Animacy and asymmetries in differential case marking

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Abstract

The present paper presents a cross-linguistic overview of animacy effects in (differential) case marking, and provides an explanation for the attested patterns in terms of two competing case marking strategies. It is argued that the complexity of animacy effects in differential case marking is due to the fact that some of these patterns result from the differentiating function of case marking, while some others result from the indexing function. Further, it will be shown that under the indexing strategy animacy effects are epiphenomenal, while under the differentiating strategy they may be obscured by the availability of other disambiguating strategies, such as agreement and word order. Definiteness effects in differential case marking parallel animacy effects and may be provided a similar explanation in terms of the two basic case marking strategies. Finally, examination of animacy effects in ditransitive constructions lends further support to the advocated approach.

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1. Introduction

The impact of animacy on grammar seems to be more direct and straightforward for some grammatical categories than for others. A good example of the former case is the category of number (Corbett, 2000). As noted by Corbett (2000; cf. Smith-Stark, 1974), the possibility of
distinguishing number diminishes monotonically as one moves down the animacy hierarchy, from personal pronouns at the top of the hierarchy to inanimate nouns at the bottom. For example, in Asmat plural marking is confined to first and second person pronouns, in Igbo to all pronouns, in Kobon to pronouns and kin terms, in Marind it is found on human arguments, and in Slave on animate arguments (Corbett, 2000:57–64). The usual explanation for this correlation invokes the notion of prominence or topic-worthiness: it is more relevant to indicate the number of discourse prominent participants, than that of non-prominent ones (Mallinson and Blake, 1981:86; Wierzbicka, 1981; Blake, 2001:140). Since discourse prominence is related to the speaker’s empathy,¹ it is conceivable that animate, in particular human, nominals are more eligible for number marking as compared to inanimate ones. Some other categories, like agreement, also seem to be sensitive to prominence, and display similar animacy effects. For example, in Lakhota (Van Valin, 1985), only animates are cross-referenced by agreement markers (see Comrie, 1989; Croft, 1990; Yamamoto, 1999; Siewierska, 2004, for more discussion and exemplification).

The impact of animacy on case is more diverse and defies one single explanation. A few examples will suffice here. Some ergative languages like Chukchi or Nepali distinguish between two different ergative forms used for animate and inanimate subjects. Many other languages (like Hindi, see below), mark animate and inanimate (direct) objects differently. There also exists variation in the encoding of indirect objects with a Goal function; for example in Finnish animate Goals take the allative, while inanimate ones take the illative case (Kittilä, 2005). Yet other languages distinguish between two different locative cases for animates and inanimates; an example is Yidiny, where dative is used instead of locative in the case of animate nouns (Dixon, 1977:265). The encoding of possessors can vary on this dimension as well. Some languages reserve special forms of possessors/genitive markers for nominals higher on the animacy hierarchy. Thus, in Russian, a special possessive form in -in is reserved for proper nouns and kin terms (Mash-in ‘Masha’s’, mam-in ‘mother’s’) and does not occur on inanimates. Further, many languages make a distinction between animate and inanimate comitative forms. In Even (Tungusic), for instance, animates take the comitative case in -nun (cf. gia-nun ‘with a friend’), while inanimates take a comitative-proprietive form in -ikan (cf. turki-ikan ‘with a slade’). More data on the impact of animacy characteristics on the choice of case can be found in Aristan (1997).

Note that some of the observed differences may be explained in terms of semantic roles. Thus, it is possible to argue that animate and inanimate Goals, or Comitatives actually represent two distinct roles, which will motivate their different encoding. For some other cases this explanation seems less appropriate, as in the case of object encoding which involves an alternation of an overt case with the absence of a case marker. With respect to the latter cases, Aristan (1997) notes that case markers are often dispensable when the interpretation of arguments can be recovered from the lexical content of the noun. This brings into discussion considerations of markedness and economy, which will play a central role in the explanation of differential object case marking addressed in the next section.

The main goal of this paper is to present a cross-linguistic overview of animacy effects in (differential) case marking, and building on previous joint work with Helen de Hoop (see de Hoop and Malchukov, 2006) to provide an explanation for the attested patterns in terms of two competing case marking strategies. I will combine a competing motivation approach as practiced in functional typology with a functional optimality-theoretic approach. A fine grained

¹ Notably, in some theories, like Langacker’s (1991), the Animacy Hierarchy is referred to as ‘empathy hierarchy’ (see also Kuno and Kaburaki, 1977 on the term ‘empathy’).
optimality-theoretic analysis will not be attempted here though, as the focus is on the typological issues (but see de Hoop and Malchukov, 2006 for demonstration of how some of the data addressed here can be analysed within bidirectional OT).

The paper is organized as follows. In section 2, I address differential object marking (DOM) and discuss an explanation for this pattern based on the notion of markedness. In section 3, I discuss differential subject marking (DSM) and argue that markedness is not sufficient to explain the attested DSM patterns. In section 4, I demonstrate how the asymmetries between differential subject and differential object marking can be explained in terms of two conflicting constraints in the domain of case marking, indexing and differentiating. Then I will argue that the two different DSM patterns are different resolutions of a conflict between the indexing and the differentiating strategy. Section 5 shows that similar resolution effects may be observed in the domain of differential object marking, as well. Section 6 addresses definiteness effects in differential case marking, demonstrating that asymmetries in differential case marking (DCM) due to definiteness parallel the asymmetries due to animacy. Section 7 extends the discussion of animacy effects from monotransitive to ditransitive constructions in order to show that the same strategies are also responsible for cross-linguistic variation in ditransitive patterns. Finally, section 8 summarizes the main conclusions of the paper.

2. Animacy and differential object marking

Differential encoding of animate and inanimate objects is part of a broader pattern known as differential object marking (DOM), described by Bosson (1985), Lazard (1998), and Aissen (2003), among others. These studies have shown that in many languages objects higher on the animacy/definiteness hierarchy tend to be (case) marked while those which are lower on the hierarchy need not be. It has also been observed that in some languages differential object marking (DOM) is more sensitive to the definiteness dimension (e.g., in Persian, where the postposition –rā occurs mostly with definite NPs), while in some other languages DOM is more sensitive to animacy proper (e.g., in Guaraní, the postposition pe is normally found with animate NPs). In yet other languages DOM is sensitive to both features. One of the best studied cases is Hindi, where animate NPs should be marked by accusative/dative case, while inanimates are marked only if definite (Mohanan, 1990):

Hindi (Mohanan, 1990:104)

(1) Ilaa-ne bacce-ko (*baccaa) uTaayaa
   IIa-ERG child-ACC (*child) lift.PERF
   ‘Ila lifted a/the child’

(2) Ilaa-ne haar uTaayaa
   IIa-ERG necklace lift.PERF
   ‘Ila lifted a/the necklace’

(3) Ilaa-ne haar-ko uTaayaa
   IIa-ERG necklace-ACC lift.PERF
   ‘Ila lifted the necklace’

The usual explanation for DOM relies on the concept of markedness, rather than prominence. This explanation, originally due to Silverstein (1976), is formulated by Comrie (1989:128) as follows: “In a standard transitive scenario, A is animate and definite while P is inanimate/
indefinite (or at least less animate and definite than A), so any deviation from this scenario should be marked”. This account correctly predicts that animate/definite objects, which manifest a marked (less natural) combination of role and semantic features, should be case-marked, while inanimate/indefinite objects, which manifest an unmarked combination, need not be marked.

This markedness explanation of DOM patterns also lies at the heart of Aissen’s (2003) optimality-theoretic account of DOM. Aissen proposes to capture the markedness pattern through a harmonic alignment between a scale of grammatical functions (subject and object) and prominence scales incorporating the animacy hierarchy. On Aissen’s account the insight that animate arguments are less natural qua objects (than qua subjects), is captured by a constraint ranking, where a constraint against having unmarked animate objects is stronger than a constraint against having unmarked inanimate objects. Thus, the pattern in Hindi where only humans are obligatorily case-marked is captured in Aissen’s account in the following fashion (a simplified fragment of the constraint hierarchy is represented in (4)):

(4) \[ \ldots *Oj/Hum & Øc \gg *Case \gg \ldots \gg *Oj/Inan & Øc \ldots \]

In this representation the constraint against having zero marked human objects (*Oj/Hum & Øc) dominates the economy constraint prohibiting any case marking (*Case), which in turn dominates a constraint against having zero marked inanimate objects (*Oj/Inan & Øc). As a result, human objects are obligatorily marked in Hindi, while inanimates may be left unmarked (see Aissen, 2003 for a full account).

3. Differential subject marking: a problematic pattern

As aptly demonstrated in the literature (Moravcsik, 1978; Bossong, 1985; Comrie, 1989; Lazard, 1998; Aissen, 2003, amongst others), DOM is both a pervasive and a cross-linguistically consistent phenomenon, even though languages differ in extensions of object marking along the animacy/definiteness hierarchy. Less studied is the phenomenon of differential subject marking (DSM), which may be largely due to the fact that ergative languages, which provide stronger cases of DSM, became the subject of a systematic study only recently.2 Does DSM conform to the markedness pattern, as does DOM? The predictions here would be that inanimate and/or indefinite As which deviate from the prototype are preferably marked (cf. Comrie, 1989). Sometimes one indeed finds such a pattern. Consider the case of Mangarayi, where only inanimate As (of the neuter gender) take the ERG case, while animate As (of masculine or feminine genders) do not:

Mangarayi (Merlan, 1982:61)

(5) Bu<ny wu-na 
show 3SG->2SG-AUX-PP F:NOM-old_woman
‘Did the old woman show you?’

2 Note that in most accusative languages the syntactic status of “non-canonical subjects” is controversial (see the papers in Bhaskararao and Subbarao, 2004 for a recent discussion). For example, Icelandic seems to be quite exceptional among Germanic languages in having oblique subjects, involved in a DSM pattern. The corresponding constructions in other Germanic languages (such as German Mir gefällt das Buch) are usually considered to involve object experiencers, rather than subject experiencers, since the experiencer fails the standard tests for subjecthood (see, e.g., Zaenen et al., 1985 for discussion of Icelandic/German contrasts).
Yet, such a pattern, where only inanimate As need to be case marked, is rare. In most other split-ergative languages of Australia (as well as some Tibetan and Caucasian languages), markedness effects are manifested in a noun/pronoun split, where pronouns (or just the first and second person pronouns, as in Dyirbal; Dixon, 1972), which are highest on the animacy hierarchy, lack the ergative case (Silverstein, 1976; Comrie, 1989). This pattern is consistent with Silverstein’s generalization, which predicts that accusative marking spreads from the nominals on the top of the animacy hierarchy to lower nominals, while ergative marking spreads in the opposite direction starting from the nominals on the bottom of the animacy hierarchy. Although lack of ergative case on pronouns is consistent with the markedness explanation, the rarity of the animate/inanimate split is unaccounted for under this approach.

There are, furthermore, cases which directly contradict the predictions of the markedness approach. Consider DSM in Hindi (Mohanan, 1990; Butt and King, 2004; de Hoop and Narasimhan, 2005). As is well-known, DSM in Hindi is primarily conditioned by aspect: ergative marking of transitive subjects is attested only in perfective tenses. There is also a group of intransitive verbs which allow a case alternation on subjects in the perfective, and where the choice between ERG and NOM depends on volitionality:

Hindi: Mohanan (1990:94):

(7)  Vah  cillaaya  
he.NOM  shout/scream.PERF  
‘He screamed’

(8)  Us-ne  cillaaya  
he.ERG  shout/scream.PERF  
‘He ERG shouted (deliberately)’

Note that ergative marking here is restricted to volitional and hence animate subjects, contrary to what is predicted under the markedness approach. This is not an isolated case. It has long been noted (see, e.g., DeLancey, 1981), that DSM in many ergative languages (both consistently ergative languages and ergative languages with a tense/aspect based split) does not follow the markedness/economy predictions. For these languages the presence of an ergative case on the subject is rather related to its agentivity (properties of volitionality/control). Similar counterexamples to the expected markedness pattern are attested elsewhere. Consider the following examples from Samoan, where animate As are consistently encoded by ergative case, while inanimate As (e.g. those referring to natural force) allow for an alternation between ergative and oblique (locative) case:

Samoan (Mosel and Hovdhaugen, 1992:424-5)

(9)  Na  tapuni e  le  matagi le  faitoto’a  
PAST close  ERG ART wind  ART door  
‘The wind closed the door’
4. Animacy and two functions of case marking

In the functional-typological literature, two main functions of case marking have been identified: the indexing function, that is, cases are used to encode semantic roles, and the discriminating function, that is, the need to distinguish between the core arguments (subjects and objects) (Comrie, 1989; Hopper and Thompson, 1980; Kibrik, 1985; Mallinson and Blake, 1981). At first, recognition of these functions has given rise to two analyses of case marking that were viewed as alternative and even competing. Nowadays, however, it is generally acknowledged that both are indispensable to account for the cross-linguistic variation in case patterns (Song, 2001:156–167; cf. Mallinson and Blake, 1981:91–96). For example, the indexing approach provides a better account of case marking of oblique arguments, and of the marking of core arguments in languages where case reflects semantic roles of arguments (‘role-dominated’ languages in terms of Van Valin and Lapolla, 1997). On the other hand, the indexing approach on its own fails to account for a well known tendency, attested both in accusative and ergative languages, to leave the single argument of an intransitive verb (S) as well as one of the core arguments of the transitive verb (A or P) unmarked. To account for this pattern one usually invokes other functional factors, such as the need to differentiate between the two arguments (that is, the discriminating function mentioned above), as well as economy that disfavors overt marking of (core) arguments.

From this perspective markedness effects observed in differential case marking can be related to the discriminating function of case marking: indeed, markedness can be regarded as a context independent or generalized distinguishability. On this broad interpretation of the discriminating function, its scope is not confined to contexts of actual ambiguity (e.g., marking of animate objects for purposes of disambiguation), but extends to contexts of potential ambiguity as well (e.g., marking animate objects in all contexts). On the other hand, the explanation in terms of semantic roles and prominence is related to the indexing function. Ideally, a case marking system should comply with both the indexing and the discriminating function. As observed in the typological literature (see, e.g., Kibrik, 1985; Croft, 1990), this explains the cross-linguistic distribution of basic alignment patterns, in particular, why S in many languages aligns itself either with A (producing an accusative pattern), or with P (producing an ergative pattern). However, we do not readily find a pattern where A and P show the same marking, while S shows a distinct one. Indeed, the latter pattern does not conform to either function: it does neither distinguish between A and P, nor does it index the roles properly (that is, what would A and P have in common which sets them apart from S?). Generally both functions are compatible insofar as indexing arguments for semantic roles ensures distinguishability between them.\(^3\) They are different though inasmuch as distin-

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\(^3\) Exceptions to this generalization can be found in languages with an impoverished case system, like the two-term systems discussed by Arkadjev (in press). For such languages following an Indexing strategy may yield a “double oblique” configuration (use of the same OBL case on both A and P arguments, as in some Pamir languages; Payne, 1980), which will correspond to an ERG-ACC pattern found in languages with a richer case inventory.
guishability is more parsimonious, restricting an overt marking to cases of potential ambiguity. The discriminating approach also provides a natural explanation for the fact why the sole argument of the intransitive clause (S) is normally in the unmarked case. In what follows we shall see that the ‘indexing’ and the ‘differentiating’ function, when conceived as two general constraints on case marking, may either conspire in producing the same pattern, or else be in conflict.

Once these two motivations for case marking in general are recognized, we can consider what predictions follow for the domain of differential case marking. From a functional-typological perspective, indexing and differentiating can be viewed as two (potentially) competing motivations (see DuBois, 1985; Croft, 1990), or in optimality-theoretic terms two conflicting constraints (Prince and Smolensky, 2004). I assume that DIFF and INDEX are two general constraints (or rather families of constraints) in the domain of case marking (see de Hoop and Narasimhan, 2005; Malchukov, 2005; de Hoop and Lamers, 2006).

- **DIFF**: The arguments (A and P) must be distinguishable.
- **INDEX**: Encode semantic roles (A and P).

INDEX may be conceived as a family of role-related faithfulness constraints, as commonly assumed in the literature (e.g., Stiebels, 2000; Woolford, 2001; Lee, 2003; de Hoop and Narasimhan, 2005). DIFF is similar to the markedness constraints introduced by Aissen (2003), yet its scope is broader as DIFF can be satisfied by other means than case such as agreement or word order (see de Hoop and Lamers, 2006 for discussion; see also de Swart, 2003). Since the present paper takes an OT syntactic perspective, DIFF is conceived here as a production constraint, rather than a comprehension constraint, as in de Hoop and Lamers (2006). The question to be addressed is what consequences for the domain of case marking follow from recognition of these two general constraint families.

As already noted in the literature (de Swart, 2003; de Hoop and Narasimhan, 2005), for the case of DOM, marking a prominent (animate) P is consistent with both functions. Indeed, from a distinguishing perspective, preferential marking of animate Ps is understandable, as they are more likely to be confused with the subject. From an indexing perspective, marking of animate Ps is also favored, although for a different reason: Ps that are higher on the animacy hierarchy are more salient in discourse (are ‘prominent’ arguments in terms of Legendre et al. (1993), or ‘strong’ arguments, in terms of de Hoop, 2005), and thus make a ‘better’ patient. 4 The following generalized Table 1 shows cross-linguistic preferences in the marking of prominent (P) and less prominent (∼P) objects, given these two constraints.

The table is intended to capture the interaction of the two constraints across languages, rather than to account for the grammatical patterns in individual languages in terms of language-specific constraint rankings. As is clear from this table, both INDEX and DIFF constraints penalize marking of less prominent objects in preference to prominent ones. Indeed, the absence of case marking of low-prominent (in particular, inanimate) patients can be attributed either to INDEX (under the constraint ranking INDEX-P >> ECON >> {INDEX-P, DIFF-P, DIFF-P}) or to DIFF (under the

4 Within an indexing approach, as developed by Hopper and Thompson (1980), animacy along with referentiality contributes to the object’s ‘individuation’, which is considered one of the features of high transitivity (‘transitivity parameters’). The clearest evidence for this assumption arguably comes from languages allowing noun incorporation: as is well known in many incorporating languages only high-prominent (animate and/or definite/specific) objects qualify as full fledged patients while low-prominent objects tend to be incorporated (Hopper and Thompson, 1980; see also Mithun, 1984).
constraint ranking \( \text{DIFF-P} \gg \text{ECON} \gg \{\text{DIFF-p, INDEX-P, INDEX-p}\} \). As both constraints favour the same pattern,\(^5\) the cross-linguistic consistency of the DOM pattern is (correctly) predicted.

With regard to DSM, the predictions are rather different. DIFF will disfavor ergative marking of ‘strong’ (prominent, animate) As, since the latter are identified as agents more easily, making ergative marking dispensable. By contrast, INDEX penalizes ERG on ‘weak’ (inanimate/non-sentient) As, as they are less typical as agents. Thus, in case of DSM, these two constraints give conflicting predictions with respect to the marking of prominent/strong (A) or less prominent/weak (a) subjects (Table 2).

Given that the two constraints are in conflict, and on a further assumption, that there is no universal fixed ranking between the two, this analysis correctly predicts a variation in DSM patterns across languages. Thus, it explains why DSM is less consistent cross-linguistically as compared to DOM. As predicted, two different DSM patterns are found. In some languages more prominent nominals (e.g., pronouns, as in Dyirbal, or animates as in Mangarayi) will lack ERG case, in accordance with the differentiation/markedness approach. Other languages restrict the use of ERG case to more agentive (and hence animate) nominals (cf., the pattern in Hindi and Samoan), following the predictions of the indexing approach. Thus, the Dyirbal pattern results from a constraint hierarchy where \( \text{DIFF} \ll \text{ECON} \ll \{\text{DIFF-A, INDEX-A, INDEX-a}\} \),\(^6\) while the Hindi pattern results from the opposite ranking of the two constraints \( \{\text{INDEX-A} \gg \text{ECON} \gg \{\text{INDEX-a, DIFF-a, DIFF-A}\}\})\). (See also de Hoop and Malchukov, 2006 for a bidirectional OT analysis of these patterns.)

Recall that animacy effects are expected under the differentiating strategy, as animacy information plays an important role for disambiguation. From the indexing perspective, the role of animacy is less straightforward, however, as it is redundant to mark animacy \emph{per se} (as it is clear from the lexical content of the nominal in question). Rather animacy effects can be due to correlations with some semantically motivated transitivity features, contributing to agentivity on the part of the A argument, and patienthood of the P argument. The main feature contributing to

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\(^5\) Although application of the two constraints yields similar results in the domain of DOM, in some cases effects of DIFF and INDEX can be discerned in this domain as well (see sections 5 and 7 below for discussion).

\(^6\) As noted by an anonymous reviewer, case marking in Dyirbal might be better explained by markedness considerations rather than by DIFF, as Dyirbal allows for a double marking (ERG-ACC) pattern in cases when A is a noun and P is a pronoun. However, I believe that such patterns may still be attributed to DIFF (conceived in a broad sense of resolution of potential ambiguity rather than actual ambiguity) given pervasiveness of discourse ellipsis in Dyirbal: as noted by Dixon (1972:70) only the topical nominative arguments are obligatory, while non-nominative arguments are frequently omitted.
agentivity is volitionality/control, while the distinctive feature of patienthood is the object’s affectedness (Hopper and Thompson, 1980; Dowty, 1991). Both control and affectedness correlate with animacy features, hence the attested animacy effects. On the one hand, volitionality/control presupposes animacy on the part of the subject. On the other hand, affectedness correlates with the degree of P’s prominence/individuation, and hence indirectly with its animacy features. All other things being equal animate Ps are conceived as more affected, as compared to inanimates (cf. Wierzbicka, 1981; Näss, 2004). The reason for this connection, admittedly more subtle, seems to be that inanimates are affected inasmuch as they undergo a change of a physical state in the course of an action, while animates can also undergo a change of a mental/emotional state to qualify as affected. Also, it is more important to register the affectedness of animates as they are more prominent in discourse as compared to inanimates. Thus, under the indexing perspective animacy effects are epiphenomenal, being derived through correlations between animacy features and role-related characteristics of arguments.7

5. Disentangling indexing and differentiating effects in DOM

Above we have seen that the effects of the INDEX and DIFF strategies can hardly be confused in case of DSM: in fact both strategies are needed to account for the cross-linguistic variation in DSM patterns. With regard to DOM, however, the question arises whether markedness is not sufficient to account for the attested DOM patterns, as indeed has been suggested by Silverstein, Comrie and Aissen. Yet, the differentiating strategy and markedness fail to provide an explanation for some of the attested DOM patterns. Thus, the distinguishing approach fails to explain DOM patterns involving an alternation between two overt cases (as in the well-known case of the accusative/partitive alternation in Finnish), as both overt cases satisfy the differentiating constraint. Further, the role of indexing becomes obvious when animacy effects in DOM are extended to DSM, as is the case in Central Pomo (Mithun, 1991). In Pomo the object (patient) case is only found on human patients:

Central Pomo (Mithun, 1991:521)

(11) M’u tu ʔa-hk’ūm
    3SG.PAT I.killed
    ‘I killed him’

(12) M`u-l ʔa-hk’ūm
    3SG I.killed
    ‘I killed it (the bee)’

This may appear a usual DOM pattern, yet it cannot be reduced to matters of markedness/discriminating, since it carries over to DSM. Consider the object case on the pronominal subject in (13):

(13) Q’alā-w m’u-tu
    died 3SG.PAT
    ‘He died’

7 As pointed out by an anonymous reviewer, in a sense animacy effects are epiphenomenal from a distinguishing perspective as well: yet in the latter case they are derived more directly, without mediation of the role properties.
Mithun (1991) argues that case marking on both objects and intransitive subjects is due to affectedness: animate arguments attract patient marking as it is easier to perceive animate beings as affected compared to inanimates. This corroborates a connection between animacy, prominence and affectedness, and also implicates that some cases of DOM can be better explained under the indexing approach. Indeed, INDEX provides the most straightforward way of capturing the Pomo DCM pattern for both subjects and objects through a single constraint ranking: INDEX-P >> Econ >> INDEX-p, where only human patients qualify as strong, (Ps), while non-human patients qualify as weak (ps). Similar cases of ‘extended’ DOM can be found in other languages, even though languages differ with respect to the cut-off point on the animacy hierarchy, and the case marking mechanisms involved. Thus, in some Papuan languages like Moni (Li and Lang, 1979:310 citing Verhoeve), the marked ‘absolutive’ is found only on pronouns in the S/O function, while in Lakhota (Palmer, 1994:73 citing Van Valin) object agreement is found on first and second person pronouns in the S function.

The examples above show that for some languages DOM is due to the indexing function. One can make a stronger claim that also in other languages animacy effects in DOM are due to INDEX, but are masked by the higher ranking DIFF constraints (DIFF-P >> INDEX-P >> Econ >> {DIFF-p, INDEX-P, INDEX-p}). However, in other cases, distinguishability fares better as an explanation for DOM. Consider the case of Awtuw, where ACC is obligatorily used if P equals or is higher than A on the animacy hierarchy (Feldman, 1986):

Awtuw (Feldman, 1986:110):

(14) Tey tale-re yaw d-æl-i
    3FS woman-ACC pig  FA-bite-P
    ‘The pig bit the woman’

If P is lower than A on the hierarchy, it is unmarked:

(15) Tey tale  yaw d-æl-i
    3FS woman pig  FA-bite-P
    ‘The woman bit the pig’

This pattern is clearly due to the differentiating strategy; the ACC marks untypical Ps (animate, human), which may be confused with the subject otherwise. The indexing account of this pattern seems to be less plausible, as the object participants in (14) and (15) do not differ ostensibly either in role or prominence. In other words, I propose that DOM in Awtuw can be accounted for by the following constraint ranking where DIFF ranks high while INDEX ranks low: DIFF-P >> Econ >> {DIFF-p, INDEX-P, INDEX-p}.

A mirror image of the Awtuw pattern is found in Fore (Scott, 1978), where the ergative determiner (Scott’s “delineator”) is used only if P is higher than A on the animacy hierarchy (as in (17)), otherwise A remains unmarked (as in (16)):

Fore (Scott, 1978:116):

(16) Yaga: wá aegûye
    pig  man 3SG.hit.3SG
    ‘The man hits (or kills) the pig’
Also here the use of the case marker is motivated by the need to disambiguate: ERG case appears on non-prominent (non-human) As which are more likely to be construed as objects than as subjects. If both arguments are equal on the animacy hierarchy, word order becomes decisive: the first argument is interpreted as subject. Note also that ERG marking becomes dispensable if the arguments are disambiguated through the use of verbal agreement; on Foley’s account (1986:173), this means that verbal (agreement) morphology takes precedence to the nominal (case) morphology as a disambiguation strategy. The observed interaction of case with animacy information, agreement and word order provides clear evidence for the discriminating function of case marking in Fore. Generally indexing does not come into question as an explanation of DSM in Fore as it would incorrectly predict ERG marking of As which are high in prominence, rather than those which are low in prominence.

Thus, both Papuan languages clearly follow the differentiating strategy and comply with the markedness predictions. It should be noted that here the case marking strategy is “global” in Silverstein’s (1976) terms, and not “local” as in the classic cases of differential case marking attributed to markedness (cf., e.g., DOM in Hindi). That is, case marking here is sensitive to the relative ranking of A and P on the animacy hierarchy. Arguably this pattern provides the clearest evidence for the differentiating strategy: recall that Comrie’s (1989) “transitive scenario” also refers to the relative animacy/prominence of A and P. The distinction between local and global disambiguation is not clear-cut, though. Thus, while in Hindi markedness is local, in the genetically related language Kashmiri it is global, that is, P takes an object (ACC/DAT) case if A is lower than P on the Animacy/Person Hierarchy (Wali and Koul, 1997:155). Similar evidence for a close connection between patterns of local and global distinguishability can be adduced from other languages. For example, in Kwaza (Amazonian), the definite P marker –wa, is usually used for disambiguation, but sometimes is also found in contexts where arguments are already disambiguated through the use of agreement (van der Voort, 2004:106–107). Furthermore, global and local strategies seem to be diachronically related. As observed by Zeevat and Jäger (2002), what starts as a global marking, used sparsely when needed for disambiguation (‘pragmatic DCM’), will eventually grammaticalize into the local marking (‘syntactic DCM’), where case is used with certain types of NPs irrespective of a larger context. Therefore, I consider both local and global distinguishability as manifestations of basically the same strategy.

As is clear from the discussion above, animacy effects in case marking are more clearly related to the differentiating function. These effects may be “local” (that is case marking on an argument is sensitive to animacy features of the argument in question), or “global” (when case on an argument changes depending on the relative animacy of the A and P arguments). The latter case is most straightforwardly explained by the need of disambiguation. As noted above, the indexing function can induce animacy effects only indirectly, exploiting correlations with such features as control/volitionality (on the part of A) and affectedness (on the part of P). On the other hand, animacy effects on case due to the differentiating function may be less comprehensive than expected due to availability of other disambiguating strategies, such as agreement and word order.

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8 And conversely, a language may use animacy related morphology to indicate differences in volitionality. Thus, in Ewonda, which is a language with noun classes, the class agreement that is normally used for the inanimate class can be used with animates to indicate non-volitionality (Lazard, 1998:178).
6. Asymmetries in differential case marking: animacy and definiteness compared

As noted above, Comrie (1989) relied on markedness to explain why not only animate Ps, but also definite Ps tend to be marked in languages displaying a DOM pattern. We further observed that the role of animacy is different for DOM and DSM patterns, as in the latter case the indexing and differentiating strategies make different predictions. The question arises then whether we find a similar asymmetry between DOM and DSM with respect to the definiteness dimension of the nominal hierarchy, as well. In fact, Comrie (1981:129) notes an “embarrassing” absence of evidence for markedness effects in cases of differential encoding of definite and indefinite subjects. That is, one does not readily find cases where only indefinite As appear in the ergative case, as expected under the markedness approach. The same point has been repeated in subsequent literature, both functional-typological and optimality-theoretic (cf., e.g., Næss, 2004; Woolford, 2001). This claim, however, is not entirely correct. Consider the case of Ika (Frank, 1985), where we find exactly this pattern: new, indefinite As take the ergative case (see (18)), while given/definite As do not, unless they are emphatic/contrastive (as in (19)):

Ika (Frank, 1985:150)

(18) Iki gä-ža kua ikä-se’ gä-ža?
man eat-MED or man-ERG eat-MED
‘They eat people or people eat them?’

(19) José-se’ eigui keiwı tšei-na
Jose-ERG also right.away shoot-DIST
‘Jose also shot it’

Frank (1985:150) notes that A arguments, which are newly introduced, or contrastive, are regularly marked by ERG, and explicitly relates this fact to the markedness pattern as observed by Silverstein and Comrie. Ika is not exceptional in this respect. A similar pattern is found in many other languages displaying a phenomenon termed here “focal ergativity”. Although the fact that in some languages ERG marking appears on emphatic, new or contrastive As has not gone unnoticed in the literature (Plank, 1979:34; Van Valin, 1992), its significance for the theory of case marking has not been sufficiently appreciated. Few examples will suffice here. In Ostyak the ergative case is restricted to rhematic As, and in Burmese it is restricted to contrastive As (Lazard, 1998:200). Similarly, in Kaluli (Papuan), only new As take the ergative marker (Van Valin and Lapolla, 1997:366), and in Newari, As take the ergative marker when rhematic (Givón, 1984:154). Thus, (20) would be appropriate as an answer to “Who is breaking the window?”; while (21) as an answer to “What is the man doing?” (Givón, 1984:154):

Newari (Givón, 1984:154)

(20) Wô mgnu-ną jhya tafy-a-nq co-nq
the man-ERG window break-AUX be-AUX
‘The man is breaking the window’
Wo mānu jhya tajya-nq co-nq
the man window break-AUX be-AUX
‘The man is breaking the window’

In Gooniyandi (McGregor, 1992), ERG regularly marks those transitive subjects which are unexpected as agents, as in the following example (given/predictable agents when overt need not be marked):

Gooniyandi (McGregor, 1992:289)

(22) Ned Colin-ngga ridim-ngangadda yawarda
Ned Colin-ERG ride-3SG.A + 3SG.P + 1SG.D horse
‘Ned Colin rode my horse for me’

In a more recent publication, McGregor (1998) showed that emphatic ergatives are wide-spread in Australian and Papuan languages. Similar cases of focal ergativity are attested elsewhere. For example, in Chukotka-Kamchatkan languages the ergative case is diachronically related to a definiteness-contrast marker (cf. Žukova, 1967 on Koryak), and for some of these languages it is arguably better analyzed as an emphatic marker synchronically as well (cf. Georg and Volodin, 1999:127 on emphatic “ergative” pronouns in Itelmen). Similarly, in Manipuri (Meithei), the ergative-agentive case seems to perform a focal function. Notably, a number of uses which Bhat and Ningomba (1997) analyse as ergative marking, represent according to Chelliah (1997) a homophonous focal clitic.

To sum up, markedness reversal effects in DSM are well attested with respect to definiteness, even though the data available seem to indicate that the relevant distinction may be between topical/given and focal/new NPs, rather than between definite and indefinite ones. This conclusion is also consistent with the ‘given A constraint’ proposed by DuBois (1987). According to DuBois (1987) A arguments are overwhelmingly given/definite, hence when they are new or indefinite they are expected to be eligible for a special marking. However, the opposite pattern where the ergative case is missing on low-prominent/non-referential As is attested as well. Thus, Dixon (1994:90) observes that some ergative languages restrict ergative marking to definite subjects. In Semelai (Kruspe, 1999), specific As take the ergative case and are cross-referenced by the ergative proclitic, while generic As are neither marked nor cross-referenced:

Semelai (Kruspe, 1999:253)

(23) Cɔ jɔl jkɔs
dog(s).DIR bark.at porcupine.DIR
‘Dogs bark at porcupines’

(24) Jkɔs ki-jɔl la-cɔ
porcupine.DIR 3SG-bark.at ERG-dog(s)
‘The dog(s) bark(s) at the porcupine’

A similar pattern has been reported for Alsea (Mithun, 1999), where ergative is restricted to referential As. Note the absence of an ergative proclitic on the non-referential A in the following example:
Alsea (Mithun, 1999:233)

(25) \( \text{Sis} \ \text{ú-keay} \ \text{sú-lhaK-ay-t-\text{-mc}} \)  
\( \text{IRR.COMP} \ \text{someone} \ \text{dream-INCH-STAT-1SG.O} \)  
‘If anyone should dream about me . . .’

While in the examples above, availability of ergative marking correlates with semantic referentiality (specificity), in other languages it is rather related to discourse referentiality, that is, communicative importance or salience of an argument in discourse (see Givón, 1984:423ff. on a distinction between semantic and pragmatic referentiality). Thus, in Timbe (Givón, 2001:215 citing Foster) discourse prominent As (persistent topics) are more likely to take the ergative case. And in Gooniyandi, one of the functions of the ergative case is ‘stressing referentiality of an actor’ (McGregor, 1992).

Yet in other languages, distribution of the ergative case is arguably due to both strategies. Thus, in Wakhi (Bashir, 1986), the ergative can appear on an S argument either to indicate volitionality (as in Hindi), or to stress referentiality (as in Gooniyandi), in accordance with the indexing strategy. However, the ergative is also regularly used when the subject is rhematic, as expected under the markedness approach.

Thus, in the domain of definiteness we find asymmetries between DOM and DSM patterns similar to those we observed in the domain of animacy. Again the DOM pattern is cross-linguistically consistent: high-prominent patients, which are specific/referential and given/topical are preferentially marked. Preferential marking of specific patients can be naturally explained in terms of prominence, and therefore attributed to INDEX (given the constraint ranking: INDEX-P >>> ECON >>> \{INDEX-p, DIFF-p, DIFF-P\}). The role of prominence constraints is probably most obvious for incorporating languages where low-prominent (in particular, non-specific) objects tend to be incorporated (Mithun, 1984). On the other hand, preferential marking of topical/given (hence, usually definite) objects can be attributed to DIFF, as given/topical arguments are likely to be construed as As otherwise (given the constraint ranking: DIFF-P >>> ECON >>> \{DIFF-p, INDEX-P, INDEX-p\}). Yet given a natural correlation between topicality/givenness, definiteness and specificity, the effects of the two strategies are often difficult to discern in the domain of DOM. In DSM we find less consistency with respect to definiteness effects. Thus, we find languages, like Semelai and Alsea, where ERG case is reserved only for referential subjects (strong As), which can be attributed to INDEX (INDEX-A >>> ECON >>> \{INDEX-a, DIFF-a, DIFF-A\}). In other languages (Ika, Newari), ERG marking is confined to non-topical, new, indefinite subjects. This pattern is readily explained by DIFF (given the constraint ranking: DIFF-a >>> ECON >>> \{DIFF-A, INDEX-A, INDEX-a\}), since non-topical/new/indefinite arguments are more likely to be construed as objects than as (transitive) subjects, which are topics par excellence. Thus, asymmetries between DOM and DSM, in the domain of definiteness/topicality are parallel to those observed in the domain of animacy, and can be also accounted for in terms of the same two constraints.

7. Animacy effects and distinguishability in ditransitive constructions

Animacy effects due to distinguishability have been discussed above in relation to monotransitives, that is, with regard to the distinguishability of A and P arguments. However, similar effects can be observed for P and G (Goal/Addressee) arguments within ditransitive constructions (Kittilä, 2006; cf. Blansitt, 1973). As shown by Kittilä (2006), distinguishability problems arise under the following conditions: (a) accusative is identical to dative, as attested in many languages displaying a DOM pattern (e.g., in Hindi); (b) the P argument in a
ditransitive construction is animate (as in Kittilä’s example ‘The woman showed the baby to her sister’).

As noted above, languages having a regular DOM pattern face a specific problem when this pattern is extended to ditransitive constructions where both G and P arguments are animate. Indeed if P is inanimate, no distinguishability problems arise, as P will be left unmarked, while G will be marked by the object (accusative/dative) case. If, however, P is animate, the expectation would be that it should be marked as well, in analogy to the monotransitive construction. This, however, would lead to a situation with two identically marked objects, a situation which is avoided in many languages for reasons of ambiguity. The conflict here can again be viewed as a conflict between INDEX, the indexing constraint (consistency in marking of prominent/animate patients), and DIFF, the differentiating strategy, which penalizes identical marking of both objects. Note however, that the differentiating constraint here pertains to distinguishability between two object arguments (P and G), rather than to distinguishability of the subjects and the object (A and P). As shown by Blansitt (1973) and Kittilä (2006), different languages will resolve this conflict in different ways.

On the one hand, some languages choose satisfaction of INDEX, hence the consistent marking of animate Ps, even at the cost of a violation of DIFF. Thus, in Korku, which reveals an animacy driven DOM pattern of the Hindi type, this pattern is extended to ditransitives. This leads to a potential ambiguity in case P is animate, as now both the direct and the indirect object are marked by the same case:

Korku (Nagaraja, 1999:46, via Kittilä, 2006)

(26) Raja Ra:ma-ke Sita-ke ji-kne-nec  
king.NOM Ram-OBJ Sita-OBJ give-PAST-PERS  
‘The king gave Sita to Ram’

A similar situation obtains in Hindi (de Hoop and Narasimhan, 2005). Importantly, however, in such cases disambiguation would be achieved through other means, such as word order. As noted by de Hoop and Narasimhan (2005), case marked prominent patients in Hindi undergo obligatory scrambling in a ditransitive construction. Similar word order “freezing” phenomena have been observed in ditransitive constructions with animate Ps elsewhere (see Kittilä, 2006 on Kinnauri).

In the above cases, INDEX is preserved in a ditransitive construction, while DIFF is violated. However, in other languages, DOM is suspended in ditransitives involving an animate patient-theme. This is the case in Awa Pit (Curnow, 1997), where monotransitives take the animate P in the ACC case, while ditransitives do not:

Awa Pit (Curnow, 1997:72, via Kittilä, 2006)

(27) Santos-ta-na pyan-a-ma-i  
Santos-ACC-TOP hit-PL-COMP-PF  
‘They beat up Santos’

(28) Na-na Santos-ta pashu mla-ta-w  
I-TOP Santos-ACC daughter give-PAST-AGR  
‘I gave my daughter to Santos’

A more familiar example (not discussed by Kittilä) is Spanish, where according to Company (2003:233–236), the object marker a used for animate Ps of monotransitives as well as for G
arguments, is systematically avoided in ditransitives (only 1% cases display this marking). Thus, consider:

Spanish (Company, 2003:234)

(29) El maestro presentó su mujer a sus alumnos  
the teacher introduced his wife to his pupils

‘The teacher introduced his wife to his pupils’

(30) El maestro presentó a su mujer a sus alumnos  
the teacher introduced to his wife to his pupils

‘The teacher introduced his wife to his pupils’

The different ways of conflict resolution in ditransitives can be represented by the following two tables (under the assumption that G is case marked); as before P refers to a prominent (animate) patients-theme, and p to low-prominent (inanimate) one.

Table 3 shows that marking of inanimate themes of ditransitives is expected to be cross-linguistically consistent in languages with a DOM pattern. Indeed, given DIFF (as well as Economy considerations) if inanimate (low-prominent) objects/themes are unmarked in a monotransitive construction, they will remain unmarked in a ditransitive construction as well. Naturally, INDEX-P (requiring case marking of prominent Ps) is vacuously satisfied in constructions where P is low prominent (inanimate), and does not interfere with DIFF. In case of animate Ps, however, there is a conflict between the indexing constraint compelling consistent encoding of prominent/animate Ps across constructions, and distinguishability constraints (see Table 4). If INDEX-P outranks DIFF, the DOM pattern is extended to ditransitives (as in Korku or Hindi), while under the opposite ranking (DIFF >> INDEX-P), the DOM pattern will be suspended in ditransitives (as is the case in Awa Pit and Spanish).

Maybe the most interesting way of conflict resolution is found in languages, where satisfaction of both INDEX-P and DIFF leads to differential encoding of the G argument. Thus, in Kikuyu (Blansitt, 1973; Kittilä, 2006), the G (addressee) gets marked by an oblique case only when the P argument is animate, otherwise both objects remain unmarked. A somewhat similar pattern is possible for some ditransitive verbs in Spanish as well (Company, 2003:251). Thus, a less preferred alternative to the standard ditransitive construction in (29) above is to keep a

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<th>P + case</th>
<th>INDEX-P</th>
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preposition on the animate direct object, and introduce the indirect object through a comitative phrase:

Spanish (Company, 2003:251)

(31) *El maestro presentó a su mujer con sus alumnos*

the teacher introduced to his wife with his pupils

‘The teacher introduced his wife to his pupils’

The pattern observed in (31) results from a constraint ranking where both INDEX-P and DIFF outrank the INDEX-G constraint, compelling a consistent encoding of the Goal argument ({DIFF, INDEX-P} >> INDEX-G). Note that similarly to what we observed for Papuan languages above, animacy effects, caused by distinguishability, are global: animacy characteristics of the direct object affect case marking of the indirect object in a ditransitive construction.

8. Conclusions

In this paper I have argued that animacy effects in differential case marking are complex because they either result from the differentiating function of case marking, or from the indexing function. I showed that under the indexing strategy animacy effects are epiphenomenal (as it is redundant to mark animacy *per se*), while under the differentiating strategy they may be obscured by availability of other disambiguating strategies, such as agreement and word order. Interaction of these two strategies can explain asymmetries between differential object marking and differential subject marking in the domain of animacy. Definiteness effects in differential case marking parallel animacy effects and may be provided a similar explanation in terms of the two basic case marking strategies. Finally examination of animacy effects in ditransitive construction lends further support to the advocated approach.

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