

Icelandic Case and the Structure of Events*

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Abstract. I argue in this paper for a novel analysis of case in Icelandic, with implications for case theory in general. I argue that structural case is the manifestation on the noun phrase of features which are semantically interpretable only on verbal projections; thus, Icelandic case does not encode features of noun phrase interpretation, but it is not uninterpretable either; case is properly seen as reflecting (interpretable) tense, aspect, or Aktionsart features. Accusative case in Icelandic is available when the two subevents introduced in a transitive verb phrase are identified with each other, and dative case is available when the two parts are distinct. This analysis bears directly on the theory of feature checking in the Minimalist Program; specifically, it is consistent with a restrictive theory of feature checking in which no features are strictly uninterpretable: all formal features come in interpretable-uninterpretable pairs, and feature checking is the matching of such pairs, driven by legibility conditions at Spell-Out.

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1. Case and meaning

Case Theory has been useful to linguists in stating constraints on the distribution of noun phrases (DPs). In this section I examine some of the basic findings of Case Theory and outline the assumptions I make use of in this paper.

Linguists have long looked for meaning in the cases; any Latin grammar lists the different uses of the dative and so on. In generative grammar, it has been more common (since Rouveret and Vergnaud (1980)

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and Chomsky (1980)) to take case (or Case) to be a strictly formal licensing mechanism, with no direct connection to any semantic content. In this paper I explore a particular view of case which does connect it to meaning, but not in the way traditionally envisioned.

1.1. *What are the primitives of Case Theory?*

The distribution of case is usually stated in terms of Grammatical Functions such as subject, object, and indirect object. These are identified by a linking theory which is sensitive to θ -roles but also to certain Grammatical Function-changing operations such as Passive.

Recent work, however, has replaced the primitives of Grammatical Functions with licensing positions in the functional architecture of the clause. These licensing positions are often (though not always) provided by heads independently necessary for the interpretation of the clause. For example, in much work a (surface) subject is simply the DP in SpecTP—the specifier of TP, the projection of a Tense head; Tense is independently motivated in the clause (see McCloskey (1997), Svenonius (2002) for discussion of the deconstruction of the notion subject).

Similarly, much recent work in lexical semantics breaks down the primitive notions of θ -roles into components that are independently motivated by verb meanings, for example when a Theme is defined as the first argument of a lexical conceptual primitive GO (cf. Jackendoff (1990)); Travis (1992, 2000) and Borer (1994, 1998) argue that the object position in the clause is the specifier of an aspectual projection. Hoekstra and Mulder (1990), Mulder (1992), and Tenny (1994) have argued that linking rules are sensitive only to aspectual information.

In light of these developments, it is plausible to think that the category of case should be reducible to some of these lexical and aspectual notions. This is what I propose here for Icelandic, in particular for dative and accusative object cases.

Obviously, different languages find different utility in placing morphological marking on noun phrases. In some languages nominal affixes mark definiteness (e.g. Norwegian), in others they may mark volition (e.g. Tsova Tush, Holisky (1987)) or the property of having formerly existed (Yaqui, Dedrick and Cusad (1999:136)). Whether we call these markers case is partly a question of terminology. Thus the specifics of the proposal here apply only to Icelandic. But in many ways Icelandic case marking is similar to what is observed in many languages, so I expect this analysis to have wider applicability, modulo the details.

1.2. *Tense, Aspect, and Aktionsart*

Evans (1995) shows that in the Australian language Kayardild, case markers covary with the Tense and Mood of the clause they appear in (note that the postverbal noun phrases in (1b-c) have double case; only the outside case covaries with Tense and Mood).

- (1) a. Ngada warra-ja ngarn-kir. (Kayardild)
I go-ACT beach-ALL
 'I am going/have gone to the beach'
- b. Ngada warra-ju ngarn-kiring-ku.
I go-POT beach-ALL-M.PROP
 'I will go to the beach'
- c. Ngada warra-jarra ngarn-kiring-kina.
I go-PAST beach-ALL-M.ABL
 'I went to the beach'

Though Tense and Mood are interpreted at the clause level, they are not interpretable on the DP itself. Thus, in the terminology of Pesetsky and Torrego (2000) or Chomsky (1998), these Tense/Mood markers may be thought of as being 'uninterpretable' morphological expressions on DPs of 'interpretable' features in the verbal projection of the clause: Case in Kayardild is uninterpretable Tense/Mood.

Kiparsky (1998) and (2001) shows clearly that in Finnish, though partitive case may be used to signal a partitive interpretation for a DP, it also has a function in which it gives no information about the interpretation of the DP itself, but only about the aspect of the larger verbal projection in which the DP is situated (examples from Vainikka (1993)).

- (2) a. Riitta luki kirjan. (Finnish)
Riitta read book.ACC
 'Rita read the book'
- b. Riitta luki kirjaa.
Riitta read book.PART
 'Rita was reading the/a book'

The effect is very much like that of Slavic imperfective aspect, except that rather than being expressed on the verb, partitive case is realized on the object.

- (3) a. Rita pročitala knigu. (Russian)
Rita read.PERF book
 'Rita read the book'

- b. Rita chitala knigu.
Rita read.IMPERF book
 ‘Rita was reading the/a book’

Thus, in Finnish, (partitive) Case is uninterpretable Aspect; just as in Kayardild, the feature is interpretable, but not without looking at the larger context surrounding the DP bearing it.

What I argue in this paper is that Icelandic represents a third variety in this general scheme; the alternation between accusative and dative case on direct objects in Icelandic is determined by factors of lexical semantics that may be grouped together under the rubric of Aktionsart, or Inner Aspect.

- (4) a. Þeir sópuðu rusl.
they swept garbage.ACC
 ‘They swept garbage’
 b. ?? Þeir sópuðu rusli.
they swept garbage.DAT
 c. * Þeir sópuðu rusl í poka.
they swept garbage.ACC in bag.ACC
 d. Þeir sópuðu rusli í poka.
they swept garbage.DAT in bag.ACC
 ‘They swept garbage into a bag’

As indicated, the verb *sópa* ‘sweep’ takes accusative case. However, with a directional PP indicating the endpoint of the movement of the object, the object must be dative.¹

Thus, in Icelandic, ‘Case is uninterpretable Aktionsart.’ In a way, this is neither novel nor surprising. Cases have been associated with thematic and Inner Aspectual meanings for as long as people have been interested in case.

However, the broader context in which I situate this claim is novel; it makes Kayardild and Finnish different from Icelandic only in terms of the level of verbal structure relevant for the determination of case; and this may correlate with other factors. For example, given that Kayardild case is uninterpretable Tense/Mood, it is expected that Kayardild DPs must be licensed in a relatively high level of the clause, where Tense and Mood heads are situated. Consistent with this, Kayardild is a so-called non-

¹ The data in (4) is from Halldór Sigurðsson, personal communication. Not all speakers accept the ‘locatum’ object in (4a), but all speakers get accusative for this verb with an object like *golfið* ‘the floor.’ Similar alternations were originally noted by Barðdal (1993) and are discussed further in Svenonius (2001) and in §5.

configurational language. In Finnish, on the other hand, where I have associated case with Outer Aspect, the licensing domain of case should be somewhat lower. Finnish, fittingly, is a discourse-configurational language with scrambling. Finally, Icelandic case is determined at the level of the verb phrase, and Icelandic has relatively rigid word order. Of course, these correlations are not perfect; case in German is even more ‘lexical’ than in Icelandic (in the sense that there are fewer alternations, see below), but has less rigid word order; and many non-configurational languages show a case system less exotic than that of Kayardild.

2. Case in Icelandic

Icelandic has morphologically distinct expressions of nominative, accusative, dative, and genitive case. In (5a), this is illustrated with a ditransitive construction showing the typical nominative subject, dative indirect object, accusative direct object, and genitive possessor. In (5b), the typical alternation of directional accusative and locational dative is illustrated with the preposition *í* ‘in.’

- (5) a. Haraldur sendi frænku forsetans ástarbréf.
Harald.NOM sent cousin.DAT the.president.GEN love.letters.ACC
 ‘Harald sent the president’s cousin love letters’
- b. Frænkan setti bréfin í ruslafötuna í húsinu
the.cousin.NOM put the.letters.ACC in the.bin.ACC in the.house.DAT
 ‘The cousin put the letters in the wastebasket in the house’

Under passive, the external argument is removed, and the accusative argument changes to nominative. Neuter nouns like *bréf* ‘letter’ show no inflectional distinction between nominative and accusative, but the plural agreement on the finite verb in these examples shows that it is nominative, as finite verbs only agree with nominative arguments in Icelandic.

- (6) a. Frænku forsetans voru send ástarbréf.
cousin.DAT president.GEN were.3PL send love.letters.NOM
 ‘The president’s cousin was sent love letters’
- b. Bréfin voru sett í bréfaörfuna í húsinu.
the.letters.NOM were.3PL put in the.bin.ACC in the.house.DAT
 ‘The letters were put in the wastebasket in the house’

Thus far Icelandic case is very like that of German, though one difference can already be noted. Note that the dative has moved to initial position in (6a) (though the nominative could alternatively appear there). Zaenen et al.

(1985) show through an extensive battery of tests that datives may function as subjects in Icelandic. More differences are discussed below.

2.1. *Non-nominative subjects, non-accusative objects*

Icelandic is famous in linguistic circles for productively having non-nominative subjects, illustrated in (7a) (exx. from Svavarsdóttir and Jónsdóttir (1993:141)); certain predicates require (or tend to appear with) dative subjects, others accusative, and a few genitive. Dative subjects in particular are fairly common; Barðdal (2001a:89) found that about 4% of subject tokens in a written corpus were dative, and about 6% in a spoken corpus.² I give examples here only for dative (7a-b) and accusative (7c-d), showing both transitive (7a, c) and intransitive (7b, d) variants.

- (7) a. Mér batnaði kvefið.
me.DAT recovered the.cold.NOM
 ‘I recovered from the cold’
- b. Krökkunum var heitt í sokkunum.
the.boys.DAT was hot in the.socks.DAT
 ‘The boys were hot in their socks’
- c. Mig vantar nýja skó.
me.ACC needs new shoes.ACC
 ‘I need new shoes’
- b. Daginn lengir.
the.day.ACC lengthens
 ‘The day grows longer’

To a far greater extent than German, Icelandic employs non-accusative objects.³ An example of a nominative object is seen in (7a). Dative and genitive objects are given in (8) (from Thráinsson (1979:19)).

- (8) a. Böðullinn frestaði aftökunni.
the.executioner.NOM postponed the.execution.DAT
 ‘The executioner postponed the execution’
- b. Ég vænti þín
I.NOM miss you.GEN
 ‘‘I miss you’

² Figures for accusative subjects were around 1% in both corpora, genitives just 0.3% in the written corpus and absent from the spoken corpus.

³ Barðdal (2001a:89) reports that in a corpus, the breakdown of tokens of objects was as follows: 67% accusative, 25.2% dative, 5.8% nominative, and 2% genitive.

- c. Henni höfðu leiðst þeir.
her.DAT had.PL bored they.NOM
 ‘She had been bored by them’

Various other combinations of cases are possible; see Yip et al. (1987) for discussion. Previous accounts of Icelandic case assignment have generally made use of the distinction between structural case and lexical or ‘inherent’ case. Inherent case is assigned along with a thematic role by a predicate to a specially-marked argument. Structural case is assigned in a specific structural configuration without regard to θ -role. If the dative is always inherent, then the assignment of the other cases can proceed structurally by marking the highest argument nominative and the next accusative. Crucially, the identity of the arguments marked dative is left up to lexical stipulation, though the existence of patterns is usually noted, without attempt at formalization. This is the approach of Andrews (1982),⁴ Zaenen and Maling (1984),⁵ Zaenen et al. (1985),⁶ Yip et al. (1987),⁷ and Sigurðsson (1989)⁸; see also Thráinsson (1979).⁹

⁴ Andrews (1982:464): “These examples show that while there is a good deal of systematicity to case selection, there is no invariant meaning that one can assign each case ... Rather, case selection is basically lexical and idiosyncratic, but subject to regularities keyed to the semantics of the matrix verb.”

⁵ Zaenen and Maling (1984:325, p. 146 in 1990 reprint): “It is preferable, of course, to state more interesting generalizations about the relation between θ -roles and the specific quirky cases ... but the Icelandic system may well be in flux in this respect, and synchronically there may well not be any interesting generalizations to capture.”

⁶ Zaenen, Maling, and Thráinsson (1985:462): “Idiosyncratic or lexical case marking is an idiosyncratic property of a lexical item, assigned by a verb, preposition, or adjective. We assume that idiosyncratic case is associated with a particular theta role, and that this case marking is assigned before thematic roles are associated with grammatical functions”

⁷ Yip, Maling, and Jackendoff (1987) adopt the idiosyncratic lexical case suggested in the other works cited here, but restrict it slightly by allowing each verb to assign at most one; however, they allow a verb with a single idiosyncratic case to also have a ‘thematic’ case, e.g. dative on a goal argument, citing unpublished work by Holmberg and postulating “a regular lexical rule which optionally associates D[AT] with goal arguments” (p. 229).

⁸ Sigurðsson (1989:103): “...the dative and the genitive are always either idiosyncratic (fixed but unpredictable) or thematic (semantically predictable).” See also Sigurðsson (2001:106): “...the correlation [between morphological case and semantic ‘case’ in roughly Fillmore’s sense] is much more opaque and arbitrary than commonly believed.”

⁹ Thráinsson (1979:50-51, n. 9): “It is possible to argue that accusative is the “normal” or “unmarked” case for objects, and that dative and genitive objects are idiosyncratic.” ... “One could then propose that verbs governing idiosyncratic object cases are so marked in the lexicon (by features or whatever).” ... “In Modern Icelandic there is a lot of idiosyncrasy in the case government of verbs, as evidenced by the fact that synonymous verbs may govern different cases (cf. e.g. *drepa* ‘kill’+acc. vs. *bana* ‘kill’+dat.). Some of these synchronic peculiarities

Van Valin (1991) has a slightly different take on the matter. Rather than specifying some verbs as dative-taking, he specifies them as not taking a ‘macrorole,’ distinguishing objects with macroroles from objects without them. He then lets dative be assigned as a default case to arguments which have not been assigned the macrorole cases nominative and accusative.¹⁰ Since actor and undergoer are canonically agent and patient respectively, the account would seem to have some predictive advantage over the others; however, the dative arguments must, in his system, count as NP arguments on the theta-hierarchy, as they compete with other arguments for promotion to subject position (e.g. under passive), and therefore nothing in the system actually limits what arguments might be marked as non-macrorole-bearing. The proposal of Vainikka (1985) is similar in essential respects.

Thus, the problem I am concerned with here is not addressed in any of those works. Namely, those works are willing to stipulate the marking of dative arguments lexically, on a verb-by-verb basis; to a certain extent, this is a matter of focus; they allow some other component to determine the marking of the verbs.¹¹ However, it does have an effect on the analysis, in legitimizing the separation of the dative from the accusative in the system. I explain in the next subsection why it is impossible to believe that Icelandic dative is truly idiosyncratic.

2.2. *The rise of the dative*

Dative is extensively used in Icelandic; Maling (1998) provides a non-exhaustive list of somewhere on the order of eight hundred dative-taking verbs (compare about 140 for German, Maling (2001)). Furthermore, it is well-documented by now that the dative in Icelandic is on the rise. In terms of token frequency in a corpus, Barðdal (2001a:180-181) reports

may have coherent historical explanations ..., but from a synchronic point of view it seem clear that we must accept quite a bit of arbitrary case marking.”

¹⁰ Van Valin (1991:179): “These verbs are irregular, but not with respect to case assignment. Rather, their irregularity lies in their transitivity (macrorole number): they each take one less macrorole than would be expected for a verb with their argument number, ... Transitivity is an area of notorious lexical idiosyncrasy, and every theory, including LFG and RRG, simply stipulates the transitivity of exceptional verbs in its lexical entry.”

¹¹ Cf. the first note in the 1990 reprint of Zaenen and Maling (1984): “We want to emphasize that our use of the term idiosyncratic case in this article is not meant to preclude that such case marking may sometimes, or even usually, be predictable from the thematic role a given argument bears; for example, Goals are often marked dative. ... The syntactic behavior of such NPs is to the best of our knowledge the same whether the case is thematically predictable or truly idiosyncratic.”

that dative has increased from 23% of all noun phrases in Old Icelandic to 30% in Modern Icelandic, mainly in an increase of dative-taking prepositional phrases (an increase from 53% to 58% of all prepositional phrases) and dative objects (from 22% to 25% of all objects). This gives a rough indication that instances of the dative cannot be seen as a frozen holdover from a previous era; the primary data for first-language learners may be assumed to be robust.

In fact, prescriptivists have noticed that certain Experiencer verbs which previously took accusative, genitive, or nominative subjects have begun to appear with the dative, and they have taken measures to combat this tendency, calling it ‘Dative Sickness’ (*þágufallssýki*; documented in Svavarsdóttir (1982) and Halldórsson (1982); see Smith (1994), Eythórsson (2000), Jónsson (2001), and references there for recent discussion).

The phenomenon itself, the prescriptivist reaction to it, and the ensuing confusion are all beautifully illustrated by Svavarsdóttir (1982:19) with a dialog from a work by Pétur Gunnarsson.

- (9) B Mamma, mamma, mér hlakkar svo til þegar...
mommy mommy me.DAT looks.forward so to when
 H Mig hlakkar, leiðrétti Haraldur.
me.ACC looks.forward corrected Harald
 B Mig hlakkar svo til þegar...
me.ACC looks.forward so to when
 Á. Ég hlakka til, áréttaði Ásta.
I.NOM look.forward to emphasized Ásta
 B Ég hlakka svo til þegar...
I.NOM look.forward so to when
 H Ertu eitthvað klikkuð kona, hrópaði Haraldur.
*are.you something cracked woman yelled Harald*¹²

The spread of dative to contexts where it was not previously observed proves that speakers do not simply learn where datives are used, verb by verb, but intuit a system (cf. the works cited above for evidence that Dative Sickness only affects experiencer subjects). This is unsurprising in

¹² Mommy, mommy, me.DAT is so looking forward to when...
 Me.ACC is looking forward, corrected Harald.
 Me.ACC is so looking forward to when...
 I am looking forward to, emphasized Ásta.
 I am looking so forward to when...
 Are you completely cracked, woman? yelled Harald.

light of the richness of the primary data available. Barðdal (2000) shows that both adult and child speakers are willing to assume that nonce verbs take dative subjects, if their meaning resembles that of known dative-subject verbs.

The evidence from neologisms is even more striking. In a study of loan words and new coinages, Barðdal (2001a:123-124) finds that about a quarter of new transitive verbs take dative objects (168 of 696 different verbs). Many of these verbs are borrowed from languages like English and Danish which have no morphological dative case. This quashes any remaining illusion that the assignment of dative can be listed verb by verb as a lexical property of a stem.

The incontrovertable significance of the spread of the dative and its use with neologisms and nonce verbs is that there must be some system. Regularities have, of course, been noted; the most thorough efforts have been those of Barðdal (2001a) and Maling (2001).

Barðdal, more than anyone, has established and documented the productivity of the dative case. She provides extensive statistics on tokens in corpora, organized by grammatical function and by thematic role (using a list of 19 thematic roles). She emphasizes the heterogeneity of the dative in being able to express any role except that of Agent.¹³ Barðdal analyzes the productivity of the dative (1999, 2001:117-142) in terms of similarity of meaning: if a verb (e.g. a new loan) has a meaning similar to that of another verb, it is likely to gain the case pattern associated with it. The predictive power of this proposal is compromised by three factors. First, there is no formal characterization of the meaning of a verb; rather, an intuitive approach is taken. Second, there is no constraint on what verbs are likely to provide models for new verbs entering the language (e.g. ones with regular morphology, frequently occurring ones, classes with a large number of members, etc.). Third, Barðdal allows for verbs to retain features from the language they are borrowed from, thus avoiding the similarity principle. Nevertheless, I accept the main point of Barðdal's proposal here, and to a certain extent this paper can be seen as an attempt to make more precise the elements of meaning which are relevant to the adoption of one case pattern rather than another.

Maling (2001) organizes a long list of dative object-taking verbs according to semantic classes, including about nine main classes plus

¹³ Though this depends on one's definition of Agent; a definition that preserves the generalization in the face of data like *Henni mæltist vel* 'her.DAT spoke.MIDDLE well' (meaning, 'She delivered a good speech') restricts the range of the label 'Agent' substantially (as in e.g. Andrews 1982 and Jónsson 2001). See Nygaard (1966:99) for possible dative Agents in Old Norse passives.

several minor ones. I draw substantially on them in this work, attempting to contribute to their characterization in formal terms. Her class IA, ditransitives with recipients, is treated here in §3.1, her class IIA, ‘verbs of helping,’ in §3.2, her class IIB, ‘Experiencers’ is partly treated in §3.3, her class IID, ‘Verbs whose objects undergo movement’ is treated here in §4 and §5.

2.3. *Burzio’s Generalization and v*

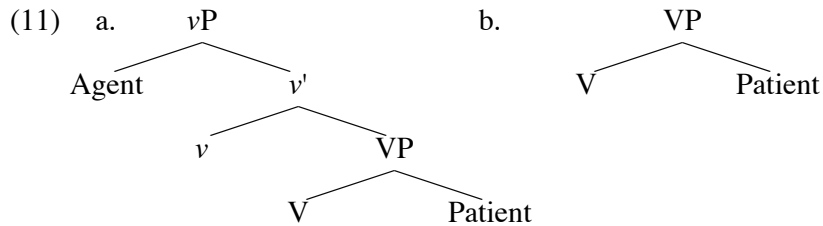
Despite various attempts to reduce Burzio’s Generalization (Burzio (1986)) to other factors, there remains something unexplained about the tendency for accusative case to be dependent on the presence of a higher θ -role. In (10a), the two-place verb *leave* assigns case; in (10b), a resultative is formed on the one-place verb *fall*; and (10c) shows that a transitive resultative is ill-formed (cf. also Burzio (2000:219)).

- (10) a. The leaves left the ground covered.
 b. The leaves fell thick on the ground.
 c. * The leaves fell the ground covered.

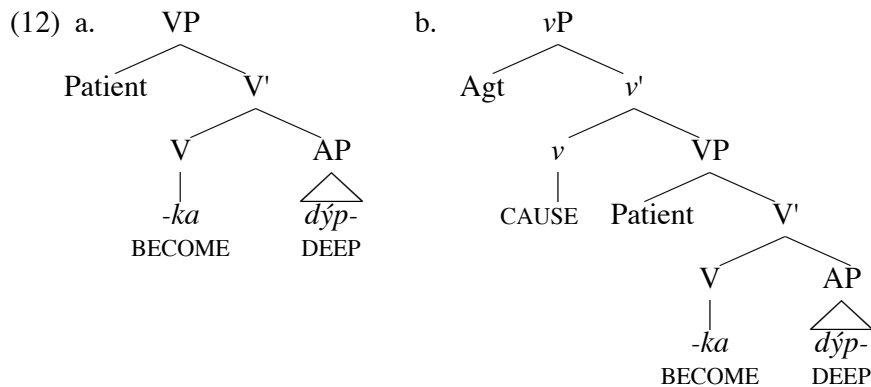
As Haider (2000a) notes, an external θ -role is not strictly necessary for accusative case, but it does seem that a *higher* θ -role is generally implied; thus there are accusative-assigning experiencer verbs (as in Faroese, Lockwood (1977)) and passives (as in Ukrainian, Franks (1995, ch. 8)) but accusative-assigning ‘unaccusatives’ do not seem to be found (I follow Haider (2001) in taking apparent counterexamples in Icelandic to be covertly transitive).

Accusative case and the external θ -role are neatly (though stipulatively) linked by the hypothesis that a head variously called voice (Kratzer (1994), Kratzer (1996)), V (Travis (1992), Hale and Keyser (1993a)), Event (Harley (1995)), or *v* (Chomsky (1995), Arad (1998), Marantz (2001)) is responsible both for the introduction of an external argument and the checking or licensing of accusative case (note that not all of the aforementioned authors explicitly assume any connection to case; but all motivate a separate projection for the Agent/Actor/Cause argument).

I propose a novel version of the *v*-as-case-assigner hypothesis here. As the works cited, transitive verb phrases are assumed to expand as in (11a) (indicating an intermediate bar level for visual convenience, without attaching theoretical significance to it), while unaccusatives can be assumed to expand as in (11b).



The head v in (11a) makes the difference between monovalent and bivalent *break* or *roll*. Unaccusatives may be complex, of course; for example, the inchoative deadjectival verb *dýpka* ‘deepen’ discussed in Sigurðsson (1989) and Svenonius (2001) would have the structure in (12a), and its causative variant would have the structure in (12b).



There is a distinction, crucial to the account which follows, between the heads marked v and V and non-verbal projections like that of the (adjectival) root in the AP in (11). I will assume that verbal heads (those marked v and V) provide SUBEVENT VARIABLES which need to be identified in a particular way (discussed immediately below), and that non-verbal heads do not. If prepositional case is to be unified with the case theory proposed here, then p and P must also provide such subevent variables.

Assume a primitive notion of event, with at most one initiation, one telos, and so on. An event consists of one or more subevents, one introduced by each of the verbal heads in (11), and each subevent involves at most two participants (e.g. a causing subevent links a causer with a caused, a process subevent may link a subject of process with a resultant situation, etc.; cf. Ramchand (2002)). Assume further that each subevent must be IDENTIFIED relative to the event of which it is a part. Identification is a kind of temporal linking, which locates the subevents with respect to

the larger event, which itself is eventually bound by a temporal operator. Subevents may be identified by OVERLAP; two subevents may overlap completely, in which case they occur at the same time, or the end of one may overlap with the beginning of the other, and so on. I assume that the kind of identification that holds between v and V in (11a) is determined by properties of both heads; in general, v is a function on V , and if the two have similar event structure, then whether v overlaps completely with V is determined by properties of v . If V has a different event structure, then overlap may be impossible, for example if v is eventive (e.g. CAUSE) and V is stative (e.g. BE). See for example Krifka (1998) for a formalism in which the temporal overlap (or homomorphism, cf. Krifka (1999)) of events is stated.

It has been documented (e.g. Harley (1995), Arad (1998), Davis and Demirdache (2000)) that languages vary according to their lexical inventories of v ; English, it seems, has a particularly general v which can be used to introduce arguments with only the most tenuous thematic relationship to an event, as illustrated in (13) (examples based on Hawkins (1986, ch. 4)).

- (13) a. My guitar broke a string in the middle of a song.
 b. Fifty cents will buy a cup of coffee.
 c. The book sold 10,000 copies.

Unlike English, Icelandic does not have a v with these properties, as suggested by the examples in (14).¹⁴

- (14) a. * Gítarinn minn sleit streng í miðju lagi.
the.guitar.NOM my broke string.ACC in middle song.DAT
 b. * Femmtiu krónur geta keypt einn bolla af kaffi.
fifty crowns.NOM can bought one cup.ACC of coffee.DAT
 c. * Bókin seldi í 10 000 eintökum.
the.book.NOM sold in 10,000 copies.DAT

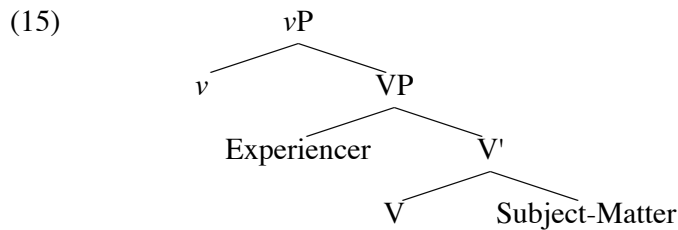
However, Icelandic does have a v which licenses experiencer subjects (as in (7a-b), (8c), and (9), which might be represented as in (15) (adopting

¹⁴ Hawkins (1986, ch. 4) points out this contrast between English and German, linking it to the case system of German. However, Norwegian is like German and Icelandic in its restrictions on non-thematic subjects, as the translations here of the sentences in (12) demonstrate, despite having an English-like case system.

- i. * Min gitar slet en streng midt i en sang.
 ii. * Fem kroner kan kjøpe en kopp kaffe.
 iii. * Boka solgte 10 000 eksemplarer.

I assume that English has a v that the other languages lack.

Sigurðsson's (1989) analysis of quirky subjects as VP-internal, and Pesetsky's (1995, ch. 3) label for the object).



Rather than assuming that v or V assigns case in (11a) (cf. Chomsky (1999)), I assume that case is made available by the combination of the two. I assume that the two parts of the verb introduce different subevents, which can be subject to independent entailments (cf. Hale and Keyser (1993a)). I argue that accusative case is only licensed when a particular relationship obtains between v and V . I characterize this relationship in terms of an aspectual notion, that of temporal overlap.

Now the distribution of accusative case can be characterized as follows.

- (16) In a syntactic context α representing an event x composed of subevents y and z , accusative case is licensed in α iff the temporal extension of y is identical to the temporal extension of z .

This principle was first proposed in a slightly different form in Svenonius (2001). There I tried to connect it to the following generalization (Arad (1998:73)).

- (17) All measurers are (universally) marked with accusative case.

A 'Measure' of an event can be characterized as an argument whose physical extension is mapped onto the temporal extension of that event (Krifka (1992); a typical incremental theme entails both a mapping of the event to the object and a mapping of the object to the event). In order for an event to be mapped exhaustively onto an argument, the two subevents comprising it must be identified as in (16). Thus (16) seems to be a precondition for mapping to objects. In fact, the operation of mapping that identifies the two subevents in (16) (cf. Kratzer's (1996) event identification) might be seen as the same operation as the mapping that holds for measures.

The principle in (16) entails that accusative is available when the subevents are identified temporally. This paper is partly an exploration of the extent to which (16) (and (18) below) has predictive power. Ideally, it

is observed in all cases of accusative assignment. This would make it possible to state the distribution of the dative as follows.

- (18) In a syntactic context α representing an event x composed of subevents y and z , dative case is licensed in α iff the temporal extension of y is not identical to the temporal extension of z .

These conditions are meant to imply that if there is no ν , as in (11b), then neither dative nor accusative case will be available. When both ν and V are present, the assignment of dative versus accusative case will depend on properties of both. Thus, passive in Icelandic can be assumed to be a ν head which does not introduce an external argument nor induce a total overlap of the ν subevent with the V subevent. As a result, accusative case will not be licensed, but dative will be, as was observed in (5-6). ECM verbs, being stative verbs, will naturally create an environment for accusative case; interestingly, this does not override the dative of a dative subject verb (quirky dative subjects remain dative under ECM; see Sigurðsson 1989, 2000 for details). This follows naturally if the case environment for a dative subject under ECM consists of four verbal heads: the ν and V of the upper clause and the ν and V of the lower clause. Since total overlap fails in the lower clause, it fails in the larger set of four, and (18) applies.

If (16) and (18) are significant principles for the assignment of dative and accusative in Icelandic, then learners of Icelandic will be able to use case as an indication of the internal temporal structure—the Aktionsart—of a given verb. They will also be able to decide on the basis of their conceptualization of an event what case pattern to assign to a novel verb describing that event.

It would surely be hubris to think that the torturous shoals of Icelandic case, on which so many theories have foundered, could be reduced to such banal principles. It is certainly easy for a learner to acquire more difficult rules than these, and to acquire lexical stipulations. The fact that German or Russian dative direct objects are not on the rise, but seem to be limited to a set number of verbs, suggest that at least there, dative-taking verbs might simply be listed as such. There are at any rate hundreds of Icelandic verbs for which I cannot demonstrate why they should pattern the way they do. Therefore it is possible that certain verbs should simply be marked with a diacritic [DAT] as on the accounts discussed in §2.1. At the very least, prescriptivism might lead to such a situation for certain verbs. Even more likely is that there are many discrete contexts for the dative (as Barðdal (2001a), Maling (2001), and Sigurðsson (2001) argue), rather than being an ‘elsewhere’ case as I have characterized it above (cf. also Van Valin’s and Vainikka’s accounts).

Nevertheless, I show here that the principles in (16) and (18) account for a range of Icelandic case-assignment patterns, and leave it to others to improve on this. There is method to this madness. It may seem that for a learner to remember that, for example, ‘help’ takes a dative object, while ‘assist’ takes an accusative object is a simple task for the memory, like the fact that one starts with a consonant and the other with a vowel. But given that there is a system, as I argued in §2.2, the system must be learnable. An arbitrarily assigned case diacritic on a verb is not simply there to be memorized, it is a distraction from the pattern, a false clue. Therefore, since the pattern clearly is learned, there cannot be many such false clues. If my characterization above is correct, then the generalization has to do with the internal structure of the event, and there is little surface data which will contradict it. This makes it even less likely that a learner will learn that a given verb is an exception to the rule. Thus I expect very few exceptions, and I expect exceptions to be unstable, as is attested by the ‘Dative Sickness’ phenomenon.

3. Experiencer, Benefactive, Recipient, Goal

A common claim is that dative correlates with experiencers in Icelandic. The fact is, as Smith (1994) stresses, experiencer subjects tend to be nominative, and experiencer objects tend to be accusative.

- (19) a. *gleðja* ACC ‘delight’
 b. *hræða* ACC ‘frighten, intimidate’
 c. *fæla* ACC ‘terrify’
 d. *ónáða* ACC ‘disturb, bother, trouble’

There are a few dative-taking experiencer object verbs, but not enough to lead learners to generalizations.¹⁵

However, if one examines dative subjects, there is a clear tendency for them to be experiencers. I will not deal with experiencer subjects, beyond the tree suggested in (15); here I focus on dative objects, where the

¹⁵ Potential examples are *skaprauna* DAT ‘irritate,’ *stríða* DAT ‘tease, needle,’ though these may not qualify; more convincingly Barðdal (2001b) lists six verbs meaning alternatively ‘please, suit’ or ‘like’ (*henta, hæfa, passa, sóma, sæma, þóknast*) which can alternatively take their dative experiencer argument as subject or object (plus many more alternating verbs which are complex, e.g. *falla vel* ‘like/please,’ *sæknast vel* ‘go well/do well,’ *liggja e-ð á hjarta* ‘be anxious/make anxious’). Certainly these interesting verbs tell us something (see Platzack 1999 for a Minimalist analysis), but their alternating nature presumably makes them poor triggers for a learner trying to figure out the Icelandic case system.

number of experiencers is fairly negligible. There are many dative object-taking verbs, and dative objects are very high in frequency, as noted above, and are therefore likely to be important in the learner's establishment of the generalization for their distribution.

In this section I examine datives which are typically characterized as goals, recipients, or beneficiaries.

3.1. *Ditransitives*

As Yip et al. (1987) (citing Holmberg) note, goals in Icelandic are quite commonly dative. Adopting the tripartite analysis of ditransitive verbs of Mulder (1992 ch. 3), Marantz (1993), or Pesetsky (1995), ditransitives have a structure like that in (20) (see Collins and Thráinsson (1996) on the compatibility of this structure specifically with their analysis of Icelandic double object constructions); I borrow the label RP from Ramchand (2002), where R is mnemonic for 'result'; this projection is assumed to be verbal in the sense used in §2.3, namely that it introduces a subevent.

(20) [_{VP} Agent CAUSE [_{VP} Goal BE [_{RP} WITH Theme]]]

The structure in (20) is consistent with the view that each head introduces at most one syntactic argument (cf. Mulder (1992)). By hypothesis, the middle and the lowest parts of the structure in (20) are equivalent to the abstract predicate HAVE postulated in bipartite analyses of ditransitive constructions (i.e. as x CAUSE y HAVE z, as in e.g. Pinker (1989)); in fact, it is difficult to show that the two lowest parts of the structure in (20) are distinct; I take this to be because the subevents they introduce are temporally identical, i.e. accusative is licensed in VP in (20), by principle (16). Recall from §2.3 that I assume that subevents in verb phrases in general require temporal identification, and that identification is determined by properties of the verbal heads; the subevent variable in R is mapped onto the one in V, and this leads to them having the same temporal extension.

Observationally, dative is available in vP in (20), and according to (18) this must be because the causing subevent and the having subevent are not temporally identical. Given that a very general principle drives subevent identification, this must be because the kind of causation that these verbs imply cannot be unified with the state of possession expressed by the VP. Possibly this is because the causation implied is an activity, while the possession implied by the VP is a state.

The event identification relations are indicated in (21), with labels showing what cases are licensed in the two domains.

(21) [_{VP} Agent CAUSE [_{VP} Goal BE [_{RP} WITH Theme]]]
 └─ [DAT] ─┘ └─ [ACC] ─┘

Now, it is clear that case must be prevented from associating with the higher of two arguments in a syntactic domain, otherwise the agent could receive dative and the goal accusative. At this point, the theory does not force a choice of mechanisms for avoiding this; one simple way to ensure it is to assume that case is checked as quickly as possible, so that when BE is merged with RP, the Theme will have its case checked before the Goal is merged.

I will not attempt a more sophisticated analysis of the Aktionsart of the ditransitive. Instead, I will assume that BE and WITH are essentially stative, and can therefore be composed in a way that satisfies (16). This is consistent with the fact that stative verbs like ‘love,’ ‘see,’ and ‘know’ in Icelandic take accusative case. I will also assume that CAUSE is essentially eventive, in a way that foils the unification of the causing event with the having state, leading to dative under (18). This will be true of the large class of dative-accusative ditransitive verbs, including *gefa* ‘give’ illustrated here, but also, for example, *bjóða* ‘offer,’ *lána* ‘loan,’ *segja* ‘say,’ and so on. Verbs with accusative before dative, such as *leyna* ‘conceal,’ *ræna* ‘rob,’ *svipta* ‘deprive,’ and *verja* ‘protect,’ all imply an effect of an action on the accusative (e.g. deprive somebody-ACC [of] something-DAT, protect somebody-ACC [from] something-DAT, etc.). Conceptually, if the accusative is regarded as centrally affected by the causing event, it seems plausible to map *v* completely onto V. The involvement of the dative in the event is clearly less direct, as the accusative is being deprived of it; thus I find it plausible that V does not completely overlap R. Verbs with two dative arguments (and a nominative subject) such as *lofa* ‘promise,’ *skila* ‘return,’ and *hóta* ‘threaten’ involve two pairs of subevents neither of which overlap completely, according to the prediction of the analysis. Finally, there is one accusative-accusative verb, *kosta* ‘cost,’ for which the three subevents, I surmise are seen as completely overlapping. I extend this analysis in the next subsections.

3.2. Help verbs

Many languages show dative case on the objects of verbs which commonly appear with human objects, such as those with meanings like ‘help,’ ‘obey,’ ‘trust,’ ‘rule,’ and so on. Some examples are shown for Icelandic in (22).

- (22) a. *hjálpa* DAT ‘help’
 b. *trúa* DAT ‘trust, have faith in’
 c. *þakka* DAT ‘thank’
 d. *ógna* DAT ‘threaten’
 e. *sinna* DAT ‘care for’
 f. *stjórna* DAT ‘rule, govern’
 g. *hlýða* DAT ‘obey’

For convenience I will call this class, which includes many traditionally analyzed as having a Recipient argument, *help* verbs. It is well-known that Indo-European languages tend to have oblique cases on *help* verbs, but the phenomenon is more widespread: Arad (1998) shows that Hebrew uses prepositional complements for many verbs of this kind, and Chung (1978) shows that such verbs occur with dative in many Austronesian languages. An historical factor may be that accusative is avoided on human objects (they don’t make good ‘Measures’; cf. (17) above). However, synchronically, the generalization does not refer to animacy or humanness, since they may take inanimate direct objects, and when they do, they remain obligatorily dative.

- (23) a. *Vaxtalækkun* *hjálpar* *efnahaginum*/**efnahaginn*
interest.rate.cut.NOM helps the.economy.DAT/the.economy.ACC
 ‘An interest rate cut helps the economy’
 b. *Þessi höfn getur sinnt öllum skipaflotunum*/**alla skipaflotana*
this port can tended all the.fleets.DAT/all the.fleets.ACC
 ‘This port can tend all the fleets’

Thus these verbs have something in their lexical entry which forces dative case.

A solution compatible with the general principles outlined in §2 would be to follow the intuition that with *help* verbs, the internal argument has a high degree of potential control over the second subevent, interfering with the ability of the causing subevent to completely control the subordinate subevent (cf. Blume (1998) for some discussion). However, this introduces thematic notions of agency and volition (perhaps to be characterized in terms of Talmy’s (2000) Force Dynamics), whereas the solution sketched below is stated purely in terms of the aspectual notions of temporal overlap of subevents.

The simplest purely aspectual solution, given the discussion in §3.1, is that the lexical conceptual representation for *help* verbs includes HAVE; in

other words, they mean something like x CAUSE y to HAVE ‘help.’ This is diagrammed as in (24).

(24) [_{VP} Agent CAUSE [_{VP} Recip BE [_{RP} WITH ‘help’]]]
 └─ [DAT] ─┘ └─ [ACC] ─┘

The representation in (24) makes it appear that accusative case should be available with *help* verbs. Interestingly, *help* verbs often permit a controlled infinitive clause as a second argument. Compare dative-taking *hjálpa* ‘help’ in (25a) with accusative-taking *aðstoða* ‘assist’ in (25b), which requires a preposition (*við* ‘with’) in order to license an infinitival clause.

- (25) a. Ég hjálpaði blinda manningum að fara yfir götuna.
 I helped blind the.man.DAT to go over the.street
 ‘I helped the blind man to cross the street’
- b. Ég aðstoðaði blinda manninn við að fara yfir götuna.
 I assisted blind the.man.ACC with to go over the.street
 ‘I assisted the blind man in crossing the street’

However, an accusative DP would not be allowed after the dative in (25a), for example in a resultative construction (**I helped him his shoes off; *Ég hjálpaði honum skóna af*), so it seems better to assume a simpler representation for ‘help,’ one in which WITH is not seen as introducing an argument and is not seen as contributing a subevent. I represent this schematically as in (26).

(26) [_{VP} Agent CAUSE [_{VP} Recip BE [_{PP} WITH ‘help’]]]
 └─ [DAT] ─┘

This is functionally equivalent, for present purposes, to the following.

(27) [_{VP} Agent CAUSE [_{VP} Recip HAVE ‘help’]]
 └─ [DAT] ─┘

That the two subevents are not temporally identical might be suggested by Jackendoff’s (1990:134) observation that *help* does not necessarily imply completion of an event, illustrating this with the contrast in (28).

- (28) a. Harry helped Sam wash the dishes (but they didn’t finish).
 b. Harry assisted Sam in washing the dishes (??but they still didn’t finish).

3.3. Beneficiary alternations

There is a class of verbs discussed by Barðdal (1993) (cf. also Sigurðsson (1989:252)) which ordinarily occur with accusative, but which may appear with dative objects when the object is human or a familiar animal such as a cat. These verbs, when appearing with the dative, typically imply that the dative object benefitted from the event, and for this reason the object may be characterized as a Beneficiary.¹⁶

- | | | |
|---------|---|--|
| (29) a. | Kristín þurrkaði handklæðið.
<i>Kristin dried the.towel.ACC</i>
'Kristin dried the towel' | Kristín þurrkaði barninu.
<i>Kristin dried the.child.DAT</i>
'Kristin dried the child' |
| b. | Kristín þvoði handklæðið.
<i>Kristin washed the.towel.ACC</i>
'Kristin washed the towel' | Kristín þvoði barninu.
<i>Kristin washed the.child.DAT</i>
'Kristin washed the child' |
| c. | Kristín greiddi hárið.
<i>Kristin combed the.hair.ACC</i>
'Kristin combed her hair' | Kristín greiddi Jóni.
<i>Kristin combed Jon.DAT</i>
'Kristin combed Jon's hair' |

With these verbs, accusative is acceptable with human objects, but dative is impossible with inanimate objects.

Unlike the *help* verbs, these verbs are not analyzed basically as dative-taking; they admit of some flexibility. Possibly, they have a basic structure like that in (30). Since CAUSE and BECOME are both eventive, the two events can be identified, and accusative is licensed.

- (30) [_{VP} Agent CAUSE [_{VP} Theme BECOME 'dry/clean/combed']]
 └── [ACC] ───┘

Notice that these predicates are typical 'incremental theme' predicates, and that the direct object will be mapped onto the event. From the structure in (30), one could imagine an alternative like that in (31), given the existence of the HAVE predicate illustrated in (27).

- (31) [_{VP} Agent CAUSE [_{VP} Benef HAVE 'dry/clean/combed']]
 └── [DAT] ───┘

Recall that the difference in case follows automatically from the mismatch in aspectual qualities of the two predicates.

Examples like those in (32) are perhaps even more conducive to such an analysis, given the existence of expressions like *give x a stroke* or *give*

¹⁶ Halldór Sigurðsson, personal communication. The examples are taken from Barðdal (1993), and are also discussed briefly in Barðdal (2001a:146-149).

x a scratch (though less free in Icelandic: ?*Kristín gaf kettinum stroku*) ((32a) is from Barðdal (1993), (32b) from Maling (2001)).

- (32) a. Kristín strauk handlegginn á sér. Kristín strauk kettinum.
Kristin stroked the.arm.ACC on RFX Kristin stroked the.cat.DAT
 ‘Kristin stroked her arm’ ‘Kristin stroked the cat’
- b. Kötturinn klóraði mig. Ég klóraði kettinum.
the.cat scratched me.ACC I scratched the.cat.DAT
 ‘The cat scratched me’ ‘I scratched the cat’

In this section, I have adjusted the label on the dative argument in the lexical decomposition diagrams according to the tradition for the respective lexical items that replace them. However, nothing whatsoever hinges on those labels. The meanings of the different verbs which replace the components CAUSE–HAVE and so on may include information that lends to a characterization of one argument as a goal and another as a beneficiary, but the labels themselves are irrelevant to the rules of case assignment.

4. Movement

Einarsson (1945:108) notes that ‘verbs denoting quick movement’ tend to take the dative in Icelandic (this phenomenon is already observed in Old Norse, an extension of the instrumental; cf. Nygaard (1966:108-109). The proper generalization, however, does not involve the rapidity of the motion. Rather, I will argue, the question is to what extent the motion is accompanied by an Agent, a feature which I connect to the connection between the two subevents as sketched in §2. Verbs of ballistic motion, such those in (33a-c), but also verbs denoting movement that typically does not involve much direction on the part of the agent, such as those in (33d-e), typically take dative objects.

- (33) a. *kasta* DAT ‘throw, fling, hurl’
 b. *þeyta* DAT ‘fling, blow’
 c. *henda* DAT ‘throw away, discard’
 d. *velta tunnu* ‘roll [a] barrel.DAT’
 e. *stökkva vatni* ‘sprinkle water.DAT’

As above, the dative case here implies that the event introduced by *v* and the event introduced by *V* are only loosely connected. In these particular cases, this is because the initiating event which causes something to be

thrown or to roll or sprinkle may end before the movement of the object ends. Contrast these with some typical accusative-taking verbs of caused motion.

- (34) a. *draga* ACC ‘pull, drag, draw’
 b. *flytja* ACC ‘move, transport, carry’
 c. *færa* ACC ‘move’; ‘bring’
 d. *hækka* ACC ‘raise’
 e. *lækka* ACC ‘lower’

Each of the verbs in (34) either denotes accompanied motion or directed motion. This is quite typical of accusative-taking verbs of caused motion.

Some verbs enter into an alternation depending on whether they are interpreted as dative-taking verbs of directed motion or as accusative-taking affected-object verbs (these examples from Maling (2001)).

- (35) a. *skjóta fuglinn* ‘shoot the bird’ (ACC)
 b. *skjóta kúlunni* ‘shoot the bullet’ (DAT)
 c. *skutla hvalinn* ‘harpoon the whale’ (ACC)
 d. *skutla skutlinum* ‘throw the harpoon’ (DAT)

The predicates in (33-34) all mean roughly something like CAUSE to GO, as do the ones in (35b) and (35d). The dative examples are systematically different in that the initiating subevent (CAUSE) does not necessarily last for the duration of the movement subevent (GO); for the accusatives, at least canonically, the initiating subevent and the movement subevent overlap completely.

Krifka (1999) develops an analysis of the dative alternation which fits the facts presented here quite well. He argues that verbs of accompanied motion contain within their lexical specification a manner component that necessarily holds of both of the subevents, while verbs of ballistic motion specify only the manner of the causing event. He does not adopt a syntactic decomposition (because of the need to mark the manner component in two places) but it is a simple matter to incorporate his proposal into the system here.

Thus a ballistic motion verb like that in (33a) will have the lexical decomposition in (36a), and an accompanied motion verb like the one in (35b) will be as in (36b).

- (37) a. Hann spreypjar bílinn með málningu.
he sprays the.car.ACC with paint.DAT
- b. Hann spreypjar málningu á bílinn.
he sprays paint.DAT on the.car.ACC
- c. Við hlóðum vagninn með heyi.
we loaded the.wagon.ACC with hay.DAT
- d. Við hlóðum heyinu á vagninn.
we loaded the.hay.DAT on the.wagon.ACC
- e. Hann smyr brauðið með hnetusmjöri.
he smears the.bread.ACC with peanutbutter.DAT
- f. Hann smyr hnetusmjörinu á brauðið.
he smears the.peanutbutter.DAT on the.bread.ACC

The pattern is systematic: when the direct object is the location or affected object, it is accusative; when it is a material or object in motion, it is dative (I will not treat the case on the prepositional complements here; see Svenonius (2001) for some discussion). The example in (37b) might be unified with the cases discussed in §4. Unlike the objects in motion discussed in §4, however, the events in (37d) and (37f) would normally be thought of as involving constant participation by the agent in the directed motion of the (dative) theme; it would be implausible to label them as involving ballistic motion.

Consider a pair of plausible lexical decompositional representations for these verbs ((38b) will be revised below).

- (38) a. $[_{VP} \text{ Agent CAUSE } [_{VP} \text{ Patient BECOME } [_{PP} \text{ WITH 'load/spread' }]]]$
 $\quad \quad \quad \underline{\quad} \text{ [ACC] } \underline{\quad}$
- b. $[_{VP} \text{ Agent CAUSE } [_{VP} \text{ Theme GO } [_{PP} \text{ to Location}]]]$
 $\quad \quad \quad \underline{\quad} \text{ [DAT?] } \underline{\quad}$

That the causing subevent and the becoming subevent in (38a) should be unifiable in the way suggested in (16) is certainly expected; in fact, the accusative objects there are canonical incremental themes or affected objects, the most typical type of accusative object (cf. (17)). What remains to be explained is why the causing subevent and the movement subevent in (38b) should not be so unified; for a structure like (38b), the analysis predicts accusative.

The crucial clue, I think, is the fact that unlike the verbs of direction motion in §4, the verbs in (37) allow dative only when they appear with a directional PP (cf. also (4); the PPs in (37a), (37c), and (37e) are strictly optional). Without that PP, as (39), dative is impossible.

- (39) a. * Hann spreypjar málningu.
he sprays paint.DAT
 b. * Við hlóðum heyinu.
we loaded the.hay.DAT
 c. * Hann smyr hnetusmjörinu.
he smears the.peanutbutter.DAT

Thus, the caused motion structure here is dependent on the PP in a way quite different from that of verbs like *kasta* ‘throw’ and *velta* ‘roll’ in (33). This suggests something more like the structure in (40).

- (40) [_{VP} Agent CAUSE [_{PP} Theme to Location]]
 [— [DAT] —]

The structure in (40) is very much like that in Hale and Keyser (1993a), in that the Theme argument is located inside a non-verbal projection. In Svenonius (2001) I show evidence for what is essentially this structure, based on the possibility of adverb attachment; in brief, an adverb may attach to *vP* or *VP* but not to *PP*. The crucial examples are repeated here.

- (41) a. Við hlóðum næstum því vagninn með heyi.
we loaded nearly so the.wagon.ACC with hay.DAT
 ‘We nearly loaded the wagon with hay’ (ambiguous)
 b. Við hlóðum næstum því heyinu á vagninn.
we loaded nearly so the.hay.DAT on the.wagon.ACC
 ‘We nearly got around to loading the hay onto the wagon’

The important fact is that (41a) is ambiguous as to whether the adverb modifies the causing event or the process of loading, whereas in (41b), the adverb cannot modify just the movement of the hay onto the wagon, independently of the causing event. See Svenonius (2001) for comparison with Hale and Keyser’s structures. The structure in (38b) fails to make the correct prediction, as there is a verbal attachment point (*VP*) between the causing projection and the *PP*.

However, I suggested in §2.3 that non-verbal projections do not introduce subevents. Though case is licensed inside *PP* (presumably at the boundary between two nodes as stated in (16) and (18)), it is not generally licensed at the boundary between *V* and *PP*. Thus there is a dilemma. Including the *V GO* predicts the wrong case, and fails to account for the dependency of the dative on *PP*, and for the distribution of adverbs; but leaving the *V* out predicts that there should be no case at all. What is needed is a projection that is like *VP* in introducing an event but like *PP* in resisting (certain) degree adverbs and obligatorily containing a

prepositional phrase. If the theory of case outlined here is correct, that projection must also have an aspectual profile which does not overlap easily with the canonical causation head. This suggests replacing the PP with a complex projection as in (42), where the label R is used (Ramchand's (2002) 'Result'; cf. §3.1). A complex predicate consisting of the abstract verb and the preposition is underlined.

(42) $[_{VP} \text{ Agent CAUSE } [_{RP} \text{ Theme } \underline{\text{GO-to}} \text{ Location}]]$
└─── [DAT] ───┘

Precisely this collapsing of projections has been independently argued for by Hale and Keyser (2001), under the rubric of 'Delayed Gratification' (cf. also Haider (2000b)). In brief, though the locative material in PP in (42) is predicative, other predicative material (GO) may be merged with it provided each layer ultimately discharges its θ -role to the same argument (the Theme in (42)). Though CAUSE can map onto GO, it cannot map onto the entire complex subevent GO-to, thus (18) licenses dative. Collapsing projections will not be possible, I assume, just in case there is a manner component attached to GO, as there was assumed to be in the case of the accompanied motion verbs in §4.

6. Conclusion

In this paper I have argued for a novel theory of case. On this theory, the distribution of case is not identified by the identity of individual verbal heads, but by combinations of them. In this way, it shares something with the theory of Watanabe (1993), but without any reference to Agr.

The involvement of two projections in each case leads to a derivation of Woolford's (1997:206) 'Mac Acc Formula,' stated in (43), which is intended to identify the maximum number of VP-internal cases available in any construction, in any language.

(43) $\text{Max. Acc.} = \# \text{Arguments} - \# \text{Lexical Cases} - 1$

This is meant to be read 'the maximum number of cases is equal to the number of arguments minus the number of lexical cases minus one.' For Woolford, the minus one is simply stated as a matter of fact. Given that I assume one head in the verbal projection for each argument, and given that cases are available only at the boundaries of such projections, it follows that there should be at most one case fewer than there are arguments. As for the subtraction of lexical cases, this would follow if I were to assume

lexical case assigning heads to be inert or invisible for the purposes of determining structural case availability.

The fact of the matter is that I have not made use of lexical case whatsoever. As I noted in §2, previous researchers have thrown up their hands at finding regular rules of assignment for the Icelandic dative, and have established the tradition of lexical case. I have suggested here that they had not looked in the right place for the system, which raises the hope that perhaps there is no such thing as idiosyncratic lexical case; that is, to stipulate that a verb takes a dative object is to also stipulate something else about that verb, so that the stipulation is not entirely independent of event structural properties.

It is not surprising that people should have been looking in the wrong place. On the view promoted here, case does not reflect any property of or entailment about a noun phrase (thus expletives can also have case); but nor is case entirely uninterpretable, as in Chomsky (2001). Instead, case is the uninterpretable manifestation on the noun phrase of interpretable properties of the verb phrase (as Pesetsky and Torrego (2000) have argued regarding the relationship between tense and nominative).

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