Optional and alternating case marking: Typology and diachrony
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Abstract

This paper presents a survey of the typology and diachrony of optional and alternating case marking, in the context of related phenomena such as referent- and construction-based splits. While there is much recent work in this area, driven by text-based approaches to language description, as well as quantitative and areal approaches to typology, the domain remains somewhat scattered, conceptually and terminologically. We chart the relevant phenomena, and provide a typological survey of optional and alternating marking for A and O arguments. We also highlight some of the questions that remain, including problems with the classic model of case marking based on markedness reversal. A final section investigates the diachronic origins of optional case markers. These are largely similar to those for non-optional systems, apart from certain lexical sources, as well as factors related to information structure, both in the form of source domains and as constructional contexts playing a role in the development of the markers.

Keywords:
case, optional marking, alternating marking, differential marking, split case systems, typology, diachrony
1. Introduction

This paper provides a survey of the typology and diachrony of optional and alternating case marking, in the context of related phenomena like referent- and construction-based splits in case marking. There is much recent work in this area, driven by text-based approaches to language description, as well as quantitative and areal approaches to typology, but the domain remains somewhat scattered, conceptually and terminologically. In this paper, we try to chart the relevant phenomena, synthesize the main contributions in the literature, and highlight and clarify some of the questions and problems that remain.

In very general terms, optional case marking refers to the situation where a case marker can be present or absent in a particular environment without affecting grammatical roles (following Kittilä 2005, McGregor 2010, 2013). In the Umpithamu structure in (1), for instance, the ergative marker can be left out without affecting the interpretation of the relevant nominal as the A argument (i.e. the more Agent-like argument) in the clause. Alternating case marking, by contrast, is defined here as referring to the situation where two overt case markers alternate in the same environment, similarly without affecting grammatical roles (following a conceptual distinction made in McGregor 2010, Iemmolo 2013, though with different terminology; see section 2 on our terminological choices). This is the case in the Finnish structure in (2), where an accusative marker alternates with a partitive, without affecting the interpretation of the relevant nominal as the O argument (i.e. the more Patient-like argument) in the clause.

(1) Umpithamu (Pama-Nyungan; Verstraete fn)
   a. waypala-mpal maarra-n=antyangku motoka-nti
      whitefella-ERG take-PST=1PLEXC.ACC car-COM
      ‘The whitefella took us in the car.’
   b. waypala maarra-n=antyangku
      whitefella take-PST=1PLEXC.ACC
      ‘The whitefella took us.’

(2) Finnish (Uralic; Iemmolo 2013: 379)
   a. hän jo-i maido-n
      s/he drink-PST.3SG milk-ACC
      ‘S/he drank (all) the milk’
   b. hän jo-i maito-a
Both of these examples can be contrasted with classic ‘obligatory’ case systems, where switches in case by definition serve to mark changes in grammatical role (e.g. Blake 2004). Still, the presence or absence of a case marker in structures like (1) is not meaningless, nor is the alternation with other case markers in structures like (2). In (1), for instance, the presence of an ergative marker places focus on the referent, while in (2) the alternation between accusative and partitive marks different degrees of affectedness of the referent in the event.¹ These types of meaning are broadly in line with the meanings highlighted in the literature on these topics, respectively from the domains of information structure and participant involvement (see further in section 3).

Systems of optional and alternating case marking are interesting for a range of reasons. First, they are theoretically challenging. Case is at the core of clause structure, coding the essential grammatical roles: optional and alternating marking of case challenges rigid notions of paradigmaticity and ideal grammars, and highlights the need to look towards intersections with discourse, interpersonal organization and diachrony in accounting for case marking. Second, optional and alternating case marking are interesting from a typological perspective. There are many classic generalizations about case in linguistic typology, most obviously relating to different versions of the referential hierarchy (e.g. Silverstein 1976, Moravcsik 1978, DeLancey 1981, Tsunoda 1981). The validity of such hierarchies has recently been questioned (Bickel et al. 2014); phenomena of optional and alternating marking add further questions, in the sense that they challenge the markedness relations assumed to underly referential hierarchies. Finally, phenomena of optional and alternating case marking are also conceptually and terminologically challenging. Case marking has rarely been analysed as completely uniform, and ‘optional’ and ‘alternating’ marking are part of a crowded field of labels for case systems that rely on alternations and optionalities of various kinds, like split systems, hierarchical systems and many other types. In this sense, phenomena like the ones illustrated in (1) and (2) also highlight the need for more precise characterizations of the nature of different types of optionalities and alternations in case marking, and how these relate to each other.

¹ It is well-known that the partitive case serves a variety of functions in Finnish, and not only marking partial affectedness (see, for instance, Luraghi & Kittilä 2014, Huumo 2018). Here we simply focus on the contrasting pair of sentences in (2).
In this paper, we situate optional and alternating case marking within the larger field of research on case marking systems, we try to synthesize the most important contributions in the recent typological and diachronic literature, and we highlight some of the questions and problems that remain. As suggested by our use of the term ‘case’, we focus on dependent-marking patterns. This is where much of the recent work on optional and alternating marking has been concentrated, and it is likely that relevant generalizations are specific to patterns of dependent marking, and cannot simply be transferred to head marking (as shown, for instance, by Iemmolo’s (2011) comparison of case and indexation for optional and alternating object marking). The structure of the paper is as follows. Section 2 defines the basic phenomena, focusing first on optional and alternating case marking, and then on the related phenomena of referent- and construction-based splits in case marking. Section 3 discusses the typological generalizations proposed in the literature, focusing specifically on how the different types of case marking relate to each other. We show that the classic unified model based on markedness reversals between Agents and Patients is problematic, and we propose a more differentiated approach. Section 4 discusses what we know about the diachronic development of systems of optional and alternating case marking, particularly what is specific about the origins and development of these types of systems in comparison with classic ‘obligatory’ case systems. We show that diachronic sources of optional markers are largely shared with those of obligatory ones, apart from certain lexical fields, but that factors relating to information structure may have played an important role in the diachrony of optional systems, either as sources or as constructions intervening at some stage in their development. Section 5 rounds off with a conclusion.

2. Phenomena and terminology

This section introduces the basic phenomena, starting with optional and alternating case marking (sections 2.1 and 2.2), where case alternations are determined by the speaker’s choice to construe the participant in a particular way, rather than by any aspect of the structure involved (McGregor 2010). This is followed by a discussion of referent- and construction-based splits in case marking (section 2.3), where changes in case marking are triggered by aspects of the structure, either differences in the referent involved or differences in the larger construction in which the case marker is used. When discussing different types of marking, we use the terms S, A and O as they are traditionally used in typology, i.e. S for the sole argument of an intransitive clause, and A and O (or P, in some traditions) for the more Agent-
like and the more Patient-like arguments of a transitive clause (see Haspelmath 2011). We realize that these terms are in fact problematic hybrids (see Mithun & Chafe 1999, McGregor 2002 for some of the problems), but in this context we use them as convenient shorthand terms to link with the typological literature we survey here.

2.1. Optional case marking

Following Kittilä (2005) and McGregor (2010, 2013), optional case marking can be defined as a situation where a case marker can be present or absent in a particular environment, without affecting the grammatical role of the relevant nominal. In many studies of case marking, this is actually subsumed under a broader category of differential marking of case (e.g. Bossong 1985, Aissen 2003), but in section 3 we will show that there are, in fact, good reasons to distinguish optional marking from situations where two distinct, overt case markers alternate, following McGregor (2010) and Lemmolo (2013). Optional marking is found mainly for A and for O arguments, as illustrated in section 2.1.1 below, but there is also evidence for optional marking of Goal arguments (see further in Kittilä 2008, and in section 4.2). Given that optional marking of case typically conveys additional meanings, some authors in this domain reject the label ‘optional’, or dispute that we are, in fact, dealing with case markers (of specific types). These questions are discussed in more detail in section 2.1.2.

2.1.1. Optional marking of A and O

Optional case marking for A arguments is illustrated in the structures in (3) and (4) below, from Kuuk Thaayorre and Mongsen Ao, respectively. Both languages have basic ergative alignment for nominals,\(^2\) and in neither instance does the absence of a case marker on the A argument affect the grammaticality of the structure. Thus, the nominals without the ergative or agentive markers in (3b) and (4b) function as A arguments just as much as their equivalents with the relevant markers in (3a) and (4a).

\(^2\)Optional ergative marking is the most typical and best-documented type of optional marking for A (see De Hoop & Malchukov 2008), but there are also instances of optional marking of nominatives or subject markers (see McGregor 2010: 1616). See also section 2.1.2 on Burmese as an example of optional nominative marking (Jenny & Hnin Tun 2013), and on Coupe’s (2007) analysis of the Mongsen Ao system, which is slightly different from our interpretation.
(3) Kuuk Thaayorre (Pama-Nyungan; Gaby 2008: 126, 124)

a. parr-an pul kuta-ku nhaa<inha>m nhunh thatr
   child-ERG 3DU dog-ERG watch<RDP>:NPST 3SG.ACC frog
   ‘A boy and a dog are looking at the frog.’

b. parr_r nhul thatm puut nhaanham
   boy 3SG.NOM foot boot look:RDP:NPST
   ‘The boy looks into the boot.’

(4) Mongsen Ao (Tibeto-Burman; Coupe 2011: 157)

a. a-hən nə a-tʃak tʃàʔ-âj-û?
   NRL-chicken AGT NRL-paddy consume-PRES-DECL
   ‘The chickens are eating paddy.’ [implying that they are stealing it]

b. a-hən a-tʃak tʃàʔ-âj-û?
   NRL-chicken NRL-paddy consume-PRES-DECL
   ‘The chickens are eating paddy.’

However, there are other differences in the interpretation of these structures. In the
example in (3), the difference relates to information structure: in (3a), the nominals with the
ergative marker are unexpected as the A argument, as this is the first time they are mentioned
in the narrative, while in (3b) the nominal without the ergative marker is the expected A
argument at that point in the narrative, having been introduced in the preceding stretch of
discourse (Gaby 2008: 124, 126). In (4), the difference relates to the degree of agentivity: in
(4a), the nominal with the agentive marker is construed as intentionally involved in the action
expressed by the verb, in contrast with the nominal without the agentive marker in (4b)
(Coupe 2007: 156-157). In fact, these two instances exemplify the two most common types of
motivations found for optional marking of A arguments: explicit marking of case is associated
either with A arguments that are somehow prominent or unexpected (information structure),
or with A arguments that are especially potent or agentive (participant involvement). These
functional motivations are discussed in more detail in section 3.1 below.

Optional marking of O arguments is illustrated in the structures in (5) and (6) below,
from Persian and Shua. Both languages have basic accusative alignment for nominals, and in
neither case does the absence of an accusative marker affect the role interpretation of the O
argument or the grammaticality of the structure as a whole.

(5) Persian (Indo-European; Lazard 1994: 170)
a. ketâb-râ xând-am
   book-ACC read:PST-1SG
   ‘I read the book.’

b. ketâb xând-am
   book read:PST-1SG
   ‘I read a book/books.’

(6) Shua (Khoe-Kwadi; McGregor 2016, 2018)

a. xam ?a ti: lao-se sa:-ha nggurube ?a lao-a-ta
   lion ACC ISGOBL shoot-ADV try-PST warthog ACC shoot-J-PST
   ‘I tried to shoot the lion, but shot the warthog instead.’

b. k’a: khoe katse pa:-ha
   male person cat bite-PST
   ‘The man bit the cat.’

Again, however, the presence or absence of a case marker conveys additional meanings.

In Persian, this is associated with definiteness, in the sense that only definite nominals obligatorily receive accusative case, as in (5a) (Lazard 1994: 169-170). In Shua, this is associated with factors like unexpectedness or contrastiveness, as illustrated in (6a) (compare (6b), without a contrastive relation), or the degree of affectedness of the O argument (McGregor 2016, 2018). The association with information structure shown in these examples is a fairly typical one, as will be explained in more detail in section 3.1.

2.1.2. ‘Optional’ marking, or even ‘case’ marking?

As already mentioned, not all analysts agree with the characterization of these systems as ‘optional’ marking, nor even as case marking. The objections to ‘optional’ are mainly terminological, because these systems do not actually involve free variation. The objections to analyses in terms of case marking are more serious, however, and have engendered a substantial debate.

The term ‘optional’ has become the conventional way to refer to systems of optional A marking, ever since McGregor (1989), the first study to point out systematic semantic and

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3 Systems of optional O marking, by contrast, have more typically been subsumed under the umbrella term ‘differential O marking’, although more recently some authors have split off optional O marking as a separate and distinct category (e.g. de Hoop & Malchukov 2008,
information-structural motivations for what at first sight looked like ‘optional’ use of ergative markers (see also Saxena 1991, Tournadre 1991 for other early observations to this effect). In many of these earlier publications on optional A marking, ‘optional’ was often used with scare quotes, probably to distinguish it from the traditional assumption that case markers could be genuinely optional in a structural sense, i.e. be omitted whenever it was clear who did what to whom (as discussed, for instance, in Dixon 1979: 72-73 or Comrie 1981: 123, who recognized optionality early on but explained it in terms of a basic discriminatory function of case). Without scare quotes, the term is not entirely felicitous, since it may seem to suggest that the presence or absence of a case marker is a matter of free variation, which is obviously not the situation. However, given that the term has become conventionalized in a large part of the literature, is not clear that any alternative term would be any better, especially in a domain that is already quite crowded terminologically. One alternative, i.e. subsuming optional marking under the umbrella term of differential marking (see footnote 3), is problematic for analytic reasons, as will be shown in section 3. Another alternative, i.e. the formal term ‘asymmetrical marking’ (contrasting with ‘symmetrical marking’, following de Hoop & Malchukov 2008), would obscure the fact that we are dealing with one single marker that can be present or absent, which may have semiotic import (as argued in McGregor 2013; see further in section 3.2).

More significantly, some authors have also objected to characterizing these optional systems as case systems, or as case systems with a specific type of alignment (e.g. DeLancey 2012, Coupe 2007, Dixon 2002: 132-133). The crucial point here is that in some systems of optional A marking, the optional case marker can also be used for S arguments in some intransitive clauses (see McGregor 2007: 218-219 for a survey). Among the three systems discussed so far, for instance, this is the case in Kuuk Thaayorre and Mongsen Ao, as shown in (7) and (8) below, but not in Umpithamu, where optional ergative marking is restricted to A arguments.

McGregor 2010, Iemmolo 2013, sometimes using distinct terminology), a choice we follow in this paper. Some authors also use the term ‘differential’ for optional A marking, although this is less widespread than for optional O marking; see de Hoop & de Swart (2008) and Jenny & Hnin Tun (2013) on ‘differential subject marking’, and Malchukov (2008) and Fauconnier (2011) on ‘differential A marking’.

4 In fact, optionality of A marking had been observed even earlier in the Australianist tradition, in mid-19th century descriptions of Pama-Nyungan languages, as documented in Stockigt (2016: 149-150).

5 Similar extensions are also found in referent-based split systems (see further in § 2.3), e.g. in Nemi (Oceanic, Austronesian), where the ergative marker is used for all A arguments, as well as animate S arguments (Moyse-Faurie 2003).
(7) Kuuk Thaayorre (Pama-Nyungan; Gaby 2008: 117)

parr-an pul kuta-ku ngok-eln wontr

child-ERG 3DU.NOM dog-ERG water-DAT fall:NPST

‘The child and the dog fall into the water [together].’

(8) Mongsen Ao (Tibeto-Burman; Coupe 2007: 160-161)

ni no akhət

1SG AGT cough.PST

‘I coughed.’ [i.e. on purpose, to get your attention]

A distribution beyond A arguments may suggest that the relevant marker is not an ergative marker, and that we are dealing with something other than a system of optional A marking. This is, in fact, the argument developed in Coupe (2007), who prefers to call the Mongsen Ao marker agentive, in line with its basic semantics of wilful involvement in the activity, rather than ergative, which would be in line with its supposed distribution (see also Chelliah & Hyslop 2011 for similar arguments).6 A parallel argument for Kuuk Thaayorre would be to suggest that the relevant marker is in fact an information-structure marker associated with subjects, rather than an ergative marker whose optional use has information-structural meanings (see Gaby 2008: 127-128). However, there are arguments against this conclusion, for both languages. Thus, for instance, Gaby (2008: 128) shows that an information-structural analysis is not viable because the relevant marker is strongly associated with A arguments in contexts of elicitation, to the extent that its use with S arguments is typically rejected out of context. Similarly, Coupe’s (2007: 164) analysis of Mongsen Ao suggests that the agentive marker is in fact rare with intransitive verbs, a skewed distribution that goes against an analysis as a general agentive marker. Similar arguments have been made for other languages, for instance in McGregor (2007), who shows that the occasional use of an ergative marker in intransitive clauses in Warra (Nyulnyulan) does not imply that it is an agentive rather than an ergative marker, or in Riesberg (2018), who argues that intransitive uses of the ergative in Yali (Trans-New Guinea) are too rare to affect its characterization as ergative.

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6 In fact, ‘optional agentive marking’ appears to be the preferred term for Tibeto-Burman languages, rather than ‘optional ergative marking’ (as reflected, for instance, in the terminology used in Chelliah & Hyslop 2011).
On the other hand, there are also languages where intransitive uses of apparent ergative markers do not seem to be exceptional at all, and in some cases may be frequent enough to call into question their status as ergative. This is the case, for instance, in Kurtöp (Tibeto-Burman, Hyslop 2010), where ergative markers are common with certain classes of intransitive verbs; in Sumi (Tibeto-Burman), for which Teo (2018) reports that ergative markers can be found in elicited intransitive clauses; and in Gurindji Kriol (mixed language), for which Meakins (2015) argues for a reanalysis of the ergative marker borrowed from Gurindji (Pama-Nyungan) as an optional nominative marker in Gurindji Kriol. For such languages an alternative analysis as an optional nominative or subject system may be more suitable than an optional ergative one. As already mentioned, optional nominative systems are less well documented than optional ergative ones, but there are some well-attested cases like Burmese, with a subject marker that can be used both for S, as shown in (9a), and for A, as shown in (9b), and whose use is motivated by information-structural factors, including contrastiveness and topicality (as in (9b), where the subject markers in the two clauses co-vary; Jenny & Hnin Tun 2013: 715-719).

(9) Burmese (Tibeto-Burman; Hnin Tun & McCormick 2014: 6, Jenny & Hnin Tun 2013: 717)

a. ʃə mã na'{mɛ (ká) ma.la pa
 1SG.POSS name SBJ Mala PRT
‘My name is Mala.’

b. ᵐʔme (ká) móun.hni? ᵐʔte ʔə pè, ʃəmá (ká) lai? ʔəun ʃe. mother SBJ batter fried fry give 1F SBJ follow sell FUT
‘Mother, you fry the batter (for me), I go out and sell it.’

Interestingly, there are also very rare uses of the same marker on O arguments (Jenny & Hnin Tun 2013: 699), which may point towards an extension to a general information-structure marker for topic function. A similar extension has been observed in the ergative system of Jingulu (Mirndi; Pensalfini 1999), where the ergative marker appears to have been reanalysed as a focus marker, co-existing with its ergative source.

2.2. Alternating marking
In this survey, we contrast optional marking with alternating marking, following a conceptual distinction made in McGregor (2010) and Iemmolo (2013): instead of the presence or absence of one single case marker, alternating marking involves an alternation between two distinct case markers that does not affect grammatical role. In the literature, what we call optional and alternating marking have more commonly been subsumed under a broader category of ‘differential’ marking (e.g. Bosson 1998, Aissen 2003; see also Malchukov & de Swart 2009), which also includes referent-based splits, to be discussed below in section 2.3.1. We believe that these three categories are best kept apart for analytical reasons, which is also why we introduce the new label ‘alternating’, to distinguish this category both from ‘optional’ and ‘differential’. On the one hand, an alternation between two case markers in the same context is not just formally different from variable use of one single marker, but as will be shown in section 3, it also has a somewhat different distribution and functional motivation. On the other hand, alternating marking as defined here is also distinct from referent- and construction-based split marking, where the alternation is triggered by differences in the structure involved, i.e. different referents or different constructions (see further in section 2.3).

Alternating marking is found, once again, both for A argument and for O arguments. For A arguments this is quite rare, since, as mentioned just above, alternative markers for A are usually triggered by differences in referent or construction (see further in section 2.3). However, there are some examples in the literature, like the alternation found in Warrwa, where two ergative markers can be used in the same grammatical context, without affecting grammatical roles. Thus, for instance, the basic ergative marker in (10a) and the focal ergative marker in (10b) can be used interchangeably, without any effect on the interpretation of the relevant nominals as the A argument. The only difference between the two lies in the domain of information structure: the focal ergative marks that the A argument is “both unexpected and highly agentive” (McGregor 2006: 393), as in (10b), while the neutral ergative is neutral in this regard (though it is itself optional, and its absence marks defocusing of the A argument; McGregor 2006: 409-412).

(10) Warrwa (Nyulnyulan; McGregor 2006: 394, 401)
   a. yila-na kujuk ø-na-ng-ka-ny-ø warli
dog-ERG swallow 3minNOM-TR-EN-carry-PF-3minACC meat

7 A similar distinction is proposed by De Hoop & Malchukov (2008), but with different terms: symmetrical differential marking (two overt case markers) vs asymmetrical differential marking (one case marker that can be present or absent).
‘The dog swallowed the meat.’

b. kaliya yab, ϕ-na-ndi-ny-ngayu kaliya buka-nma

finish away 3minNOM-TR-get-PFV-1minACC finish crocodile-FERG

‘A crocodile has got me,’ (she said).

For O arguments, alternating marking is less rare than for A arguments, although most
alternations for O are still triggered by differences in referent or construction (see section 2.3).
An example of alternating O marking can be found in Evenki, which has an alternation
between a definite and an indefinite accusative marker, as shown in (11) below. The choice of
the definite or indefinite accusative marker does not have any effect on the role of the relevant
nominal as an O argument, but it does mark definiteness of the O argument, as in (11a), as
opposed to indefiniteness or partial affectedness of the O argument, as in (11b).


a. oron-mo java-kal
reindeer-DEF.ACC take-PRS.IMP.2SG
‘Catch that reindeer.’

b. min-du ulle-ye kolobo-yo by:-kel
1SG-DAT meat-INDEF.ACC bread-INDEF.ACC give-IMP.PRS.2SG
‘Give me (some) meat and (some) bread’

2.3. Related phenomena

The systems of optional and alternating case marking discussed so far all have in common
that differences in case marking are independent of lexical or morphosyntactic features of the
structures involved, and are solely determined by the choice of the speaker to construe a
participant in a certain way (e.g. prominent, potent, wilful, partially affected, focused, definite
etc). There are other types of optionalities and alternations in case systems, but the crucial
point is that in such cases both structure and case marker vary, with changes in structure
determining the differences in the use of case markers. In this section, we discuss the two
most important categories of such alternations: referent-based splits (section 2.3.1), where
differences in case marking are determined by the nature of the referent involved, and
construction-based splits (section 2.3.2), where differences in case marking are determined by
differences in the larger construction involved.
2.3.1. Referent-based split marking

The first type to be discussed here is a pattern in which case alternations occur in one and the same construction, but are determined by differences in the referent, in the sense that one type of referent requires obligatory presence of case marking, whereas another requires obligatory absence, or presence of another case marker. This is, of course, a classic in the typology of case, where referent-based splits in case marking have been linked to hierarchies of referent types based on principles of animacy and/or empathy (e.g. Silverstein 1976, Moravcsik 1978, Tsunoda 1981, DeLancey 1981). Figure 1 represents one of several versions of this hierarchy (see further in section 3.2).

Figure 1 here

These types of hierarchies can produce alternations for A and O marking that at first sight look like patterns of optional or alternating case marking discussed above. An example of referent-based split A marking is found in Nêlêmwa, illustrated in (12) below. Nêlêmwa has two different types of ergative markers, one for inanimate A arguments, as in (12a), and one for animate A arguments, as in (12b). Split O marking is illustrated by the Malayalam structure in (13), where accusative marking is obligatory for human O arguments, as in (13a), while it is absent for inanimate O arguments, as in (13b).

(12) Nêlêmwa (Austronesian; Bril 1997: 379)
   a. doi-na ru cacia
      sting.TR-me ERG.INAN acacia
      ‘The acacia stung me.’
   b. i tûûlî pwaxi eli a kaavo
      she dry child that.ANAPH ERG.AN Kaavo
      ‘Kaavo dried the child.’

(13) Malayalam (Dravidian; Asher & Kumari 1997: 203)
   a. avan kutti-ye aticcu
      he child-ACC beat.PST
      ‘He beat the child.’
   b. ñaan teenŋa vaanŋi
I bought some coconuts.

The structure in (12) superficially looks like alternating marking for A arguments, while that in (13) looks like optional marking for O arguments. However, these cases are both logically and functionally distinct from the optional and differential systems described above. They are logically distinct because it would not be possible, in either case, to have these case alternations for one and the same referent, which is the defining feature of optional and alternating systems. They are also functionally distinct, because their functional motivation relates to differences in animacy (and, in the classic explanation, the associated likelihood of serving as A and O; see further in § 3.1), rather than to information structure or participant affectedness, which motivate optional and alternating systems.

Of course, this is not to say that referent-based splits are completely unrelated to optional and alternating systems. There are a number of links between the two types. First, optional systems in particular are often also partially split. This is the case, for instance, for Umpithamu, where ergative marking is obligatory for inanimate nominals and optional for all other nominals (with the motivations discussed in example (1) above), as illustrated in (14) below. Thus, one and the same language can have both a referent-based split and an optional system.

(14) Umpithamu (Pama-Nyungan; Verstraete fn)

a. aykirri-mpal /*aykirri umpa-n=ilu-ungku yuku
   wind-ERG / *wind break-PST=3SG.NOM-3SG.ACC tree
   ‘The wind knocked down the tree.’

b. ama(-mpal) umpa-n=ilu-ungku yuku
   person(-ERG) break-PST=3SG.NOM-3SG.ACC tree
   ‘The man knocked down the tree.’

Secondly, referent-based splits can also be probabilistic rather than obligatory, thus shading into optional systems. For instance, Verbeke & Decuypere (2015) argue that for Nepali (Indo-European), the use of ergative marking is partly split on the basis of animacy principles, i.e. referent-based, but in a probabilistic rather than an absolute way: in imperfective tenses, ergative marking is more typical for inanimates, and less typical for animates. Similarly, Schultze-Berndt (2017) shows that for Jaminjung (Mirndi), the use of
the ergative marker is determined not just by referent-related factors such as animacy and person, but also by information structure (as in the optional ergative systems discussed in section 2.1.1 above) and tense/aspect and verb class (as in the construction-based splits to be discussed in section 2.3.2). Again, the different factors interact in a probabilistic way, as shown in Schultze-Berndt & Meakins (2017).

This type of shading between types suggests that referent-related splits and optional systems could ultimately be linked functionally and/or diachronically, with a more general principle of expectedness linking animacy-based degrees of expectedness as A and O with focality and agentivity (see further in sections 3 and 4). From a synchronic, typological perspective, however, the two categories are logically distinct, and there is little to be gained by lumping them together as one type. In fact, keeping them as separate categories is a precondition for discovering any functional links there may be.

2.3.2. Construction-based splits

The second type to be discussed here is the structural opposite of the first: construction-based splits are case alternations that are not determined by referent type, which in principle can remain constant, but by differences in the larger construction in which the case marker occurs. These include valency changes that actually determine changes in syntactic role, and therefore also case switches, but also other construction-level features that determine switches in case but not in role, such as distinctions in tense, aspect, polarity or mood marking.

An example of the first type is the case alternation illustrated in the Guugu Yimidhirr structures in (15) below. At first sight, this may look like an instance of alternating A marking, with nominative in (15a) and adessive in (15b) alternating to express volitional versus accidental instigation of an event. Importantly, however, case marking is not the only aspect of these structures that is different. Verbal morphology is also different in the two structures, with the structure in (15b) showing a reflexive marker on the verb (which can actually be analysed as a general intransitivizer, see Verstraete 2011). In other words, we are dealing with different constructions, a basic transitive one in (15a) and an intransitivized one with a reflexive marker in (15b). From this perspective, the case alternation in (15) does not meet the basic criterion for alternating case marking as defined in section 2.2 above: the constructional context differs, and accordingly also the syntactic role of the case-marked elements (the adessive-marked nominal is not an A, see Verstraete 2011).
(15) Guugu Yimidhirr (Pama-Nyungan; Haviland 1979: 125)

a. ngayu galga nhanu dumbi
   1SG.NOM spear 2SG.GEN break.PST
   ‘I broke your spear (on purpose).’

b. ngadhun.gal galga nhanu dumbi-idhi
   1SG.ADESS spear 2SG.GEN break.PST-REFL
   ‘I broke your spear (accidentally).’

A comparable example is the East Futunan structure in (16) below. Again, at first sight this looks like alternating A marking, with an alternation between ergative and possessive marking to background the A role in polite contexts (Moyse-Faurie 2000, 2011). As with the Guugu Yimidhirr structure, however, there are other changes at the construction level that indicate that the basic transitivity of the structure has changed: the genitive-marked argument in (16b) actually forms a possessive phrase with the equivalent of the O argument, and this whole phrase is marked as absolutive. In other words, these structures again do not meet the basic criterion for an alternating system, because case alternations correlate with broader morphosyntactic differences between constructions: these differences affect syntactic roles, and accordingly also determine differences in case marking.

(16) East Futunan (Austronesian; Moyse-Faurie 2011: 593)

a. e feave'aki e Atelea ana fakapaku i lamatu'a
   NS peddle ERG Atelea his doughnut LOC road
   ‘Atelea peddles his doughnuts along the road.’

b. e feave'aki a fakapaku a Atelea i lamatu'a
   NS peddle ABS doughnut POSS Atelea LOC road
   ‘Atelea peddles his doughnuts along the road.’

The structures in (15) and (16) are relatively minor patterns typologically (see further in Verstraete 2011 on structures like (15) and Duranti & Ochs 1990, Moyse-Faurie 2000, 2003 on structures like (16)), but there are a number of classic alternations in the typology of case that are equally triggered at the level of the construction, even though these do not always as clearly affect syntactic roles. One of these concerns case alternations triggered by differences in tense, aspect or mood values (see further in DeLancey 1981, Malchukov & De Hoop 2011). An example is provided in the Kurdish structures in (17) below, where both the marking of
the A argument and the O argument alternate depending on whether the clause is in the past (17a) or present (17b). Similarly, alternations can be triggered by aspectual distinctions (e.g. Nepali, where ergative marking is obligatory in perfective tenses and optional in imperfective ones, see discussion in section 2.1 above) or mood-related ones (e.g. Finnish, where accusative marking is absent in imperative clauses, see Malchukov & de Hoop 2011; see further in section 3.1.1 below).

(17) Kurdish (Indo-European; Matras 1997: 617-618)

a. min tu dit-î
   I-OBL you saw-2SG
   ‘I saw you.’

b. ez te di-bîn-im
   I you-OBL PROG-see-1SG
   ‘I see you.’

Another well-known case in this domain are instances of so-called ‘hierarchical’ or ‘inverse’ alignment, where alternating markers cannot be assigned to any one argument, but are triggered by the specific configuration of the two main arguments involved (Klaiman 1992, Zuñiga 2006, Jacques & Antonov 2014, Haude & Witzlack-Makarevich eds 2016). A classic example comes from Cree, illustrated in (18) below, where a configuration of first person acting on third triggers a direct marker, as in (18a), while a configuration of third person acting on first triggers an inverse marker, as in (18b).

(18) Cree (Algic; Klaiman 1992: 228)

a. ni-waapam-aaw-ak
   l-see-DIR-3PL
   ‘I see them.’

b. ni-waapam-ikw-ak
   l-see-INV-3PL
   ‘They see me.’

The examples discussed in this section are quite diverse in their own right, but from the perspective of optional and alternating case marking as described above, they all illustrate the same structural phenomenon, viz. case alternations that are triggered by construction-level
features. As will be shown in section 3, some of these case alternations are quite easily
confused with patterns of alternating case marking, so it is important to mention them in this
survey. In some cases, they can also co-occur with patterns of optional or alternating marking,
as in the case of aspect-based splits, which are found in combination with optional ergative
patterns in Tibeto-Burman (e.g. DeLancey 1990, 2012 on Lhasa Tibetan) and in neighbouring
Indo-Aryan languages such as Hindi-Urdu (Butt 2006) and Nepali (e.g. Verbeke & Decuyper
2015).

2.4. Summary

Table 1 below summarizes the basic distinctions made so far, which as already mentioned
largely follow the conceptual distinctions drawn in McGregor (2010) and Iemmolo (2013).
On the one hand, there are case alternations that are independent of any lexical or
morphosyntactic conditions, and can in principle apply to one and the same element in one
and the same construction. Within this category, optional systems have a single marker that
can be present or absent, and alternating systems show an alternation between two overt case
markers. On the other hand, there are also case alternations and optionalities that are triggered
by differences in the referent or differences in the larger construction. These are known as
referent-based splits and construction-based splits, respectively.

Table 1 here

In the following section, we discuss functional generalizations proposed in the literature for
each of these types individually, as well as the relations between them. This will also make
clear why we fix these particular boundaries between types (again following McGregor 2010,
Iemmolo 2013), even if some of these choices are different to a certain extent from some of
the literature on the topic, as has been highlighted at various points.

3. Functional and typological generalizations

This section surveys what is known about the typology of optionalities and alternations in
case systems. In section 3.1, we focus on optional and alternating case marking as defined in
the previous section, and we show that traditional unified explanations of the two cannot be
maintained in light of recent research. Instead, we first show that optional marking should be
distinguished from alternating marking, and second that phenomena relating to the marking of
A are not automatically mirrored for O, as is predicted by the classic analysis of markedness relations underlying referential hierarchies. In section 3.2, we focus on how optional and alternating marking relate to referent- and construction-based splits. This leads to a number of diachronic questions, which are further elaborated in section 4, on the origins of optional case markers.

3.1. Optional and alternating marking

The classic typology of case offers a relatively unified framework to deal with what we have called optional and alternating case marking. This framework is based on two principles. On the one hand, what we call optional and alternating marking of case are usually subsumed under the umbrella term of differential marking (together with referent-based splits), and not accorded any special status beyond their basic formal difference. This is clearest for the marking of O arguments, where a single category of ‘differential’ O marking is the dominant option, but even for A marking, where optional marking is a more frequent terminological choice, it is rare to find a principled distinction between optional and alternating marking (as mentioned in Malchukov & de Swart 2009; see further in section 2.2). On the other hand, referential hierarchies like the one proposed in Silverstein (1976) and subsequent work predict that A marking and O marking are each other’s “mirror image” (as it is labelled in de Hoop & de Swart 2008: 6) following a principle of markedness reversal, as shown in Figure 2: what is typical for A arguments is atypical for O arguments, and the other way around (e.g. Comrie 1981, Aissen 2003, Naess 2006).

Figure 2 here

Thus, principles proposed for differential marking of O, like partial affectedness, are predicted to be mirrored in their opposite for differential marking of A, and vice versa (see Fauconnier & Verstraete 2014 for an overview and critique of this approach to case marking). These two principles are visualized in Table 2 below: if one of the four basic cells can be explained, this explanation can be extended to the whole domain, first because optional and alternating marking are regarded as mere formal variants within a basic category of differential marking, and secondly because whatever principle is recognized for A (or O) will be mirrored in an opposite principle for O (or A).
In this section, we show that recent typological work on optional and alternating marking for A and O does not conform to this unified model, and suggests a more differentiated approach. We first survey typological work on the four different types, i.e. optional A marking, optional O marking, alternating A marking and alternating O marking (section 3.1.1), and then return to what this says about the traditional unified model (section 3.1.2).

3.1.1. Typological survey

To begin with optional A marking, the literature offers a clear set of generalizations, about distribution and about function (see McGregor 2010, and the papers in McGregor & Verstraete eds 2010, Chelliah & Hyslop eds 2011-2012). As to distribution, optional A marking is not rare: McGregor (2010) lists over 100 languages with optional ergative marking (plus rarer instances of optional nominative marking), and estimates that about 10% of morphologically ergative languages show optional ergativity. These are not distributed evenly across the world, however: there are two clear hotbeds of optional ergativity, one in the Australia-New Guinea region (see also Foley 2000: 374-375), and one in Tibeto-Burman languages (see also LaPolla 1995). As to function, the old idea that omissibility of A marking is mainly found in contexts with little chance of confusing A and O (e.g. Dixon 1979: 72-73, LaPolla 1995: 215-216) is now largely abandoned. Instead, two clear clusters of motivations have emerged (see McGregor 2010, Chelliah & Hyslop 2011).

First, there is a set of motivations relating to information structure: the presence of A marking is motivated by informational prominence for the A argument. This is a notoriously slippery term, of course, but we can distinguish two major types of prominence here (see further in Verstraete 2010: 1647-1648). On the one hand, there are ‘local’ types of prominence, where the presence of A marking is associated with focus on the A argument, often set off against a presupposition in the immediately preceding discourse, as in contrastive focus contexts and question-answer sequences. On the other hand, there are also more ‘global’ types of prominence, where the presence of A marking is sensitive to expectations about A

8 See Plank (1980) for an early analysis of problems with distinguishability as a motivating principle for case systems in general. For optional case marking, there is one domain where distinguishability may still play a role, viz. in imperatives, where the inherent identifiability of the A argument may lead to optionalities for A or O marking (Plank 1980, Malchukov & de Hoop 2011).
arguments in larger chunks of discourse (see McGregor 1992, 2006), such that the expected A argument for an episode is left unmarked after its introduction, but any deviations from the expected A within the episode are marked. Second, there is also a set of motivations relating to degrees of agentivity, such that marking for the A argument is associated with control, potency or volitionality in its involvement in the activity. In some languages, this goes hand in hand with degrees of patientivity, in the sense that a strongly affected O argument can also trigger marking for the A argument (e.g. McGregor 1992: 284-285). None of these motivations are mutually exclusive. The optional A system in a language can involve all of the above (e.g. in Kuuk Thaayorre, Gaby 2008), some (e.g. in Mongsen Ao, where agentivity and expectedness seem to play a role, Coupe 2007), or only one (e.g. in Umpithamu, where only focus plays a role for optional ergative marking, Verstraete 2010). And where more than one type of motivation is available, they can reinforce each other in individual cases (see Gaby 2008).\footnote{As already mentioned, there are also systems where these factors interact in a probabilistic way with factors determining referent- or construction-based splits, as demonstrated by Schultze-Berndt & Meakins (2017) for Jaminjung.} Obviously, there is also some discussion in the literature about whether these two sets of factors (information structure and degrees of agentivity) could be reduced to one single feature, as will be discussed in more detail in section 3.1.2 below.

Optional O marking has a longer tradition in the typological literature than optional A marking, with Comrie (1979) and Bossong (1985) as prominent early studies (though, as mentioned earlier, using the umbrella term ‘differential marking’). In more recent work, Iemmolo (2011) offers a sample-based typological study of the phenomenon, and in Iemmolo (2013) this is explicitly distinguished from, and contrasted with, differential O marking as defined in this paper (using the terms ‘asymmetric’ and ‘symmetric’, respectively, following de Hoop & Malchukov 2008). All of the studies in this tradition also include patterns of referent-based split marking, especially based on animacy, which in this study is regarded as a distinct type. If we factor in these differences, we can derive the following generalizations from the literature. First, optional O marking is not rare, and probably more frequent than optional A marking. Bossong (1991: 154) claims that this type is relatively stable in the development of case marking systems and “represents a preferred target of diachronic evolution”. Similarly, in a large-scale survey, Sinnemäki (2014) suggests that systems of O marking with some form of optionality are more frequent than systems without it,\footnote{Sinnemäki’s survey does not include signed languages, but Börstell (2017) adds Swedish Sign Language to the set of languages showing optionality in O marking.} a generalization that holds even if we leave out referent-based splits from his figures. Second,
unlike with optional A marking there is no clear areal pattern (Sinnemäki 2014). While some
 genetic units have attracted particular attention in the literature (e.g. Romance or Sinitic),
 there are no clear areal hotbeds as with optional A marking.

As to functional motivations, finally, there are three clear clusters that emerge from the
literature (see Iemmolo 2011 for an overview). One relates to animacy, in the sense that
explicit marking of O is associated with animate and/or human O arguments. In terms of our
typology, this is usually a matter of referent-based splits (see (13) above) rather than optional
marking. As mentioned above, however, in some cases the distribution over animacy types
appears to be probabilistic rather than absolute and can therefore shade into optional marking
(see further in section 3.2). The second cluster of motivations relates to information structure
in a broad sense, with case marking being associated with O arguments that are definite, given
or topical. Of these factors, topicality has engendered most debate, with at least two senses in
which aspects of topichood are said to correlate with O marking: either as sentence-level
topichood, traditionally defined in terms of ‘aboutness’, motivating optional O marking
(Dalrymple & Nikolaeva 2011), or as topic shifts or topic promotions motivating optional O
topichood as a motivating factor, but it is interesting to note that the contrast between the two
approaches involves the same distinction between ‘local’ and ‘global’ information structure as
found with prominence for A marking. A final cluster of motivations found in the literature
relates to affectedness, with case marking being associated with (degree of) affectedness for O
arguments. The relevance of this factor for what we call optional O marking is actually
dismissed in Iemmolo (2011: 116, 220ff), who argues that most cases where it is proposed can
be handled more efficiently in terms of information structure (see also Luraghi & Kittilä 2014
on diachronic links between affectedness and information structure). It does appear to be a
robust independent factor, however, in Sinitic (Chappell 2013), as well as in several West
African languages (e.g. Lord 1993); this is discussed in more detail in section 4.2.2 below,
which deals with O marking deriving from ‘take’ verbs. As with optional A marking, the
different types of motivations can co-exist in a single system, although at least definiteness
appears to be rare as a motivation on its own (Iemmolo 2011: 133-134).

Alternating O marking as defined here, i.e. involving an alternation between two different
case markers in the same context, is relatively rarely distinguished from optional O marking,
and even more rarely studied in its own right. The two phenomena are distinguished on
theoretical grounds in de Hoop & Malchukov (2008), and they are studied contrastively in a
sample-based analysis in Iemmolo (2013), in both cases using different terminology
‘asymmetric’ and ‘symmetric’ marking for what we call optional and alternating marking, respectively). Iemmolo’s results show that alternating O marking is relatively rare, definitely much rarer than optional O marking, and that its distribution is quite specific, limited to the Circum-Baltic area, Kartvelian languages and Polynesian languages, as well as some older Indo-European languages (Iemmolo 2013: 380-381). In functional terms, his study shows a broad range of functional motivations, which can be divided into two sets. One set involves clause-level triggers for alternations in O marking, like specific values for polarity or aspect. From the perspective of our typology, these are construction-based splits rather than genuinely alternating systems, since the case alternation is triggered by construction-level features. The second set involve genuine alternating O marking, with its own semantics, either a value of participant affectedness (complete versus partial affectedness, as in the Finnish example in (2)) or one of definiteness (as in the Evenki structure in (10)).

Alternating A marking, finally, is again rarely studied in its own right. McGregor (2010: 1615) identifies a few instances, as do Fauconnier (2011), Fauconnier & Verstraete (2014) and Hemmings (ms). The literature has, in fact, identified some more examples under the label of differential A marking, but these are usually instances of something else in our typology. Alternations based on animacy are usually instances of referent-based splits, as was the case for the Nêlêmwa structure in (12), while alternations involving volitionality are usually construction-based splits, as was the case for the Guugu Yimidhirr structure in (15). The handful of instances that remain after these have been weeded out, are motivated in terms of potency, volitional involvement or focus (see McGregor 2010: 1615).

### 3.1.2. A more differentiated model

Table 3 here

Table 3 summarizes the generalizations that can be derived from the typological literature about optional and alternating marking. We can now use these results to revisit the unified model discussed in the introduction to this section, which was based on the combination of two principles: (i) a largely undifferentiated category of differential marking, subsuming both optional and alternating marking, and (ii) the mirror image principle predicting a naturally inverse relation for differential A and O marking.

The first principle is not supported for O marking: optional and alternating marking are quite different, and should be distinguished. This is, in fact, the point made in Iemmolo (2013).
on typological grounds, as well as in DeHoop & Malchukov (2008) on theoretical grounds. Alternating marking is not only rarer than optional marking, but also has somewhat different functional motivations: while definiteness and affectedness can play a role in both (though this is disputed for affectedness, see Iemmolo 2011), topicality does not play a role in alternating marking. The principle could in theory be said to be supported for A marking, since roughly similar functional motivations seem to be involved, but in general alternating A marking has a very limited distribution, with so few instances to be almost inexistent in our typology. Overall, therefore, we can say that the first principle is not really supported by the data. This is also the reason why, following the distinctions made in McGregor (2010) and Iemmolo (2013), we decided to consistently distinguish between optional marking, where one marker can be present or absent, and alternating marking, where two different markers are involved.

The second principle, i.e. the mirror image principle, does not seem to be supported for either optional or alternating marking. The motivations involved for A and O in either case are quite different. While there are some general functional links (for instance, both have an ‘information structure’ type of motivation), these are not specific enough to support any mirror image principle. Topicality for O could hardly be said to be the mirror image of focus for A, for instance. This is, in fact, the point made by de Hoop & Malchukov (2008) and Fauconnier & Verstraete (2014), who develop an argument against the mirror image approach to A and O using evidence from optional and alternating case marking (though both are called differential in these studies).

Going beyond these two principles, there is also a proposal in the literature that ascribes a more schematic meaning to optional marking as distinct from other types of marking, regardless of whether it affects A or O. McGregor (2006, 2010, 2013) argues that optional marking is special among case systems because it involves a contrast between the presence and absence of a sign, which on semiotic grounds could be said to have a general type of meaning that is distinct from contrasts between two different signs. Specifically, McGregor argues that the type of meaning involved in optionality is interpersonal, relating to general cognitive principles of joint attention, i.e. prominence (“whether or not [the referent] is accorded particular attention within the frame”) and backgrounding (“whether or not [the referent] is presumed to be in the frame of joint attention”, McGregor 2013: 1157). McGregor (2010, 2013) demonstrates how this approach can be used to typologize quite subtle differences in the meanings of optional case marking systems.
3.2. Related phenomena

As mentioned earlier, optional and alternating case marking can co-occur with referent-based splits, and they can be superficially similar to construction-based splits. In this section, we examine how exactly the categories relate to each other in functional terms. Before we can answer this question, however, it is necessary to briefly revisit the basics of referent- and construction-based splits marking, as the classic typology of this domain has been subject to serious challenges in recent work.

Referent-based splits are probably the best-studied of the two types, very well-studied for individual languages, and with a classic generalization in the form of the referential hierarchy (Silverstein 1976, DeLancey 1981, Tsunoda 1981; see also Figures 1 and 2 above). As already mentioned, this hierarchy is usually motivated in terms of markedness, such that what is semantically unusual gets formally marked. For instance, in the most typical example, nominals with inanimate referents are marked in A roles, and receive ergative marking, while 1st person pronouns are marked in O roles, and receive accusative marking. The same type of hierarchy has also been used as a generalization for so-called hierarchical alignment (one of our types of constructionally determined case marking), where participant configurations triggering different types of marking have been analysed in terms of going with or against the direction of the hierarchy, e.g. first person acting on third versus third on first as in the Cree example in (18) above. While no one would dispute the analyses of referent-based splits in individual languages, the question is whether the hierarchy proposed to underly the splits really holds as a generalization. Bickel et al. (2014) subject various versions of the hierarchy to a large-scale typological test, showing that they are not tenable as a universal, even a statistical one, and that instead they are areal features, with strong evidence in Australia-New Guinea and Eurasia, but relatively little evidence elsewhere. Taking a different perspective, Cristofaro (2013) shows that hierarchies which look like a valid generalization synchronically may in fact be composite diachronically, with different parts deriving from quite different historical sources, and often involving principles that are quite different from the functional principle supposed to underly the hierarchy.

The usefulness of hierarchies has also been questioned as a generalization for so-called hierarchical alignment. Witzlack-Makarevich et al (2016) argue that these systems are more usefully analysed in terms of a basic feature of co-argument sensitivity, where marking for one participant depends on the nature of other participants in the same clause. This re-analysis also brings it more closely in line with other types of alignment, not just referent-based splits
(Witzlack-Makarevich et al. 2016: 557-558), but also patterns of optional and alternating
marking as defined here (see, for instance, semantic motivations for optional ergative marking
as discussed in section 3.1.1, which can originate both in agentivity features of A and
patientivity features of O). Other types of constructionally differentiated case marking,
specifically TAM-based types, have received relatively less attention in recent work. The
classic generalization is that values of perfective or past trigger ergative patterns, while
imperfective or present trigger accusative patterns (Dixon 1994), often explained in terms of a
feature of O-centredness for past and perfective construals of an event, versus A-centredness
for present and imperfective construals (DeLancey 1981). There have been a number of
refinements in the typology, especially Malchukov (2014), who proposes a more extensive
scale of tense-aspect-mood values, and Coon (2013), who argues that presumed mood-based
splits are actually better analysed as other types of split, but not the radical critique observed
above for referential hierarchies.

Given this re-calibration of the field, how do referent- and construction-based splits relate
to optional and alternating marking as discussed in this paper? To begin with referent-based
splits, this pattern often co-occurs with optional marking in one and the same language, as
exemplified earlier for Umpithamu, where ergative case is obligatory for inanimate nominals,
and optional for all other nominals. This specific distribution is confirmed by the broader
typological surveys of McGregor (2010: 1616-1617) for A marking, and Iemmolo (2011: 80)
for O marking. While co-occurrence does not mean the two types are not logically distinct, it
does strongly suggest there may be a link between them – as also suggested by the occurrence
of apparently probabilistic realizations of animacy-based splits as in Nepali, and partly also in
Jaminjung. Links could be sought in functional-typological generalizations, for instance,
adapting McGregor’s (2013) argument about generalized meanings of optionality to referent-
based splits, or using preferred argument structure to link animacy principles with discourse
structure (Du Bois 1987, but see also Haig & Schnell 2016), or using OT-style mechanisms
with generalized constraints to incorporate both animacy-based and prominence-based
phenomena (e.g. de Hoop & Malchukov 2008). Given that the explanatory value of animacy-
based hierarchies can be questioned, however, it may also be useful to look elsewhere,
specifically at diachrony (see also Cristofaro 2013, Cristofaro & Zuñiga eds 2018). There are
a number of suggestions in the literature that obligatory systems of case marking (whether
split or not) could have grammaticized out of optional systems. This argument has been made
most strongly for O marking, for instance by Iemmolo (2011), whose general argument is that
O markers in optional systems often originate in topic-related markers, and that animacy-
based splits may be grammaticized from such topic-based systems, given that animate and
definite NPs are most likely to be topical (see also Dalrymple & Nikolaeva 2011). Similar
arguments have been made for A marking, for instance by Gaby (2010), who shows how
ergative marking in Kuuk Thaayorre may derive from focal types of marking, and McGregor
(2008, 2017), who argues that focalizing constructions with indexical markers may be at the
origin of some Australian ergative markers. These links will be further elaborated in section 4,
on the diachrony of optional and alternating marking.

Construction-based splits do not necessarily co-occur with optional and differential
marking, but in some cases they can be hard to distinguish from them. The basic criterion we
used so far is whether optionalities and alternations are triggered by construction-level
features or not, as demonstrated for the Guugu Yimidhirr structures in (15) above, where an
apparent pattern of alternating marking is actually triggered by differences in formal
transitivity. In cases like these, it is easy to show that we are not dealing with alternating
marking: alternating marking concerns case alternations that do not affect grammatical roles,
whereas the change in transitivity coded by the reflexive marker in Guugu Yimidhirr does
imply that basic grammatical roles are different. The question is, however, where one should
draw the boundary. Not all construction-level features affecting case marking have an effect
on grammatical roles, and in some cases such features can even be in line with the
motivations typically associated with optional or alternating marking. A case in point is
Iemmolo (2011: 216), whose study shows that what looks like optional O marking often goes
hand in hand with specific constructional features marking topicality, like differences in
prosody or word order (see, for instance, the discussion of optional O marking in section 4.2).
In a strict application of the typology proposed here, these are construction-based splits, with
constructional marking of topicality (e.g. in terms of word order) triggering the use of O
markers. However, from the perspective of diachronic hypotheses about the origins of
optional O marking (as discussed in the previous paragraph), an association between
topicality marking and the use of O marking is not very surprising. In that sense, such
structures could in fact be regarded as standing in between construction-based splits and
optional marking, revealing yet another pathway of grammaticization towards optional
marking. The status of TAM-based patterns of constructionally differentiated marking,
finally, remains unclear at the time being. On the one hand, the relevant differences do not
appear to affect grammatical roles, which distinguishes it from the Guugu Yimidhirr
structures in (15). On the other hand, however, it is also not immediately clear how these
patterns would link up with any of the features motivating optional and alternating marking,
except in a general way in ‘perspectival’ theories that link tense-aspect values with A- and O-
centredness (there are also specific links between aspect and features like affectedness that
figure in optional O marking, see Iemmolo 2013, Luraghi & Kittilä 2014).

To conclude, we can say that referent- and construction-based splits are logically and
typologically distinct from the patterns of optional and alternating marking that are the focus
of this study, but not completely unrelated. In particular, the typological literature suggests
quite a few diachronic pathways that may link them. These are explored in more detail in the
next section, which focuses on the diachrony of optional and alternating marking.

4. Diachronic origins

In this section, we discuss what is known about the diachronic development of optional and
alternating case marking. The focus will be on optional systems, as these are more common
and more uniform typologically than alternating ones (as discussed in section 3.1). The main
question we address is whether there is anything specific about these kinds of systems that
makes their origins or their development different from classic ‘obligatory’ types of case. We
tackle this question from two perspectives. On the one hand, we show that the origins of
optional markers are not necessarily different from other types of case systems. If we look at
families where optional ergativity is widespread, for instance, like Tibeto-Burman, the origins
of ergative markers include some of the classic sources for case markers found elsewhere, like
various types of non-core cases. On the other hand, we also show that there may be sources
that are more specific to optional systems. In particular, the distinctive functions associated
with optional A or O marking have led some authors to posit origins in syntactic constructions
linked to these functions, for instance, in focus markers associated with information structure.
This has added a number of specific source domains to the literature, which make sense in
terms of the synchronic function of optional markers, and may in fact be specific to optional
systems (though some types have also been discussed for case systems in general, see
Lehmann 2002: 100-107). Along with the diachronic specificity of optional systems, a
secondary question we address is whether there is any diachronic relation between optional
and ‘obligatory’ systems of case, and if so, in what direction. This is a question that comes up
regularly in the literature, but has not really received a definitive answer, except in cases
where recent change can be tracked (like contact varieties, young people’s varieties or
contexts of obsolescence, e.g. McGregor 2017: 462-463). We discuss these questions in two
sections, one devoted to A marking (section 4.1) and one devoted to O marking (section 4.2).
Before moving on to the origins of markers in optional systems, we first provide a brief survey of the main sources of case marking in general, as they have been discussed in the literature. In the classic studies on case (e.g. Lehmann 2002: 97-107), there appears to be a consensus that case markers generally arise from adpositions, which in turn have their source in nouns and verbs and to a lesser extent in adverbs and particles. Typically it is the non-core cases, above all local cases, which provide the source for the core cases at the heart of our study. Thus, nouns give rise to adpositions and case affixes, producing markers of non-core roles such as instrumentals, locatives, ablative and allative, while verbs in series typically give rise to adpositions, similarly coding non-core roles (Blake 2004: 161-167). The degree of grammaticalization involved may be high, which means that in the majority of languages with case markers, it is usually no longer possible to trace the original source, testifying to their “long ancestry” (Blake 2004: 161, 172). This is also apparent in the highly fused nature of portmanteau morphemes which incorporate case, number, gender and other grammatical features (see also Lehmann 2002: 132 on coalescence as a parameter of grammaticalization).

In other words, core case markers generally represent the end process of different kinds of secondary grammaticalization, that is, further stages in the grammaticalization chain for elements that have already lost their lexical status (as coined by Givón 1991: 305, based on Kurylowicz 1965: 22). Consequently, attested instances are rare of any single, direct step from a lexical source or local case to the core cases of ergative or accusative.

4.1. Optional A marking

4.1.1. Classic source domains for A

Lehmann (2002) proposes a set of grammaticalization chains to explain some cross-linguistically recurrent patterns of polysemy that point to common pathways for the genesis of A and/or S markers. These are illustrated in Figure 3 below (partly reproduced and adapted from Lehmann 2002: 99).

According to this schema, the classic sources for ergative markers include non-core cases like instrumental, ablative, genitive, and locative (see also Blake 2004, Cristofaro 2013, McGregor 2008, 2017, Narrog 2014). In this section, we show that most of these pathways are also
found for case markers in optional A systems, which suggests that the origins of ergative markers in such systems need not be different from those in ‘obligatory’ systems. We make this point by focusing on Tibeto-Burman languages, which show a high incidence – perhaps even dominance, according to DeLancey (2012) – of optional ergative marking. Apart from Tibeto-Burman material, we also cite examples from Australian languages and beyond, if there is good evidence for an optional marker originating in one of these non-core cases.

Instrumental sources

Polysemy between ergative and instrumental functions, which may point to an origin of one in the other, is well-established for a large number of Tibeto-Burman languages (see LaPolla 1995, who lists 49 cases in his survey of sources of ergative marking in 106 Tibeto-Burman languages), as well as for many Australian languages (see Dixon 2002: 135-136, and more generally Palancar 2009: 567-568).

This source is found, for instance, in Darma, which has optional ergative marking: Darma has a marker *su* that serves as both the ergative and the instrumental adposition (Willis 2011), as illustrated in (19) below.

(19) Darma (Tibeto-Burman; Willis 2011: 106)

\[ \text{niŋ su pharsu su nadu pyel-n-su} \]

1PL ERG axe INSTR DEM.NEUT chop-1PL-PST

‘We chopped it with an axe.’

Similarly, in the optional ergative systems described for Umpithamu and Kuuk Thaayorre (see sections 1 and 2.1.1 above for examples) the ergative markers can also be used for instrumental marking, as is the case for many Australian languages. Interestingly, examples like these also show how in some cases ergative-instrumental polysemy is only one part of a more complex diachronic path. For Kuuk Thaayorre, there is evidence that the ergative...

---

11 In contrast to this, a minority has accusative alignment, e.g. some of the Lolo-Burmese languages (see §2.1.2 above), while others have obligatory ergative alignment such as Dolakha Newar, Chintang, numerous Kiranti languages and many Tibetan varieties (LaPolla 1995: 216, Chelliah 2017: 925-926). The optional type of system is largely distributed from a core area in the West Himalayan area through to Central Tibetan, Na and Qiangic, the latter spoken in Tibet, Yunnan and Sichuan (DeLancey 2012: 10). Amongst these branches of Tibeto-Burman, different degrees of optionality are clearly evident and so too different motivations behind the use of these markers, as already discussed in section 3.
marker ultimately originates in structures with focus markers or indexical markers (as detailed in section 4.1.2 below). In this sense, ergative-instrumental polysemy may also postdate the development of an optional system, for instance reflecting a generalization of an optional A marker towards an optional marker of a broader Effector role, which encompasses both Agents and Instruments (see also Gaby 2017: 218-219).

**Ablative sources**

Ablatives are reasonably common as a source for ergatives in Tibeto-Burman languages, as the figures from LaPolla (1995) reveal (18 instances in his survey of 106 ergative Tibeto-Burman languages). The examples from Yongning Na (also known as Mosuo) in (20a) and (20b) show precisely this polysemy, in an optional ergative system (see Lidz 2011).

(20) Yongning Na (Tibeto-Burman; Lidz 2011: 54)

a. \(w_y^{13} k^h u^{33} t^h u^{33} n u^{33} l\sigma^{33} s\xi^{33} l\sigma^{33} p\sigma^{31} t^h u^{33} n i^{33}\)

again dog 3SG.PRO AGT ACCOMP-carry ACCOMP-bring CERT

‘Again he took the dog hunting (and) brought (it) back.’

b. \(l\sigma^{33} s\xi^{33} \tilde{z} e^{33} s^{31} x y^{33} k u^{31} m y^{33} w\sigma^{33} n u^{33}\)

ACCOMP-carry PFV 1INC heavens ABL

‘(He) carried (her) off, (he) carried (her) off from our heavens’

Lidz explains that \(n u^{33}\), which she labels as an agentive marker, has the same form as the ablative (Lidz 2011: 54). However, it is extremely rare in texts with an ablative function, for which \(k w\sigma^{33}\) is the more common marker. According to Lidz, \(n u^{33}\) may in fact be a loan from Tibetan: apparently, cognates of this morpheme are common as agentive or ergative markers across Qiangic and Loloish languages in Yunnan, Sichuan and Northern Thailand (Lidz 2011: 54). Along similar lines, Noonan (2009: 268) remarks that the cognate ablative forms in the Tibeto-Burman subgroup of Bodish (Ghale, Tibetan varieties, West Himalayish), as well as Newar, Baric, Mishmi, and Akha, all show extension to the ergative and instrumental.

There is also at least one instance of an optional ergative system in an Australian language where the marker involved derives from an ablative. Schultze-Berndt (2017) shows how in Jaminjung the ‘regular’ ergative marker can alternate with a form that is also used as an ablative. Both are optional, but Schultze-Berndt clearly shows that the second type is restricted to animate, volitional A arguments, and is more strongly triggered by focal status.
for the A argument, as shown in (21) below. Obviously, this is the typical information-
structural motivation that has often been observed in this type of system, but from the
perspective of this section it is interesting that the marker involved appears to derive from an
ablative, which is common also in ‘obligatory’ ergative systems.

(21) Jaminjung (Mirndi; Schulte-Berndt 2017: 1109-1110)

ba-manggu nami=ngunyi
IMP-hit 2SG=ABL
‘Kill it yourself!’

A related diachronic change in non-optional systems is the development of ablatives into
markers of the Agent in passive constructions (Heine & Kuteva 2002: 29-30). Heine &
Kuteva (2002: 199-200) view this as a general process involving spatial concepts, which
includes locatives used as A markers, which are discussed in the next subsection.

Locative sources

A locative source for ergative marking is found scattered across a variety of languages and
language families, including a small number of Tibeto-Burman languages (LaPolla 1995:
190), Australian languages (usually also including instrument, in Palancar’s survey, 2009:
569), as well as Sumerian (isolate; Blake 2004:172), Chukchi (Chukotko-Kamchatkan;
Lehmann 2002: 98) and Northwest Caucasian languages (Palancar 2009: 569) among others.

This includes optional ergative systems, as in Singpho, where the optional agentive
marker is identical to an adverbial particle which codes mainly locative and temporal
meanings (Morey 2012). Example (22a) illustrates the ergative use of the marker, while (22b)
shows how a marker with the same form is used to express the locative sense of ‘on’.

(22) Singpho (Tibeto-Burman; Morey 2012: 3, 12)

a. dai³ kəsaa² ii³ dai³ jan³ phee³ biya kora haʔ¹
   that son AGT that girl A.AGT marry do DECL
   ‘... and so the son married that very girl.’

b. nyee⁴ num⁴naŋ¹ waa¹² naa⁴ lstaʔ ii⁴ jum¹
   1SG.POSS friend DEF POSS hand ADV grab
   ‘grab my friend (by) the hand’, lit. ‘grab (on) the hand of my friend’
Morey (2012) points out that language-internal evidence is insufficient to show that the agitative marker developed on the basis of the locative/temporal adverbial, but he does concur that this is one of the possible pathways in Tibeto-Burman.

Coupe (2011) argues that the optional ergative marker in Mongsen Ao, \(-nə\) (see examples (4) and (8) above), has its source in a local or relational term for ‘rib, side’, reconstructed as \(*na\) in Proto-Ao and \(*ʔ-nam\) in Proto-Tibeto-Burman. He compares this development with other languages, including Mandarin Chinese, where the noun for ‘side’ is well-established as a lexical source for relational terms called ‘localizers’, and some French-based pidgins and creoles which use forms derived from ‘side’ in a similar manner to form relational terms (Heine & Kuteva 2002: 272). Interestingly, this is one of the few cases where we can potentially trace back an optional A marker to a lexical source, even though here too the development probably went through a generalized locative stage before the ergative function developed. As argued by Coupe (2011), the lexical form ‘side’ may have led to a general type of oblique marker covering direction, source and instrument, from which \(-nə\) would have developed into an optional agentive marker (Coupe 2011). The study does not indicate from which of these three main functions the agentive has evolved, however. The example in (23) illustrates a proverb in which all three uses are evident, viz. the agentive use on ‘dog’, the directional use on ‘vomit’, and the instrumental use on a generic pronoun.

(23) Mongsen Ao (Tibeto-Burman; Coupe 2011: 27)

\[
\begin{array}{llllllllll}
\text{a-ji} & \text{nə} & \text{tu} & \text{nə} & \text{at} & \text{ʔ-tʃən} & \text{nə} & \text{a-nət-ʃən} & \text{wa} & \text{mətəm} \\
\text{NRL-dog} & \text{AGT} & \text{GPN} & \text{INST} & \text{vomit-LNOM} & \text{ALL} & \text{NRL-TWO-ORD} & \text{go} & \text{like} \\
\end{array}
\]

‘Like a dog going back to its vomit by itself for a second time.’

(= to eat one’s words; to reject something and then want it later)

4.1.2. Specific source domains

The previous section has shown that markers in optional systems can have very similar origins to their counterparts in ‘obligatory’ systems. However, the specific functions found in optional systems have also led to the exploration of some less traditional source domains, especially information structure, which as mentioned above is a typical function associated with optional ergative and nominative systems. There are two clusters of sources that can be
discussed under this umbrella: focus markers (Gaby 2010) and indexical markers that serve to draw attention to unexpected Agents (McGregor 2008, 2017).

Focus marking has been identified as a source for optional ergative marking in Kuuk Thaayorre (Gaby 2010), where the ergative marker in the first declension class is homophonous with a focus marker, as illustrated in (24a) and (24b).

(24) Kuuku Thaayorre (Pama-Nyungan; Gaby 2010: 1684, 1680)

a. nhangnam yirr-ntam nganip thon=thurr
   mother different-ABL father one=FOC
   ‘They’re from different mothers [but] one father.’

b. nganh kuta mong-thurr patha-rr
   1SG:ACC dog many-ERG bite-PST.PFV
   ‘Many dogs have bitten me.’

Specifically, Gaby (2010) argues that the focus function of the morpheme precedes its development into an ergative marker (unlike in Jingulu, where a focus marker is a recent development from an ergative marker, see section 2.1.2 above). Gaby adopts the framework of Preferred Argument Structure (Du Bois 1987) to explain how this reanalysis may have come about. Given that lexical A forms are rare in discourse (since Agents typically represent given information and quickly pronominalize), in an initial period it is conceivable that they may have been marked by the focus marker to code some kind of discourse prominence. In frequent association with lexical A arguments, the focus marker could subsequently have been reanalysed as an ergative marker, encoding transitive subjects rather than just focus, thus leading to the synchronic coexistence of the focus and ergative functions and subsequent formal differentiation in patterns of allomorphy. A similar development has been identified by McGregor (2008) for Nyulnyulan and Bunuban languages, where an appositional construction with Agent nouns and a determiner, originally used to code focus, evolved into a plain non-appositional construction with increased usage and reanalysis of the focus marker as an ergative marker.

The Nyulnyulan and Bunuban cases actually illustrate a second cluster of phenomena, viz. indexicals like demonstratives, pronouns and determiners as a source domain for ergative marking, most likely because of their function in a construction that serves to highlight the unexpected status of a participant (McGregor 2017). McGregor (2006, 2008), Kulikov (2006) and König (2011) are some of the few studies that treat this development in some detail;
McGregor (2017) provides a comprehensive survey.

An example of an indexical source can be found in Baagandji, where one of the ergative markers derives from a demonstrative (Hercus 1982; as also discussed in McGregor 2008 and Cristofaro 2013). This is, in fact, still visible in systematic synchronic ambiguity: as shown in (25) below, the demonstrative feature of -nhuru is still interpretable alongside the ergative one.

(25) Baagandji (Pama-Nyungan; Hercus 1982: 63)

gaarru nhuunggu-nhuru wadu-dji-na
other woman-DEM/ERG take-PST-3SG.ACC

‘Another woman took it. / This other woman took it.’

A direct reanalysis from demonstrative to ergative is hard to motivate, but McGregor (2008, 2017) argues that the relevant context may have been appositional constructions, where the apposition of an indexical to a nominal serves to highlight the unexpected status of A arguments. As in Gaby’s (2010) model, this explanation crucially involves a Preferred Argument Structure constraint, according to which A arguments are most likely to be expected participants, in contrast with S or O arguments, and therefore most in need of formal marking if they are unexpected. This may explain why ‘highlighting’ appositional constructions may come to be associated with A arguments to the exclusion of other roles. Further examples of indexical sources for ergative marking can be found in König (2008, 2011: 511), who has reconstructed a definite marker in Päri, Anywa and Jur-Luwo (Nilotic) which first evolved into a marked-nominative case and then ultimately into an ergative marker. Finally, Harris and Campbell (1995: 341) also cite the case of Georgian (Kartvelian), where a demonstrative and personal pronoun ‘this, he’ may be the source of its ergative marker -ma/m.

4.2. Optional O marking

As already mentioned in section 3.1, optional O marking does not have a specific areal distribution like optional A marking, but appears to be the dominant pattern of O marking overall according to the survey in Sinnemäki (2014). The diachrony of optional O marking has been relatively well-researched (see Seržant & Witzlack-Makarevich eds 2018 for a
recent survey), with a particular focus on specific families and subgroups, like Romance languages within Indo-European (Bossong 1991, 1998, Iemmolo 2010, Antonov & Mardare 2014), a range of West African languages within Niger-Congo (e.g. Lord 1993), optional accusative languages in Nilo-Saharan (König 2008: ch.2) and also in Sino-Tibetan, particularly the Sinitic languages (Chappell 2013). Tibeto-Burman stands out here for the range of optional case marking phenomena: not only does it have optional O marking but it also possesses optional A marking.

As in our discussion of optional A marking in the preceding section, we will analyse the diachrony of optional O marking in relation to what is known about the development of O marking more generally. Some of the major sources identified cross-linguistically are spatial adpositions, benefactives and datives, with datives as a central node preceding O marking (Lehmann 2002, Heine & Kuteva 2002, Blake 2004, Heine 2009, König 2011). This is shown in Figure 4 below, taken from Lehmann (2002: 99).

Figure 4 here

In general, there is a relatively close match between optional and obligatory O marking in terms of secondary grammaticalization, for instance starting from datives (which is not surprising, given that optional marking is probably the dominant pattern typologically for O; see section 3.1). Instead, the origins of optional O marking stand out in two ways. On the one hand, the optional type appears to be distinct in terms of the nature of the grammaticalization paths, with discourse and other intervening factors being identifiable for the optional type. On the other hand, optional O marking is also quite distinct in the sense that lexical sources appear to be readily identifiable in some cases. These include the lexical field of ‘take’ verbs, which are common in Niger-Congo languages of West Africa and in several Asian language families, not to mention ‘give’ and ‘help’ verbs in Sinitic, as well as comitative verbs.

Given these differences, this section will be organized slightly differently than the previous one, with section 4.2.1 devoted to secondary grammaticalization paths involving datives, and section 4.2.2 devoted to lexical and other sources leading to datives and thence to O markers.

4.2.1. Secondary grammaticalization paths involving datives

Datives and information structure
Spatial and directional cases including allatives, locatives and perlatives, appear to be some of the main non-core cases that are widely recognized as a source for O marking, after passing through a further stage where they may mark dative functions. The same set of sources can be found in optional O systems, but interestingly there is some evidence that information structure plays a role somewhere along the path from either dative or allative to optional O marker.

Two specific examples in European languages are allative and perlative prepositions as sources for O marking in Romance languages, many of which synchronically involve some degree of optionality. For example, in Spanish and Sardinian, the prepositions *a*, which are used to mark datives and, with different degrees of optionality, accusatives as well, are the reflexes of the Latin allative *ad* ‘to, towards’ (Bossong 1998, Iemmolo 2010). By way of contrast, in Romanian, the accusative preposition derives from the perlative *pe* ‘through’, descended from Latin *per* ‘through’. According to Mardale (2010), the use of this accusative marker involves both a referent-based split and optionality, as defined in section 2. It is optional for specific, human nouns, as shown in (26), while it is obligatory for proper names and pronouns, and excluded everywhere else.

(26) Romanian (Indo-European; Mardale 2010: 5)

```plaintext
am căutat(-oi) (pe) studentăi
PERF search=ACC ACC student
‘I have looked for the student.’
```

In some cases, there are indications that information structure played a role in the path towards O marking. For instance, Mardale (2010) argues that in addition to local semantic features such as animacy and specificity, the global factor of topicality also plays a role in the evolution from dative/perlative to an O marker in Romanian. An indication for this is the existence of a construction-based split in Romanian, in which O marking is obligatory in left-dislocation constructions, as shown in (27).

(27) Romanian (Indo-European; Mardale 2010: 16)

```plaintext
*(pe) student ȋl cunoaşte.
ACC student ȋl ACC knows
‘It’s the student that John knows.’
```
Similarly, Iemmolo (2010) uses discourse data for a further four Romance languages to show that O marking is particularly favoured in left dislocation structures, in which the direct object, typically a pronoun, is placed in clause-initial position. He analyses the use of the allative preposition *ad* (and its descendants) as a topic marker in left dislocation structures in Late Latin, Old Sicilian and several modern Romance languages, including Sicilian, Italian, Catalan, and some non-standard French varieties, as shown in (28) for Italian.

(28) Northern Italian (Indo-European; Iemmolo 2010: 249)

```plaintext
A te, non ti sopporto più!
ACC you NEG 2SG tolerate:PRS.1SG longer

‘I cannot stand you any longer.’
```

Iemmolo (2010) generalizes these developments as a pathway leading from an allative marker over a topic marker, to a dative and subsequently to an O marker. A pathway involving topic marking, of course, chimes in with the synchronic functions of optional O marking in an interesting way, as argued in detail in Iemmolo (2011). Still, we think the proposed pathway may need some refinement. Rather than ‘topic marking’ representing a developmental stage in its own right, between allative and dative, we would argue that topicalized left-dislocation, and similarly ‘afterthought’ constructions, should be seen as the appropriate syntactic environment for re-interpretation of datives as optional O markers. This is, in fact, reminiscent of the situation of focus marking constructions in the development of A marking, promoting reanalysis of indexicals in specific appositional constructions into ergative markers (as discussed in section 4.1.2). In terms of the typology developed in sections 2 and 3, both of these instances can be interpreted as construction-based splits that serve as a diachronic pathway towards optional marking.

*Early stages of grammaticalization from datives into O markers*

Interestingly, McGregor (2018) argues for several Khoe languages that the source of the optional O marker is a copular verb that came to be used as a focus marker with high frequency on objects in cleft sentences, but was also possible on other arguments. Later, a generalization in use took place so that the marker mainly marked direct objects, and indirect objects (for which the conditions of use are less clear). Strikingly, the discourse conditions and semantic features of its usage resemble those described above for Romance and Tibeto-Burman, despite the clearly distinct source.
In many Tibeto-Burman languages, we find a situation that resembles closely what we have just described for Romance languages, but that may nonetheless reveal an earlier stage in the grammaticalization process, given the apparently more restricted scope of usage of the resulting optional O marker. Many Tibeto-Burman languages show an extension of datives to optional O markers on animate and referential nouns, and sometimes on topical ones, but in a large number of languages the dative still takes precedence over the O argument for being overtly marked when they co-occur in the one structure (see further in Lidz 2012 and other papers in Chelliah & Hyslop eds 2011-2012).

Burmese is a case in point. The dative postposition -ko/-go, which originates in an allative (Jenny & Hnin Tun 2016: 160-163), is typically used to mark recipient or beneficiary functions. As an accusative marker, -ko/-go shows both optionality and a referent-based split. It is obligatory on nominals with a human referent, such as personal pronouns, names, kinship terms and terms for professions, and optional with other semantic categories of nouns, with marking determined by discourse features such as topicality and referentiality. Significantly, in ditransitive predicates, only one noun may be marked by -ko/-go, and in this case, it is the dative which is ‘favoured’ over the O argument, as shown in the contrast between (29b) and (29a).

(29) Burmese (Tibeto-Burman ; Jenny & Hnin Tun 2016: 162, 163)

a. tɕɑun-golè-go khwé-golè kaiʔ-te
   cat-DIM-OBJ dog-DIM bite-NFUT
   ‘The little dog bit the little cat.’

b. θu.myà-go di ʔatɕàun ma-pyʒ-nè
   other.people-OBJ this matter NEG-speak-PROH
   ‘Don’t speak about this to others.’

From a diachronic point of view, this type of polysemy is evidently quite harmonious with the case of Indo-European languages for the dative/allative > accusative shift, also for its pattern of generalization down the person hierarchy. Rather than explaining these phenomena in terms of a synchronic pattern as ‘anti-ergative markers’ used to disambiguate the ergative from other core roles in the clause (see LaPolla 1992, following Comrie 1975), we may usefully adduce the diachronic principle of persistence (Hopper 1991: 22), whereby traces of the original or earlier meaning remain after the reanalysis process sets in. It is therefore not
surprising to find that when these dative markers extend in use to accusatives in early stages of grammaticalization, the semantic feature of the human or animate category may be carried over to this new accusative use, leaving a vestige of the prototypical dative case which codes a (human or animate) beneficiary or recipient.

4.2.2. Lexical sources leading to datives and O markers

Unlike the case with A marking, the paths of grammaticalization leading to optional O marking can more readily be traced back to their lexical sources. In this section, we first discuss two source domains that are found mainly in Sinitic, and have not been described in much detail in the wider typological literature. Then we round off with a better-known pattern that is found in West Africa and large parts of Asia.

Verbs of giving and helping

Lexical sources that undoubtedly represent a much earlier stage in the grammaticalization process of O marking outlined in the previous section are the domains of giving and helping. Cross-linguistically, verbs of giving are well-known for furnishing benefactive or dative adpositions (Lord 1993, Newman 1996, Heine & Kuteva 2002, Heine 2009), but a secondary grammaticalization into optional O marking is a development which has taken place in a large number of Central Sinitic languages (Chappell 2013).

This reanalysis takes place in the V\textsubscript{1} position of sentences with complex predicates whereby the first verb grammaticalizes into a benefactive preposition ‘for’ and then into an O marker. All uses can be found to co-exist synchronically. For example, in the languages of Hunan, the most common optional O marker, illustrated in (30b), derives from the main verb of giving, \textit{pa}\textsuperscript{41}, illustrated in (30a).\textsuperscript{13}

\textsuperscript{13} Note that this verb \textit{pa}\textsuperscript{41} is cognate with the O marker in Northern Sinitic, including Standard Mandarin, \textit{pa}\textsuperscript{214} 把, whose source meaning is ‘to hold’. It is, however, consistently used as a verb meaning ‘to give’ in this central area of China for Xiang, Gan, Southwestern Mandarin, Hakka and patois (all Sinitic) whereas in Standard Mandarin it can no longer be used as a verb at all. Presumably, the morpheme has undergone a semantic shift from ‘hold’ to ‘give’ at some stage in its evolution, but one that predates the formation of the O-marking construction from the available evidence. In this respect, Güllemann (2013) proposes the notion of ‘semantic coercion’ in both Tuu and Sinitic, as the possible mechanism underlying the shift from ‘take’ to ‘give’, specifically coercion of monotransitive ‘take’ verbs used in syntactically ditransitive contexts to mean ‘give’, whence they develop along the pathway
Verbs of helping undergo the same development in Sinitic languages. While the grammaticalization from ‘help’ to benefactive is very common across all Sinitic languages (Kuteva & Heine forthc), the further stage of grammaticalization into an optional O marker is largely confined to the Wu, Hui, and Xiang branches. In (31), for instance, from the Jiangshan variety of Wu, the O marker is derived from the verb *pa*44 ‘to help’.

(31)Jiangshan (Sinitic; Xu & Tao 1999:138)

\[
pâ44\text{ieʔɕiŋ⁵⁵ guu⁲² pau⁶⁵tɕie⁵⁵ thon⁵⁵thon⁵⁵ ma²² teu⁵¹} \text{OM this CLF₃₄ old newspaper all RDP sell CMPL.}
\]

‘Sell all these old newspapers.’

From a semantic point of view, ‘help’ and ‘give’ verbs can be treated together for this path of grammaticalization in the syntactic context of earlier serial verb constructions (S\[V\]\_1[help, give] O \[V\]\_2) in which they first evolve into prepositions meaning ‘for’. A subsequent development towards O marking can be linked to a bridging context (Evans & Wilkins 2000, Heine 2002) in which an action performed for someone’s benefit also affects them. See further in Chappell, Peyraube & Wu (2011), who argue that this development is particularly evident with actions in the personal sphere where the beneficiary is also the patient (e.g. *The barber trimmed his beard for him.*).

Comitative verbs

A lesser known source domain for optional O markers are comitative verbs from which described above, to dative and accusative markers (See also Wu 2005: ch. 6 and Chappell 2015 for other unrelated ‘give’ verbs that have developed an O-marking function).
comitative prepositions arise. This development appears to be largely restricted to Sinitic, where it is solidly attested for adpositions which have evolved from lexical sources meaning ‘to be together’, ‘to connect’, ‘to follow’ or ‘to mix (together)’.

Once more, this development occurs in the typical syntactic context of $V_1$ in serial verb constructions of the form $S V_1 O V_2$ (see further in Chappell 2015). It is evident from the lexical sources of such verbs that they can all be associated with the semantic feature of accompaniment, the core value of the comitative. This is illustrated in (32) below, from a variety of Southern Wu (Taihu group), where a lexical verb, $tse\text{ʔ}45$, meaning ‘stick together’ developed a comitative use, illustrated in (32a), and an $O$ marking use in (32b).

(32) Shaoxing (Sinitic; Xu & Tao 1999:142)

a. no$^{13}$ tse$\text{ʔ}45$ no$^{12}$ ie$\text{ʔ}5$te$^{53}$saŋ$^{53}$ te$^{hij53}$
   1SG COM 2SG together go
   ‘I’ll go together with you.’

b. ve$^{12}$ ciæ$^{35}$ciŋ$^{53}$ tse$\text{ʔ}45$ tsv$\text{ʔ}45$ fo$^{53}$uŋ$^{53}$ saŋ$^{53}$ pha$^{53}$ dze$^{0}$
   NEG.IMP careful OM CL vase push.over-break CRS
   ‘If you’re not careful, you’ll knock over the vase.’

For this grammaticalization pathway, note however that there is no direct step from comitative to $O$ marker. As for verbs of giving and helping, an intermediate stage is proposed via a general oblique marker covering benefactive, dative and ablative functions, which subsequently develops into a benefactive or dative, and finally into an optional $O$ marker. This is certainly an unusual source for $O$ marking, since cross-linguistic surveys of the comitative in the main show a pathway from comitative over instrumental to ergative, which is particularly widespread in Australian languages, if not from comitative to instrumental for many European languages (Heine & Kuteva 2002: 84-90; Stolz 2001; Narrog 2009: 589-599).

\[14\] In her study of West African serial verb constructions, Lord (1993: 132) mentions the possibility of a comitative source marker for a form that can be used for $O$ marking in Awutu (Niger-Congo), observing that comitative verbs such as ‘be with’ or ‘meet’ may develop functions as markers of instrument, comitative and patient. Iemmolo (2011: 103-104) points out that comitatives are used as optional $O$ markers in at least two Southeast Asian creoles: Kristang (Malacca Creole Portuguese) and Bazaar Malay. Bazaar Malay has been heavily influenced by varieties of Southern Min or Hokkien which could explain its use of $kap <$ ‘with’, as he correctly supposes. The source of Kristang $ku$ is less clear but may be borrowed from a Sinitic language, as Iemmolo also remarks.
'Take' verbs

'Take' and 'hold' verbs present a very common source for optional O marking, including more semantically-specific verbs such as 'hold', 'grasp' and, sometimes, 'get' and 'obtain'. This source is well-documented for several West African languages in Niger-Congo (see Lord 1993: 65-137, Heine and Kuteva 2002: 289-290, Heine 2009), for creoles (Jansen, Koopman & Muysken 1978) and for several Asian language families including Tai-Kadai, Austroasiatic and Hmong-Mien (Clark 1989, Bisang 1992) and Sinitic (Chappell 2013).

The discourse and semantic conditions of use for these optional O markers have been clearly pinpointed for Sinitic and for many Southeast Asian languages: a definite, if not referential, O is required, representing given information (see Chappell 2013, and Iemmolo & Arcodia 2014). Furthermore, an interpretation of affectedness (though not of animacy) generally pertains to the outcome of the event for O. This is illustrated in (33) below, from Mandarin, where the Patient is marked with an O marker $ba^3$ [$pa^{214}$] derived from a verb meaning 'hold'. This example is taken from a conversation at the beginning of a novel describing the economic decline of a factory. The 'manager of the factory' represents a person known to the other characters in the story and thus represents a piece of given information. The fact that the manager is fired clearly fulfils the affectedness parameter. It is therefore a prime candidate for marking with this type of O marker.

(33) Mandarin (Sinitic; Chappell & Shi 2016: 452)

\begin{verbatim}
  ting\textsuperscript{1}shuo\textsuperscript{1} mei\textsuperscript{2}you\textsuperscript{3} shang\textsuperscript{4}tou\textsuperscript{2} ba\textsuperscript{3} chang\textsuperscript{3}zhang\textsuperscript{3} che\textsuperscript{4} le\textsuperscript{0}
  hear  NEG  boss  OM  factory.director  fire  LE
\end{verbatim}

'Have you heard about it? The boss fired the manager.'

Given these discourse conditions, the aptness of verbs that mean 'take', 'hold' or 'grasp' is evident as a source for O marking: their inherent notion of manipulation of an object enables the change of state implication, that is, the feature of affectedness (see Table 3 above).

In West African languages as well as Southeast Asian languages, the actual path from 'take' to O marking may involve a stage marking instruments. In Twi, for instance, where O marking is associated with definiteness in some contexts (see Lord 1993: 111-113), the O marker derives from a verb meaning 'take, hold, possess, own' (Lord 1993: 70-71), as shown in (34a). In contemporary use it can introduce O as well as instrument, manner and comitative, as shown in (34b) for instrument and (34c) for O (note that the marker has
forward semantic scope, even though it is represented as a suffix in the source).

(34) Twi (Niger Congo; Lord 1993: 70, 67, 66)

a. ṭɔkɔm de me
   hunger take me
   ‘I am hungry.’

b. o-de enkrante tya duabasa
   he-DE sword cut branch
   ‘He cut the branch with a sword.’

c. o-de afoa ce boha-m
   he-DE sword put scabbard-inside
   ‘He put the sword into the scabbard.’

A similar observation can be made for Southeast Asia, for which Clark (1989) observes that ‘take’ serialization is endemic. This includes the relevant verbs of Thai (Tai-Kadai) aw, Hmong (Hmong-Mien) muab and Khmer yɔːk, which may introduce both instruments and direct objects in clauses with complex predicates (of the structure S-take-O-V). The Khmer examples in (35) illustrate the use of yɔːk for O marking (35a) and for instruments (35b). The structure in (35a) further also illustrates the availability of lexical and grammaticalized interpretations in the same structure; this accords with ‘take’ verbs as being at a very “young stage” of grammaticalization but just for these particular languages, as argued in Bisang (1992).

(35) Khmer (Austro-Asiatic; Bisang 1992: 73, 434)

a. kɔːst yɔːk khaoʔaːv tju haːl thŋay
   3SG take clothes V_DIR put sun
   ‘He put the clothes in the sun/ He took the clothes and put them out in the sun.’

b. kɔːst yɔːk kambt mɔːk kat sac-crù:k
   3SG take knife V_DIR cut pork
   ‘He cut the pork with a knife.’

5. Conclusion
Our survey of the diachrony of optional case marking suggests a number of generalizations about the origins and development of the markers involved. On the one hand, it shows that the origins of optional case markers overlap to quite some degree with their counterparts in ‘obligatory’ systems, particularly in the development of instrumental, locative and ablative to ergative, or dative to accusative. On the other hand, there are also a few features that are specific to the origins of optional marking. First, the analysis shows that, in certain language families and linguistic areas, some of the common source domains for the dative stage preceding optional O marking can be traced back to very early lexical stages of ‘give’, ‘help’ and comitative verbs, which may contribute to the task of identifying recurrent mechanisms of reanalysis. Second, the survey also highlights the potential importance of information structure in the development of optional marking, either as a specific morphosyntactic source domain (e.g. with focus or indexical markers for ergative case), or as a constructional context inducing a particular path of grammaticalization (e.g. focus or topic constructions as a crucial stage towards case functions). Along the same lines, properties of source domains or constructions often continue to play a role in the current functions of case markers, as illustrated, for instance, by the continuing importance of information structure as the motivation behind optional A and O marking, or the affectedness constraint in optional O markers deriving from ‘take’ and ‘hold’ verbs.

These observations actually bring us back to our typological starting point. The typological survey in the first part of this paper has shown that it is important for analytical reasons to regard optional, alternating, split and obligatory systems as distinct phenomena: they are logically distinct, and they have quite different typological properties. On the other hand, the discussion so far has also suggested quite strongly that there are interrelations between the systems: different types can co-exist within one and the same language (sometimes in probabilistic ways), and/or within one and the same genetic unit. Given these links, the question is how exactly the different types relate to each other.

The most obvious question concerns the relation between optional and obligatory systems of case marking, and whether one can be regarded as a diachronic source for the other. The overlapping origins of optional and obligatory markers, and the co-occurrence of optional and obligatory systems in the same genetic unit (e.g. for A marking in Tibeto-Burman and in Pama-Nyungan, and for O marking in Romance), are strong indications that the two are diachronically related in some way. In the literature on optional marking, we can find indications about directionality, going either way. For instance, work on ergative marking in contexts of rapid change, e.g. in young people’s varieties or obsolescent systems, has shown
that an optional system can develop out of an obligatory one (e.g. Meakins & O’Shannessy 2010, see McGregor 2017: 462-463 for a survey). Conversely, for Tibeto-Burman, Delancey (2012) has pointed out that optional use of ergative markers can already be discerned in Old Tibetan texts, and has hypothesized, with LaPolla (1995), that an original optional system may have stabilized into an obligatory one in some Tibeto-Burman languages like Newar and Mizo. Coupe (2011) makes a similar point comparing the optional system of Mongsen Ao with the obligatory one in Chang. For Romance, Iemmolo (2010) uses a comparison between accusative marking in Old and Modern Sicilian to argue that the optional system in Old Sicilian has become generalized in a process of diffusion down the animacy hierarchy, leading to a loss of its original link with information structure in Modern Sicilian. In another view on directionality, Bossong (1991:154) contends that languages all have some kind of predisposition to develop optional O marking and that this typically involves some kind of formal restructuring and lexical replacement of older systems – which may also have been optional. Studies like these are definitely suggestive about the issue of directionality, but in general much more work is needed, including historical-comparative work and careful study of textual material in older stages, where that is available, in order to provide definitive answers to this question.

A second question concerns the relation between optional (and alternating) systems and split systems. Again, frequent co-occurrence of split and optional systems within one language suggests that there must be some kind of link. Our diachronic analysis has suggested at least one way in which the two types could be related. Both for the development of A and O marking, the analysis highlighted specific constructional contexts that induced grammaticalization towards case marking, e.g. focus constructions involving indexicals in apposition on the way towards A marking in Australian languages, and topicalizing constructions involving dislocation on the way towards O marking in Romance. In both cases, the relevant stage could be regarded as a construction-based split, since it is the use of a particular construction that induces the use of a particular marker. Crucially, however, the constructional features inducing the split actually foreshadow the later functional specialization of the optional marker in terms of information structure, such as from topical to given and definite, and therefore can be regarded as forming a diachronic pathway towards an optional marker and beyond from its source domain. Still, as with the previous question, these are only suggestions, and more careful diachronic and typological work will be needed to answer these questions in a satisfying way.
More generally, we believe that open questions like these can most fruitfully be examined by work at the interface between typology and diachrony, which tries to link synchronic properties and constraints to properties of source domains and constructions at the origins of case systems, as also suggested in Cristofaro (2013), Barðdal & Gildea (2015) and Cristofaro & Zuñiga (eds 2018). We hope that this survey can help to stimulate this kind of work.
6. Abbreviations used in the glosses

A.AGT anti-agentive, ABL ablative, ABS absolutive, ACC accusative, ACCOMP accomplished,
ADESS adessive, ADV adverbiaal, AGT agentive, ALL allative, AN animate, ANAPH anaphoric,
CERT certainty, CLF classifier, CMPL verb complement, COM comitative, CRS currently relevant
state, DAT dative, DECL declarative, DEF definite, DEM demonstrative, DIM diminutive, DIR
direct / directional, DU dual, EN epenthetic nasal, ERG ergative, EXC exclusive, F feminine,
FERG focal ergative, FOC focus, FUT future, GEN genitive, GPN generic pronoun, IMP
imperative, INSTR instrumental, INAN inanimate, INC inclusive, INDEF indefinite, INV inverse,
LNOM locative nominalizer, LOC locative, MIN minimal, NEG negation, NEUT neutral, NOM
nominative, NPST non-past, NRL non-relational noun prefix, NS non-specific tense aspect
marker, OBJ object, OBL oblique, OM object marker, ORD ordinal number, PART partitive, PERF
perfect, PFV perfective, PL plural, POSS possessive, PRES present, PROH prohibitive, PROG
progressive, PRT particle, PST past, RDP reduplication, REFL reflexive, SBJ subject, SG singular,
SUB subordinator, TR transitive, VDIR directional verb
7. References


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Linguistics of the Tibeto-Burman Area, 14, 109-116.


Stolz, T. (2001). To be with X is to have X. Comitatives, instrumentals, locative, and predicative possession. Linguistics, 39, 321-350.


## 8. Tables

<table>
<thead>
<tr>
<th>Type of case marking</th>
<th>Structure</th>
<th>Marking</th>
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<tbody>
<tr>
<td>Optional</td>
<td>Referent</td>
<td>Case vs none</td>
</tr>
<tr>
<td>Alternating</td>
<td>Construction</td>
<td>Case¹ vs Case²</td>
</tr>
<tr>
<td>Referent-based split</td>
<td>different</td>
<td>same</td>
</tr>
<tr>
<td>Construction-based split</td>
<td>same</td>
<td>different</td>
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**Table 1**: Basic typology of alternations and optionalities

<table>
<thead>
<tr>
<th>Mirror image principle</th>
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</thead>
<tbody>
<tr>
<td>Optional A marking</td>
</tr>
<tr>
<td>Alternating A marking</td>
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</tbody>
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**Table 2**: Classic model of optional and alternating marking

<table>
<thead>
<tr>
<th>Optional A marking</th>
<th>Optional O marking</th>
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<tbody>
<tr>
<td>Distribution</td>
<td>Not rare</td>
</tr>
<tr>
<td>Function</td>
<td>- Focus and/or unexpectedness</td>
</tr>
<tr>
<td></td>
<td>- Degree of agentivity</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternating A marking</td>
<td>Alternating O marking</td>
</tr>
<tr>
<td>Distribution</td>
<td>Very rare</td>
</tr>
<tr>
<td>Function</td>
<td>Focus, potency, volitionality</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3**: Functions and distributions of optional and alternating marking
9. Figure captions

Figure 1: (one version of) the referential hierarchy (Silverstein 1976)

Figure 2: Referential hierarchy and markedness reversal

Figure 3: Grammaticalization chains for A (and/or S) markers

Figure 4: Grammaticalization chains for O markers