

Dative Verbs and Dative Alternations from a Crosslinguistic Perspective

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1 Introduction: The origins of the dative alternation

Studies of English “dative” verbs and their counterparts in other languages typically focus on whether a language shows two morphosyntactic argument realization options for these verbs—a DATIVE ALTERNATION—and, if so, what these options are (e.g., Dryer 1986, Haspelmath 2004a, Malchukov, Haspelmath & Comrie 2007, Margetts & Austin 2007).

For instance, in English verbs taking agent, recipient (possessional goal), and theme arguments, such as *give*, *send*, and *throw*, show this alternation.

- (1) a. Terry gave Sam an apple. (double object construction)
b. Terry gave an apple to Sam. (*to* construction)
- (2) a. Martha sent Myrna a package.
b. Martha sent a package to Myrna.
- (3) a. Leigh threw Lane the ball.
b. Leigh threw the ball to Lane.

QUESTIONS: What gives rise to the dative alternation?

Why do these verbs—or in some languages, a subset of them—show a dative alternation?

Why do some language lack a dative alternation?

PROPERTIES OF MOST PREVIOUS ANALYSES (particularly of English):

- provide a uniform analysis of all dative verbs
- focus on the association of the verb with certain morphosyntactic frames

RH&L (2008) argue for a “verb sensitive” account of the alternation: fine-grained semantic distinctions among dative verbs need to be recognized in a satisfactory analysis.

FOUNDATIONAL ASSUMPTION: Three types of representations are relevant to an account:

- a verb’s core meaning (i.e. its root)
- the event types this meaning can be associated with
- the morphosyntactic frames that realize these event types

The verb sensitive account factors the argument realization problem with dative verbs in two:

- associations between verbs and event types: (core) verb (meaning) \Rightarrow event type
- associations between event types and morphosyntactic frames:
event type \Rightarrow morphosyntactic frame

(6) A summary characterization of the verb sensitive approach:

	<i>to</i> construction	Double object construction
<i>give</i> -type verbs:	caused possession	caused possession
<i>throw</i> -type verbs:	caused motion or caused possession	caused possession
<i>send</i> -type verbs:	caused motion or caused possession	caused possession

THE UPSHOT: The English dative alternation does not have the same source with all verbs.
(See also Jackendoff 1990 for a similar analysis.)

2.1 The core meanings of dative verbs

KEY ASSUMPTION: Verb meanings are bipartite consisting of an association between:
— one of a small set of event types (possibly defined in terms of primitive predicates)
— one of an open-ended set of “roots” representing a verb’s core lexicalized meaning.
(Grimshaw 2005, Hale & Keyser 2002, Jackendoff 1983, 1990, Marantz 1997, Pesetsky 1995, Pinker 1989, RH&L 1998)

LEXICALIZATION refers to meaning components entailed in all uses of a verb, whatever the context.

THE MAJOR DIVISION:

CORE DATIVE VERBS: inherently lexicalize causing a change of possession,
i.e. lexically select a recipient: e.g, (4a).

NONCORE DATIVE VERBS: do not lexicalize caused possession;
many, but not all, are said to lexically select a spatial goal, e.g., (4b).
(Will ignore verbs involving the communication of a message.)

• CORE DATIVE VERBS

Their meanings could be schematized as in (7), assuming a primitive predicate HAVE, inherently signifying possession, whether stative (e.g., English *have*, *own*) or not (e.g., English *give*, *sell*).

(7) [[x ACT] CAUSE [BECOME [y HAVE_{<POSS-TYPE>} z]]]

— *Give*: As made explicit in Goldberg (1995, 2006), this verb’s root does not contribute anything beyond what is already encoded in the caused possession event type in (7).

— OTHER VERBS OF GIVING: Their roots are associated with further meaning components which refine on what is encoded in the caused possession event type: e.g., *rent* and *lend* specify that the possession is temporary in some sense. The annotation ‘poss[ession]-type’ on HAVE in (7) is intended to represent these additional meaning components.

• NONCORE DATIVE VERBS

— *send*-TYPE VERBS: Their meaning inherently involves causing a theme to move to a spatial goal.

— *throw*-TYPE VERBS: They basically describe two-participant events in which one entity instantaneously imparts a force on a second entity, the force recipient. They differ in the manner in which the force is imparted or in the instrument used to impart the force.

2.2 Dative verb \Rightarrow event type

- *give*-type roots are inherently associated with the caused possession event type.
- *send*-type roots are inherently associated with the caused motion event type.
- *throw*-type roots are associatable with the caused motion event type because events of imparting force may cause the force recipient to move along a path to a goal.

(8) [[x ACT_{<THROW>}] CAUSE [y GO [PATH z]]]

- The roots of *send*- and *throw*-type verbs may also be associated with the caused possession event type in English (Croft et al. 2001, Jackendoff 1990, Levin 2004; see also section 4).

(9) [[x ACT_{<THROW>}] CAUSE [y HAVE z]]

NOTE: Since in most relevant respects *send*- and *throw*-type verbs pattern together, we primarily focus on the latter in discussing ‘verb \Rightarrow event type’.

- *give*-type verbs are not associated with the caused motion event type, contra other accounts (e.g., Goldberg 1995, Harley 2003).

Other accounts take the expression of the recipient in a *to* phrase as evidence that *give*-type verbs are associated with the caused motion event type and, hence, select a spatial goal argument.

However, *give*-type verbs lack basic properties of *throw*-type verbs in the *to* construction (Jackendoff (1990, RH&L 2008). These differences can be understood if *throw*-type verbs, but not *give*-type verbs, select a spatial goal.

(10) Ability to select spatial prepositions beside *to*:

- a. Fred threw/kicked the ball under the porch/behind the tree/over the fence.
- b. *Fred gave the ball at/behind/over Mary.

(11) Ability to question the *to*-phrase with *where* (Levinson 2005):

- a. To whom/where did you throw the ball?
- b. To whom/*where did you give the ball?

2.3 Event type \Rightarrow morphosyntactic frame

- Caused motion event type \Rightarrow *to* construction;
that is, spatial goals are marked by *to*.
- Caused possession event type \Rightarrow double object construction **or** *to* construction;
that is, recipients meet the semantic characterizations for two syntactic realizations:

— THE FIRST OBJECT IN THE DOUBLE OBJECT CONSTRUCTION: It is dedicated to the expression of a “projected possessor” (Goldsmith 1980:429; also Goldberg 1995, Green 1974, Oehrle 1976, Pinker 1989). Applicable to a recipient, as a generally animate entity capable of possession.

— THE OBJECT OF *to*: It is much less semantically restricted than the first object and indicates a wide range of argument types, broadly falling under semantic categories covered by the dative and allative cases in other languages, including spatial goals, recipients, and some arguments with less clear categorizations (e.g., *yield to*, *submit to*, *surrender to*, *subject to*).

Recipients may be realized as spatial goals are—as objects of the allative preposition *to*—since by the Localist Hypothesis (Gruber 1965, Jackendoff 1972, 1983) they may be seen as a kind of goal.

CONSEQUENCE: The English dative alternation reflects alternate realizations of the caused possession event type due to the availability of two realizations for recipients.

3 (Un)attested patterns of event type \Rightarrow morphosyntactic frame

The association between the two event types and morphosyntactic frames is a possible locus of crosslinguistic variation as the available frames depend on the resources of particular languages.

STARTING POINT: Assume that the same associations of dative verb types and event types hold across languages; we return to crosslinguistic variation in this association in section 4.

THE ASSOCIATION OF VERBS WITH EVENT TYPES:

- *give*-type verbs: caused possession only
- *throw*- and *send*-type verbs: caused motion and caused possession

This assumption gains support from a study of Hebrew and Russian, which reveals that these languages parallel English in ‘verb type \Rightarrow event type’ (Levin 2007).

3.1 Distinct morphosyntactic frames for the two event types

THE MORPHOSYNTACTIC PATTERN: A language has one morphosyntactic frame for the caused motion event type and a second frame for the caused possession event type, i.e. it has distinct markers for spatial goal and recipient.

PROPOSAL: Russian exemplifies such a language.

- The dative case marks recipients of the caused possession event type.
- The preposition *k* marks animate goals of the caused motion event type.
(Other prepositions may also be used to indicate spatial goal-like notions, particularly with inanimates.)

• *give*-type verbs may express their recipient using the dative case, but not with another case marker or adposition, such as the allative preposition *k*, used elsewhere with animates as spatial goals.

(12) Ja dal Ivanu knigu.
I.NOM gave Ivan.DAT book.ACC
‘I gave Ivan a book.’

(13) *Ja dal knigu k Ivanu.
I.NOM gave book.ACC K Ivan.DAT
‘I gave a book to Ivan.’ (intended meaning)

As these verbs are only associated with the caused possession event type, this suggests that the dative case is used to express recipients, but *k* is not.

- Although *k* may be found with animates, there is clear evidence that *k* is a spatial goal marker and NOT a recipient marker.

EVIDENCE: Animate goals that are not also recipients are marked by *k* and not by the dative case.

BACKGROUND: Animate goals are found with *send* and its translation equivalents: when such verbs take an animate theme, there is typically no possessive relation between the theme and the other non-agent argument; hence, only the caused motion event type is available.

AN EXAMPLE: If a teacher sends some children to the principal, the principal does not, as a result, have the children, while if someone sends the principal a letter, he does, as a result, have the letter.

- (14) a. The teacher sent the children to the principal.
 b. # The teacher sent the principal the children.
 c. # The principal got the children.
- (15) a. The teacher sent the letter to the principal.
 b. The teacher sent the principal the letter.
 c. The principal got the letter.

The unavailability of (14b) in English shows that *the principal* is a spatial goal and not a recipient; clear spatial goals show precisely the same pattern, as illustrated by the much-cited (16):

- (16) a. We sent the package to the border
 b. # We sent the border the package.
 c. # The border got the package.

Turning back to Russian, the dative is not found when *poslat* 'send' takes an animate theme.

- (17) *Ja poslal učnikov direktoru.
 I.NOM sent students.ACC director.DAT
 'I sent the children to the director.'

To express the intended meaning the allative preposition *k* is used, consistent with the proposal that there is only a caused motion sense and no recipient is involved.

- (18) Ja poslal učnikov k direktoru.
 I.NOM sent students.ACC K director.DAT
 'I sent the children to the director.'

- Russian counterparts of *throw*, such as *brosat* and *kinut*, should be associated with both the caused motion and caused possession event types, and these verbs show a range of argument realization options.

— They may take a PP expressing a spatial goal, as expected given their association with the caused motion event type.

- (19) Ja kinul mjač v korzinku.
 I.NOM threw ball.ACC in basket.ACC
 'I threw the ball into the basket.'

— They may occur with a dative NP expressing a recipient, as expected given their association with the caused possession event type.

- (20) Ja kinul mjač Ivanu.
I.NOM threw ball.ACC Ivan.DAT
'I threw Ivan a ball.'

3.2 One morphosyntactic frame for the caused possession event type and a second open to both event types

THE MORPHOSYNTACTIC PATTERN: A language has one morphosyntactic frame dedicated to the caused possession event type and a second that may be used for either event type.

PROPOSAL: English exemplifies such a language.

- The first object expresses recipients in the caused possession event type.
- The preposition *to* marks spatial goals in the caused motion event type and recipients in the caused possession event type.

3.3 One morphosyntactic pattern for the caused motion type and a second open to both types

THE MORPHOSYNTACTIC PATTERN: Such a language would be a “mirror image” of English, with:
— one morphosyntactic frame dedicated to the caused motion event type
— a second morphosyntactic frame used for either event type.

EXAMPLE? We have not found any clear instances of this option; see section 3.6 for discussion.

3.4 A hybrid option: A split in the treatment of pronominals

THE MORPHOSYNTACTIC PATTERN:

- Pronominals show the Russian pattern.
- Nonpronominals show the “mirror image” of the English pattern.

PROPOSAL: This option is instantiated by Hebrew.

(The Hebrew discussion draws on Botwinik-Rotem 2003, Francez 2002, 2006.)

- Hebrew has a clitic *le-*, sometimes called a dative marker, with the following distribution:
 - it can appear with *give*-type verbs, which have the caused possession event type only, and, thus, select only recipients and not spatial goals,
 - it can appear with motion verbs, which select spatial goals, but not recipients.

(NOTE: *le-* and a second marker, the preposition *el*, are glossed as LE and EL, respectively.)

- (21) Yosef natan tapuax le-dana.
Yosef gave apple LE-Dana
'Yosef gave an apple to Dana.'

- (22) Yosef halax la-xeder.
Yosef walked LE.the-room
'Yosef walked into the room.'

- Based on its distribution, Hebrew *le-* might seem comparable to English *to*, but the facts are more complicated: its “pronominal” form has a distribution like the English first object or Russian dative.

In Hebrew when the object of *le-* is pronominal, it occurs in an “inflected” form, e.g.:

- *le-* takes the form *lo* with a third person masculine singular object.
- *le-* takes the form *la* with a third person feminine singular object.

Crucially, the pronominal form of *le-* is only found with recipients and not with spatial goals: it is found with a *give*-type verb, but not a motion verb.

- (23) Yosef natan la tapuax.
 Yosef gave LE.3.f.sg apple
 ‘Yosef gave her an apple.’ (*give*-type verb—recipient)
- (24) *ha-xeder_i Se Yosef halax lo_i
 the-room that Yosef walked LE.3.m.sg
 ‘the room that Yosef walked into.’ (motion verb—spatial goal)

- There is a way of expressing the intended meaning of (24). Motion verbs can also be found with the preposition *el* replacing *le-*, without a change in meaning: compare (22) and (25).

- (25) Yosef halax el ha-xeder.
 Yosef walked EL the-room.
 ‘Yosef walked into the room.’

- Returning to (24), its intended meaning is expressible using the pronominal form of *el*.

- (26) ha-xeder_i Se Yosef halax elav_i
 the-room that Yosef walked EL.3.m.sg
 ‘the room that Yosef walked into.’

- *el*, however, cannot replace *le-* with a *give*-type verb, nor is pronominal *el* found with such verbs.

- (27) *Yosef natan el Dana tapuax.
 Yosef gave EL Dana apple
 ‘Yosef gave Dana an apple.’
- (28) *Yosef natan eleha tapuax.
 Yosef gave EL.3.f.sg apple
 ‘Yosef gave her an apple.’

- These observations support the more general proposal that *give*-type verbs take recipients, but not spatial goals.

A DISTRIBUTIONAL GENERALIZATION FOR HEBREW:

le- marks both recipients and spatial goals, while *el* is exclusively a marker of spatial goals.

A SECOND DISTRIBUTIONAL GENERALIZATION FOR HEBREW:

Only recipient uses of *le-* can be pronominalized; spatial goal uses cannot be: these are the characteristics of the first object in the English double object construction.

(29) A summary of the Hebrew data:

	pronominal <i>le-</i>	pronominal <i>el-</i>	nonpronominal <i>le</i>	nonpronominal <i>el</i>
<i>give</i> -type verbs:	caused possession	—	caused possession	—
<i>throw</i> -type verbs:	caused possession	caused motion	caused possession or caused motion	caused motion

3.5 A single morphosyntactic frame expresses both event types

THE MORPHOSYNTACTIC PATTERN: A language has a single morphosyntactic frame for the two event types as a consequence of having a single marker for both spatial goal and recipient.

EXAMPLE? We have not found any clear instances of this option.

NOTE: Finnish might appear to have this pattern: its allative case is used for goals and recipients. But actual distributional pattern is sensitive to the animacy of the non-theme, non-agent argument: the allative case is found predominantly with (extended) animate recipients and to some degree with inanimate—and not animate—goals (Kittilä 2007).

3.6 Discussion of crosslinguistic variation in ‘event type ⇒ morphosyntactic frame’

The attested patterns schematized:

(30)		Russian	English
	caused possession	dative	first object <i>to</i>
	caused motion	<i>k</i>	<i>to</i>

(31)		Hebrew pronominals	Hebrew nonpronominals
	caused possession	<i>le-</i>	<i>le-</i>
	caused motion	<i>el</i>	<i>le- el</i>

3.6.1 Sources of the different patterns

THE MAJOR SOURCE: The morphosyntactic options available for expressing recipients and goals.

- Variation in case and adposition inventories, including the “semantic domains” of case markers or adpositions expressing recipients and spatial goals (Blansitt 1988).

EXAMPLE: English *to* covers both recipients and spatial goals, while the Russian preposition *k* is reserved for certain spatial goals, with the dative case being used for recipients, but never for purely spatial goals. The result is that in Russian, the caused motion event type has a morphosyntactic realization distinct from that of caused possession, contrasting with English, where it does not.

- The availability of a double object construction.

EXAMPLE: English has such a construction, which is dedicated to expressing caused possession.

NOTE: Levin (2006) argues that dative case-marked NPs are comparable to the first object in a double object construction, drawing on Siewierska (1998) and Gerdts (1993). This approach is consistent with repeated observations that despite surface similarities with direct objects, recipients in the double object construction lack many direct object properties (e.g., Baker 1997, Hudson 1992, Maling 2001, Marantz 1993, Polinsky 1996, Ziv & Sheintuch 1979).

3.6.2 Standing back: Two types of dative alternation

These studies show two sources for a dative alternation:

- A verb may be associated with two event types, each with its own morphosyntactic realization (e.g., Russian, where they are necessarily distinct)
- An argument type specific to an event type may have two realizations (e.g., the recipient in English caused possession events)

A language may have one or both forms of the alternation: English has both; Russian only the first.

WHY DO ENGLISH AND RUSSIAN DIFFER?

Specifically, why does English have alternate expressions for the recipient?

English surface word order has two functions: encoding argument realization and encoding information structure, with given information preceding new information.

THE CONSEQUENCE: English needs two constructions: one where the recipient precedes the theme and one where the theme precedes the recipient. The double object and *to* constructions fill this need.

Studies of texts confirm the distribution of the constructions is largely governed by information structure considerations, interacting with heaviness considerations (e.g., Davidse 1996, Erteschik-Shir 1979, Givón 1984, Polinsky 1996, Ransom 1979, Snyder 2003, Thompson 1990, 1995, Wasow 1997, 2002).

In contrast, as Russian, unlike English, has fairly free word order, it allows either order of recipient and theme NPs without needing two realizations of the recipient.

3.6.3 Insights that emerge from this way of laying out the data

- It is probably not an accident that when a language treats full NPs and pronominals distinctly, the pronominals pattern like Russian, rather than English.

Even in English, pronominals show a distribution that is reminiscent of the Russian pattern: pronominal recipients are overwhelmingly realized as first objects rather than as the objects of *to* (Thompson 1990, among others).

WHY? A recipient is most likely to take a special form when pronominal because recipients tend to be given in a discourse and pronouns also tend to express given material. So a recipient will probably be expressed as a pronoun more frequently and, following Haspelmath (2004b), frequency contributes to the rise of special forms.

- The apparently unattested hybrid pattern (section 3.3) may be unavailable because potential patterns of change in the semantic domains of cases and adpositions might preclude its emergence.

As Aristar (1996) discusses, markers used to indicate spatial goals may be extended to indicate recipients (presumably, by metaphorical extension).

The result is that a language with the Russian pattern could turn into a language with the English pattern. The reverse extension in meaning appears not to be found.

- The apparently unattested single-marker pattern (section 3.5) may be unavailable due to an apparent dispreference for having a single marker for both animate goals and animate recipients.

More generally, further investigation is needed of the interactions of animacy considerations with the morphosyntactic realization of the event types.

4 Crosslinguistic variation in ‘dative verb ⇒ event type’

A review of primary and secondary data suggests a second locus of crosslinguistic variation. Languages differ in how verbs from distinct semantic classes are associated with the caused possession event type: noncore dative verbs, are not associated with this event type in all languages.

4.1 The starting point: The distribution of verbs in the English double object construction

As the English double object construction only expresses the caused possession event type, it can serve as a diagnostic for whether a verb is associated with this event type.

(32) Verbs found in the double object construction (based on Gropen et al. 1989:243-244):

- give-type verbs: give, pass, hand, sell, pay, trade, lend, loan*
- Verbs of future having: advance, allocate, allot, allow, assign, award, bequeath, forward, grant, guarantee, leave, offer, promise*
- send-type verbs: mail, send, ship*
- throw-type verbs: fling, flip, kick, lob, shoot, slap, throw, toss*
- Verbs of continuous causation of accompanied motion in a deictically specified direction: bring, take*

(33) Verbs not found in the double object construction (based on Gropen et al. 1989:244):

push-type verbs carry, pull, push, schlep, lift, lower, haul

These data suggest that the verbs in (32) are associated with the caused possession event type, but that those in (33) are not.

(NOTE: “benefactive” and manner of speaking/communication examples are ignored; see Levin 2004 for brief discussion of the latter.)

4.2 Beyond English: An implicational hierarchy of semantic verb classes

4.2.1 A first pass at a hierarchy of semantic verb classes

Based on an examination of English, Icelandic, German, Dutch, Croft et al. (2001) propose a ditransitivity hierarchy involving three verbs chosen from major dative verb classes.

- (34) Ditransitivity Hierarchy: ‘give’ < ‘send’ < ‘throw’
- (i) If there are constraints on the distribution of a ditransitive [= double object or dative] construction the construction will be associated with the higher end of the Ditransitivity Hierarchy;
 - (ii) If there are constraints on the distribution of an oblique [= allative] construction, especially a spatial oblique construction, the construction will be associated with the lower end of a Ditransitivity Hierarchy.
- (Croft et al. 2001:2)

(Kittilä (2006:23) can also be read as suggesting something like a ditransitivity hierarchy based on the morphosyntactic frames verbs are found in, with the order of verbs on the hierarchy taken to reflect their distance from a ditransitive prototype.)

This hierarchy suggests that there is constrained crosslinguistic variation in ‘verb ⇒ event type’, on the assumption that a verb’s occurrence in the double object or dative construction can be taken as a proxy for its being associated with the caused possession event type.

4.2.2 A refinement of the hierarchy of semantic verb classes

Additional data from other languages confirm (34) and begin to fill out the picture further (see also Levin 2004).

NOTE: The languages surveyed have double object constructions, as in English, or other syntactically comparable constructions: usually, involving a dative NP (Siewierska 1998; see section 3.6.1), but also a clitic doubled dative, as in Spanish (Bleam 2003, Demonte 1995); a genitive NP, as in Greek (Anagnostopoulou 2002); or pronominal *le-* as in Hebrew (see section 3.4).

Here we take these constructions as being dedicated to the caused possession event structure, though in some instances this assumption needs to be substantiated by further study.

	Greek	English Dutch	Warlpiri	Hebrew	Icelandic	Mandarin	Yaqui	Fongbe
<i>Give</i> -type	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Future having	Yes	Yes	ND	Yes	Yes	Yes	ND	ND
<i>Send</i> -type	Yes	Yes	Yes	Yes	Yes	No	No	ND
Bring/take	Yes	Yes	Yes	Y/N	Yes	No	ND	ND
<i>Throw</i> -type	Yes	Yes	Yes	Yes	No	No	No	No
<i>Push</i> -type	No?	No?	No	No?	ND	No	ND	ND

(ND = no data available; data sources: Dutch — Lamiroy (p.c.); Fongbe — Lefebvre (1994:117-118), Lefebvre & Brousseau (2002:472-473); Greek — Anagnostopoulou (2002:12-13); Icelandic — Barddal (2007), Mandarin Chinese — Chung & Gordon (1998:113), Grano (p.c.); Warlpiri — Legate (2003); Yaqui — Guerrero Valenzuela (2002, p.c.).)

(NOTES: In Hebrew, *le-* indicates sources with the verb ‘take’, but recipients with the verb ‘bring’; in Icelandic the theme of *throw*-type verbs is expressed in the dative case.)

The parallel distributional restrictions on the verbs extend to a very fine-grained level of detail: e.g., controversy about whether *push*-type verbs occur in the double object/dative construction.

AN EXAMPLE: Controversy whether *push*-type verbs occur in English double object construction:
 YES — Green (1974:80, 85); NO — Pesetsky (1995:137), Pinker (1989:103, 110-111).

Examples occur in very large English text corpora (e.g., the Web; Bresnan & Nikitina to appear):

- (35) a. As player A pushed him the chips, all hell broke loose at the card table.
b. “Well . . . it started like this . . .” Shinbo explained while Sumomo dragged him a can of beer and opened it for him . . .

Anagnostopoulou (2002) notes that intuitions concerning the Greek counterparts are unstable.

4.3 Interpreting the patterns

There is crosslinguistic variation in the distribution of semantic verb classes across the double object and dative constructions and, thus, in their association with the caused possession event type.

THE QUESTION: Why does the variation take the form of an implicational hierarchy?

PROPOSAL: The ordering of semantic verb classes in this hierarchy reflects how naturally the particular semantic verb type can be associated with the caused possession event type.

That is, as we now suggest, the semantic verb classes most often associated with this event type are those necessarily associated with it or most easily construed as fitting it.

A MORE DETAILED VIEW:

- *give*-TYPE VERBS: These verbs are naturally associated with the caused possession event type due to the very meaning they lexicalize:
 - the verb *give* itself simply instantiates the type without contributing additional information;
 - other verbs in this class contribute additional information about the nature of the event.
- VERBS OF FUTURE HAVING: Though the data on these verbs is incomplete, overall they pattern like *give*-type verbs. This is consistent with the claim that they also lexicalize caused possession, though modified by a particular “sublexical modality” (Koenig & Davis 2001; also Croft 2003): a modal, negation, or temporal operator.

EXAMPLE: “a promise entails a transfer of possession in models in which the set of circumstances is restricted to those in which people honor their promises” (Koenig & Davis 2001:85).

- *send*-TYPE VERBS: These verbs lexicalize caused motion and are naturally associated with the caused motion event type. However, as noted in section 2, these verbs may also be associated with the caused possession event type because, as Goldberg (1997) proposes, verbs may be integrated into event types via a force-dynamic relation—in this instance, a means relation. Presumably, though this option is not exploited in all languages, explaining their placement on the verb class hierarchy.

- *throw*-TYPE VERBS: These verbs basically describe two-participant events in which one entity instantaneously imparts a force on a second. As this second entity may be set in motion, these verbs may be associated with the caused motion event type, and, due to this association, also with the caused possession event type just as the *send*-type verbs are.

Presumably, *throw*-type verbs are below the *send*-type verbs in the verb class hierarchy as their association with the caused possession event type is less direct. Furthermore, as *throw*-type verbs lexicalize some manner, they are less likely to focus on the result, whether or not the event includes an intended possessor; in contrast, *send*-type verbs do not lexicalize a manner and so might more easily describe events with an intended possessor.

- *push*-TYPE VERBS: These verbs describe “continuous causation of accompanied motion in some manner” (Pinker 1989); like the *throw*-type verbs, they basically describe two-participant events of imparting force and do not lexically select a spatial goal. Again, as they describe events which can set a force recipient in motion, they can be associated with the caused motion event type.

Why, then, are they less likely than the *throw*-type verbs to also be associated with the caused possession event type? The reason might be that here caused motion generally requires the continuous intervention of the agent; unlike the *throw*-type verbs their meanings involves an event-to-event homomorphism (Krifka 1999) in that the action of the agent is reflected in the movement of the theme. This property may make them less likely to be used to describe an event with an intended possessor.

At least some instances of these verbs in the double object construction have properties that might facilitate their association with the caused possession event schema:

In (35a), the pushing event actually does not involve the continuous causation of motion, but rather the force sets the theme in motion, making it an event of imparting force as with a *throw*-type verb.

5 Conclusions

- The inherent meaning of individual dative verbs has a greater contribution to make to the morphosyntactic expression of their arguments in English and other languages than most current accounts typically assume (Jackendoff 1990 being the exception).
- A better understanding of the attested range of crosslinguistic variation is available if there is separate consideration of: ‘verb \Rightarrow event type’ and ‘event type \Rightarrow morphosyntactic frame’.
- Members of different semantic verb class show distinct associations with event types across languages, with the attested options appearing to support a hierarchy of verb classes.
- Specifically, *give*-type verbs are associated with the caused possession event type, while *throw*- and *send*-type verbs have caused motion and, in many languages, caused possession event types.

NOTE: The ditransitivity hierarchy may be reflected elsewhere, e.g., in whether a verb must have an applicative affix when in the double object construction—i.e. presumably, when associated with the caused possession event type.

- It will be important to fully delineate the space of morphosyntactic options found across languages for expressing caused motion and caused possession, in general, and the notions recipient and spatial goal, in particular.

Blansitt’s (1988) typological study of dative, locative, and allative case/adposition syncretisms would provide a productive starting point for doing this.

Acknowledgments: I thank Tanya Nikitina for much helpful input. For discussion and examples of dative verbs in languages other than English I am grateful to Béatrice Lamiroy (Dutch), Itamar Francez (Hebrew), Thomas Grano (Mandarin), and Olga Kagan, Boris Katz, Tanya Nikitina, Maria Polinsky, and Maria Koptjevskaja-Tamm (Russian).

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