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 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 temporally 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.

1. Accusative and its relation to event structure

There is a striking cross-linguistic tendency for accusative case (in nominative-accusative systems) to correlate with certain aspects of interpretation. For example, Blake (2001, p. 133) notes that affected patients are almost always accusative while objects not affected often appear with prepositional complements or oblique case rather than the accusative. Tenny (1994) formalizes a related intuition in terms of the 'measuring out' of an event but states the generalization over direct objecthood rather than case; Arad (1998, p. 18) states the correlation as in (1).

> (1)   All measurers are (universally) marked with accusative case.

The measuring out of an event is a relationship between the temporal run-time of an event and the physical extent of some participant (the 'measurer') or the degree to which the measurer has a property. For example, in an event of smoking a cigarette, each part of the combustible section of the cigarette corresponds to a moment in time, and when the last part is smoked, the event is over; in this way the physical extent of the cigarette measures out the event (cf. Krifka 1992 for formalization). In an event of grilling a steak, the mapping is not from times to parts of the steak, but rather to points on a scale of doneness; but the doneness is determined by examining the steak (the object), not the coals or the cook (cf. Tenny 1994, Ramchand 1997).

In this paper I focus almost exclusively on Icelandic in order to give a very specific account of the accusative case as well as the dative. The details of the formalization are novel, but they are compatible with the cross-linguistic tendencies noted, giving hope that they have validity outside Icelandic.

In the remainder of this section I outline some general assumptions about case assignment before going into the specifics of the analysis presented here.

1.1. Accusative

The dependence of accusative case on the presence of an external argument is stated in Burzio's Generalization (see the papers in Reuland 2000 for recent discussion); this is illustrated in (2). (2a) shows that the resultative predicate *covered* is licit with the internal argument *the ground*. (2b) shows that *fall*, as an unaccusative, can appear with a resultative predicate. But (2c) shows that the unaccusative and the resultative are not sufficient to license an additional argument; this is explained if *fall* cannot assign case, as predicted by Burzio's Generalization.

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

Haider (2001) gives examples like those in (3) to argue that the dependence of accusative is not on an external argument but on the assignment of nominative case.

(3) a. Trieb es   den   Kahn an den Strand?   (German)
        drove it   the.ACC boat to the beach

     b. Trieb der   Kahn an den Strand?
        drove the.NOM boat on the beach

Haider notes that these mean the same thing (roughly, 'did the boat wash up on the beach?'); thus the subject in (3a) is an expletive and does not receive an external theta-role. This means that the accusative in (3) is dependent on the presence of the expletive, not on the presence of a thematic role (see Haider 2000, Marantz 1991 for discussion).

However, Icelandic accusative subject constructions such as those in (4) are problematic for Haider's claim that nominative case is necessary for accusative case to be assigned.

(4) a. Mig   vantar   nýa   skó.
      me.acc   needs   new   shoes.ACC

      I need new shoes.

  b. Daginn   lengir.
      the.day.ACC   lengthens

      The day grows longer.

Haider postulates a null expletive in these cases, but his evidence is based on a comparison with German, which has been demonstrated to have significantly different properties; in particular, there is overwhelming evidence that the sentence-initial accusatives in (4) are subjects and that corresponding German DPs are not (Zaenen et al. 1985). Note that expletive constructions in Icelandic are subject to a definiteness effect, suggesting that the examples in (4) cannot be collapsed with such constructions; this is illustrated in (5).

(5) a. Bátinn   rekur   á   land.
      the.boat.ACC   drifts   to   land

      The boat drifts to land.

  b.*Það   rekur   bátinn   á   land.
      it   drifts   the.boat.ACC   to   land

This pair contrasts with the 'Impersonal Modal Construction' (Sigurðsson 1989, pp. 163 ff), in which the object gets accusative case in the embedded clause (which has an arbitrary *pro* subject, according to Sigurðsson) and is therefore not subject to the definiteness effect.

(6) a. Bátinn   verður   að   laga.
      the.boat.ACC   must   to   repair

  b. Það   verður   að   laga   bátinn.
      it   must   to   repair   the.boat.ACC

      The boat needs to be repaired.

In (6), it is reasonable to assume that (6a) is derived by movement of the accusative from the in situ position (seen in (6b)). This leaves Haider without a way to account for the contrast between (5) and (6) (cf. Sigurðsson 1989, pp. 355 ff for relevant discussion). Below I offer an alternative to Haider's explanation for accusative subjects by connecting the availability of accusative to the relationship between *v* and V.

1.2. v *and the external argument*

Recent work supports decomposing the transitive verb into two distinct parts (cf. Kratzer 1994, 1996, Harley 1995, Arad 1998), commonly labeled *v* and V. In languages where *v* has a morphological realization, it can be seen that there are different types of *v*; for example Japanese (Harley 1995), Austronesian languages (Travis 2000), and Salish (Davis and Demirdache 2000).

Evidence for different types of *v* can be uncovered even in languages which do not have any overt morphological realization of *v*. This is the natural extension of the earlier assumption that verbs can assign different theta-roles to the external argument (e.g., experiencer, source, agent). In fact, English allows subjects with a very wide range of thematic relationships to an event, as illustrated in (7) (examples based on Hawkins 1986, ch. 4, who cites work by Rohdenberg).

(7) 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.

Icelandic is less free than English in this regard, as suggested by the examples in (8).

(8) a. *Gítarinn   minn sleit streng   í   miðju
         the.guitar.NOM   my   broke string.ACC in middle

         lagi.
         song.DAT

     b. *Fimmtíu krónur   geta keypt   einn bolla   af
         fifty   crowns.NOM can   bought   one   cup.ACC   of

         kaffi.
         coffee.DAT

     c. *Bókin   seldi í   10.000 eintökum.
         the.book.NOM   sold   in 10,000 copies.DAT

This contrast can be characterized as a difference in the lexical inventory of *v*'s in the two languages.[1] The *v* in (7a), for example, introduces an argument (*my guitar*) and a subevent (by hypothesis, *v* always does) but does not imply a relation of agency or even causation between the upper (*v*) subevent and the one introduced by the lower V *break*; the relationship might simply be one of contemporaneity. The same *v* is not possible with all verbs; for example it is impossible with *destroy*: **My guitar destroyed a string*; it seems that *destroy*, like Hale and Keyser's *smear*, is compatible only with a causative *v*. Thus two verbs in one language might have different information under *v* even when there is no overt morphological expression of this fact.[2]

Travis (1992) links *v* directly to the assignment of accusative case as well as to the introduction of an external argument. I follow Travis in assuming that *v* is central in the assignment of accusative case but argue further that certain *v*'s which do not introduce arguments nonetheless license accusative. I argue that this reconciles the apparently conflicting evidence in (2) and (3).

Specifically, I suggest, the standard accusative-assigning configuration is one in which two heads, *v* and V, each introduce subevents which are construed as parts of a temporally indivisible single event. I state some general (cross-linguistic) assumptions in (9).

(9)   a.   Certain syntactic elements, e.g., *v* and V, introduce event variables in their semantic representations (Davidson 1967). Others do not.

      b.   Event variables introduced within a syntactic constituent α may represent a complex event x consisting of two (or more) subevents y and z (and . . .).

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[1]   Hawkins (1986, ch. 4) points out the contrast between English (7) and German equivalents, 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 (7) 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.

In the system proposed here, there is no reason to expect a head which freely introduces external arguments, as the English one does, to be restricted to languages without morphological case. Cf. the freely introduced subjects of Japanese, which does have case.

[2]   Cf. Hale and Keyser's (1993) suggestion that the difference between *splash* (which has an unaccusative use) and *smear* (which does not, for them) has to do with a manner specification on the higher segment of *smear*, implicating an agent.

   c. If the event x consists of subevents y and z, then y and z are related temporally.

   d. If the temporal relation of y and z is one of total overlap, then accusative case is licensed in α

   e. Aspectual features of y and z may force or prevent total overlap.

(9d) is the basic principle of accusative case: if the two subevents (of *v* and V) have exactly the same temporal extension, i.e., they occupy exactly the same time, then accusative is licensed.

External arguments are always introduced by a subeventive head, explaining the reference to external arguments in Burzio's Generalization; unaccusatives fail to assign accusative because they express a non-complex event, i.e., they have no *v* subevent. But a *v*-V combination may fail to assign accusative case for a number of reasons, as discussed below.

1.3. Passive and other varieties of v

For example, imagine that a language has a *v* which is 'opaque,' in the sense that it does not provide variables for binding (neither event nor argument variables); this would be the case if all such variables are already bound by an existential operator. Such a head would imply the existence of an external argument but would not allow for its expression by an overt noun phrase, except perhaps as an adjunct, and it would not allow the temporal isomorphism required by (9), thus failing to assign accusative case. This *v* would then be a typical 'passive' although that term is applied to a variety of phenomena (Chomsky 1981, Shibatani 1988).

Alternatively, a functional head added above *v* might serve the function of binding the variables introduced by *v*; this might be a better characterization of the Icelandic passive (Taraldsen 2002 makes some observations about Norwegian passives which might suggest this). However, for the purposes of this paper I continue to assume that the Icelandic passive head is *v*.

Given the view of *v* as a class of functional heads, it is clear that *v* can be highly selective of the class of V's with which it combines; for example, English has no impersonal passive (cf. (10a)), meaning that the English passive *v* only combines with object-taking V. English does not restrict passive to volitional or agentive verbs (cf. (10b)).

(10) a.*There was worked all day.
    b. I was pleased by the news.

Icelandic, in contrast, does have impersonal passives (cf. (11a), from Sigurðsson 1989, p. 318), suggesting that passive *v* has no transitivity

restriction, and verbs with non-volitional subjects do not passivize (cf. (11b), from Jónsson 2001, p. 17; cf. Sigurðsson 1989, p. 322).

(11) a. Það   var   djöflast   allan   daginn.
         it   was   deviled   all   day

    Hard work went on all day.

    b.*Ég var gladdur af Þessari frétt. (cf. Þessi frétt
       I   was pleased   by these   news   these news

    gladdi   mig)
    pleased me

    I was pleased by this news.

Now the accusative-taking examples in (4) can be explained; what they show is that Icelandic is unlike English and German in having a *v* which does not introduce an external argument at all, not even as a bound variable (see Pylkkänen 1999 on Japanese and Finnish constructions which introduce a sense of causation without introducing an external argument).

In this paper I argue that Icelandic verbs which take dative objects can generally be identified as verbs in which there are two subeventual heads (*v* and V) but in which the temporal isomorphism required by (9) fails, either because of the temporal profile of *v* or because of the temporal profile of V. Such temporal profiles are a matter of Inner Aspect or Aktionsart.

Case is not interpretable on a DP; that is, case on a DP is an uninterpretable feature (Chomsky 1999). If the features checking morphological case, however, are Aktionsart features of the verb, which are interpretable, then case turns out to be like other features which appear in interpretable-uninterpretable pairs, for example agreement (Chomsky 2000). Pesetsky and Torrego (2001) have proposed that nominative case is uninterpretable tense; I suggest here that accusative (and dative, in Icelandic) is uninterpretable Inner Aspect, or Aktionsart (see Svenonius 2001 for an extension of this to Finnish, building on Kiparsky 1998).

The analysis might begin to provide an understanding of why something like Rouveret and Vergnaud's (1980) Case Filter might hold, if DP requires a spatio-temporal anchoring to the clausal context in order to refer.

2. Case in Icelandic

Icelandic has morphologically distinct expressions of nominative, accusative, dative, and genitive case. In (12a), this is illustrated with a

ditransitive construction showing the typical nominative subject, dative indirect object, accusative direct object, and genitive possessor. In (12b), the typical alternation of directional accusative and locational dative is illustrated with the preposition *í* 'in.'

(12) a. Haraldur   sendi frænku   forsetans
       Harald.NOM sent   cousin.DAT the.president.GEN

       blómvendi.
       bouquets.ACC

       Harald sent the president's cousin bouquets.

   b. Frænkan   setti blómvendina   í   ruslafötuna í
      the.cousin.NOM put   the.bouquets.ACC in the.bin.ACC in

      húsinu.
      the.house.DAT

      The cousin put the bouquets in the wastebasket in the house.

Under passive, the external argument is removed, and the accusative argument changes to nominative. Note the plural agreement on the finite verb with the nominative argument.

(13) a. Frænku   forsetans   voru   sendir blómvendir.
       cousin.DAT president.GEN were.3PL sent   bouquets.NOM

       The president's cousin was sent bouquets.

   b. Blómvendirnir   voru   settir í   ruslafötuna í
      the.bouquets.NOM were.3PL put   in the.bin.ACC in

      húsinu.
      the.house.DAT

      The bouquets were put in the wastebasket in the house.

In these respects Icelandic case is very like that of German; and as in German, the nominative could alternatively appear in initial position in (13a) rather than the dative. However, there is an important difference. Zaenen et al. (1985) show through an extensive battery of tests that datives like the one in (13a) are true subjects in Icelandic but not in their German counterparts. Non-nominative subjects are discussed further in the next subsection.

2.1. Non-nominative subjects, non-accusative objects

Icelandic is famous in linguistic circles for productively having non-nominative subjects. Accusative subjects were already illustrated in (4), and some dative subjects are given in (14) (exx. from Svavarsdóttir and Jónsdóttir 1993, p. 141); certain predicates require (or tend to appear with) dative subjects, others accusative, and a few genitive. Dative subjects in particular are fairly common (cf. Barðdal 2001a, p. 89).

(14) a. Mér   batnaði   kvefið.
        me.DAT recovered the.cold.NOM

        I recovered from the cold.

   b. Henni   höfðu   leiðst   þeir.
        her.DAT had.PL bored they.NOM

        She had been bored by them.

   c. Krökkunum   var   heitt   í   sokkunum.
        the boys.DAT was hot   in   the.socks.DAT

        The boys were hot in their socks.

To a far greater extent than German, Icelandic employs non-accusative objects (for statistics again see Barðdal 2001a, p. 89). Examples of nominative objects are seen in (14a–b). Dative and genitive objects are given in (15) (from Thráinsson 1979, p. 19).

(15) 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.

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 particular argument. Structural case is assigned in a specific structural configuration without regard to θ-role (see Svenonius 2002 for some discussion of these notions). 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 (cf. Andrews 1982, p. 464; Zaenen and Maling 1984, p. 325; Zaenen et al. 1985, p. 462; Yip et al. 1987, p. 229; and Sigurðsson 1989, p. 103; see also Thráinsson 1979, pp. 50–51, n. 9).[3]

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.[4] 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. 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.

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[3] Though most of the works cited are skeptical to the possibility of finding a pattern for lexical case-marking, Zaenen and Maling express some optimism in the first note in the 1990 reprint of their 1984 article:

"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."

Thus in their case, the lack of a formal statement of the distribution of cases is a matter of focus.

[4] Van Valin (1991, p. 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."

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). In terms of token frequency in a corpus, Barðdal (2001a, pp. 180–181) reports that about a quarter of all objects are dative. These facts are the first indications that the dative is not a frozen holdover from a previous era, preserved only in idioms (as it is in Norwegian); the primary data for first-language learners is 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, p. 19) with a dialog from a novel by Pétur Gunnarsson (the prescriptively correct form is nominative; the child has the dative, which Harald ('H') hypercorrects to accusative, and Ásta ('Á') recorrects to nominative, whereupon H chides her).

(16) B Mamma, mamma, mér hlakkar svo til
       mommy   mommy   me.DAT looks.forward so to

    þegar . . .
    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

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 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, pp. 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.

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. Barðdal (1999, 2001a, pp. 117–142) analyzes the productivity of the dative 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 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 section 8, her class IIA, 'verbs of helping,' in section 5, her class IIB, 'experiencers' is partly treated in section 6 (cf. also section 7), her class IID, 'verbs whose objects undergo movement' is treated here in section 4 and section 9.

2.3. Specifics

I have proposed a formal principle for accusative case assignment (in (9)) which depends on the temporal relationship between (subevents introduced by) *v* and V. Specifically, when *v* and V overlap temporally, then accusative is licensed. In what structural position it is licensed is less clear, but I will assume for the sake of argument that it is licensed in SpecVP.

I assume furthermore that several different things may disrupt the neat temporal overlap of *v* and V (often leading to dative case). One of them is the 'shape' of *v*, i.e., its temporal signature. I suggested something similar for passives in section 1.3 above. Another example might be experiencer subjects; if *v* indicates the experience of a sensation in relation to the object of V, then the object of V could disappear without the experience necessarily ending. For further observations see section 7.

Another factor that may disrupt the temporal relation of *v* and V is the 'shape' of V. I argue below that this is the case with verbs like *hjálpa* 'help.' Here Icelandic is similar to German and Russian (and many other languages) in taking dative rather than accusative. However, the nature of dative case may vary from one language to another; Vogel and Steinbach (1998) show that datives in German are like adjuncts, and Bailyn (1995) argues that dative in Russian is assigned in a different structural location from accusative. The diagnostics used by those authors do not produce similar results for Icelandic, in which dative objects behave very much like accusative objects syntactically, and in which the inventory of dative-taking verbs is different.

These various observations lead to the following Icelandic-specific conclusion about the licensing of dative case (a counterpart to (9), stated more compactly).

(17)   In a syntactic context α representing an event x composed of
        subevents y and z, dative case is licensed in α iff the temporal
        relationship of y and z is not total overlap.

As with accusative, it may be assumed that dative is licensed in SpecVP. The intended effect of (9) and (17) together is that in the absence of a subevent-introducing *v*, neither case will be assigned.

3. Stative verbs

The simplest verbs aspectually are the stative ones. Typical stative verbs include verbs of perception and cognition and verbs denoting various

stative physical relationships. Such verbs, when transitive, generally take accusative objects in Icelandic.

(18) a. *sjá* ACC 'see'
  b. *heyra* ACC 'hear'
  c. *þekkja* ACC 'know'
  d. *halda* ACC 'think'
  e. *innihalda* ACC 'contain'
  f. *þekja* ACC 'cover'

There are various reasons to assume that stative transitive verbs decompose into two parts, just like active ones (cf. Baker 2001), despite the fact that the external v is not causative or agentive. On the account sketched here, the licensing of accusative is expected if the subevent introduced by v is co-temporaneous with (i.e., starts and ends at the same time as) the subevent introduced by V. This accords with the intuition that the seer and the seen participate equally long in an event of seeing; if either is removed, the seeing event is over.

It has been argued (see Postal 1974, Koizumi 1993) that ECM (Exceptional Case Marking) involves raising of the embedded subject into the VP headed by the ECM verb. If this is so, then ECM constructions with verbs of perception and cognition are expected in this model to license accusative, in Icelandic. This is ordinarily true (Thráinsson 1979, p. 332).

(19) a. Ég tel   Maríu   vera fífl.
    I believe Maria.ACC be fool

    I believe Maria to be a fool.

  b. Þeir kváðu Harald   vera ágætismann.
    they said Harald.ACC be fine.fellow

    They said Harald to be a fine fellow.

However, when predicates independently license quirky case (dative or genitive) on a subject, the subject retains that quirky case even under ECM (Thráinsson 1979, p. 353).

(20) a. María telur   mér líka við hann.
    Maria believes me.DAT like with him

    Maria believes me to like him.

  b. Ég tel   vindsins gæta   minna hér.
    I believe the.wind.GEN be.noticeable less here

    I believe the wind to be less noticeable here.

This shows that 'quirky case' on subjects is licensed in the lower verb phrase (as argued by Sigurðsson 1989) and that it cannot be 'undone' by movement into the higher verb phrase. This is not problematic since it is clear that accusative need not be assigned in general (cf., e.g., object drop constructions, conative constructions, and so on).

An alternative would be that the case-licensing domain in ECM contexts involves three heads: the higher v and V as well as the lower v. This would mean that the temporal signature of stative ECM verbs is compatible with that of agentive or causative v: since agentive or causative embedded subjects get accusative case, the complex event consisting of higher v and V and lower v subevents must involve total overlap. In the case of quirky subjects, the v is presumably different (e.g. experiencer v; cf. section 7), and so total temporal overlap fails, and dative is assigned by (17). It is less clear how to treat the genitive in (20b) on this option (genitive subjects might involve a v with nominal properties; I have no further remarks at this time).

4. Movement

Einarsson (1945, p. 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, pp. 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 throughout the event by a causer, a feature which I connect to the connection between the two subevents as sketched in section 2. Verbs of ballistic motion, such those in (21), typically take dative objects ((21d–e) are neologisms from Barðdal 2001a).

(21) a. *kasta* DAT 'throw, fling, hurl'
    b. *þeyta* DAT 'fling, blow'
    c. *hend*a DAT 'throw away, discard'
    d. *þrykkja* DAT 'kick or smash' (< *þrykk* (noun) 'print'?)
    e. *dúndra* DAT 'kick or smash' (< Danish *dundre* (verb) 'thunder'?)

Contrast these with some typical accusative-taking verbs of caused motion.

(22) 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 (22) denotes either accompanied motion or directed motion. This is quite typical of accusative-taking verbs of caused motion. The critical difference between (21) and (22), I argue, is that in (22), the subevents introduced by *v* and by V are temporally indistinguishable, the default understanding therefore being that the causing force accompanies the object throughout the motion of the object, whereas in (21) the subevent introduced by V has a characteristic 'signature,' that of smoothly flowing inertial movement, which is inconsistent with the signature of causative *v*.

Consider another class of transitive verbs in which the movement of the object is independent of the actions of an agent or causer. As noted, the verbs in (23) take dative objects.

(23) a. *dreypa* DAT 'drip'
  b. *fleyta* DAT 'float'
  c. *sökkva* DAT 'sink'
  d. *sleppa* DAT 'release'
  e. *velta* DAT 'roll'
  f. *stökkva* DAT 'sprinkle'

The dative in (23) is expected on the account here if V provides an aspectual profile unsuitable for overlap with the subevent introduced by *v*. Typical affected object verbs, on the other hand, such as those in (24), take accusative.

(24) a. *brenna* ACC 'burn'
  b. *brjóta* ACC 'break'
  c. *kljúfa* ACC 'cleave, split'
  d. *flétta* ACC 'braid, plait'
  e. *minnka* ACC 'shrink, reduce'
  f. *beygla* ACC 'dent'

This means their aspectual profile is not specially marked as ballistic or inertial, in the way that the verbs in (21) and (23) are.

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

(25) 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 (21–22) all mean roughly something like CAUSE to GO, as do the ones in (25b) and (25d). The dative examples are systematically

different in that the initiating subevent (CAUSE) does not necessarily last for the duration of the movement subevent (GO). The accusatives, on the other hand, conceptualize the event as a way of affecting an object (a bird in (25a), a whale in (25c)); as such, the agent's participation is conceived of as co-temporaneous with the patient's undergoing the effect, despite the fact that in the real world the agent's efforts might be the same whichever object is chosen.

5. 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 (26).

(26) 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. The class is identifiable cross-linguistically; see Blake (2001), Arad (1998) for some discussion. It is frequently characterized in terms of the animacy of the object, but, synchronically, the animacy or humanness is irrelevant since these verbs may take inanimate direct objects, and when they do, the objects remain obligatorily dative.

(27) a. Vaxtalækkun hjálpar
 interest.rate.cut.NOM helps

 efnahaginum/*efnahaginn.
 the.economy.DAT/the.economy.ACC

 An interest rate cut helps the economy.

b. Þessi höfn getur sinnt öllum skipaflotunum/*alla
 this port can tended all the.fleets.DAT/all

 skipaflotana.
 the.fleets.ACC

 This port can tend all the fleets.

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

The notion of internal versus external causation is important in determining the class of unaccusative verbs cross-linguistically (Levin and Rappaport Hovav 1995). Internally caused events are those which are conceptualized as stemming from the inherent properties of an object; for example *shining* (internally caused) as opposed to *breaking* (externally caused). The division has a semantic basis but is lexicalized, in that individual verbs are stored by speakers are internally or externally caused. Something similar might be true for *help* verbs. They are lexically specified as implying that the internal argument has its own trajectory, partly independent of *v*. One helps a person to do something, canonically; compare kicking, where the recipient of the kick does not typically participate actively in the event whatsoever. These remarks entail that in (27a) the economy is thought of as dynamic, quite plausibly.

Interestingly, *help* verbs often permit a controlled infinitive clause. Compare dative-taking *hjálpa* 'help' in (28a) with accusative-taking *aðstoða* 'assist' in (28b), which requires a preposition (*við* 'with') in order to license an infinitival clause.

(28) a. Ég hjálpaði blinda manninum   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
        I   assisted   blind the.man.ACC with to go   over

       götuna.
       the.street

       I assisted the blind man in crossing the street.

A solution compatible with the general principles outlined in section 2 would be one stated in terms of control of the event by the external argument (cf. Davis and Demirdache 2000 on the relevance of control to the selection of *v* in Salish; cf. Blume 1998 for some discussion of control in reference to the dative). 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 here is stated purely in terms of the aspectual notions of temporal overlap of subevents. Possibly, a control-based analysis is better for some languages. A purely aspectual analysis naturally unifies the *help* verbs with the verbs of ballistic motion discussed in section 4.

The simplest purely aspectual solution, given the discussion in section

3.1, is that the lexical conceptual representation for V in *help* verbs has a different aspectual signature than that of verbs like *kick* and *break*. This aspectual signature cannot overlap completely with that of the external argument introducing *v* which these verbs require.

That the two subevents are not temporally identical might be suggested by Jackendoff's (1990, p. 134) observation that *help* does not necessarily imply completion of an event; he illustrates this with the contrast in (29).

(29) 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).

Unfortunately the contrast is rather weak and might in any case be attributable to the difference between infinitives and gerunds.

6. Beneficiary alternations

There is a class of verbs discussed by Barðdal (1993) (cf. also Sigurðsson 1989, p. 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.[5]

(30) a. Kristín þurrkaði handklæðið.
        Kristin dried   the.towel.ACC

        Kristin dried the towel.

        Kristín þurrkaði barninu.
        Kristin dried   the.child.DAT

        Kristin dried the child.

     b. Kristín þvoði   handklæðið
        Kristin washed the.towel.ACC

        Kristin washed the towel.

        Kristín þvoði   barninu.
        Kristin washed the.child.DAT

        Kristin washed the child.

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[5] Halldór Sigurðsson, personal communication. The examples are taken from Barðdal (1993), and are also discussed briefly in Barðdal (2001a, pp. 146–149).

c. Kristín greiddi hárið.
   Kristin combed the.hair.ACC

   Kristin combed her hair.

   Kristín greiddi Jóni.
   Kristin combed Jon.DAT

   Kristin combed Jon's hair.

d. Kötturinn klóraði   mig.
   the.cat   scratched me.ACC

   'The cat scratched me.

   Ég klóraði   kettinum.
   I   scratched the.cat.DAT

   I scratched the cat.

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.

Notice that these predicates are typical 'incremental theme' predicates and that the direct object will be mapped onto the event. The alternation here suggests that the presence of a sentient benefactive object changes the 'aspectual signature' of these verbs. This is not surprising, given that the nature of the direct object is known to determine certain properties of the verb phrase; for example a non-quantized object gives a verb phrase unbounded aspect (Verkuyl 1972).

The difference between *hjálpa* 'help' and *þvo* 'wash' is that *hjálpa* is lexically specified to have a V with a temporal signature of the 'internally caused' type whereas *þvo* only acquires such a signature if it has an object with high empathy. Other verbs, such as *slá* 'hit', acquire a temporal signature of the ballistic motion type if they are used with an object understood as a projectile ('hit the ball-DAT' vs. 'hit the fence-ACC'; cf. (25)). Finally, many verbs simply remain accusative, regardless of their objects, either because of encyclopedic knowledge – they cannot easily be used to refer to ballistic or benefactive events (e.g., *brenna* ACC 'burn,' *draga* ACC 'drag') – or because the aspectual information they lexically provide is inconsistent with such interpretations (e.g., *sjá* ACC 'see,' perhaps *aðstoða* ACC 'assist').

7. Experiencers

It is a common claim that dative correlates with experiencers in Icelandic (Andrews 1982, p. 463, Smith 1994, Jónsson 1997–1998, 2001). The fact is, as Smith (1994) stresses, experiencer objects tend to be accusative (cf. (31), and experiencer subjects tend to be nominative (cf. (32); for consistency with other examples in this paper, only the object case is indicated there). See Jónsson (1997–1998, 2001) for discussion.

(31) a. *gleðja* ACC 'delight'
   b. *hræða* ACC 'frighten, intimidate'
   c. *fæla* ACC 'terrify'
   d. *ónáða* ACC 'disturb, bother, trouble'

(32) a. *elska* ACC 'love'
   b. *hata* ACC 'hate'
   c. *öfunda* ACC 'envy'
   d. *syrgja* ACC 'mourn'

There are a few dative-taking experiencer object verbs; potential examples are *skaprauna* DAT 'irritate,' *stríða* DAT 'tease, needle,' but in the absence of a clear-cut definition of experiencer there is no good way to establish whether they should be included under this rubric. Certainly they seem less good candidates for experiencer objects than those in (31), and there are fewer of them.[6]

However, if one examines dative subjects, there is a clear tendency for them to be experiencers. These might be analyzed by simply positing an experiencer *v* with an opaque temporal signature, such that it licenses dative; see Svenonius (2002) for discussion. In this paper I focus on dative objects, where the number of experiencers is fairly negligible.

8. Ditransitives

As Yip et al. (1987, citing Holmberg) note, goals in Icelandic are quite commonly dative. If the underlying structure for ditransitives is something

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[6] 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 probably makes them poor triggers for a learner trying to figure out the Icelandic case system.

like that in (33), then accusative is licensed on the Theme between *v* and V, as with other verbs (cf. Larson 1988, Baker 1996 on the structure of ditransitives; the label 'RP' for 'Result Phrase' is from Ramchand's 2002 decomposition of the verb phrase).

(33)   *gefa* 'give' [$_{vP}$ Agent CAUSE [$_{VP}$ Theme GO [$_{RP}$ TO Goal]]]

The structure in (33) is consistent with the view that each head introduces at most one syntactic argument (cf. Mulder 1992) but requires a derivation to achieve the typical Goal–Theme order of Icelandic (cf. (12a) in section 2)). 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.

The dative case on the Goal might be licensed within RP by a temporal mismatch between V and R, or it might be licensed in a higher position, possibly even to the left of *v* (e.g., if there is a subevent-introducing head above *v*, as on Pylkkänen's 2000 applicative). It is in any case clear that the general syntactic characteristics of direct objects all accrue to the Theme and not the Goal (e.g., the case of the Theme changes to nominative under passive, cf. section 1.3 only the Theme can incorporate, Baker 1996; the Theme controls depictive and resultative predicates, Hale and Keyser 1996).

Verbs with accusative before dative, such as *leyna* 'conceal,' *ræna* 'rob,' *svipta* 'deprive,' and *verja* 'protect,' imply an effect of an action on the accusative (e.g., deprive somebody-ACC [of] something-DAT, protect somebody-ACC [from] something-DAT, etc.). Such verbs might be represented as in (34).[7]

(34)   *svipta* 'deprive' [$_{vP}$ Agent CAUSE [$_{VP}$ Theme GO [$_{RP}$ FROM Goal]]]

The differences here would be [i] that the adversely affected deprivee is seen as the participant most directly affected by the event (and is hence the 'Theme' in SpecVP in (34)), and [ii] that the primitive head FROM does not induce dative shift, unlike the primitive head TO in (33). As in (33), the object affected is the argument of V and gets accusative (on the assumption that *v* is mapped completely onto V) while the dative bears a more peripheral relation.

Verbs with two dative arguments (and a nominative subject) such as *lofa* 'promise,' *skila* 'return,' and *hóta* 'threaten' involve three subevents, no two of which overlap completely, according to the prediction of the

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[7]   The use of the label 'Goal' after FROM may be unexpected here. With 'deprive,' the argument of FROM must be something the Theme wants. What label is assigned to that argument does not affect the analysis proposed here.

analysis. The failure of *v* and V to assign accusative there falls under the analysis of help verbs in section 5. Finally, there is one accusative-accusative verb, *kosta* 'cost' (Zaenen and Maling 1984), for which the three subevents, I surmise, are seen as completely overlapping. This should be uncontroversial since kosta is stative.

9. The Spray-Load alternation

The *spray-load* alternation is well known (cf. Baker 1997 for relatively recent discussion and references). It is productive in Icelandic, as the following examples suggest.

(35) a. Hann spreyjar bílinn   með málningu.
        he   *sprays*   *the.car.ACC* *with* *paint.DAT*

    b. Hann spreyjar 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 (35b) might be unified with the cases discussed in section 4. Unlike the objects in motion discussed in section 4, however, the events in (35d) and (35f) 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 (for (36a), see Kratzer 1994, Baker 2001; (36b) will be revised below).

(36) a. [$_{vP}$ Agent CAUSE [$_{VP}$ Patient BE-'loaded/spread']]
      b. [$_{vP}$ Agent CAUSE [$_{VP}$ Theme GO [$_{PP}$ to Location]]]

That the causing subevent and the becoming subevent in (36a) should be unifiable in the way suggested in (9) is certainly expected; in fact, the accusative objects there are canonical incremental themes or affected objects, the most typical type of accusative object (cf. (1)). What remains to be explained is why the causing subevent and the movement subevent in (36b) should not be so unified; for a structure like (36b), the analysis predicts accusative.

The crucial clue, I think, is the fact that, unlike the verbs of ballistic motion in section 4, the verbs in (35) allow dative only when they appear with a directional PP (cf. also (4); the PPs in (35a), (35c), and (35e) are strictly optional). Without that PP, as (37), dative is impossible.

(37) a.*Hann   spreyjar   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 (21). This suggests something more like the structure in (38).

(38)   [$_{vP}$ Agent CAUSE [$_{VP}$ V [$_{PP}$ Theme to Location]]]

The structure in (38) is very much like that in Hale and Keyser (1993), 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 *v*P or VP but not to PP. The crucial examples are repeated here.

(39) 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 (39a) is ambiguous as to whether the adverb modifies the causing event or the process of loading whereas in (39b) the adverb cannot modify just the movement of the hay onto the wagon independently of the causing event. See Svenonius (2001) for compar-

ison with Hale and Keyser's structures. The structure in (36b) fails to make the correct prediction as there is a verbal attachment point (VP) between the causing projection and the PP.

However, I assume that not all heads introduce subevents, and not all pairs of subevents form complex events (cf. section 1.2). Though case is licensed inside PP (presumably at the boundary between two nodes as stated in (9) and (17)), it is not generally licensed at the boundary between V and PP. Recall from the discussion of quirky case marking on ECM arguments that the lower domain was significant for the case-licensing on the object, despite evidence for subject-to-object raising. The two options countenanced there were [i] that case is actually determined in the embedded clause and retained under A-movement and [ii] that case is determined by the three heads v–V–v; the failure of temporal overlap leads to dative. Given that there is no reason to expect case assignment to the Theme in (37), it is option [ii] that seems appropriate here: case is determined by the triumvirate of heads v–V–P; since P does not have the same temporal profile as the other two heads, perfect overlap is unattainable and dative case is assigned.

10. 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, p. 206) 'Max Acc Formula,' stated in (40), which is intended to identify the maximum number of VP-internal cases available in any construction, in any language.

(40)   Max. Acc. = #Arguments – #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 (following, e.g., Mulder) 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 what-soever. As I noted in section 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 inter-pretable properties of the verb phrase (as Pesetsky and Torrego 2001 have argued regarding the relationship between tense and nominative).

References

Andrews, Avery D.: 1982, 'The Representation of Case in Modern Icelandic', in J. Bresnan (ed.), *The Mental Representation of Grammatical Relations*, MIT Press, Cambridge, pp. 427–503.

Arad, Maya: 1998, *VP-Structure and the Syntax-Lexicon Interface*, PhD thesis, University College London.

Bailyn, John F.: 1995, 'Configurational Case Assignment in Russian Syntax', *The Linguistic Review* **12**, 315–360.

Baker, Mark: 1996, 'On the Structural Positions of Themes and Goals', in J. Rooryck and L. Zaring (eds.), *Phrase Structure and the Lexicon*, Kluwer, Dordrecht, pp. 7–34.

Baker, Mark: 1997, 'Thematic Roles and Syntactic Structure', in L. Haegeman (ed.), *Elements of Grammar: Handbook in Generative Syntax*, Kluwer, Dordrecht, pp. 73–137.

Baker, Mark C.: 2001, 'Phrase Structure as a Representation of "Primitive" Grammatical Relations', in W. D. Davies and S. Dubinsky (eds.), *Objects and Other Subjects: Grammatical Functions, Functional Categories and Configurationality*, Kluwer, Dordrecht, pp. 21–51.

Barðdal, Jóhanna: 1993, 'Accusative and Dative Case of Objects of Some Transitive Verbs in Icelandic and the Semantic Distinction between Them', in *Flyktförsök. Kalasbok till Christer Platzack på femtioårsdagen 18 november 1993, från doktorander och dylika*, Lund University, Lund, pp. 1–13.

Barðdal, Jóhanna: 1999, 'Case in Icelandic – A Construction Grammar Approach', *TijdSchrift voor Skandinavistiek* **20**, 65–100.

Barðdal, Jóhanna: 2000, 'Case Assignment of Nonce Verbs in Icelandic', *SKY Journal of Linguistics* **13**, 7–28.

Barðdal, Jóhanna: 2001a, *Case in Icelandic: A Synchronic, Diachronic, and Comparative Approach*, PhD thesis, Lund University.

Barðdal, Jóhanna: 2001b, 'The Perplexity of Dat-Nom Verbs in Icelandic', *Nordic Journal of Linguistics* **24**, 47–70.

Blake, Barry J.: 2001, *Case*, Cambridge University Press, Cambridge.

Blume, Kerstin: 1998, 'A Contrastive Analysis of Interaction Verbs with Dative Complements', *Linguistics* **36**, 253–280.

Chomsky, Noam: 1981, *Lectures on Government and Binding*, Foris, Dordrecht.

Chomsky, Noam: 1999, 'Derivation by Phase', *MIT Occasional Papers in Linguistics* **18**, 1–43.

Chomsky, Noam: 2000, 'Minimalist Inquiries: The Framework', in R. Martin, D. Michaels and J. Uriagereka (eds.), *Step by Step: Minimalist Essays in Honor of Howard Lasnik*, MIT Press, Cambridge, pp. 89–155.

Chomsky, Noam: 2001, 'Beyond Explanatory Adequacy', ms., MIT.

Davidson, Donald: 1967, 'The Logical Form of Action Sentences', in N. Rescher (ed.), *The Logic of Decision and Action*, University of Pittsburgh Press, Pittsburgh, PA.

Davis, Henry and Hamida Demirdache: 2000, 'On Lexical Verb Meanings: Evidence from Salish', in C. Tenny and J. Pustejovsky (eds.), *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, CSLI, Stanford, CA, pp. 97–142.

Einarsson, Stefán: 1945, *Icelandic: Grammar, Texts, Glossary*, Johns Hopkins University Press, Baltimore.

Eythórsson, Thórhallur: 2000, 'Dative vs. Nominative: Changes in Quirky Subjects in Icelandic', *Leeds Working Papers in Linguistics* **8**, 1–28.

Haider, Hubert: 2000, 'The License to License: Licensing of Structural Case Plus Economy Yields Burzio's Generalization', in E. Reuland (ed.), *Arguments and Case*, John Benjamins, Amsterdam, pp. 31–55.

Haider, Hubert: 2001, 'How to Stay Accusative in Insular Germanic', *Working Papers in Scandinavian Syntax* **68**, 1–14.

Hale, Kenneth and Samuel Jay Keyser: 1993, 'On Argument Structure and the Lexical Expression of Syntactic Relations', in K. Hale and S. Jay Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, MIT Press, Cambridge, pp. 53–109.

Hale, Kenneth and Jay Keyser: 1996, 'On the Double-Object Construction', ms., MIT.

Halldórsson, Halldór: 1982, 'Um méranir: Drög að samtímalegri og sögulegri athugun' [On Using mér: An Attempt at a Synchronic and Diachronic Study], *Íslenskt mál og almenn málfræði* **4**, 159–189.

Harley, Heidi: 1995, *Subjects, Events, and Licensing*, PhD dissertation, MIT.

Hawkins, John A.: 1986, *A Comparative Typology of English and German*, University of Texas Press, Austin.

Jackendoff, Ray: 1990, *Semantic Structures*, MIT Press, Cambridge.

Jónsson, Jóhannes Gísli: 1997–1998. 'Sagnir með aukafallsfrumlagi' [Verbs with Oblique-Case Subjects], *Íslenskt mál og almenn málfræði* **19–20**, 11–43.

Jónsson, Jóhannes Gísli: 2001, 'Not so Quirky: On Subject Case in Icelandic', ms., University of Iceland.

Kiparsky, Paul: 1998, 'Partitive Case and Aspect', in W. Geuder and M. Butt (eds.), *The Projection of Arguments: Lexical and Compositional Factors*, CSLI, Stanford, CA, pp. 265–307.

Koizumi, Masatoshi: 1993, 'Object Agreement Phrases and The Split VP Hypothesis', in J. D. Bobaljik and C. Philips (eds.), *Papers on Case and Agreement I*, MIT Working Papers in Linguistics, Cambridge, pp. 99–148.

Kratzer, Angelika: 1994, 'On External Arguments', in J. Runner and E. Benedicto (eds.), *Functional Projections*, GLSA, Amherst, MA, pp. 103–129.

Kratzer, Angelika: 1996, 'Severing the External Argument from the Verb', in J. Rooryck and L. Zaring (eds.), *Phrase Structure and the Lexicon*, Kluwer, Dordrecht, pp. 109–137.

Krifka, Manfred: 1992, 'Thematic Relations and Links Between Nominal Reference and Temporal Constitution', in I. A. Sag and A. Szabolcsi (eds.), *Lexical Matters*, CSLI, Stanford, CA, pp. 29–53.

Larson, Richard K.: 1988, 'On the Double Object Construction', *Linguistic Inquiry* **19**, 335–391.

Levin, Beth and Malka Rappaport Hovav: 1995, *Unaccusativity: At the Syntax-Lexical Semantics Interface*, MIT Press, Cambridge, MA.

Maling, Joan: 1998, 'Modern Icelandic Verbs Governing Dative Objects', ms., Brandeis University.

Maling, Joan: 2001, 'Verbs with Dative Objects', ms., Brandeis University.

Marantz, Alec: 1991, 'Case and Licensing', in *Proceedings of the Eastern States Conference on Linguistics*, MIT, pp. 234–253.

Mulder, Ren: 1992, *The Aspectual Nature of Syntactic Complementation*, PhD dissertation, University of Leiden.

Nygaard, Marius: 1966, *Norrøn Syntax*, Emil Moestue Aschehoug, Oslo.

Pesetsky, David and Esther Torrego: 2001, 'T to C Movement: Causes and Consequences', in Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, MIT, Cambridge, MA, pp. 355–426.

Platzack, Christer: 1999, 'The Subject of Icelandic Psych-verbs: A Minimalist Account', *Working Papers in Scandinavian Syntax* **64**, 103–115.

Postal, Paul: 1974, *On Raising*, MIT Press, Cambrdige.

Pylkkänen, Liina: 1999, 'Causation and External Arguments', in L. Pylkkänen, A. van Hout and H. Harley (eds.), *Papers from the UPenn/MIT Roundtable on the Lexicon*, MIT 35, Cambridge, pp. 161–183.

Pylkkänen, Liina: 2000, 'What Applicative Heads Apply To', in M. Minnick, A. Williams, and E. Kaiser (eds.), *Proceedings of the 24th Annual Penn Linguistics Colloquium*, Philadelphia.

Ramchand, Gillian: 1997, *Aspect and Predication: The Semantics of Argument Structure*, Oxford University Press, Oxford.

Ramchand, Gillian: 2002, 'Aktionsart, L-syntax, and Selection', in H. J. Verkuyl (ed.), *Proceedings of Perspectives on Aspect Conference*, OTS, Utrecht, pp. 1–15.

Reuland, Eric (ed.): 2000, *Arguments and Case*, John Benjamins, Amsterdam.

Rouveret, Alain and Jean Roger Vergnaud: 1980, 'Specifying Reference to the Subject: French Causatives and Conditions on Representations', *Linguistic Inquiry* **11**, 97–202.

Shibatani, Masayoshi (ed.): 1988, *Passive and Voice*, John Benjamins, Amsterdam.

Sigurðsson, Halldór Ármann: 1989, *Verbal Syntax and Case in Icelandic: A Comparative GB Approach*, PhD dissertation, Lund University.

Smith, Henry: 1994, 'Dative sickness' in Germanic', *Natural Language & Linguistic Theory* **12**, 677–736.

Svavarsdóttir, Ásta: 1982, 'Þágufallssýki' [Dative-sickness], *Íslenskt mál og almenn málfræði* **4**, 19–62.

Svavarsdóttir, Ásta and Margrét Jónsdóttir: 1993, *Íslenska fyrir Útlendinga: Kennslubók í Málfræði [Icelandic for Foreigners: Textbook in Linguistics]*, Málvisindastofnun Háskóla Íslands, Reykjavík.

Svenonius, Peter: 2001, 'Case and Event Structure', in N. Zhang (ed.), *ZAS Working Papers 26*, ZAS, Berlin.

Svenonius, Peter: 2002, 'Case is Uninterpretable Aspect', in H. Verkuyl (ed.), *Proceedings of Perspectives on Aspect Conference*, University of Utrecht, Utrecht.

Talmy, Leonard: 2000, *Toward a Cognitive Semantics, vol. I: Concept Structuring Systems*, MIT Press, Cambridge.

Taraldsen, Knut Tarald: 2002, 'Complex Passives and Germanic and Romance', ms., University of Tromsø.

Tenny, Carol: 1994, *Aspectual Roles and the Syntax-Semantics Interface*, Kluwer, Dordrecht.

Thráinsson, Höskuldur: 1979, *On Complementation in Icelandic*, Garland, New York.

Travis, Lisa deMena: 1992, 'Inner Aspect and the Structure of VP', *Cahiers Linguistique de l'UQAM* **1**, 130–146.

Travis, Lisa: 2000, 'Event Structure in Syntax', in C. Tenny and J. Pustejovsky (eds.), *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, CSLI, Stanford, pp. 145–185.

Vainikka, Anne: 1985, 'Icelandic Case without Primitive Grammatical Functions', *Working Papers in Scandinavian Syntax* **24**, 1–17.

Van Valin, Robert D. Jr.: 1991, 'Another Look at Icelandic Case Marking and Grammatical Relations', *Natural Language & Linguistic Theory* **9**, 145–194.

Verkuyl, Henk J.: 1972, *On the Compositional Nature of the Aspects*, Reidel, Dordrecht.

Vogel, Ralf and Markus Steinbach: 1998, 'The Dative – An Oblique Case', *Linguistische Berichte* **173**, 65–90.

Watanabe, Akira: 1993, *Agr-based Case Theory and its Interaction with the A-bar System*, PhD dissertation, MIT.

Woolford, Ellen: 1997, 'Four-way Case Systems: Ergative, Nominative, Objective and Accusative', *Natural Language & Linguistic Theory* **15**, 181–227.

Yip, Moira, Joan Maling, and Ray Jackendoff: 1987, 'Case in Tiers', *Language* **63**, 217–250.

Zaenen, Annie and Joan Maling: 1984, 'Unaccusative, Passive, and Quirky Case', in M. Cobler, S. MacKaye, and M. T. Wescoat (eds.), *Proceedings of the Third West Coast Conference on Formal Linguistics*, Stanford University, Stanford, CA, pp. 317–329.

Zaenen, Annie, Joan Maling, and Höskuldur Thráinsson: 1985, 'Case and Grammatical Functions: The Icelandic Passive', *Natural Language & Linguistic Theory* **3**, 441–483. [Reprinted in 1990, *Modern Icelandic Syntax*, J. Maling and A. Zaenen (eds.), Academic Press, San Diego, pp. 95–136.]