

Slap, Give a Slap, Slap a Slap:
Crosslinguistic Diversity in Hitting Event Descriptions

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Goal: To show the range of encoding options observed across languages for specific types of events largely arises from crosslinguistically applicable argument realization principles interacting with each language's lexical and morphosyntactic resources.

The case study: The description of hitting events, with a focus on strategies for expressing predicative content and, secondarily, argument realization.

1 The argument realization of hitting—and breaking—verbs in English

The English verbs *hit* and *break* are each representative of a larger class of verbs, whose members share elements of meaning and patterns of behavior (Fillmore 1970).

- (1) a. HITTING VERBS: bash, beat, **hit**, kick, pound, punch, slap, smack, tap, whack, . . .
Subtype of surface contact verbs: involve (often forceful) contact with an entity, without entailing a change in its state.
- b. BREAKING VERBS: bend, **break**, crack, fold, shatter, splinter, split, snap, . . .
Subtype of change of state verbs: involve a change of state in an entity.

Verbs of both types allow transitive uses, optionally accompanied by an instrumental *with* phrase:

- (2) a. The boy hit the window [SURFACE] (with a ball [INSTRUMENT]).
b. The boy broke the window [PATIENT] (with a ball [INSTRUMENT]).

But hitting and breaking verbs show considerable divergences in their argument realization options, with hitting verbs overall showing more options than breaking verbs:

- (3) Availability of the conative alternation:
a. Carla hit the door./Carla hit at the door.
b. Janet broke the vase/*Janet broke at the vase.
- (4) Availability of the *with/against* alternation (Fillmore 1977:74–78):
a. Perry hit the fence with the stick. = Perry hit the stick against the fence.
b. Perry broke the fence with the stick. ≠ Perry broke the stick against the fence.
- (5) Availability of body-part possessor ascension (Fillmore 1970:126, (23)–(26)):
a. I hit his leg./I hit him on the leg.
b. I broke his leg./*I broke him on the leg.

- (6) Availability of the causative alternation (V-transitive = ‘cause to V-intransitive’):
- a. The boy hit the window./*The window hit.
 - b. The boy broke the window./The window broke.

Generalizations about argument realization in English across transitive uses:

- The **patient** must be realized as the direct object of a breaking verb.
- The **surface** may but need not be realized as the direct object of a hitting verb.

2 Descriptions of hitting events across languages

- Across languages variation is observed in the realization of the argument denoting the surface, with the attested options going beyond what English might suggest.
- Further, some languages may express some part of the predicative content of the hitting event description—typically, a tool or body part—outside the verb.

2.1 Attested types of hitting event descriptions

- **Surface as object with hitting verb:** Smith hit *the fence*. (English, Vietnamese)

[_{VP} V NPSURFACE-ACC]

- **Surface as oblique with hitting verb:** Smith hit at *the fence*. (English, Hebrew, Ingush, Lhasa Tibetan, Ulwa)

[_{VP} V NPSURFACE-OBL_{loc}] or [_{VP} V [_{PP} P_{loc} NPSURFACE]]

- **Surface as object if animate, but oblique if inanimate with hitting verb:** Smith hit *Jones/at the fence*. (Dutch, German, Russian, Swedish)

- **Surface as oblique with a V-N combination:** The horse gave a kick to *my shin*. (English, Hebrew, Ingush, Lhasa Tibetan, Portuguese, Spanish, Ulwa)

TYPES OF V-N COMBINATIONS:

- V is a light verb: *give slap/slapping* ‘slap’ (English, Hebrew, Italian, Portuguese, Spanish)
- V is a ‘basic’ hitting verb: *hit fist* ‘punch’ (Emai, Ingush, Lhasa Tibetan, Ulwa)
- V is a hitting verb and N is a cognate object: *hit_V hit_N* ‘hit a hit’ (Vietnamese)

[_{VP} V N NPSURFACE-OBL] or [_{VP} V N [_{PP} P NPSURFACE]]

Choice of case/P (e.g., locative vs. dative) may depend on animacy of surface.
N provides semantic content to distinguish among types of hitting events.

- **Surface as first object with a V-N combination:** Jones hit *Smith* a fist. (Emai)

[_{VP} V NPSURFACE N]

V is a ‘basic’ hitting verb: *smack fist* ‘punch’.

N provides semantic content to distinguish among types of hitting events.

2.2 Language-specific case studies of hitting event descriptions (See Appendix for more)

2.2.1 Ulwa (Koontz-Garboden p.c.)

- The surface, whether animate or inanimate, is expressed in a PP headed by locative *kau* with *baunaka*, which is used to describe a variety of hitting events, including those falling under English *hit*, *kick* and *beat*, as well as with *tisnaka* ‘slap’.

(7) M raudi L *(kau) bau-t-ida.
M SUBJ L at hit-TA-3SING
‘M hit L.’ (Koontz-Garboden field notes:0405-1024)

(8) Andrew raudi Ulwa uuka *(kau) bau-t-i tung ka.
Andrew SUBJ Ulwa house at hit-TA-PROG walk SENT-KA
‘Andrew’s walking around hitting the Ulwa house.’ (Koontz-Garboden field notes:0405-1025)

- Hitting verbs consist of a precategorial root (e.g., *bau-*) and a transitive class marker (*pa*, *ta*), but cannot take an intransitive class marker (*da*, *wa*), and, thus, lack the causative alternation.

(9) bauTAnaka (transitive); *bauWAnaka/*bauDAnaka (intransitive)

2.2.2 Swedish (Lundquist & Ramchand 2012)

- The surface must be expressed in a PP when inanimate, but may be an object when animate (Lundquist & Ramchand 2012, Viberg 2004:337–338).

(10) a. Jag sparkade *(på) bordet (flera gånger).
I kicked (on) table.DEF (many times)
‘I kicked (on) the table many times.’ (Lundquist & Ramchand 2012:224, (2a))

b. Jag sparkade (på) honom (flera gånger).
I kicked (on) him (many times)
‘I kicked him many times.’ (Lundquist & Ramchand 2012:224, (1a))

(11) *sparka-* ‘kick’, *slå-* ‘hit’, *bita-* ‘bite’, *slicka-* ‘lick’, *hugga-* ‘chop’ (Lundquist & Ramchand 2012:228)

- An inanimate object is possible only if a resultative phrase is predicated of it or if it is understood as being set in motion due to the force imparted as part of the action denoted by the hitting verb. (This observation extends to at least some other languages whose inanimates aren’t usually objects.)

(12) Jag sparkade bollen i må.
I kicked ball.DEF in goal
‘I kicked the ball into the goal.’ (Lundquist & Ramchand 2012:229, (15))

- Swedish shows something like the English *against* construction, with the instrument as object.

(13) Jag högg kniven i bordet.
I stuck knife.DEF in table.DEF
‘I stuck the knife into the table.’ (Lundquist & Ramchand 2012:229, (16))

2.2.3 Ingush (Nichols 1982, 1984, 2011)

- The surface, whether animate or inanimate, is expressed with an oblique case—the dative—and the instrument with the nominative (i.e. absolutive) (Nichols 1984:188, 2011:467–470, 746).

(14) Cuo mashienaa ghadzh tiexar.
3s.ERG car-DAT stick-NOM strike
'He hit the car with a stick.' (Nichols 2011:340, (47))

(15) Da:s woʃa: bi: bi-ett.
father-ERG son-DAT fist-NOM beats
'(The) father beats (his) son.' (Nichols 1984:188, (8))

(16) *d-ietta* 'strike (repeatedly), beat', *ħaqan* 'cut, slice, rub (and other lateral motions)', *quossan* 'throw, shoot', *tuoxan* 'strike' (Nichols 1984:188–189, 2011:470)

- This case-marking pattern is common across Caucasian (Nichols 1984:188), with languages varying as to whether the oblique case is dative or locative.

- Certain concepts lexicalized by hitting verbs in English are expressed via verb-noun (V-N) combinations (Nichols 1982:447, 1984:188).

— The verb is fairly unspecific and the noun, typically an instrument or body part, specifies the type of hitting event (cf. English *give a kick*).

(17) *tuop tuoxan*, literally 'rifle strike', means 'shoot', not 'beat with a rifle'; *urs tuoxan*, literally 'knife strike', means 'stab', not 'hit with a knife'; *cerjg tuoxan*, literally 'tooth strike', means 'bite'; *kur tuoxan*, literally 'horn hit', means 'butt' (Nichols 1984:189, 2011:341, 468).

(18) as pħagalna tuop qüössira.
I-ERG rabbit-DAT rifle-NOM threw
'I shot at the rabbit with a rifle.' (Jakovlev, 1940:43; cited in Nichols 1984:189, (12c))

— The surface is again expressed with an oblique case and the instrument with the nominative case.

2.2.4 Portuguese (Amaral p.c., Baptista 2004)

- While there are some hitting verbs (e.g., *bater* 'hit'), the events described by many English hitting verbs are only expressible via V-N combinations.

— Portuguese uses the light verb *dar* 'give' rather than a general hitting verb.

— The object of the light verb is typically a "predicative violent action noun" formed by adding *-ada* to a concrete noun denoting an instrument or body part that can be used to hit or hurt.

(19) O João deu uma bengalada ao Pedro.
the John give.PERFPST3s a caning to.the Peter
'John gave a cane-*ada*, i.e. a caning, to Peter.' (Baptista 2004:36, (18c))

(20) BASES FOR *-ada* NOUNS: *agulha* 'needle', *bastão* 'club, staff', *bengala* 'cane', *chibata* 'switch, rod', *faca* 'knife', *porra* 'club', ... (from Baptista 2004:39–40)

Baptista lists over 40 violent action nouns in *-ada*, and notes that such nouns are productively formed (e.g., the nonce *sapatada* ‘shoe-*ada*’, *cadeirada* ‘chair-*ada*’).

— A few simple nouns (*pontapé* ‘kick’, *murro* ‘punch’) can enter into these V-N combinations.

— The surface, if inanimate or a body part, is expressed in a PP headed by the locative preposition *em* or, if animate, with the dative.

(21) O João deu uma bengalada no carro.
 the John give.PERFPST3s a caning in.the car
 ‘John hit the car.’

(22) a. O João deu [um pontapé] [na perna do Pedro].
 the John give.PERFPST3s a kick in.the leg of.the Peter
 ‘John gave a kick in the leg of Peter.’ (Baptista 2004:32, (2a))

b. O João deu [um pontapé] [ao Pedro] [na perna].
 the John give.PERFPST3s a kick to.the Peter in.the leg
 ‘John gave a kick to Peter in the leg.’ (Baptista 2004:32, (2b))

- Hitting verbs don’t show the causative alternation: they lack the relevant intransitive uses.

2.2.5 Vietnamese (Pham 1999)

- Hitting verbs may express the surface—whether an animate or inanimate entity—as an object; they may also take a cognate object with the surface expressed in a PP.

(23) Ti đá tôi.
 Ti kicked me
 ‘Ti kicked me.’ (Pham 1999:232, (10a))

(24) Ti đá một đá.
 Ti kicked a kick
 ‘Ti kicked a kick.’ (Pham 1999:233, (10b))

(25) Ti đá [một đá] [vào tôi].
 Ti kicked a kick on me
 ‘Ti kicked me a kick.’ (Pham 1999:233, (10c))

- These verbs “usually involve physical movement of instruments, which can be either body parts or physical objects towards someone or something” (Pham 1999:233).

- 16 of the 32 verbs Pham lists are repeated in (26).

(26) *đá* ‘kick’, *đấm* ‘punch’, *thụi* ‘punch’, *cạo* ‘scratch’, *cấu* ‘pinch/nip’, *nện* ‘beat’, *quai* ‘beat’, *cắn* ‘bite’, *đánh* ‘hit’, *tát* ‘slap’, *vuốt* ‘stroke/fondle’, *liếm* ‘lick’, *hôn* ‘kiss’, *cù* ‘tickle’, *phang* ‘strike with a stick’, *quất* ‘strike’, ... (Pham 1999:233)

2.2.6 Emai (Schaefer & Egbokhare 2004)

Class I verbs: *so* ‘smack, collide with’, *hian* ‘strike’—found in the construction ‘V NP1 NP2’.

- (27) òhí só ójé èkpà.
Ohi smack Oje fist
‘Ohi punched Oje./Ohi smacked his fist against Oje.’ (Schaefer & Egbokhare 2004:309, (1a))

— NP1, the surface, must be human; other animates or inanimates are not possible.

— NP2 further specifies the hitting action and is chosen from a limited number of body parts; it cannot be modified or pronominalized.

- (28) *èkpà* ‘fist’ for ‘punch’, *úkpà* ‘beak’ for ‘peck’, *ízà* ‘heel’ for ‘kick’, *ìkhókhòì* ‘kuckle’ for ‘knuckle’, *àkòn* ‘teeth’ for ‘bite’, *èhìén* ‘fingernail’ for ‘pinch’

Class II verbs: *fí* ‘hit’—found in various constructions.

- ‘V NP1 NP2’: NP1 is an animate surface; NP2 is an instrument.
(NP1 may have a locative body part predicated of it in an external possession relationship.)

- (29) òhí fí ójé úkpóràn.
Ohi hit Oje stick
‘Ohi hit Oje with a stick.’ (Schaefer & Egbokhare 2004:313, (12a))

— The instrument allows certain determiners and demonstratives, but cannot be pronominalized.

— The instrument may be the subject, but the animate surface cannot occur alone.

- (30) úkpóràn fí ójé vbì ùòkhò.
stick hit Oje LOC back
‘A stick hit Oje on the back.’ (Schaefer & Egbokhare 2004:314, (12d))

- (31) *òhí/ úkpóràn fí ójé.
Ohi/ stick hit Oje
‘Ohi/A stick hit Oje.’ (Schaefer & Egbokhare 2004:314, (13a))

- ‘V NP1 P_{loc} NP2’: NP2 is an inanimate surface; resembles the English *against* construction.

- (32) òhí fí úkpóràn vbì òtòì.
Ohi hit stick LOC ground
‘Ohi hit a stick on the ground.’ (Schaefer & Egbokhare 2004:314, (12c))

2.3 A note on breaking verbs

- In the few instances that studies of hitting verbs mention breaking verbs, they note that:

— Object-oblique alternations are not possible.

Ulwa change of state verbs (e.g., *bahnaka* ‘break’, *dapinnaka* ‘straighten/bend’, *warinnaka* ‘bend’) may take their patient argument as an object, but not as object of *kau*.

- (33) Aaka bakaka ulni-ki panka (*kau) bah-t-ida.
this child writing-1SING stick at break-TA-3SING
‘This kid broke my pen.’ (Koontz-Garboden field notes:0405-1030)

— The causative alternation is their hallmark.

Ulwa breaking verb roots show this alternation, taking either transitive or intransitive class markers.

- (34) Arak-ki-bus bah-w-ida.
gun-1SING break-WA-3SING.
‘My gun broke.’ (Green 2004)

Crosslinguistic studies invariably include the counterpart of English *break* among the causative alternation verbs (Haspelmath 1993, Nedjalkov 1969, Nichols, Peterson & Barnes 2004).

— Body-part possessor raising is not possible.

— Animacy considerations are not mentioned at all.

3 Is there systematicity underlying the attested diversity in event descriptions?

- The repeated attestation of some options suggests that there is not wild crosslinguistic variation.

- Two observations emerge from the crosslinguistic survey:

— Some languages express at least some part of the predicative content of the event—its manner—outside the verb, e.g., as a complement of a light verb or a basic hitting verb or as a cognate object.

— Some languages resist expressing the surface as a direct object, especially when inanimate.

- Questions about the nature of the event descriptions attested:

— What is the reason for the V-N combinations?

— What gives rise to the different realizations of the surface?

— Are there interactions between these two properties?

- Preliminary answers follow, but a more systematic investigation of the data is necessary.

4 A key source for the distinctive properties: Hitting verbs are manner verbs

- Hitting verbs and breaking verbs fall on opposite sides of the manner/result verb divide (L&RH 1991, in press, RH&L 1998, 2010).

- Verbs that describe events in which physical objects are forcefully impacted fall into two classes:

- Hitting verbs describe making surface contact with a physical object via forceful impact; these MANNER verbs describe ways of potentially damaging objects; even if they lexicalize manners usually associated with such results, they aren't entailed.
- Breaking verbs describe changes in an object's "material integrity" (Hale & Keyser 1987); these RESULT verbs describe specific types of damage that often result from forceful impact, but they are silent about the manner in which the result comes about.

(35) The rock hit/#broke the windshield, but luckily it wasn't damaged.

- Result verb "roots" lexicalize scalar change, manner verb "roots" nonscalar change (RH&L 2010).

— A SCALE is composed of a set of degrees—points or intervals indicating measurement values—on a particular dimension (e.g., brightness, depth, height, ripeness, temperature), with an ordering relation. The dimension represents an attribute of an entity, with the degrees indicating the possible values of this attribute (Kennedy 2001, Kennedy & McNally 2005).

— A SCALAR CHANGE in an entity: a change in value of a scalar-valued attribute in a given direction on the relevant scale (Hay, Kennedy & Levin 1999, McClure 1994, Rappaport Hovav 2008).

— A NONSCALAR CHANGE in an entity: a change which cannot be characterized with an ordered set of degrees—i.e. values of a single attribute—along a dimension representing this attribute; typically involve complex combinations of many simultaneous changes.

5 Understanding the role of V-N combinations

THE OBSERVATION: Some languages express at least some of the manner component of a hitting event outside the verb, e.g., as the complement of a light or basic hitting verb or as a cognate object.

5.1 Attested strategies for expressing predicative content

- A RECURRING OBSERVATION: What is lexicalized as part of the meaning of a simple verb in some languages is expressed outside the verb in other languages.

(36) The patterns found in Emai represent "a predication type in which verbs collocate with specific parts of speech to express meanings that languages of another type express primarily with a single verb lexeme." (Schaefer & Egbokhare 2004:309)

(37) òhí só ójé èkpà.
 Ohi smack Oje fist
 'Ohi punched Oje./Ohi smacked his fist against Oje.' (Schaefer & Egbokhare 2004:309, (1a))

- Attested strategies for providing predicative content outside the verb:

- Light verb plus contentful noun ('action pattern' (Jackendoff 1990), or maybe body part or tool)
- Basic hitting verb plus noun designating body part or tool
- Hitting verb plus cognate object
- Basic hitting verb or light verb plus ideophone (see section 5.3)

- These strategies involve varying types of non-verbal content, typically nominal:
 - Cognate object (reiterates manner lexicalized in verb): Vietnamese
 - Body part or tool used as instrument: Emai, Ingush, Lhasa Tibetan, Ulwa
 - Action nominal derived from body part, tool, or other predicative content: Romance languages
 - Ideophone (see section 5.3): Emai, Japanese

5.2 Why the manner might be expressed outside the verb

Proposal: Some languages use V-N combinations to augment a small manner verb inventory.

- Some of the studies consulted suggest that languages that use V-N combinations have a smaller set of hitting verbs—a subtype of manner verbs—than, say, English (DeLancey 2000:13).

EXAMPLE: Only 16 of the 47 bases for Portuguese violent actions nouns listed in Baptista (2004) provide bases for denominal verbs.

- (38) a. *chicote* ‘whip_N’ gives rise to *chicotear* ‘whip_V’
 b. *bengala* ‘cane_N’ does not give rise to **bengalar* ‘cane_V’

- Small manner verb inventories have been documented in the motion domain in various languages: e.g., Basque, Italian, Japanese, Korean, and Spanish (Baird 2008, Cardini 2008, Cifuentes Férez 2007, 2009, Ibarretxe-Antuñano 2004, Slobin 2000, 2004a, 2004b, 2006, Wienold 1995).
- Wienold (1995:319ff) suggests the reduced manner of motion verb inventory in Japanese, Korean, and Thai reflects a general reduction in the size of the manner verb inventory in these languages.
- Manner of motion verbs in such languages tend to lexicalize the major gaits (e.g., the equivalents of English *walk*, *run*), but not their hyponyms (e.g., *jog*, *sprint* or *amble*, *creep*, *prance*, *strut*), particularly in verb-framed languages (Malt et al. 2008, Slobin 1997, 2000, Wienold 1995).

- (39) “Languages seem to have a ‘two-tiered’ lexicon of manner verbs: the neutral, everyday verbs — like *walk* and *fly* and *climb*, and the more expressive or exceptional verbs — like *dash* and *swoop* and *scramble*. In S[atellite-framed]-languages, the second tier is extensive and elaborated, making distinctions that do not play a role in the considerably smaller second tiers in V[erb-framed]-languages.” (Slobin 1997:459)

- With respect to hitting events, discussions of V-N combinations mention the use of basic hitting verbs (Koontz-Garboden p.c. on Ulwa, Nichols 1984:190 on Ingush): these are first tier verbs.
- V-N combinations provide a means of expressing hyponyms of *hit*, that is, notions that are lexicalized as second tier verbs in English.

5.3 Further evidence that small manner verb inventories have a part to play

- Another way of augmenting the manner verb lexicon: V-ideophone (mimetic) combinations (Akita 2008, Ibarretxe-Antuñano 2006, 2009, Matsumoto 2003, Schaefer 2001, Slobin 2004b:233–235, Stringer 2011, Sugiyama 2005, Wienold 1995:319–322).

- Ideophones are attested in several manner domains in Japanese, where they help make finer distinctions that are lexicalized using independent verbs in English.

(40) Manner of motion (Shibatani 1990, Wienold 1995)

Ideophone	Verb	Gloss
<i>yochiyochi</i>	<i>aruku</i> ‘walk’	‘toddle, totter’
<i>sutasuta</i>	<i>aruku</i>	‘walk briskly’
<i>burabura</i>	<i>aruku</i>	‘stroll’
<i>tobotobo</i>	<i>aruku</i>	‘trudge along, tread on’
<i>shanarishanari</i>	<i>aruku</i>	‘walk daintily’

Also: manners of laughing (Shibatani 1990:155), crying (Shibatani 1990:155, Wienold 1995:320), and looking (Tsujiyama 2007:449).

- **Prediction:** Verb-ideophone combinations should allow finer grained distinctions to be made within the hitting domain to express notions lexicalized as verbs in other languages.
- Japanese does precisely this by combining a basic hitting verb or the light verb *suru* ‘do/make’ with an ideophone (Kageyama 2007:47).

(41) *humu* ‘step on’, *kamu* ‘bite, chew’, *keru* ‘kick’, *koneru* ‘knead’, *naderu* ‘stroke’, *tataku* ‘hit’, *tuku* ‘poke’, *tutuku* ‘poke’ (Kageyama 2007:51–53)

(42) Yukiko-ga doa-o tatai-ta.
Yukiko-NOM door-ACC hit-PST
‘Yukiko hit the door.’

(43) a. Yukiko-ga doa-o gongon tatai-ta.
Yukiko-NOM door-ACC ‘bang’ hit-PST
‘Yukiko banged the door.’ (based on Kageyama 2007:47, (36))

b. Yukiko-ga doa-o gongon-to tatai-ta.
Yukiko-NOM door-ACC ‘bang’-ADV hit-PST
‘Yukiko banged the door.’ (based on Kageyama 2007:47, (36))

(44) Hahaoya-ga akatyán-no senaka-o tonton suru.
Mother-NOM baby-GEN back-ACC ‘tap’ do.PRES
‘Mother taps her baby on the back.’ (Kageyama 2007:44)

Compare English, which has onomatopoeic hitting verbs based on sounds produced through surface contact: *bang*, *clink*, *clatter*, *thud*, *thump*, *whack*, ... (Richardson 1983, Stringer 2011:18).

- Emai also uses ideophonic adverbs to convey further nuances of meaning (Schaefer 2001).

(45) a. ó fí ághán vbí óran.
he hit sickle LOC tree
‘He hit a sickle on the tree.’ (Schaefer 2001:349, (21d))

b. ó fí ághán vbí óran gbógbógbó.
he hit sickle LOC tree with-a-smack
‘He smacked a sickle on the tree.’ (Schaefer 2001:349, (21c))

6 What gives rise to the different realizations of the surface?

THE OBSERVATION: Some languages resist expressing the surface as a direct object, especially when inanimate.

SOME TERMS: PATIENT refers to the argument of a result verb that undergoes the scalar change, while FORCE RECIPIENT refers to the ‘passive’ argument of a manner verb, including a surface.

6.1 Why the surface need not be an object

- Based on a study of English manner and result verbs, RH&L (2011) posit a constraint on the argument realization options of result—i.e. scalar change—verbs (see also RH&L 1998, 2005):

(46) The patient—the entity that undergoes the scalar change—MUST be realized and CAN ONLY be realized as a direct object.

- As manner verbs lack such a constraint, they may show flexibility in realizing the force recipient.
- The constraint means manner, but not result verbs may show object alternations (Levin 2006).

(47) CONATIVE ALTERNATION:

- a. Alex broke the vase./*Alex broke at the vase.
- b. Kim hit the mosquito./Kim hit at the mosquito.

(48) *With/against* ALTERNATION:

- a. Sam broke the fence with the stick./Sam broke the stick against the fence.
(fence breaks in one variant, stick in the other)
- b. Sam hit the fence with a stick./Sam hit a stick against the fence. (Fillmore 1977:75)
(in both variants, fence and stick in contact and stick moves)

(49) POSSESSOR RAISING:

- a. Pat broke the mug’s handle/*Pat broke the mug on the handle.
- b. Kelly hit my arm./Kelly hit me on the arm.

- Assuming (46) holds beyond English, it illuminates hitting verb argument realization patterns:

— By (46), a patient must be an object, so it is unsurprising that across languages breaking verbs have few argument realization options.

— The surface of a hitting verb, as a force recipient, has no constraints on its realization, so it may be an object or oblique, as attested within and across languages.

- The actual realization of the surface in a given language can be attributed to its choice of semantic determinants of objecthood, as well as to the priorities it establishes among them.

6.2 Why the surface may be realized as an object

- The surface qualifies as a force recipient as it is impinged upon by a force even if it does not necessarily undergo a change of state (Croft 1991, RH&L 2001).
- Thus, the surface shows a weaker degree of affectedness than arguments that undergo a scalar change, what Beavers describes as ‘potential for change’—“that is, the verb lexically specifies that there are specific possible outcomes” (2010:835; see also Beavers 2011).
- However, English requires some degree of affectedness for objecthood: the conative alternation shows that if surface contact is not entailed, the surface cannot be the object.

(50) Carla hit at the bear. (\neq Carla touched the bear.)

- In at least English, then, the objecthood cut-off for nonstative verbs is at ‘potential for change’.

6.3 Why the surface may or must be realized as an oblique

- If a language requires a strong degree of affectedness as the semantic determinant of objecthood, then only patients can be objects; a surface must be an oblique, as in Ulwa.
- The surface may be an oblique because of competing determinants of objecthood, e.g., motion.

— Hitting verbs may take a third, ‘instrument’ argument, which is sometimes expressed as an object, rather than an oblique, as in the *against* variant of the English *with/against* alternation.

(51) Sam hit a stick against the fence.

— In fact, analogues of the *against* variant apparently instantiate a primary argument realization option for such verbs in some languages (e.g., Caucasian languages).

— The label ‘instrument’ is used for the third argument for two reasons:

- It may be expressed as the object of the preposition *with*, as in English.
- The relevant NP may denote a body part or an artifact designed as an instrument.

— However, in a hitting event, this entity moves into contact with the surface, qualifying as a theme in the localist sense (Gruber 1965, Jackendoff 1976, 1983) or a Talmyan figure (1975).

— Thus, the *against* variant in the *with/against* alternation provides a realization of a verb’s arguments where a moving argument is given priority as an object over the surface—a force recipient.

— However, Emai, which has a double object construction, allows the surface as first object with an instrument object, as in (27), repeated here.

(52) òhí só ójé èkpà.
Ohi smack Oje fist

‘Ohi punched Oje./Ohi smacked his fist against Oje.’ (Schaefer & Egbokhare 2004:309, (1a))

6.4 Why there are animacy effects outside of V-N combinations

- Animate arguments have a special status, which affects their realization elsewhere (e.g., differential object marking; Bossong 1991).
- The differential treatment of animate force recipients in some languages means that the relevant semantic determinants of objecthood must distinguish animate from inanimate surfaces.
- Animate surfaces are considered affected since being sentient, they are “experientially affected by the event” (Lundquist & Ramchand 2012:230; also Dowty 1991:596, de Swart 2010).
- In some languages, then, the cut-off point for objecthood includes the degree of affectedness that encompasses animate surfaces, but not inanimate surfaces, which are pure force recipients.
- Possessor raising with hitting verbs also illustrates animates may have precedence as objects.

(53) Kelly hit my arm./Kelly hit me on the arm.

6.5 Argument realization in V-N combinations

- The N is syntactically an object (though perhaps in an attenuated way) specifying manner content.
— Unless the language allows for double objects as in Emai (cf. also English *give him a slap*), the surface cannot be realized as an object.
— Such languages require an alternate realization of the surface, with the precise realization dependent on the verb involved: location if ‘put’/‘hit’, recipient/goal if ‘give’.
- When manner content is expressed in an ideophone, the surface may be an object, as in Japanese.

(54) Yukiko-ga doa-o gongon-to tatai-ta.
Yukiko-NOM door-ACC ‘bang’-ADV hit-PST
‘Yukiko banged the door.’ (based on Kageyama 2007:47, (36); cited earlier as (43))

Due to their adverbial nature (Kageyama 2007:37), ideophones do not occupy an NP “slot”, so when combined with a basic hitting verb, the surface can still be the object.

NOTE: When Japanese ideophones occur with the light verb *suru* ‘do/make’ as in (44), the surface is an object—a more general property of such constructions (Kageyama 1991).

6.6 Summary

- The availability of object and oblique realizations for the surface in and across languages can be attributed to the semantic determinants for objecthood that come into play in the absence of an argument undergoing a scalar change, as well as the priorities among them.
- The surface as a force recipient or, when animate, as a more strongly affected entity and the instrument as a moving entity may both qualify as objects of hitting verbs.
- The option of realizing the surface as an object is also a matter of a language’s mode of expressing manner content.

7 In conclusion: Hitting the high points

- Much of the crosslinguistic diversity in the encoding of hitting events can be traced to differences in the lexical and morphosyntactic resources available to languages.
- Beavers, Levin & Tham (2010) already make precisely this point with respect to motion events: the crosslinguistic diversity in encoding motion events that has come under the lexicalization pattern rubric is a reflection of how differences in the lexical and morphosyntactic resources of languages are reflected in the encoding options attested for such events.
- In both instances, common abstract argument realization principles are at work across languages, with crosslinguistic differences in event encoding receiving an independent account in terms of language-specific lexical and morphosyntactic properties.

Appendix: Hitting event descriptions in additional languages

NOTE: Discussions of hitting verbs in still other languages generally support the picture emerging here (e.g., Acton 2012 on Finnish, de Swart 2010 on Dutch, Lundquist & Ramchand 2012 on German, Masini 2012 on Italian, Chung 2003 on Korean, Kiyosawa & Gerdts 2010 on Salish, Palancar 1999 on Spanish).

7.1 Hebrew (Botwinik-Rotem 2003, Gafter p.c., Halevy 2008, Rappaport Hovav p.c.)

- The surface, whether animate or inanimate, is expressed in a PP headed by locative *be*.

(55) *ba'at* 'kick', *dafaq* 'knock (on door), beat', *halam* 'beat/hit', *hitslif* 'whip', *naga* 'touch', *paga* 'hit/collide', *xavat* 'swat', ... (Botwinik-Rotem 2003:10, Halevy 2008:63, 87)

(56) Ha-sus ba'at be Dina/ ba dli.
the-horse kick.PST.3sm in Dina/ in.the pail
'The horse kicked Dina/the pail.'

- The verbs *hirbits* 'hit'—the hitting verb most frequently used colloquially—and *satar* 'slap' take animate surfaces only, and then only if expressed in the dative.
- Hitting verbs do not show the causative alternation, in contrast to *break* and other change of state verbs (Halevy 2008:87).
- As in English, hitting, but not breaking verbs allow possessor raising (Halevy 2008:84–86).

7.2 Russian (Nikitina p.c.)

- The surface is expressed in a PP when it is inanimate: it is the object of the preposition *po*; however, the surface is expressed as an object, bearing accusative case, when animate.

(57) Petja udaril/ stuknul/ šlepnul Kolju.
Petja.NOM hit/ knocked/ slapped Kolja.ACC
'Petja hit/knocked/slapped Kolja.'

(58) Petja udaril/ stuknul/ šlepnul po stolu.
 Petja.NOM hit/ knocked/ slapped on table.DAT
 ‘Petja hit/knocked/slapped the table.’

- Causative uses of *break* and other change of state verbs are transitive and have related anticausative intransitives formed by the addition of a reflexive suffix. Hitting verbs lack such uses.

7.3 Lhasa Tibetan (DeLancey 1982, 1995, 2000)

- The counterpart of English *hit* is not transitive: the surface, whether animate or inanimate, takes locative case.

(59) thub=bstan-gyis blo=bzang-la gzhus-song.
 Thubten-ERG Lobsang-LOC hit-PERF
 ‘Thubten hit Lobsang.’ (DeLancey 2000:6, (18))

(60) shing-la sta=re gzhus-pa
 tree-LOC axe hit
 ‘hit the tree with an axe’ (DeLancey 2000:13, (61))

- Locative case is not found on the patient argument of change of state verbs.

(61) thub=bstan-gyis dkar-yol cig bcag-song
 Thubten-ERG cup a break-PERF
 ‘Thubten broke a cup.’ (DeLancey 1982:23, (6))

- Counterparts of some English hitting verbs are expressed via V-N combinations; the surface is still in the locative case (DeLancey 1995, 2000:13).

(62) nga-s blo=bzang=la rdog=rdyag gzhus-pa yin
 I-ERG Lobsang-LOC kick_N hit/throw-PERF/CONJUNCT
 ‘I kicked Lobsang’ (DeLancey 1995:(20))

(63) thub=bstan-gyis blo=bzang-la mur=rdzog gzhus-song
 Thubten-ERG Lobsang-LOC fist hit-PERF
 ‘Thubten punched Lobsang’ (DeLancey 2000:13, (64))

7.4 Kimaragang Dusun (Kroeger 2010)

- As in other Philippine-type languages, every sentence has a ‘nominative’ NP whose semantic role is indicated by a voice affix on the verb root.

- Generally, instruments are expressed as the nominative NP when the verb takes the zero-affix allomorph of the instrument voice form together with the transitive prefix *poN-*.

(64) Gibang nopo ot pongoduntung ku dialo, aba no.
 0-poN-duntung
 left only REL IV-TR-punch 1SG.GEN 3SG faint PRTCL
 ‘Even if it is only my left (hand) that I hit him with, he will pass out.’ (Kroeger 2010:10, (20b))

- Hitting verbs may also express the instrument as the nominative NP in the *i-* allomorph of the instrument voice form of the verb; however, now the surface is marked in dative case.

(65) N-i-duntung dialo sid tobon a tonggom yo
 PST-IV-punch 3SG DAT wall NOM fist 3SG.GEN
 ‘He punched his fist against the wall.’ (Kroeger 2010:10, (20a))

Such sentences are comparable to the *against* variant of the English *with/against* alternation: they “describe a particular manner of moving a theme in order to bring it into contact with a surface.” (Kroeger 2010:11)

- Roots of breaking verbs combine with distinct voice affixes to give rise to transitive and intransitive forms—i.e. they show a causative alternation; roots of hitting verbs have only a transitive form.

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