languages like Turkish, where it was noted that phonological processes such as vowel harmony and consonant assimilation can bleed Suspended Affixation with some speakers (Kornfilt 2012). When the two, formally identical, affixes are phonologically quite different, ellipsis seems to be degraded. This, again, receives a straightforward answer under an ellipsis approach since ellipsis is known to be subject to morphophonological similarity requirements. Under an asymmetric assignment account, there is no plausible explanation why the phonological similarity requirement should affect the syntactic case assignment.

Him and I are fighting. (26)

Parrott (2009)

- He says he saw *John and I* last night. b.
- *She and him* will drive to the movies. c.
- He thought that I was coming between he and his wife

Johannessen (1998)

(26) shows all possible combinations of asymmetric case assignment. Abstractly, the combinations can be represented as follows:

- (27)[ACC and NOM]&Psubi
 - [ACC and NOM]&Pobi b.
 - c. [NOM and ACC]&Psubi
 - [NOM and ACC]&Pobi

At first sight, these cases seem like obvious counterexamples to the SOCIC generalization. However, people who dealt with this particular topic seem to agree that the underlying syntactic pattern is [ACC and ACC] and all of the patterns above are basically additional allomorphs learned as a result of prescriptive pressure (for this view see Emonds (1986); Sobin (1997); Parrott (2009). Sobin (1997) calls these allomorphs grammatical viruses, Parrott (2009) calls them supplemental vocabulary items.

Sobin assumes that nominative case in English is assigned in a strict Spec-Head relation. As a result, it does not end up on a conjoined subject. Conjoined subjects thus bear the default case, which, in English, is the accusative. Hence, [ACC and ACC] patterns are always acceptable regardless of the syntactic environment.

- (28)Them and me are going to the movies.
 - She helped *him and me*.

But in addition to this pattern, there are additional rules which can change parts of the output form. The two rules that Sobin gives are the "...and I" Rule and the "that she..." Rule. In the same spirit, Parrott (2009) gives three additional insertion rules which can change the pronouns if they are adjacent to a conjunction:

(29)Supplemental Vocabulary Items:

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[D,+AUTH,+PART,-PL] \Leftrightarrow /ai/ /[&P ... & ^0 *__ ... ]

[D,-AUTH,+PART,-PL,MASC] \Leftrightarrow /hi/ /[&P ... _* & ^0 ... ]
a. [D,+AUTH,+PART,-PL]
                                                        /[i/ /[_{\&P} ... _* \&^0 ...]
     [D,-AUTH,+PART,-PL,FEM]
                                                                                              Parrott (2009)
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The rule in (29-a) changes a first person pronoun in the second conjunct to /ai/ when right-adjacent to the conjunction. The second and the third rule change the third person pronouns to /hi/ or /ſi/ when preceding the conjunction. Crucially, these rules do not make reference to case features at all. They are only concerned about adjacency to the conjunction.

Thus, I want to argue that, following the analyses by Sobin (1997) and Parrott (2009) that case is perfectly symmetric in NP conjunction in English but that there are extragrammatical rules that alter the forms of pronouns in certain contexts. A possible source

for these extra-grammatical allomorphy rules might be prescriptivism but, in principle, there can be other sources too.

The interesting question that arises how one can identify such cases of allomorphy or, as Sobin calls them, grammatical viruses. Sobin gives six different criteria. First, these viruses attack only certain specific lexical items. In this case, only an arbitrary set of pronouns partakes in the alternation. Plural pronouns behave completely regular.

(30) *Peter and we go to the movies.

The second and third property are directionality and adjacency. As was mentioned above, these extra-grammatical rules do not make reference to grammatical concepts such as features or a specific position in the tree. Only immediate adjacency and directionality are relevant. In the case at hand, the first person singular pronoun takes the nominative form only when it occurs to the right of the conjunction (cf. (31-a)). Similarly, the third person singular pronouns take the nominative form when they are to the left of the conjunction (cf. (31-b)).

- (31) a. *I and Peter go to the movies.
 - b. *You and he would make a cute couple.

Note also the following contrast, which, as far as I know, has not been noticed in the previous literature. If the adjacency between the conjunction and the second conjunct is interrupted by an intervening conjunctional adverb, then the extra-grammatical form is degraded:

- (32) a. Peter and I go to the party tomorrow.
 - b. *?Peter and probably I go to the party tomorrow.

The fourth and the fifth property of Sobin's grammatical viruses is overextension and underextension. Overextension covers cases of hypercorrection where a nominative form unexpectedly occurs in object position (cases like *between you and I* or (27-b) and (27-d)). In these cases, there is definitely no nominative case assigner and hence no alternative explanation in terms of syntactic exceptions seems possible. By underextension, Sobin refers to the fact that not all conjuncts in NP-conjunction are turned into nominatives. Underextension is the criterion that creates the impression of asymmetric case assignment in the first place.

The sixth and final criterion for a grammatical virus, Sobin gives is its insensitivity to nonlexical hierarchic constituents. In other words, we find cases of grammatical viruses that ignore empty categories or phrase boundaries in a way that a regular syntactic rule never would. Take a look at the following example:

(33) For Mary to be the winner and [$_{SC}$ I the loser] is unfair. Sobin (1997)

Here, the grammatical virus ignores the fact that the first person pronoun is contained in a small clause and leads to hypercorrection across a phrase or even a clause boundary.

So, to sum up, we have seen quite a number of reasons to believe that occasional nominative case forms in conjoined NPs in English are not the result of asymmetric case

assignment in the syntax but rather the result of (possibly extra-grammatical) allomorphy rules that change the output form in unexpected ways. The SOCIC generalization can thus be maintained.

2.3.2 Italian

Another case of allomorphy triggered by the adjacency to the conjunction itself can be found in Italian. In Italian it is only the second person singular pronoun that shows an irregular form when appearing in a conjoined subject. Instead of the expected subject form tu, the object form te appears. The original subject form is not acceptable in these contexts:

- (34) a. Io e te andremo insieme a Roma.

 I.SUBJ and you.OBJ go.FUT.1PL together to Rome.
 - b. *Io e tu andremo insieme a Roma.

 I.SUBJ and you.SUBJ go.FUT.1PL together to Rome.

 'You and I go to Rome together.'

 Johannessen (1998)

As with the first person singular pronoun in English, this allomorph appears predominantly when it appears to the right of the conjunction. The subject form that is impossible when occurring to the right of the conjunction is preferred when the order is reversed.

- (35) a. Tu e io andremo insieme a Roma.
 - b. ?Te e io andremo insieme a Roma.

As the examples above also show, it is only the second person singular pronoun that shows this alternation. The first person plural allomorph must occur in the singular form (cf. (36)).

(36) *Tu e me andremo insieme a Roma.

If we apply Sobin's criteria to identify superficial allomorphy, we find that most of the criteria are in fact fulfilled. First, we have seen that Sobin's criterion of lexical specificity is fulfilled. The second person pronoun is the only one that shows this kind of alternation. Second, as we have seen, the directionality criterion is fulfilled. When the second person pronoun occurs to the left of the conjunction, it is less preferred. Third, it can be shown that adjacency to the conjunction plays a crucial role in the choice of pronoun. As we have seen above, the subject form tu is impossible as a second conjunct. It is possible however when the adjacency between the conjunction and the pronoun is interrupted by an intervening adverb.

(37) Pietro e probabilmente tu siete stati invitati al colloquio settimana prossima. 'Peter and probably you are invited for the job talks next week.'

⁸The fact that *te* to the left of the conjunction is possible at all can maybe be attributed to the fact that several Northern dialects seem to expand the contexts of *te* to the extent that some of them do no longer distinguish between the subject and the object form.

The criteria of overextension cannot be tested since the subject pronouns occur exclusively in subject contexts and the object forms seem to have the default case properties. And the fifth criterion, namely the insensitivity to hierarchical structure is per se hard to evaluate since various dialects allow *te* in every position. An equivalent of the English sentence, which is indeed judged acceptable, is given in (38) but it is not clear whether that is really a clear case of overextension.

(38) Che lui venga chiamato un vincitore e te un perdente è That he AUX.PASS.3SG call-PCTP.3SG.MASC a winner and you a loser is semplicemente un'ingiustizia.

simply an injustice.

'That he is called a winner and you a loser is simply not fair.'

So, the three straightforwardly testable criteria all point towards a clear case of allomorphy that basically follows the same pattern as English. We can thus state that Italian, too, is no violation of the SOCIC generalization.

2.3.3 Irish

In Irish, we find a case of pronominal allomorphy that is slightly different from the ones we have seen in English and Italian. In contrast to the languages above, it is not the immediate adjacency to the conjunction that triggers the allomorph but rather adjacency to the verb. And since the subject usually follows the verb immediately, certain pronouns show a different form when appearing in subject position. In case of a conjoined subject, only the first conjunct is realized with the subject allomorph and this gives rise to the impression that conjuncts in Irish bear different syntactic case.

In Irish, full DPs do not show any case marking. Pronouns however show up in two different morphological forms:

(39) Pronouns in Irish:

	Subjects	Non-subjects
1sg	mé	mé
2sg	tú	thú
3sg.m	sé	é
3SG.F	sí	í
1PL	muid/sinn	muid
2PL	sibh	sibh
3PL	siad	iad

Ó Siadhail (1989)

We can see that only the second person singular as well as the third person (singular and plural) distinguish between these two forms.⁹ Traditionally, these forms are called

 $^{^9}$ Furthermore, it is to be noted that there is a certain range of dialectal variation with respect to this pattern. According to Ó Siadhail (1989), the Munster dialect distinguishes conjunctional and disjunctional pronoun forms only in the third person. The forms of the second person singular have converged to /thú/.

conjunctional form and disjunctional form. In the framework of theoretical grammar, however, these two forms have been dubbed nominative and accusative. 10

(40) D'inis sé do Bhríd é.
tell.PAST 3SG.SUBJ to Bríd 3SG.OBJ
'He told it to Bríd.' (Ó Siadhail, 1989, p.208)¹¹

In cases of a conjoined subject, however, we find that only the first conjunct occurs in subject form. 12

- (41) a. Chuaigh Eoghan agus é-féin 'na bhaile. go.PAST Owen and 3SG.SUBJ-EMPH home 'Owen and he went home.'
 - b. Chuaigh sé-féin agus Eoghan 'na bhaile.
 go.PAST 3SG.SUBJ-EMPH and Owen home
 'He and Owen went home.' McCloskey (1986)
- (42) Chuaigh se-isean agus e-isean 'na bhaile.
 go.PAST 3SG.SUBJ-CONTR and 3SG.OBJ-CONTR home
 'He and he went home.' McCloskey (1986)

These examples gave rise to the claim (see McCloskey (1986); Doyle (2002); Walkow (2013)) that only the first conjunct in Irish receives the nominative and all other conjuncts remain without a case. Due to the default nature of the object form, the case-less conjuncts are realized as objects. If this analysis turned out to be true, then Irish would clearly violate the SOCIC generalization.

At first sight, this seems like a good candidate for an instance of closest conjunct case as we have no reason to believe that Irish makes use of Suspended Affixation or &P clitics. However, as it turns out, these different pronominal forms are better understood as allomorphs triggered by the adjacency to the finite verb (see Carnie (1995); Harley (2000) for the same conclusion). The following insertion rules for the third person masculine singular pronoun exemplify this analysis as they, again, do not make any reference to syntactic case features.

As alluded to above, this analysis comes much closer to the notion expressed in traditional grammars which labeled these forms as conjunctional and disjunctional forms. In the following, I will present five arguments that it is in fact the adjacency that triggers the morphological form, not the syntactic case feature.

First, we can, as in the cases of English and Italian above, note that the examples with a pronoun in the subject form become ungrammatical when there is an adverb in-

¹⁰See e.g. McCloskey (1986); Chung & McCloskey (1987); Noonan (1992); Legate (1999)

¹¹Glosses of the Irish examples have been slightly adjusted for reasons of uniformity.

¹²Since simple pronouns cannot be conjoined on their own (likely due to the weak phonological nature), examples with conjunction involve emphatic or contrastive particles to which the pronouns can cliticize.

tervening in between the verb and the subject.

(44) a. *Chuartaigh, ar ndóigh, siad an bád.
search.PAST of course 3PL.SUBJ the boat
'They of course searched the boat.' Chung & M

Chung & McCloskey (1987)

This alone is not surprising since adverb placement can be restricted in some languages. However, note that the very same adverb can occur in between the verb and the subject if the subject is not pronominal.

(45) Chuartaigh, ar ndóigh, na saighdiúirí an bád. search.PAST of course the soldiers the boat 'The soldiers of course searched the boat.'

Chung & McCloskey (1987)

This strongly suggests that (44) is ungrammatical because the pronoun is not licensed in this position.

The second argument comes from the two copulas in Irish. Important for our purposes is that, while the copula /ta/ is fairly unremarkable from a syntactic point of view, the copula /is/ one induces an unusual word order from an Irish perspective. While the former leaves the standard VSO structure intact, the latter changes it to VOS. Hence we get minimal pairs like the following:

(46) a. Is Éireannach é.
COP Irishman 3PL.OBJ.
'He is an Irishman.'

(Ó Siadhail, 1989, p.224)

b. Tá sé ina Éireannach.
COP 3PL.SUBJ in.3SG Irishman.
(lit. He is in his Irishman.')
'He has become an Irishman'

(Ó Siadhail, 1989, p.226)

If the subject pronoun immediately follows the verb, its so-called subject form is chosen. If another element intervenes in between the verb and the subject, the default form is chosen.

The third argument also involves a copula construction. In certain contexts, speakers of Irish can drop the copula /ta/ when another element is fronted. This copula drop does not affect the semantics of the expression in any way and is purely optional. However, it has a direct influence on the realization of the subject if the subject is a pronoun. Compare the following minimal pair:

(47) a. Cén aois atá sé? what age is 3SG.SUBJ

b. Cén aois é? what age 3SG.OBJ 'What age is he?'

(Ó Siadhail, 1989, p.215)

As far as I can see, we have no reason to believe that there are two different underlying syntactic structures to the examples in (47-a) and (47-b). Thus, it would be very surpris-

ing to see them differ with respect to syntactic case marking. If the form alternation with pronouns is simply a case of allomorphy triggered by the adjacency to the verb on the other hand, then it is easy to understand however why dropping the copula has an effect on the surface form of the pronoun.

The fourth argument that suggests that we are dealing with an analysis in terms of allomorphy rather than syntactic case involves so-called verbal noun constructions in Irish. An example is given in (48):

(48) Ba mhaith liom é a imeacht.

COP good with 1SG 3SG.OBJ PRT go-VN
'I would like him to go.'

Bondaruk (2006)

McCloskey (1980) and Bondaruk (2006) both argue convincingly that (48) involves neither raising nor ECM. The strongest argument against a raising approach comes from the fact that the embedded subject /é/ forms a constituent with the verbal noun. The strongest argument against an ECM analysis comes from the fact that these verbal noun constructions can be the complement of adjectives and nouns which can be independently shown to be incapable of case assignment (see Bondaruk (2006) for discussion). Based on these examples, McCloskey (1985), Chung & McCloskey (1987) and Bondaruk (2006) conclude that there must be a functional head inside of the verbal noun clause that licenses the overt subject. Note however, that the subject still does not bear the so-called subject form. Given what we have said so far, this would be very surprising under the assumption that it is actually syntactic case that we are dealing with. However, if we analyze the pronoun alternations as allomorphy as I suggest, then the form of the pronoun in (48) is expected as it is not preceded by a finite verb. ¹³

Finally, the fifth argument comes from Heavy-NP-Shift. As pointed out by Harley (2000), when a subject pronoun is modified by a relative clause, it is heavy enough to undergo Heavy-NP-Shift to the final position in the clause. As expected under our assumptions, the pronoun appears in the object form if it has undergone dislocation:

(49) Tháinig t_1 isteach ina dhiaidh sin [iad sin a bhí le daoradh chun Came t into after DEM 3PL.OBJ DEM C were condemned to báis]₁ death

"Those who were to be condemned to death came in after that" Harley (2000)

So, to summarize, we have seen a number of good arguments to believe that the pronom-

(i) D'imigh sé leis agus é ag cruinniú déirce left 3SG.SUBJ with.3SG and 3SG.OBJ gather.PROG alms 'He went of begging for alms.'

As with verbal noun constructions the subject of the subordinate clause is not right-adjacent to the verb and thus, following the reasoning above, it shows the default form as it is not in the position for the subject allomorph. Under this analysis, no further stipulations are necessary as to whether subordinate clauses do or do not assign nominative case.

¹³The same point can be made with small clauses in Irish (see Chung & McCloskey (1987)):

inal case alternations in English, Italian and Irish are instances of allomorphy rather than instances of asymmetric case assignment. I therefore conclude that case marking is underlyingly symmetric in these languages as well. Therefore the SOCIC Generalization is maintained.

3 Empirical Predictions of the SOCIC generalization

In the previous sections I have discussed several cases where the symmetry of case assignment in nominal conjunction seems to be violated. However, as we saw, the phenomena were shown to involve either completely different syntactic structures to begin with (&P-clitics) or relatively superficial morphological processes (deletion and allomorphy) that merely obscure the underlying symmetrical case assignment pattern.

In the course of the discussion above, we have seen that each of the phenomena can be identified unambiguously on the basis of empirical grounds. Thus, we know the contexts in which these phenomena apply. As a consequence, we can further identify a number of immediate predictions that the SOCIC makes. In this section, I will highlight three of these predictions and, in each case, illustrate what a potential yet to be discovered counterexample would look like. Note that, in order to exclude cases of allomorphy, the predictions all imply that the case of asymmetric case assignment is systematical, i.e. the asymmetry is more pervasive inasmuch as it turns up not only on one pronoun.

(50) Prediction 1:

If two conjoined nouns systematically show different morphological case, the SO-CIC predicts that all but one of these cases is morphologically zero.

Both systematic phenomena (i.e. &P-clitics and Suspended Affixation) make the prediction that all but one conjunct appear without a case marker. In the case of &P-cliticization, this is due to the fact that, underlyingly, none of the conjuncts have case markers. In the case of SA, all but one case marker is deleted. Hence, a construction like $[Conj_1\text{-DAT} \& Conj_2\text{-GEN}]$ where dative and genitive are formed via affixation of phonological material other that \emptyset to a stem would be a clear counterexample. In Estonian, which, at first sight, looks like a case like this, the relevant cases such as the terminative are formed on the basis of the genitive stem. Hence, an analysis according to which the terminative affix attaches to the whole &P was possible. This analysis was then confirmed by the data involving case concord on adjectives and determiners. ¹⁴

(51) Prediction 2:

If two or more conjoined nouns systematically show different morphological case, the SOCIC predicts that the case that is not zero is found on a noun that is peripheral to &P.

 $^{^{14}}$ A question that is yet to be answered is whether an example like [Conj₁-ACC, Conj₂- \emptyset and Conj₂-ACC] would be a counterexample. That highly depends on the properties of SA. In some languages, SA is not completely obligatory and hence one could imagine a case of three conjuncts where SA applies when comparing the two lower conjuncts but it does not apply when comparing the first and the last conjunct. I am not aware of such data at this point.

None of the systematic phenomena could derive a situation in which the second conjunct out of three has a different case than the others. &P-clitics can, of course, only appear at the very edge of a conjunction phrase and SA deletes non-final affixes under identity with the final one. Thus, it is clear that an example such as $[Conj_1-\emptyset, Conj_2-CASE \& Conj_3-\emptyset]$ would be a clear counterexample.

(52) Prediction 3:

If two or more conjoined nouns systematically show different morphological case, the SOCIC predicts that the case that is not zero is found on the final conjunct if it is a suffix and on the first conjunct if it is a prefix.

An &P-proclitic precedes the whole &P and thus, it would create the impression that it attaches to the first conjunct. An &P-enclitic would, on the other hand look like it belonged to the final conjunct. As for SA, I am not aware of SA deleting prefixes but if there were such a case, one would assume that the remaining overt prefix appears on the first conjunct. Similarly for suspended suffixes which always appear on the final conjunct. Thus a situation like $[Conj_1-DAT \& Conj_2-\emptyset]$ could not be derived. The DAT-marker cannot possibly be derived as a phrasal affix and, similarly, SA, for all we know, deletes markers on non-final conjuncts and not on final ones. ¹⁵

These empirical predictions are readily testable cross-linguistically. In some cases, an in-depth study might be necessary to decide whether an ambiguous example is in fact a violation or not. But as discussed above, some examples would be straightforward counterexamples for which a reanalysis would be hard to motivate. I am, of course, not aware of such counterexamples and the claim of this paper is, of course, that they do not exist.

4 Theoretical Consequences of the SOCIC generalization

In this section, I will discuss the theoretical conclusions that should be drawn from the discussion above. I will argue that the SOCIC generalization strongly suggests that case assignment and ϕ -agreement should be disentangled. Sporadic mismatches between case and ϕ -agreement can always receive tailor-made language-specific solutions but the SOCIC generalization shows that the asymmetries between case and agreement are more pervasive and should be integrated into the theory. Furthermore, I argue that, once the two operations are disentangled, the question arises how they look like and in which module of the grammar they apply. Building on recent proposals of CCA, I will argue that the SOCIC suggests that case assignment is necessarily a syntactic process whereas ϕ -agreement crucially is not. ϕ -agreement can occur before or after linearization and thus at least a subset of agreement relations must lie outside of syntax. I show that the SOCIC receives a straightforward explanation against theories where ϕ -agreement

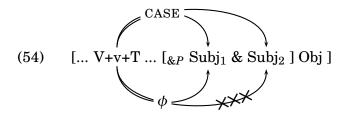
¹⁵Halpern (1995) argues that Wackernagel clitics are actually proclitics that right-attach to the first element. If this analysis is on the right track, such phenomena must be excluded from the set of possible counterexamples to Prediction 3.

proceeds in an upward fashion as well as dependent case accounts where case assignment and ϕ -agreement are usually treated as indirectly related (see Bobaljik (2008)). Under what one might call the standard theory of case assignment according to which case arises solely as a reflex of an independently established ϕ -agreement relation (see e.g. Chomsky 1995 et seq.), deriving the SOCIC generalization proves problematic.

4.1 The mismatch between case and agreement revisited

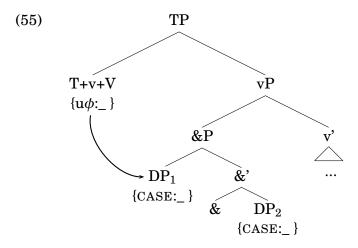
The SOCIC states that we never find asymmetric case assignment in conjunction. This is in stark contrast to ϕ -agreement where we regularly find cases where only one of the conjuncts agrees. The example in (53) gives one of the standard cases of Closest Conjunct ϕ -agreement and (54) illustrates the mismatch. The case relation affects both conjuncts whereas the ϕ -agreement relation does not. It affects only the linearly closest conjunct.

(53) Qara²at [Saliyaa wa Sumar] l-qiṣṣa read.3.FEM.SG Alia.FEM and Omar.MASC the-story 'Alia and Omar read the story.' Standard Arabic: (Aoun et al., 1994, 207)



Crucially, this mismatch always goes into one and the same direction. Case is always symmetric whereas ϕ -agreement is not. This raises the question of how the various theories of case assignment can derive this finding.

We will start by looking at the standard way of case assignment, according to which case appears on an argument as a reflex of an established AGREE-relation between that argument and a given functional head in the clause (see e.g. Chomsky 1995, 2001, etc.). It can be shown quite straightforwardly that such a theory of case assignment is problematic for the finding at hand. Take a look at (55):

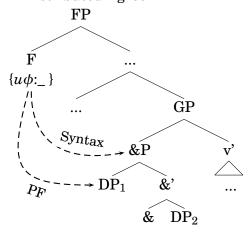


Without going into detail about the exact positioning of postverbal subjects in Arabic, we can assume, for ease of exposition, that the conjoined subject stays low in SpecvP and the verbal complex moves higher up in the tree to some clause-initial functional projection (here T).¹⁶

Under standard assumptions, T scans the tree for ϕ -features of its subject. Maybe because &P is not a suitable target as it does not bear all the relevant features, T skips the &P-node and finds the first conjunct in one way or another (see van Koppen (2005); Bošković (2009); Bhatt & Walkow (2012); Marušič, Nevins & Badecker (2015) for a variety of proposals). Arguably, T has never undergone any kind of agreement with the second conjunct as it shows only the ϕ -features of the first conjunct. Nevertheless, as we can see in (53), both conjuncts bear nominative case. If nominative case were simply a reflex of having undergone ϕ -agreement with T, it remained mysterious how the second conjunct received its case feature. It seems that we must conclude that case marking can appear on a given DP despite the lack of a pre-established AGREE-relation. Thus, the standard theory of case assignment faces severe problems when deriving the observed mismatch between case and ϕ -agreement.

In order to find strategies to derive this mismatch in a satisfying way, we can take a look at analyses of Closest Conjunct Agreement. Many of the more recent analyses tackling the asymmetry of asymmetric ϕ -agreement share the intuition that there is some kind of linearity effect going on in these structures. And in order to have the syntax operate one the basis of hierarchical structure only, a number of recent papers have put the idea forward that linearity effects of this sort are due to the fact that ϕ -agreement can, at least in part, happen in the postsyntax, i.e. after linearization (see e.g. Bhatt & Walkow (2012); Marušič, Nevins & Badecker (2015); Marušič, Willer-Gold, Arsenijević & Nevins (2015); Willer-Gold et al. (2016). This idea is illustrated in (56).

(56) Distributed Agree



¹⁶See Haddad & Wurmbrand (2016) for discussion of examples of this sort.

21

¹⁷A possible solution comes to mind that invokes the Case Filter in order to prohibit configurations like (55). However, we do not need to exclude these configurations since they are attested, however with a different case pattern. Rather, a theory along the lines sketched above would need to find a way to get nominative case to the second conjunct without prior AGREE relation. Also, it should be mentioned, that a solution invoking the Case Filter runs into problems with cases where DPs inside of a coordination phrase are shielded from any kind of case assignment (see Schütze (2001).

A functional head F that AGREES with a complex conjoined argument can do so either in the syntax or on PF. If AGREE applies in the syntax, it applies on the basis of hierarchical structure. Hence, F targets the &P-node. If however, AGREE applies on PF, that is after linearization, then F finds the linearly closest conjunct. In a sense, AGREE is distributed across different modules.

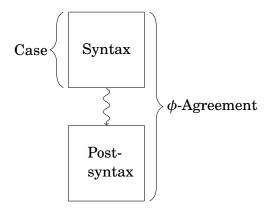
If this solution is on the right track, then we might restate the observed mismatch between case assignment and ϕ -agreement as follows:

(57) Corollary:

Case assignment is a purely syntactic operation whereas ϕ -agreement can, at least in part, be postsyntactic.

The mismatch between case assignment and ϕ -agreement can then be illustrated as in (58):

(58) Distribution of Case Assignment and ϕ -Agreement across modules:



If linearity effects with ϕ -agreement are due to ϕ -agreement applying in the postsyntax after linearization, then we can simply say that case, for some reason, is always a syntactic phenomenon. Mismatches with conjoined arguments as in (53) can arise if case assignment applies in the syntax and ϕ -agreement applies in the postsyntax.

In the next section, I will show that this corollary can nicely be derived under two alternative approaches to case assignment: (i) The Upward AGREE approach and (ii) The Dependent Case Approach.

4.2 The SOCIC Generalization in an Upward Agree Approach

In recent years, the standard approach to case assignment, which was discussed in the previous section, has been challenged from various perspectives. One of the alternative approaches on the market assumes that case is in fact assigned via AGREE as in the standard model, however the direction of AGREE is different. Rather than the probe command its goal, the order is reversed. For a successful AGREE relation to hold, the goal must c-command its goal. Probing proceeds upward and feature violation proceeds downward in the tree. This approach is known under the label *Upward Agree Approach* and has gotten quite a bit of attention during recent years (see e.g. Zeijlstra (2012); Bjorkman

& Zeijlstra (submitted); Wurmbrand (2014); Smith (2015); Haddad & Wurmbrand (2016) The following representations give an abstract example:



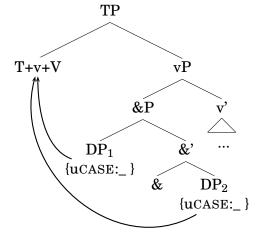
In (59), the probe P is c-commanded by the goal G. This is, under the assumptions of the Upward AGREE approaches, the prototypical configuration for AGREE to take place. In (60), the probe c-commands the goal which is thought to be impossible. However, the different Upward AGREE approaches differ as to what happens in configurations like (60).

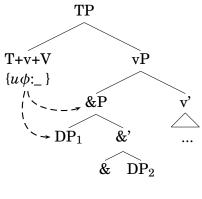
Bjorkman & Zeijlstra (submitted), for example, assume that - in parallelism to the standard approach - valuation in (60) is possible after all if there is already a pre-established AGREE relation between P and G. In other words, downward agreement can be possible if there is already a pre-established relation between the two heads in question.

Wurmbrand (2014); Smith (2015); Haddad & Wurmbrand (2016) assume that syntactic downward AGREE is impossible in general. However, in some cases, probes that remain unvalued in the syntax because they c-command their goals can be repaired by postsyntactic agreement on PF.

Regardless of which of the two options we choose, the SOCIC generalization can be derived very straightforwardly. Positing that AGREE proceeds in an upward fashion makes it possible that conjoined DPs probe for case features independently of any sort of ϕ -agreement. Due to reasons of Minimality, both DPs will inevitably find the same case assigner and thus receive the same case feature values:

(61) Step 1: Upward Probing of Case: (62) Step 2: Downward Probing of $u\phi$:





In (61), both conjoined subjects bear an unvalued case feature which then probes upward to find a case assigner. They both find T, which then assigns nominative case.

In a second step in (62), the yet unvalued ϕ -probe on T probes for ϕ -features. Depending on the assumptions discussed above, this probing can either apply as parasitic to a pre-established AGREE relation, or it will apply on PF. And depending on the featural makeup on the specific heads this downward AGREE relation will then target the linearly closest

DP or the &P-node. The former results in Closest Conjunct ϕ -agreement whereas the latter results in either resolved or default ϕ -agreement.

As one can see, the SOCIC generalization falls out of this theory without further ado. Since case probing is necessarily upward and this is the prototypical configuration for syntactic AGREE to take place, case assignment is necessarily always symmetric with conjoined elements. ϕ -agreement on the other hand proceeds downwards in at least a subset of the cases. Hence, contexts may arise in which the configurational requirements for AGREE are not met. In these contexts, asymmetric ϕ -agreement can arise.

4.3 The SOCIC Generalization in a Dependent Case Approach

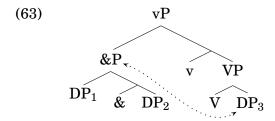
In the previous section, we have seen that the SOCIC generalization and the resulting mismatch between case and ϕ -agreement basically fall out as expected under the assumption of an Upward Agree approach. The reason for this was that reversing the direction of AGREE automatically entailed a reversal of the order of application of case AGREE and ϕ -agreement AGREE. If case assignment precedes ϕ -agreement, then a given theory can be made compatible with the SOCIC generalization.

In this section, we will take a look at another recent alternative proposal of how case assignment proceeds, namely the *Dependent Case Approach* (see e.g. Marantz (1991); McFadden (2004); Bobaljik (2008); Preminger (2014); Baker (2015)). Under the assumptions of a dependent case approach, the arguments in a given domain are assigned case simply by referring to their structural relations between each other. If there is just one argument in a given domain, it is assigned the unmarked case. If there are two arguments in a given domain, languages vary as to whether the higher one or the lower one receives the marked case. Then, in a second step, the other argument receives the unmarked case. And as for the relation of case marking and ϕ -agreement, it has been proposed that the outcome of the case assignment algorithm then can serve as an input to the ϕ -agreement computation (Bobaljik 2008).

Given that, in a Dependent Case approach, case is assigned purely on the basis of structural relations, and independently of ϕ -agreement, it is clear that the SOCIC generalization can be made to fall out of the theory. However, since the dependent case assignment algorithms that have been proposed in the literature crucially refer to the number of arguments in a given domain, we need to say something extra about conjunction patterns. Since conjunction adds a potentially infinite number of DPs in a given domain, we need to make sure that this does not affect the case marking pattern.

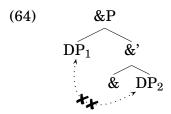
The first thing that we need to make sure is that the highest &P-node that dominates all DPs (and not the DPs themselves) counts as a coargument for DPs in other syntactic positions. ¹⁸

¹⁸It presumably does not suffice to specify that any &P counts as a coargument because conjunction of more than two DPs is usually thought to involve the use of recursive embedding via multiple &Ps (see Johannessen (1998); Progovac (1998a,b); Weisser (2015)



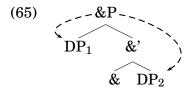
&Ps are known to inherit many properties of the categories they conjoin such as distributional or selectional properties. Thus, it comes as no surprise that they can count as coarguments for the purposes of case assignment. In (63), only the &P c-commands DP_3 (DP_1 and DP_2 do not) and thus DP_3 and &P are the crucial coarguments that lead to nominative case on the &P and accusative on DP_3 (in a nominative-accusative system).

A second necessary assumption, which is maybe more problematic to derive, is that the conjoined arguments must not count as coarguments for each other.



Given that conjoined arguments always bear the same syntactic case, we of course do not want them to count as coarguments for each other and thus assign case to each other. It is, however, not clear how this can be achieved. Given that arguments have been argued to be in a c-command relation for various reasons.¹⁹ What one could say in order to prohibit case assignment between DP₁ and DP₂ is that the &P counts as its own case assignment domain (parallel to the DP itself which counts as its own case domain e.g. for genitive assignment). However, this would be a quite undesirable stipulation because the only purpose of that posited domain would be to prevent case assignment rather than facilitate it. We would thus never get to see positive evidence for &P being a relevant domain in a dependent case approach.

The third and final assumption we need to make is that once the &P-node has been assigned case via the dependent case algorithm, it passes it down symmetrically to all of the DPs it dominates.



¹⁹Various arguments have been made in favor of an asymmetric conjunction phrase with the first conjunct c-commanding the second one. The main arguments come from binding, extraposition, residual cases of movement, etc. See Munn (1993, 1999); Zoerner (1995); Johannessen (1998); Johnson (2009); Weisser (2015). However, also see Weisser (2015) for a recent critical discussion of whether these arguments still hold.

Based on these assumptions, case assignment can apply successfully with conjoined arguments and the result may then serve as input for the ϕ -agreement computation as in Bobaljik (2008) where case determines the accessibility for subsequent ϕ -agreement. To derive resolved or default agreement, no further assumptions are necessary. To derive cases of Closest Conjunct ϕ -agreement, we need to make the small adjustment that not always is the *highest* accessible DP that controls agreement but sometimes also the linearly closest one.

Note that none of these assumptions were specifically designed to capture the SOCIC generalization. All of them are independently necessary to accommodate conjoined arguments in a dependent case approach at all. But once we have made these assumptions, the SOCIC generalization also falls out as expected. The reason for this was that, again, since case precedes ϕ -agreement in this theory, the derivations are compatible with the abstract order of operations postulated in Section 4.1 and illustrated in the picture in (58).

5 Empirical consequences of the SOCIC generalization

In this section, I briefly want to illustrate that the SOCIC generalization can serve as a simple diagnostic to decide whether a given case alternation is syntactic or morphological in nature. This is not an unprecedented claim. For example Legate (2014) uses this test to support her claim that certain instances of differential subject marking are morphological rather than syntactic.

(66) migle, vi baba-n va zu-al kala därd-en behold you.SG.POSS father-ERG and I.ABS-FOC great pain-INSTR furu-yan-exa vax search-1PL-LV.PRES YOU.SG.DAT 'Behold your father and I search you with great pain.'

Udi: Schulze (2014) as cited in Legate (2014)

The example above shows that the case alternation of transitive subjects between ergative (on full DPs) and absolutive (on pronouns) is morphological in nature rather than syntactic. Otherwise it could hardly be explained how the different case markers can show up on conjoined DPs.

The findings of this paper provide strong support for the use of the coordination test for exactly that purpose. What we found is that there are no asymmetry effects with case marking in coordination unless they are caused by superficial morphological operations such as Suspended Affixation or allomorphy. The example above thus suggests that the case alternation between pronouns and full DPs is ultimately also an instance of allomorphy.

In principle, this test can be used for any phenomenon where a given theta role can be expressed with two or more DPs with different case markers. To give a toy example, take the famous possessor case alternation between dative and nominative in Hungarian. Based on the linear order of the possessor and the determiner a/az and examples involving Left Branch-extraction of possessors, Szabolcsi (1994) claims that the difference in case arises due to a difference in syntactic position. If this is true, we expect not to be able to conjoin a dative and a nominative possessor. The prediction is borne out. Whatever order we use, the result is ungrammatical:

- (67) a. *Mari-nak és János-∅ (a) kalap-ja(-i) Mary-DAT and János-NOM DET hat-3-PL
 - b. *János-Ø és Mari-nak (a) kalap-ja(-i) János-NOM and Mary-DAT DET hat-3-PL 'Mary and János's hat'

A. Barany (p.c.)

In Finnish, direct objects can bear three different cases (see Kiparsky (2001) for discussion). Pronouns bear accusative marking (-t/), full DPs bear the genitive case marker (-a/) and objects of atelic verbs bear the partitive case marker (-a/):

- (68) a. Me nä-i-mme häne-t. 1.PL see-PAST-1.PL 3.SG-ACC 'We saw her/him.'
 - b. Me nä-i-mme karhu-n. 1.PL see-PAST-1.PL bear-GEN 'We saw a/the bear.'
 - c. Me nä-i-mme karhu-j-a.

 1.PL see-PAST-1.PL bear-PL-PART

 'We saw (some of the) bears.'

Kiparsky (2001)

Based on the generalization we established, we may thus wonder whether the different case markers can be conjoined. A pronoun bearing accusative and a full DP bearing genitive can be combined without a problem in both orders:

- (69) a. Me nä-i-mme häne-t ja karhu-n.
 1.PL see-PAST-1.PL 3.SG-ACC and bear-GEN
 'We saw her/him and a/the bear.'
 - b. Me nä-i-mme karhu-n ja häne-t. 1.PL see-PAST-1.PL bear-GEN and 3.SG-ACC 'We saw a/the bear and her/him.'

A. Vainikka (p.c.)

It is, however, not possible to conjoin a partitive object with a pronoun (or a full DP):

- (70) a. ??Me nä-i-mme häne-t ja karhu-j-a.

 1.PL see-PAST-1.PL 3.SG-ACC and bear-PL-PART
 Intended: 'We saw her/him and some bears.'
 - b. ??Me nä-i-mme karhu-j-a ja häne-t. 1.PL see-PAST-1.PL bear-PL-PART and 3.SG-ACC Intended: 'We saw some bears and her/him.'

A.Vainikka (p.c.)

As in Hungarian, the results pattern nicely with the analyses in Kiparsky (2001); Vainikka & Brattico (2014, 2016) where it is argued that the alternation between accusative and genitive is a morphological phenomenon but the partitive is assigned by a different (atelic) little v and thus due to a difference in syntactic structure.

Finally, I want to relate the findings of this paper to a recent paper on Differential Object Marking (DOM). DOM is characterized by the fact that languages assign a special case to direct objects that are high in specificity, definiteness or animacy. DOM is usually derived by syntactic means, i.e. movement of the object in question to a higher position (outside the VP).²⁰ Thus, it would be unexpected to find languages in which it is possible to conjoin a DOM-marked object and an unmarked one.

However, the survey given in Kalin & Weisser (2017) of eleven DOM-languages from five different language families reveals that the majority of DOM-languages (9 out of 11) allow for conjunction of objects with different case markers:

(71) Kumaar [&P kar-aiy-um paṇam-um] keeṭ-ṭ-aa<u>n.</u> kumaar car-DOM-COORD money.NOM-COORD ask.PAST-3M.SG 'Kumaar asked for the car and money.'

Tamil: Kalin & Weisser (2017)

(72) Dan axal [&P uga ve et-ha-ugiyot].

Dan ate cake and DOM-the-cookies
'Dan ate some cake and the cookies.'

Hebrew: Kalin & Weisser (2017)

(73) Vi [&P una mujer y a María juntas] en el parque. see.PST.1SG a woman and DOM Maria together in the park 'I saw a woman and Maria together in the park.'

Spanish: Kalin & Weisser (2017)

Against the background of what I have argued in the preceding sections, this evidence strongly suggests that the syntactic evidence for DOM should be reconsidered. It is beyond the scope of this paper to review all of this evidence but it is clear that most, if not all, of the movement-based accounts fall short of deriving these data. And given what we have said in this paper, all of the syntactic approaches to DOM face serious trouble deriving the following question: If DOM comes about by means of syntactic case assignment rules, why is it that regular syntactic case assignment obeys the SOCIC generalization but DOM case assignment in many languages does not?

6 Conclusion

This paper pursued two major goals. The first and foremost goal was an empirical one, namely to show that contrary to certain claims in the literature, a phenomenon like closest conjunct case does not exist. In order to show that, I conducted a number of case

 $^{^{20}}$ See Torrego (1998); Woolford (1999); Bhatt (2007); Rodríguez-Mondoñedo (2007); Baker & Vinokurova (2010); Richards (2010); López (2012); Ormazabal & Romero (2013) i.a. for a number of recent movement-based approaches to DOM.

studies about configurations where case marking seems to be asymmetric in the sense that not all conjuncts bear the same case marker. However, I showed that all of these cases can, and in fact should, receive a different explanation. Either the asymmetry in case marking was due to a misanalysis of the underlying syntactic structure (as with &P-clitics) or due to superficial morphological processes that delete a case affix or overwrite it with a different pronominal allomorph. Based on these findings, I proposed the following generalization:

(74) Symmetry of Case in Conjunction (SOCIC):

CASE is always evenly distributed amongst all of the conjuncts in nominal conjunction.

The second major goal of this paper was to show that this empirical generalization has immediate consequences for the theoretical relation between case marking and ϕ -agreement. Case is always symmetric whereas ϕ -agreement is not. It was shown that the standard theory according to which case assignment arises as a reflex of ϕ -agreement faces serious problems when trying to derive this generalization. I then went on to show that two alternative proposals, namely the Upward Agree approach as well as the Dependent Case approach fare much better when it comes to deriving the asymmetry between case and ϕ -agreement. The reason why they do much better is that, in both theories, case assignment is seen the basic operation with ϕ -agreement potentially being parasitic or dependent on case assignment. This was in line with our finding that the SOCIC generalization was easily derivable if one assumed that case is universally a syntactic phenomenon whereas ϕ -agreement can be syntactic or postsyntactic.

The final section showed that the validity of the SOCIC generalization provides us with a straightforward test to distinguish syntactic and morphological case alternations and while it yields correct results for many well-studied case marking alternations, it also provides us with some surprising results with cases of Differential Object Marking.

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