"Two's company, more is a crowd": the linguistic encoding of multiple-participant events*

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1. Introduction

This issue investigates the linguistic encoding of events with three or more participants from the perspectives of language typology and acquisition. Such "multiple-participant events" include (but are not limited to) any scenario involving at least three participants, typically encoded using transactional verbs like 'give' and 'show', placement verbs like 'put', and benefactive and applicative constructions like 'do (something for someone)', among others. There is considerable crosslinguistic and within-language variation in how the participants (the Agent, Causer, Theme, Goal, Recipient, or Experiencer) and the subevents involved in multiple-participant situations are encoded, both at the lexical and the constructional levels. For instance, aspects of the multiple-participant event may be encoded using a single verb like the English verb *give*, or they may be distributed across a series of verbs, as in Lao serial verb constructions (Enfield, this issue):

(1) khòòj5   qaw3   miit4   thèèng2   mèè1
    I   take   knife   stab   mother
    'I stabbed mother with (the) knife.'

The participants may be encoded using a variety of linguistic devices, for example, cross-referencing on the verb, fixed linear positions in the clause, case marking, etc. (cf. Kiparsky 1997). In addition, one can distinguish between constructions where the Theme and the Goal/Recipient are treated in the same way in their morphosyntax (symmetric encoding) and constructions in which they are realized differently (asymmetric encoding) (cf. Bresnan and Moshi 1990). At the same time, one can discriminate between different types of *alignment* and determine whether the Theme or the Recipient of a ditransitive verb is treated like the Patient of a transitive verb (Dryer 1986). Similarly, one can propose different alignment types for tritransitive constructions, for example, with a ditransitive

verb and an additional Beneficiary (*A phonetician gave a book to the bassoon player for the physiotherapist*) or Causee (*A physiotherapist made the phonetician give a book to the bassoon player*) (Kittilä, this issue). For instance, one can establish whether the additional Beneficiary or Causee is treated like the Recipient of a ditransitive verb or like the Recipient of the tritransitive construction. Multi-participant events are also interesting from the point of view of pragmatics: the speaker may convey additional meaning with the choice of different construction types available to encode the "same" event in the language, for example, describing a "hitting" event using an "internal possession" construction (*She hit his arm*) versus an "external possession" construction (*She hit him on the arm*).

Multiple-participant events are not only interesting from a descriptive and theoretical point of view; they also provide a challenging task for children acquiring language. Children have to determine the language-specific means used to encode events with three or more participants (e.g. case-marking, word order, cross-referencing affixes on the verb), the relative contributions of these devices, and the constraints on their combination. Prior research suggests that children acquiring different languages show early sensitivity to language-specific means of encoding placement events involving three participants, for example putting a cup on a table (Slobin et al. 2002). But the task is not always easy for language learners. For example, children acquiring German typically learn nominative and accusative case around their second birthday, but dative may be delayed — so how is a third argument marked before the child has mastered dative? German children use a strategy that looks like English, with prepositions instead of case (Eisenbeiß 2003: 397; see also Eisenbeiß et al. 2006):

(2)   die Feder   in   die Mama   geben.
      the feather-NOM/ACC   into   the-NOM/ACC mommy   give
      'give the feather *into* the mommy.'
      (Svenja 3; 3)

Prepositional phrases are also used when German children face the task of integrating an "extra" dative possessor argument into an utterance with a three-place predicate (Eisenbeiß and Matsuo 2003):

(3)   da   legt der Junge   auf [/] von das
      there   puts the boy-NOM   on [/] of   the-NOM/ACC
      Pferd auf den   Kopf den   Sattel.
      horse on   the-ACC   head the-ACC   saddle
      Correct:

Da   legt der Junge   dem   Pferd den   Sattel auf
there puts the boy-NOM   the-DAT horse the-ACC saddle on
den   Ruecken.
the-ACC back
'there the boy puts the saddle on the horse's back.'
(Lena 5; 10)

Bowerman and Brinkmann (1997) cite a range of errors in English children's production of the verb *hit*, from age 1; 9 to age 8, which involve expressing three participants in nonconventional ways (Examples 4–7):

(4) E (1; 9), after C hit E on the arm, E says to M:
     E: hit me Deedee arm mine.
     [then to sister:] Deedee, don't hit me arm.
     E telling M that C hit E's tummy:
     E: hit Deedee tummy mines.
     After dog's tail wags in E's face:
     E: don't hit face me, OK?
(5) E (2; 7) explains why she's crying, holding a toy:
     E: I hit this to my head.
(6) E (4; 9) complaining to M:
     E: [sister] *hit the jump rope on my lip*.
(7) E (8; 0) telling of something in Oz book:
     E: anyone that would, like, try to hit a spear at you would just
     fall back.

These kinds of errors — and their variability across languages — can be examined to address a common assumption in the language acquisition literature: that there are strong and universal correlations between the meanings of predicates and their argument structure, and that children could exploit these correlations in acquiring language — for example, using a verb's meaning to predict its syntax (*canonical mapping*, Pinker 1984: 298), or using a verb's syntax to home in on its meaning (*syntactic bootstrapping*, Gleitman 1990: 30; see Bowerman and Brown, in press). Multiple-participant events are therefore a vital focus for understanding how children acquire argument structure and how this process is influenced by the typology of the language they are learning.

   Despite the challenges posed by multiple-participant events for linguistic and psycholinguistic theorizing, they have so far received far less attention than intransitive and transitive constructions. The beginnings of a typological grasp of the crosslinguistic variation in three-place predicates have been established in Newman (1996) and in the Australian project

''Three-place predicates in the languages of the world,'' with its workshop in Melbourne in 2000. Six of the seven articles in this special issue of *Linguistics* were stimulated by this typological work and derive from presentations at the workshop ''The Linguistic Encoding of Three-Participant Events: Crosslinguistic and Developmental Perspectives,'' held at the Max Planck Institute for Psycholinguistics in 2003. The resulting articles explore the questions that arise from the relative semantic complexity of events with more than two participants and the crosslinguistic variability in their linguistic encoding.

2. Multiple-participant events

The investigation of multiple-participant events across languages presents the researcher with a fundamental challenge at the outset: which events do we include as involving multiple participants? For instance, we may start out by examining the event types encoded by three-argument verbs such as English *give*, *show*, *feed*, or *tell*. But in many languages, events of ''showing'' or ''telling'' may not be encoded with three-argument verbs at all. Rather, such events may be described with two-argument verbs that take a third argument as an adjunct, for example, *I hit the ball to him*. If different languages lexicalize different sets of events in three-argument verbs, the question arises as to which set of events to investigate. Further, using a lexical criterion based on verbs with three arguments excludes many events that we may consider to be natural candidates for three-participant events. For instance, many verbs have meanings implying a third participant even though they take only two arguments, for example, *stab* implies an instrument, while *kick* implies a body part. In other cases, verbs undergo derivational processes that allow for the inclusion of multiple participants in the clause. For instance, in Hindi, morphological causativization of the verb allows for the expression of four participants:

(8)   raam=ne   mohan=se   siitaa=ko   khaanaa
      Ram=ERG   mohan=INS   sita=DAT   food-NOM
      khil-v-aa-yaa
      eat-Ind.CAUS-Dir.CAUS-M.SG.PRF
      'Ram had Mohan feed Siitaa food'

Similarly, some languages have constructions that co-occur with a range of transitive verbs to add an extra participant. These include double object constructions, benefactives, applicatives, and external possessor constructions. For instance, in Tzeltal (a Mayan language spoken in southern Mexico), arguments are cross-referenced on verbs in an ergative

pattern (ergative prefixes for the subjects of transitive verbs, absolutive suffixes for the objects of transitive and subjects of intransitive verbs). If there are three arguments, however, the indirect object is promoted to a position where it, rather than the object, engenders absolutive suffixes on the verb. This construction is standard for verbs of transfer and certain verbs of speaking:

(9) ya   k-ak'-be-t   atzam.
     ICP   1E-give-DIT-2A   salt.
     'I give you (the) salt.'

In addition, this construction is often used when the direct object of almost any transitive verb is a possessed noun — then the possessor of the direct object noun is almost always promoted to the position of indirect object. Here the referent of the object has to be the same as the possessor, as in (Brown, in press):

(10) ya   s-mulan-be-<u>t</u>   a'-na.
     ICP   3E-like-DIT-2A   2E-house
     'She likes <u>you</u> your house' (i.e., she admires it, covets it).
(11) la   y-ajch'al-tes-be-<u>n</u>   j-tzek.
     CMP   3E-mud-CAUS-DIT-1A   1E-shirt
     'He got my skirt muddy <u>for me</u>.'

Here we would not want to claim that all the verbs that this construction can take are three-argument verbs, but rather that the construction turns two-argument verbs into predicates with three participants.

Faced with these problems, Margetts and Austin (this issue) provide a way to tackle the thorny issue of crosslinguistic variation in a principled way. They propose clear criteria for treating an event as involving three participants: if it is either "(a) encoded in at least one language by a clear monomorphemic three-place predicate [...] or (b) encoded in at least one language by a clear monomorphemic two-place predicate with a third participant expressed in its semantic representation, and in at least one other language by a crosslinguistically attested strategy for expressing three-participant events" (p. 397–398). As Kittilä (this issue) shows, even more complex events can be created when a Beneficiary or a Causee is added to such three-participant events.

3. Summary of the contributions

The seven articles in this issue approach these issues in various ways. Two are typological in scope (Margetts and Austin; Kittilä), three are case

studies on individual languages (Enfield and Lüpke) or constructions (O'Connor), and two investigate the acquisition of multiple-participant events by children (Murasugi et al.; Pye).

Anna Margetts and Peter Austin give a detailed exposition of the range of three-participant event encoding strategies employed in different Australian, Austronesian, and Indo-European languages, among others. First, they provide a semantic classification of three-participant events that meet the criteria discussed above. Amongst the twelve classes of events they distinguish, there are events that are the focus of many studies on three-participant events, for example, events where an Agent causes a Recipient to receive a Theme (e.g. English *give*) and events where an Agent causes a Theme to move to a Location (e.g. *put*). However, Margetts and Austin also include events which are discussed less frequently, such as, events where an Agent uses a body part or a non-body part instrument to impact or effect a change in the Patient. Based on this semantic classification, Margetts and Austin then go on to provide a descriptive typology of encoding strategies for three-participant events which is based on a typologically varied sample of languages. Amongst others, the encoding strategies they discuss include the three-place predicate strategy, where all participants are expressed as verb arguments, the oblique and adjunct strategy, where a third participant is encoded as an oblique argument or adjunct, and the serial verb strategy, where two or more verbs combine in a complex construction and share the three participants as arguments.

Three may be the highest number of arguments required by a lexical verb in any language, and most of the strategies discussed by Margetts and Austin appear to be designed to express a maximum of three participants. In this context, "tritransitives" constitute an interesting construction type requiring the accommodation of a fourth participant. Seppo Kittilä's article provides an extensive discussion of the means that languages employ to encode events with a Recipient as well as an additional Beneficiary (e.g. *the journalist gave a book to the police officer for the performance artist*) or an additional external Causee (e.g. *the journalist made the police officer give the book to the performance artist*). Using data from 300 grammars, Kittilä proposes an alignment typology of "tritransitive" constructions based on whether the ditransitive Recipient, tritransitive Recipient and tritransitive Beneficiary/Causee receive identical or different formal treatment (based primarily on case marking). Kittilä motivates the alignment types he proposes in terms of the speaker's desire to avoid ambiguity by formally distinguishing the Recipient from the Beneficiary/Causee, both of which are typically animate.

The two broad surveys of three- and four-participant events in different languages are followed by three articles that are case studies focussing on

different construction types within a single language (Enfield; Lüpke) or the same type of construction across a number of languages (O'Connor). Nick Enfield shows that although Lao has three-participant verbs such as *haj5* 'give' and *song1* 'send', it is not possible to express all three participants as core arguments of the single verb. The third argument is accommodated via incorporation in the verb, extraposition in a topic-comment construction, or contextually licensed ellipsis. These strategies for reducing the number of arguments in the clause to two (or less) provide support for Margetts and Austin's contention that speakers' cognitive and linguistic abilities may be challenged when encoding events with three or more participants within the clausal core. Another strategy in Lao for limiting the number of arguments per verb — verb serialization — also functions to present a particular type of event construal to the hearer. Typically, the first verb (e.g. 'carry') encodes a first stage of the agent achieving control over the theme, while the second verb (e.g. 'put') encodes the event of transfer involving the theme.

Friederike Lüpke's article deals with another language, Jalonke, which also places limits on encoding more than two arguments per clause. Unlike core arguments, the third participant, typically a Recipient or Beneficiary, is marked with a postposition. Verbs describing three-participant events exhibit different patterns in lexical profiling: the correspondence between frame-semantic roles (e.g. the "goods" or the "target" of a transfer event) and thematic roles (e.g. Theme, Goal, Instrument) in the encoding of the second and third participant. Additionally, verbs in Jalonke also differ in syntactic profiling: the linking between thematic roles and grammatical relations. Lüpke's article shows how (alternations in) linking patterns in Jalonke parallel those found in more extensively studied languages, for example, the Source/Goal-Theme and the Theme-Source/Goal strategies found in the spray/load alternation in English (*he sprayed the window with paint* versus *he sprayed paint onto the window*). But in addition, her detailed analyses show fine-grained distinctions as well, for example, Goals that are not possessors are allowed in direct object position in Jalonke. Addressing the types of argument structure alternations that have been a focus of inquiry in languages such as English, Lüpke's article makes a valuable contribution in exploring crosslinguistic variation in this domain in a systematic and detailed way.

Catherine O'Connor's article explores the issue of the interpretive differences involved in a constructional alternation, between the Internal Possession Construction (equivalent to the English *she smacked his face*) and the External Possession Construction (*she smacked him in the face*). Based on a number of diagnostics and using data from three different languages, Czech, Spanish, and Northern Pomo, O'Connor argues that the

meaning contribution of the External Possession Construction is a conventional implicature. But although the conventional implicature is quite general, speakers do not use the External Possession Construction freely in a range of situations, but typically restrict its use to conventional situations. O'Connor's article shows that the speaker's choice of a construction alternant involving the encoding of a third participant as a separate constituent has rich and complex interpretive consequences beyond figuring out the appropriate syntax-semantics mapping (e.g. recovering the relation of possession in the External Possession Construction).

Given the range of variation within and across languages, it is clear that children have to learn many aspects of the intricate web of constraints that condition the encoding of multiple-participant events. In their article on the acquisition of Japanese causative constructions, Keiko Murasugi, Tomiko Hashimoto, and Chisato Fuji document different types of errors that Japanese children make in their acquisition of agentive verbs and causatives. In order to account for these errors, they adopt Larson's (1988) VP-shell hypothesis according to which utterances with agentive verbs involve two VP-shells with two abstract verbs: 1) a higher shell with the verb *v* that represents the activity or cause, hosts the feature [+cause], and assigns the Agent role to the subject, and 2) a lower shell with a verb V that represents the change of state. Based on this hypothesis, the authors argue that Japanese children go through several stages. Children acquire the double-layer structure early on, but initially they realize the higher verb with *tiyu/tita/tite* 'do/did/doing', which leads to non-target-like utterances. In the second stage, small *v* is null. This results in nontargetlike utterances like *Koe ziityan ni miyu* 'this grandfather to see', meaning 'I show this to grandfather'. In the next stage, children acquire lexical causative and transitive verbs; and syntactic causatives are the final step in the acquisition of causatives.

Clifton Pye's article focuses on three-place predicate constructions in Mayan languages to introduce a new method for language acquisition research, based on the comparative method in historical linguistics. To illustrate the utility of taking a comparative approach to language acquisition, Pye identifies four parameters on which Mayan languages differ in their applicative construction — in the functions the applicative can be used for, in the lexical restrictions it is subject to, in whether or not a preposition or relational noun phrase can express one or more applicative functions, and in constraints on when an indirect argument can be expressed as a possessor of the direct object. He then looks at evidence for the development of the applicative construction in child language data in two Mayan languages, K'iche' and Tzeltal, asking whether Mayan children over- or underextend the applicative construction in the language

they are learning in ways compatible with the parameter settings in other Mayan languages. He finds a strong contrast between the approaches that Tzeltal and K'iche' children take to producing three-place predicates: Tzeltal children start using the applicative well before K'iche children do, and use it for a much wider range of functions. However, K'iche' children express applicative functions at least as frequently as the Tzeltal children do, simply distributing their expression of indirect objects across a different set of constructions in line with what K'iche' affords. There is no evidence that K'iche' children extend their applicative along Tzeltal lines or that Tzeltal children extend prepositions along the lines provided by K'iche'. Pye argues that taking into account the range of applicative constructions across the Mayan languages enriches our understanding of the factors that constrain the expression of indirect objects in the two languages, and more generally provides important insights into the learnability problem that children face due to the variability in expression of three place predicates.

Together these articles take a large step forward in providing systematic typological frameworks for investigating multiple participant events, insights into their variation across different languages, and their acquisition by children.

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Note

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