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INTRODUCTION

On Transitivity

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This paper critically discusses and contrasts some of the different conceptualisations of transitivity that have been presented in the literature, and argues that transitivity as a morphosyntactic phenomenon and effectiveness of an event as a semantic concept should be separated in discussions of transitivity, and also, like many other aspects of grammar, transitivity should be seen as a constructional phenomenon, and so each construction in a language needs to be examined separately, in natural contexts. An Appendix presents some general questions one can consider when analysing language data.

Keywords: Transitivity, Radical Construction Grammar, linguistic typology, verbal valence

0. Introduction

Phenomena and questions related to the concept of transitivity in individual languages and cross-linguistically were presented in the framework of a year-long series of seminars held at the Research Centre for Linguistic Typology at La Trobe University, Melbourne, 2008–2009. The papers in this issue are a small selection of the many papers presented in that series.

Transitivity is taken as a given in most grammatical theories, that is, it is assumed to be universal, manifested in all languages, and global within a single language, i.e., relevant to all constructions of the language in the same way. Our goal in producing this special issue of *Studies in Language* is to bring attention to the intra-language and inter-language diversity actually found when one looks at substantial natural data. The title of the issue is "Studies in transitivity: insights from language documentation" because all of the studies presented in this issue are based on first-hand fieldwork and documentation of individual languages, and so have a strong empirical basis. This title is also appropriate because the approach is outward from the languages, that is, starts with the languages, working

inductively, rather than starting with the theory and looking for language data to test the theory, and is driven by the need to describe the language in its entirety, dealing with all of the constructions found.

In this paper we look at several conceptions of transitivity and how the papers of this volume relate to them, and discuss a possible alternative constructionist view. The Appendix presents some general questions related to transitivity that one can consider when analysing language data.

1.   Syntactic definitions

The standard dictionary definition of "transitive" refers only to the conception of transitivity as involving the addition of a direct object, as in the following definition, from the *Collins English Dictionary (Collins Dictionary on computer,* www.collinsdictionaries.com. HarperCollins Publishers 2006, Ultralingua Software 2006):

> "… denoting an occurrence of a verb when it requires a direct object or denoting a verb that customarily requires a direct object … [… from Latin *transitus* a going over …]."

Or this one from the *Oxford English Dictionary* (Second edition, 1989; online version November 2010, www.oed.com):

> "Of verbs and their construction: Expressing an action which passes over to an object; taking a direct object to complete the sense."

Nothing is said in these definitions about what a direct object is or how to identify it.

A similar approach is that of Dixon 2010*,* Chapter 13, "Transitivity":

> "One point to be stressed — and always kept in mind — is that *transitivity is a syntactic matter.* When a clause is said to have a certain transitivity value, and when a verb is said to show certain transitivity possibilities, these are syntactic — not semantic — specifications … [I]t makes little sense to say, for example, that a given verb is 'semantically transitive' or 'semantically intransitive'. It is more appropriate to describe it as having a semantic profile which is consistent with a certain transitivity profile at the syntactic level" (p. 116, italics in original; see also Dixon 1979, 1994; Dixon & Aikhenvald 2000).

An intransitive clause is said to have one core argument, S, and a transitive clause has two core arguments, A and O. "Allocating functions A and O to the two core arguments in a transitive clause has a semantic basis. Briefly, that argument whose referent is most likely to be relevant to the success of the activity is identified as

A … And that argument whose referent is most likely to be saliently affected by the activity will be in O function" (p. 116). "Almost every language has some surface grammatical mechanism(s) for marking core and peripheral arguments so that they may be recognised — and the discourse understood — by listeners." (p. 118). Dixon argues that in some languages there are also extended intransitive and extended transitive clauses, which have a second or third core argument, respectively, referred to as "E" (p. 116–117). S, A, O, and E "can generally be recognised by surface coding; for example, place in constituent order, or case marking" (p. 136), but "[a] very few languages (Thai is one example) essentially lack all of (i)–(iii) and rely on the pragmatics of the situation of utterance for identification of which argument is in which syntactic function." (p. 119).[1]

In this view transitivity is said to be a syntactic matter, and A and O are said to be syntactic functions, yet it is said that even where there is no syntactic marking or behaviour that would identify such syntactic functions (or even core arguments), as in Thai, the language is still said to have these syntactic functions. This is problematic, as if some phenomenon is syntactic, it must be identified and defined (morpho)-syntactically in each language that is said to manifest that phenomenon. If it can't be identified and defined (morpho)-syntactically in a particular language, then we cannot say that the phenomenon is manifested in that language. And if the phenomenon is (morpho)-syntactic, then we would not expect it to be manifested in every language, or manifested in the same way in languages that do manifest it, as (morpho)-syntactic structure is the result of conventionalisation within a particular society of speakers, and so each language will be unique in terms of what types of structures it conventionalises (see LaPolla 2003 for discussion). The traditional syntactic definition of transitivity says that a language has one or more constructions where two arguments are given special status in the clause as core (obligatory) arguments, as opposed to only one argument being given that status. This is straightforward, but defining transitivity in this way doesn't help us understand very much about the language given the circularity of identifying a clause as transitive because it has two core arguments, and saying that it has two core arguments because it is a transitive clause. The traditional view also does not recognise the diversity of morphosyntactic phenomena that show that clauses with two core arguments are not all alike (see the sections below, as well as the papers by Margetts, Coupe, and LaPolla in this issue). A problem specific to Dixon's view is that it is said that in some languages intransitive and transitive clauses can have a second or third core argument, respectively, so the number of core arguments in fact does not correlate with transitivity in Dixon's view; the key criteria is whether there is an O in the clause or not. Yet the O is defined semantically, and again there is circularity in saying that you allocate O to a

core argument in a clause because it is transitive, but the existence of the O is what makes the clause transitive.

There is also the problem of the use of the terms A, S, and O in discussions of transitivity. These designations refer to neutralisations of more fine-grained semantic roles for grammatical purposes, and so are a syntactic phenomenon, and thus are not universal and are variant between languages, yet they are used as if they are universals, and once we use them we are automatically assuming that transitivity is a relevant grammatical category in the language given that they are defined relative to transitive and intransitive clauses. (See Mithun & Chafe 1999 for more detailed criticism of the use of A, S, and O.)

2. Semantic definitions

Because the straightforward syntactic approach cannot explain the diversity of patterns related to transitivity in different languages, several semantic approaches have been developed. Here we will discuss Hopper and Thompson's (1980) Transitivity Hypothesis and Næss' (2007) reformulation of it, and the Role and Reference Grammar view of macro-role transitivity.

Hopper and Thompson see transitivity as "a relationship which obtains THROUGHOUT A CLAUSE" (p. 266, emphasis in original), and a continuum defined by a set of parameters, with features related to each parameter being seen as associated with high or low transitivity (see Table 1).

Based on this set of parameters they propose the following Transitivity Hypothesis (1980: 255):

Table 1. Parameters of transitivity (Hopper & Thompson 1980: 252)

	High	Low
A. Participants	2 or more participants, A and O	1 participant
B. Kinesis	action	non-action
C. Aspect	telic	atelic
D. Punctuality	punctual	non-punctual
E. Volitionality	volitional	non-volitional
F. Affirmation	affirmative	negative
G. Mode	realis	irrealis
H. Agency	A high in potency	A low in potency
I. Affectedness of O	O totally affected	O not affected
J. Individuation of O	O highly individuated	O non-individuated

(1)   If two clauses (a) and (b) in a language differ in that (a) is higher in Transitivity according to any of the features 1A–J, then, if a concomitant grammatical or semantic difference appears elsewhere in the clause, that difference will also show (a) to be higher in Transitivity.

Hopper & Thompson clarify that "… the Transitivity Hypothesis refers only to OBLIGATORY morphosyntactic markings or semantic interpretations; i.e., it states that the co-variation takes place whenever two values of the Transitivity components are necessarily present. The hypothesis in its present form does not predict WHEN these values will surface in structure or meaning — but only that, if they DO surface, they will agree in being either both high or both low in value" (1980: 255; emphasis in original).

Although this view also assumes that all highly transitive clauses have an A and an O, the transitivity of a clause involves all of the parameters; presence or absence of an overt O is only one of them. One result of this view is that a clause with two arguments but which manifests a number of low transitivity features (e.g. *Jerry likes beer)* is considered less transitive than a single argument clause that has high transitivity features (e.g. *Susan left;* exx. from Hopper & Thompson 1980: 254). This is inherently problematic in practical application. Consider a language with (a) a monovalent clause in which the single argument is marked with the agentive case, which suggests high transitivity in terms of agency but low transitivity in terms of the number of participants, and (b) a bivalent clause in which the agent argument is not marked by the agentive case, so the clause is low in transitivity in terms of agency, but high in transitivity in terms of participants by virtue of it also having a patient argument. Which clause type shows higher transitivity then, and why? Particularly in languages in which pragmatics influences morphosyntactic marking (e.g. Ao — see Coupe, this issue), a situation in which a number of transitivity parameters can be in discord is a real possibility, and this is not resolved by Hopper & Thompson's above-mentioned clarification (p. 255).

In Hopper & Thompson's view, unlike the traditional view, "… the transitivity features can be manifested either morphosyntactically or semantically" (p. 255). Also unlike the traditional view, they argue that "… the arguments known to grammar as INDIRECT OBJECTS should in fact be Transitive O's rather than what might be called 'accusative' O's, since they tend to be definite and animate" (p. 259).

Hopper and Thompson, in their 1980 paper, also associate transitivity with foregrounding in discourse: "We have shown that the properties associated with high Transitivity, which correlate in grammars of every language we have looked at, also turn out to predominate in the foregrounded portions of discourse" (p. 292). In more recent work, though, e.g. Thompson and Hopper 2001 and Hopper 2003, they found that when looking at natural conversation simple transitive clauses

are not common: "much of ordinary conversation is couched in non-eventive language that expresses subjective attitudes and observations", and so they suggest that "transitivity is relevant not for a language as a whole but only for certain genres" (both quotes from abstract of Hopper 2003; see also Wouk's (1986) suggestion that foregrounding and backgrounding aren't relevant to conversation).

Thompson & Hopper (2001) also observe that the typical clause of English conversation has either one participant or two participants with very low transitivity, and that highly transitive exemplars are extremely rare (the latter is also true of Qiang — see LaPolla, this volume). Yet they note that fabricated examples have constituted the basis of discussions on argument structure, and that the importance accorded to the various schemas in which a given verb occurs may be an artefact of a methodology based on idealized data. They also suggest that argument structure constitutes only a small part of what a speaker needs to know about their language (see Bybee [2010:§5.2] and references therein for similar arguments downplaying the importance of argument structure in favour of a constructional view of grammar). Their analysis of English conversation is equally important for revealing that there is a remarkable degree of fluidity in the valency of verbs; transitivity is often indeterminate, and native speakers' intuitions demonstrate a usage-based bias (see Jendraschek, this issue, and Morey, this issue, for discussion of problems related to determining valency classes; also see Bybee 2006, 2010 on frequency effects). Thompson & Hopper's findings lead them to conclude that argument structure is of limited value for understanding how language is produced and processed, and that a construction-oriented approach is required to adequately capture the relationships between verbs and their arguments.

Hopper & Thompson 1980 has been very influential in the field, but we suggest that there are some problematic aspects of the theory that could be refined (some of which are mentioned in Hopper & Thompson 2001). One major problem is that in their discussion of each of the relevant parameters, it is clear that what they are talking about is the effectiveness of the event involved. This is actually a different thing from the traditional sense of transitivity as being related to the number of participants in a clause, particularly given that in their view a clause with one argument can be said to be more transitive than one with two arguments. We would like to argue that the lumping of a morphosyntactic property (transitivity) together with a semantic quality (effectiveness) under the same name is problematic. We think the two concepts should be separated, with one term, transitivity, being reserved for distinctions in the grammar of a language related to morphosyntactic constructions privileging one, two, or possibly three arguments as core arguments, and the other term, effectiveness, being reserved for possible explanations of such distinctions when they arise (recall the quote above from Hopper & Thompson where they say that the Transitivity Hypothesis cannot predict morphosyntactic

differences; the implication is they can explain some of the differences when they are manifested in a language).

A second problematic aspect of this theory is the definition of some of the parameters themselves. For example, Individuation of O "refers both to the distinctness of the patient from the A … and to its distinctness from its own background" (p. 253). Among other features, they say that a referent that is human or animate is more highly individuated than one that is inanimate. The examples they give to contrast these two are *I bumped into Charles* vs. *I bumped into the table,* and they say that in the latter "it is less probable that something happened to the table, and more likely that the effect on the A is being highlighted" (p. 253). But this is not a difference of individuation in the sense of "distinctness of the patient from the A". In real world terms a table is much more distinct from a human than another human is, and in fact the marking that we find on references to human patients and recipients can be explained in many languages using the fact that human patients and recipients are too SIMILAR to human agents, and so could be mistaken for agents, hence the need for marking them as non-agents or for marking the agents specifically as agents (see LaPolla 1992, 1995, Coupe, this issue, for discussion). The other aspect highlighted in their example is salience, not individuation. Humans are more salient referents, and so empathy will be with a human referent as opposed to a non-human referent (as in their latter example), but this is again distinct from individuation, and so should be separated out as a distinct parameter.

Næss 2007 attempts to reduce Hopper & Thompson's features to the single semantic principle of distinctness of participants, and, following Rozwadowska 1988, talks about using the three features [±Volitionality], [±Instigation], and [±Affectedness].[2] The transitive prototype is said to be where the roles of the two core arguments are maximally distinct, that is where the Agent is [+Volitionality], [+Instigation], [-Affectedness] and the Patient is [-Volitionality], [-Instigation], [+Affectedness]. This study has a weak empirical basis, and a principled way of determining the values of these features is not given, particularly because even though they are presented as binary features, they are actually assumed to be gradient, and so the individual parameters of Table 1 still need to be taken into account, and concepts such as "Affected Agent" are impressionistically applied and therefore not very reliable. The idea that some marking might not be due to the roles being maximally distinct in real world terms, but actually too similar and so there is need to disambiguate actor from non-actor is not discussed. This is significant, as what are seen as prototypical transitive clauses in this view are the ones that have more morphological marking distinguishing the two arguments. That is, a prototypical transitive clause is a marked construction. Yet in many Tibeto-Burman languages, for example, the relevant marking is used when the agent and patient or agent and recipient are semantically and pragmatically the most similar,

that is, human and identifiable. So in those languages the marking can be said to be disambiguating an agent from a non-agent in situations were both referents have the potential to be recognised as agent or patient (see LaPolla 1992, 1995, this issue, Coupe, this issue).

In the Role and Reference Grammar (RRG) view (here abbreviated from Van Valin and LaPolla 1997, §4.2), valence is divided into three different types: syntactic valence, semantic valence, and macro-role valence. The syntactic valence of a verb is the number of overt morphosyntactically-coded arguments it takes. The semantic valence of the verb refers to the number of semantic arguments that a particular verb can take. These two notions do not always coincide, as can be seen in Table 2.

Rain has no arguments semantically, but because all simple English clauses must have subjects, it has a syntactic valence of one. *Eat* can have one argument, as in *Mary ate,* or two, as in *Mary ate a sandwich. Put* can have three core arguments, as in *Dana put the files on the table*, or it can have only two, as in *Dana put the files away*. Grammatical constructions that involve varying the basic valence of a verb may involve a difference of only syntactic valence, such as with the passive in English, where the syntactic valence of the verb is reduced from two to one without the semantic valence necessarily changing. For example, in *He was hit by a train* the *by*-phrase is a peripheral adjunct and therefore does not count toward the syntactic valence of the verb in this construction, but it represents the actor of the clause, and so is still a semantic argument of the verb.

RRG argues that the syntactic valence of a verb is not the same as its transitivity, as one cannot predict from the number of arguments in a clause how a verb will behave syntactically. An example is the verb *eat*, in English: it can occur with two core arguments, in which case it has a syntactic valence of two, but it exhibits Aktionsart variation: it can be used either as an activity or as an active accomplishment. If transitivity is simply a function of the number of syntactic arguments that a verb takes, then it is to be expected that the two-argument form of *eat* should manifest consistent syntactic behavior, but, as discussed in detail in Van Valin & LaPolla 1997, §4.2, the activity and active accomplishment forms manifest different behaviour, and the feature that distinguishes between the activity and

Table 2. Non-identity of semantic and syntactic valence

	Semantic Valence	Syntactic Valence
rain	0	1
die	1	1
eat	2	1 or 2
put	3	3 or 2

accomplishment uses is the nature of the non-agent argument. So, for example, if I say *He ate pizza for an hour,* with a non-referential non-agent argument, the use of the verb is as an activity, as it can appear with the temporal adverbial *for an hour,* which is used with unbounded activities, similar to intransitive activities (e.g. *He ran in the park for an hour).* The non-agent argument serves only to characterise the action,[3] and generally would not appear as a passive subject. In an active accomplishment use, such as *He ate the whole pizza in five minutes,* there is a referential and individuated non-agent argument, which puts a boundary on the activity, that is, makes the clause telic. It can generally only appear with temporal adverbials representing bounded events such as *in five minutes,* not unbounded activities such as *for an hour,* and the non-agent argument in this type of clause will often appear as subject of a passive clause. This is typical behavour for transitive clauses, whereas the activity use does not pattern like a typical transitive clause. From the RRG perspective, the crucial difference is that while both uses take two syntactic arguments, only the active accomplishment use has two macrorole arguments, an actor and an undergoer. The activity use has only one macrorole argument, an actor. Undergoer arguments are participants which are viewed as primarily affected in the state of affairs represented, and so must be referential. Because of this, *pizza* in *He ate pizza* cannot be an undergoer. Having only a single actor macrorole is a feature of canonical intransitive activity verbs like *run*, *cry* and *fly*. Thus, two-argument activity verbs like English *eat* behave like intransitive, rather than transitive verbs, despite having two syntactic arguments.[4]

The RRG view then is that transitivity must be defined in terms of the number of *macroroles* that it takes. There are three transitivity possibilities in terms of macroroles: 0, 1, or 2, as shown in Table 2. There is no notion of "ditransitive" in terms of macroroles, since there are only two macroroles. Zero macrorole verbs are termed 'M(acrorole)-atransitive'.

Table 3. Macrorole number and M-transitivity

	Semantic Valence	Macrorole Number	M-transitivity
rain	0	0	Atransitive
die	1	1	Intransitive
eat [activity]	1 or 2	1	Intransitive
eat [active acc.]	2	2	Transitive
kill	2	2	Transitive
put	3	2	Transitive
give	3	2	Transitive

If we accept the macrorole transitivity view, we are making transitivity dependent on there being an individuated referential patient argument, similar to one criterion of Hopper and Thompson's view.

3.   Transitive vs. ergative models of transitivity

The views of transitivity we have discussed so far approach transitivity purely from the point of view of whether or not the action "carries across" to another participant, that is whether or not there is an argument other than the actor. An alternative view, represented by the Tibetan grammarians, sees it quite differently. Thon-mi Sambhoṭa, a 7th century Tibetan grammarian, as interpreted by the 18th century grammarian Si-tu Paṇ-chen Chos kyi 'byuṅ-gnas, analysed a transitive clause as representing "an act which is directly related with a distinct agent", and an intransitive clause as representing "an act which is not directly related with a distinct agent" (translations from Tillemans & Herforth 1989:4). As explained by Si-tu, the agent includes the primary agent *(byed pa po gtso bo)* and the secondary agent *(byed pa po phal ba)* (the instrument). They both take the same marker *(byed sgra* 'agentive expression'; the ergative/instrumental marker). A transitive clause is divided into 'self' *(bdag),* which includes the agents (primary and secondary) and the action *(bya,* or effort, *rtsol ba)* of the agents, and 'other' *(gźan),* which includes the entity *(dṅos po)* involved in the action and the act *(las)* that the entity undergoes. The 'other' is also called the 'focus of the action' *(bya ba'i yul).* To use Si tu's example, if a woodcutter cuts wood to pieces with an axe, the woodcutter, the axe, and the action of the woodcutter are all 'self', while the wood and the falling to pieces is the 'other', the focus of the action (exx. from Tillemans & Herforth 1989:82–82):

(2)   Intransitive: *'chad, chad* (PERFECT) 'something falls off, decays, wears down'
śiṅ   dum.bu=r   chad=do
wood bit=ILLATIVE fall:PERFECT =SFP
'The wood has fallen to pieces [through some natural process]'

(3)   Transitive: *gcod, bcad* (PERFECT), *gcad* (FUTURE), *chod* (IMPERATIVE) 'cut, discontinue sthg'
śiṅ.mkhan=gyis sta.re=s śiṅ   dum.bu=r   gcod=do
woodsman=ERG axe=ERG wood bit=ILLATIVE cut=SFP
'The woodsman cuts the wood into pieces with an axe.'

Comparing this with our dictionary definition of transitivity above, we can see that the Tibetan view takes a different persepective from the Western view: in the

traditional Western view a transitive differs from an intransitive in having a second argument that the action passes over to, while in the Tibetan view a transitive clause differs from an intransitive one in having a second argument representing an external agency. This is an interesting difference in perspective, and it would be interesting to know why the two cultures involved came up with such different analyses. Could it be because Tibetan is a language where patients are generally the unmarked participant, and agents are generally the marked participant?

Similar to this view, though entirely independent of it, is M.A.K. Halliday's (1994, 2004 §5.7) distinction between transitive vs. ergative models of transitivity. Halliday argues that there are two possible ways to view clause structure in English within the system of transitivity: using a transitive model of transitivity and using what he calls an ergative model of transitivity. Both are properties of the single system of transitivity in English. These essentially involve profiling the situation expressed by the clause in different ways.[5]

In the transitive model, a 'process and extension' model, as in (4) below, the emphasis is on an Actor, coded as Subject, doing something, and that action may or may not be extended ('carry across') to another participant (a Goal or Range)[6] (cf. the dictionary definition above). That is, the one required argument is the Subject, and Actor in the unmarked case. This argument is seen as the source of the action. E.g. in (4), *The lion chased the tourist* (4b) relates to *The lion ran* (4a), and either the lion's running didn't extend to another participant (intransitive *the lion ran),* or it did extend to another participant (transitive *the lion chased the tourist).* This is most clear in clauses with labile verbs where the Subject of the intransitive use is the same as the Subject of the transitive use, such as *the tourist hunted / the tourist hunted the lion.* There are one or two core arguments, and other arguments must be introduced with prepositions. The Goal or Range can also be made the Subject of the clause in a passive construction (4c).

(4)   a.   *The lion*   *ran*

b.   *The lion*   *chased*   *the tourist.*

         Actor   Process   Goal

c.   *The tourist*   *was chased*   *by the lion.*

         Goal   Process   Actor

         Subject   **Predicator**   **Complement**   **Circumstantial Adjunct**

Now consider clauses with labile verbs where the Complement of the transitive use is the same referent as the Subject of the intransitive use:

(5)   *I broke the chair.* (transitive)

(6)   *The chair broke.* (intransitive)

Both of these contrast with the passive form, *The chair was broken by me*. In the non-passive intransitive form, there is no assumption that anyone caused the chair to break. In the passive there is an assumption that someone broke the chair.[7]

In the ergative model, we look at the same situation from the point of view of 'instigation of a process' rather than extension (cf. the Tibetan view presented above). Looking at it this way, we can say that there is some process (an action, event or state), and one referent, the Medium (the medium through which the process is actualised), and the question is whether the process is brought about by that participant, or by some other entity (an Agent), e.g. *The lion chased the tourist* in this view relates to *the tourist ran,* and either the tourist's running was self-motivated *(the tourist ran)* or it was instigated by some other entity *(the lion chased the tourist)*. The Medium is not defined in semantic terms, that is, it isn't the doer or the causer necessarily, but the one that is critically involved in the process (which will be different with different process types).[8] Applying this to (5) and (6) we get the analysis in (7):

(7)   a.   *The chair*   *broke.*
            Medium   Process

      b.   *I*   *broke*   *the chair.*
            Agent   Process   Medium (Complement)

      c.   *The chair*   *was broken*   *(by me).*
            Medium   Process   Actor (Circumstantial Adjunct)
            Subject   **Predicator**

The two semantic models complement each other within the system of transitivity in all registers in English, but are foregrounded to different degrees in different registers. In traditional narratives, the transitive model is more often foregrounded, while in scientific English and casual conversation the ergative model is more often foregrounded.[9]

The transitivity model is linear, but the ergative/non-ergative model is not. The Medium + Process (e.g. *the boat + sail)* is the nucleus of the clause, and may be realised as a clause alone, or can appear with other participants and circumstantial functions, and it may be extended indefinitely by adding Agents (e.g. *John made Mary sail the boat)*. Halliday talks about these two semantic models simply as two different interpretations, but as argued by Davidse (1992) the two models represent two clause types (two constructions) that differ in their syntactic behaviour:

–   Only the transitive action processes can appear in clauses such as *This ice cream scoops out easily,* and only those of the ergative type can appear in "possessor-ascension" clauses such as *The cooling system burst a pipe.*

– A Beneficiary, such as in *The bell tolls for you,* or a Range, as in *The boat sailed the ocean blue,* can also appear in the clause. Semantically these roles are like participants but also like circumstances, and this is reflected in the fact that they can appear with or without prepositions in many clauses. With transitive action clauses, a Range argument can be an entity-type Range or it can be a process-type Range (see footnote 6 on the difference), but ergative clauses can only take an entity-type range, not a process-type range. For example, we cannot say *The door opened an opening,* the way we can say *sing a song* or *die a horrible death* with the transitive structure.

– The Agent (instigator) in the ergative construction cannot appear in an *of*-complement of a nominalization with the same meaning (*John opened the door* vs. *the opening of John)* whereas the Actor of the transitive model can (*The hunters shot the tiger* vs. *the shooting of the hunters).*

Halliday's conceptualisation, which incorporates both the traditional Western view of transitivity and something like the traditional Tibetan view of transitivity into one system, is an improvement over the other mono-construction approaches, as recognising the distinct construction types within a single language helps us to properly characterise and explain the ambitransitive uses of verbs and the differences between the two construction types pointed out by Davidse.

Although not discussed by Halliday, as he limited his discussion to English in the relevant chapter, this conception might also be extended to patterns such as in the Spanish example in (8) (from Hopper & Thompson 1980: 254, but with modified glosses)[10] and the Qiang example in (9) (Tibeto-Burman; LaPolla with Huang 2003: 101), similar to Halliday's treatment of Beneficiaries (see above):

(8) *Me   gusta   la   cerveza.*
  1SG:DAT please:3SG DEF beer
  'I like beer'

(9) *ʔū-dʑoʁu-le: qa-ta   ʂə.*
  2SG-key-DEF:CL 1SG-LOC exist
  'I have your key.'

In (8) the reference to beer is given the privileged grammatical status of being the sole unmarked argument of an intransitive clause and controller of the agreement on the verb, while the experiencer is given prominence as topic (put in initial position), but marked grammatically as an oblique argument. In (9) the reference to the key is given prominence both in terms of being put in topic position and in controlling agreement, while the reference to the possessor is marked as oblique.[11] In these two cases the single unmarked argument could be seen as the Medium.

Notice that English most naturally translates both these examples with transitive clauses.

Halliday's differentiation of transitive/intransitive and ergative/non-ergative models also helps us solve Hopper & Thompson's problem of the relationship between transitivity and foregrounding being related to genre.

If we accept the two models, we must treat them not only as different interpretations, but as two different clause types or constructions, even within one language. So a major step in our understanding of transitivity is seeing it as a construction-specific phenomenon, much as has been argued for grammatical relations (Foley & Van Valin 1984, Van Valin & LaPolla 1997, Dryer 1997, Croft 2001, Ch. 4, LaPolla 2006) and form classes (Croft 2000, 2001, Ch. 2). That is, recognising it not as a cross-linguistically universal phenomenon and a global phenomenon within a single language, but as one that can grammaticalise in different ways in different constructions within a single language and across languages. For example, in terms of grammatical pivots, English has a pivot for the cross-clause coreference construction but not for relativisation, whereas Tagalog does not have a pivot for the cross-clause coreference construction, but does have one for relativisation. In terms of transitivity, Coupe (this issue) argues that it is only relevant to certain constructions in the Ao language, such as the causative construction. If the development of obligatory morphosyntactic marking on core arguments in specific construction types can be viewed as a manifestation of the grammaticalisation of transitivity, then a number of Tibeto-Burman languages demonstrate syntactically-defined contexts in which such marking is required. For example, it is widely reported that marked word orders in which the patient argument precedes the agent argument is a common trigger for obligatory disambiguating marking being used either on the agent (agentive marking), or on the patient (anti-agentive marking) if semantic roles could be misconstrued — see LaPolla 1992, 1995 for discussion. In addition to having obligatory disambiguating case marking under identical conditions to these, Chirkova (2009: 23–24) reports that agentive marking is obligatory in relative clauses in Shǐxīng, again for the disambiguation of semantic roles, as the language requires these to be explicitly marked (see also LaPolla, this issue). Thus, manifestations of transitivity can be construction-specific and not necessarily have relevance to the entire repertoire of constructions found in the grammar of a language.

More evidence that transitivity is a grammaticalised and construction-specific phenomenon comes from work by L. J. Xu in distinguishing between ambitransitive uses of verbs and elliptical structures with zero arguments. Xu (ms. 2005) takes the English verb in (10a) to be transitive and the one in (10b) to be intransitive, but takes the corresponding Chinese verb in both (11a) and (11b) to be transitive.

(10)   a.   *He ate apples.*
      b.   *He ate.*

(11)   a.   *Ta chi-le   pingguo.*
            3SG eat-PFV apple(s)
            'He ate apple(s).'
      b.   *Ta chi-le.*
            3SG eat-PFV
            'He ate (it).'

In Xu's analysis, the difference between (11a) and (11b) is that the verb takes an overt object in the former and an ellipted object in the latter. So in Chinese a transitive verb must take an object, but the object may take a null form, whereas in English a transitive verb must take an overt object, but it may have an intransitive homonym that does not take an object. Some languages can omit the object and other languages cannot. Spanish is like English and Portuguese is like Chinese in this regard.

Supporting the claim is the observation that in languages like English the transitive and the intransitive homonym are semantically different. In the case of *eat*, the implicit argument of the intransitive verb has to be something conventionally edible, whereas the overt object of the transitive verb can be anything, for instance, a shoe (Fillmore 1986). In languages like Chinese, whether an object is overt or not, the verb has the same meaning. So what was eaten in (11b) is understood as whatever referent is relevant in the context, edible or inedible.[12] This shows that languages differ in terms of the particular meaning of similar conventionalised constructions.

But Xu argues that what was presented above is an oversimplification. Not all of the English ambitransitives are alike. Some of them are more like those in Chinese. Compare the following Chinese sentences and their English translations.

(12)   a.   *Tamen tongguo-le kaoshi.*
            3PL   pass-PFV   exam
            'They passed the exam.'
      b.   tamen tongguo-le __.
            'They passed.'

In the English translation of (12b) the implicit argument cannot but be interpreted as a specific exam in the context known to both the speaker and the hearer. Conceptually, things that are "passable" do not form a class the way things that are edible do. So the English sentences in (12a) and (12b) mean the same thing, just as their Chinese counterparts do. We also saw in footnote 4 that even English *eat* can be used in some contexts where it is understood to have a delimiting object, even

if that object is not overt, as in *I ate in five minutes, then rushed off to work*. So even in the same language some uses of verbs are truly ambitransitive, while others are transitive, even though the object may take a null form.

4.   Summary of this paper and others in this issue, plus conclusions

In this paper we have looked at several conceptions of transitivity which differ in terms of what is taken as the crucial difference between transitive and intransitive clauses: the traditional view of transitivity being a purely syntactic matter of having a second argument that the action "passes over" to; the Tibetan view of having a second argument that instigates or causes the first argument to undergo some action; the RRG view of having an undergoer (affected referential O) as opposed to not having an undergoer (regardless of how many overt arguments appear in the clause); Hopper & Thompson's and Næss' view of having a set of semantic and pragmatic features said to relate to transitivity or intransitivity we argued would better be talked about as "effectiveness" and "salience". Halliday's insight is to see that even within a single language not all clauses pattern the same way in terms of transitivity, and so we need a combination of something like the traditional view, the Tibetan view, and the RRG view together to account for the morphosyntactic patterns of English. We also saw from the work of L. J. Xu that even similar-looking constructions in two languages can differ in terms of transitivity.

The individual papers in this issue all point to problems with the assumption of a single uniform view of transitivity. De Busser argues that in Takivatan Bunun argument realisation is handled by a number of different interacting linguistic subsystems which cannot be integrated into a single system. He shows that the traditional notions of transitivity and argument alignment have little explanatory power for the Takivatan Bunun data. De Busser points out that the set of core argument roles might be larger than the traditionally assumed S, A, and O categories (and E or T/R in ditransitives, Dixon 1994, Haspelmath 2005; see Kratochvíl and Nordlinger (both in this issue) for similar claims). Although he talks about subsystems instead of constructions, his findings are very amenable to a constructionist analysis.

Margetts discusses transitivity and what she calls transitivity discord in Saliba-Logea, where a verb is morphologically marked for less direct arguments than appear in the clause (e.g. two direct arguments but intransitive marking on the verb), a common phenomenon in Oceanic and elsewhere (e.g. Rawang, LaPolla, this issue; Puma, Bickel et al. 2007). Her discussion of this phenomenon is innovative in that she argues that the transitivity features found in the language need to be discussed relative to different structural levels. She gives different morphosyntactic

definitions of valence and transitivity at three different levels: verb root, inflected verb and clause. Discussing each level in this way allows us to see clearly what is going on when the transitivity features of the three levels do not align, giving rise to a number of different constructions with both transitive and intransitive features.

Kratochvíl examines the role of transitivity in single and two-argument constructions in Abui, a Papuan language with a fluid semantic alignment (after Donohue and Wichmann 2008). The paper shows that in Abui there are seven argument roles: ACTOR, PATIENT, RECIPIENT, LOCATION, GOAL, BENEFACTIVE, and NEUTRAL. Not all Abui two-argument clauses have to contain an ACTOR argument; most combinations are attested. Kratochvíl argues that transitivity applies only to a subset of two-argument clauses and shows that there is no clear default two-argument construction that contains both actor and undergoer. Argument realisation in Abui is driven by semantic features such as (degree of) affectedness, control, and volition.

Nordlinger gives a detailed account of bivalent constructions in Murrinh-Patha, a non-Pama-Nyungan polysynthetic language from northern Australia. Nordlinger questions the explanatory force of syntactic definitions of transitivity for the language, in which two-argument constructions (direct object, benefactive, experiencer, and impersonal constructions) appear sensitive to semantic features of the participants such as animacy or affectedness. Nordlinger argues that the semantic prototype approaches to transitivity (Hopper and Thompson 1980, Næss 2007, among others) have much more explanatory power in dealing with languages such as Murrinh-Patha, which appears "to be sensitive primarily to the semantic role of the (non-subject) clausal participants, rather than to grammatical function: patient/theme, experiencer and source objects are encoded with the direct object marker, and benefactive/recipient/goal objects are encoded with the 'benefactive' markers" (p. 729).

Morey argues that in Cholim Tangsa neither the noun phrase markers nor the agreement can help us achieve a clear global definition of transitivity for the language, so his conclusion, much like Nordlinger's, is that transitivity has a low functional load in the language, and that it is relative to particular constructions. He questions whether transitivity is a feature of the verb, or of the construction in which it appears.

Coupe investigates the extent to which transitivity has grammaticalised as a functional category in Mongsen Ao, a Tibeto-Burman language of north-east India. The only formal correlate of transitivity in Ao is agentive marking. As this occurs non-paradigmatically in verbal clauses with varying valency statuses and appears under mostly pragmatically-licensed conditions, Coupe proposes that its use can only be marginally related to the syntactic notion of transitivity. However,

agentive case marking is obligatory in generic statements of habituality and in causativized clauses, therefore it should be viewed as a phenomenon that is relevant only to certain types of constructions in the language.

Jendraschek addresses manifestations of transitivity in Iatmul syntax. Reviewing syntactic properties of Iatmul core arguments, he argues that only the category of subject has been grammaticalized in Iatmul. The object category is split into "direct objects" and "indirect objects" but only the first one can become a pivot in complex predicates and is relevant in S=O ambitransitives, switch reference, relative clause formation, agreement and obligatory focus marking. On the other hand, there is not enough syntactic evidence for the concept of "indirect object" in Iatmul. Jenraschek views transitivity as a dynamic phenomenon that can evolve over time and proposes a typology of languages based on the level of grammaticalization of syntactic transitivity. This dynamic view of transitivity accommodates all known transitivity systems. On one end of the spectrum we find languages in which argument realization is driven by semantic and pragmatic concerns. Languages in which syntactic transitivity has grammaticalised and semantic and pragmatic concerns are marginal are located at the other end of the spectrum. In this typology, according to Jendraschek, Iatmul occupies a medial position, having grammaticalised syntactic categories of subject and direct object, but having retained sensitivity to semantic and pragmatic features of undergoers. The weak grammaticalization of syntactic categories in this language also explains the absence of argument rearranging mechanisms such as passives, causatives, and applicatives.

LaPolla presents his analyses of transitivity in two Tibeto-Burman languages, Rawang and Qiang, pointing out that they were described using very different criteria for considering a clause transitive. His argument is that each language must be analysed on its own terms, and so the criteria used for identifying transitivity, if it is to be identified at all, might be different for different languages. He also argues that part of the reason for the differences between the two languages is the degree of systematicity of the marking, with the Rawang marking being more systematic, so we need to take historical development into account as well.

Aside from the work on this issue, in recent work on Atong (Tibeto-Burman; van Breugel 2008, Chapters 20–21), it has been argued that it is not possible to distinguish transitive and intransitive clauses formally, and so identification of transitivity in those languages depends solely on whether an O and an A can both be recovered from the context. Matisoff (1976) has stated that transitivity is not an important concept for understanding Lahu grammar.

Thus, although we may see transitivity as a phenomenon manifested in many languages, it is not universal, and when manifested, it may be manifested differently between languages, and even between different constructions of a single

language. The different manifestations result from speakers conventionalising different constraints on the addressee's interpretation of the speaker's communicative intention regarding events and their participants (LaPolla 2003), and from the different diachronic paths that individual constructions may wander along over time once they have been conventionalised (Jendraschek, this volume). The overall conclusion then is that transitivity, like grammatical relations (see Van Valin & LaPolla 1997, Ch.6, Croft 2001, Ch 4; LaPolla 2006) and form classes (see Croft 2001, Ch. 2), is a construction-specific phenomenon. When working on individual languages, we need to look at each construction in the language, and in natural contexts, before we consider whether something like transitivity can help us understand how the system of the language is organised.

Notes

1. "(i)–(iii)" refers to (i) marking on the noun, (ii) bound pronouns, and (iii) constituent order (p. 119).

2. Although Næss uses different labels from Rozwadowska's [±sentient], [±cause], and [±change], respectively, the categories are essentially the same (Næss 2007: 87). For example, Næss weakens the sense of [+volitional] to include any sentient participant (2007: 90).

3. See Van Valin & LaPolla, §3.2.3.3 for discussion. See also footnote 6, below, and Halliday 1994, Ch. 5 for discussion of what Halliday refers to as the "Range" or "Scope" argument.

4. Næss (2007: 77–82) argues that the difference between the activity and active accomplishment uses of English *eat* is not due to the properties of the object, but due to the affectedness of the agent, using the single example *I ate in five minutes, then rushed off to work* as evidence that the intransitive use (with no overt object NP) can have a telic reading. In fact with this verb there is a conventionalised understood argument that bounds the event, 'a meal', and Næss acknowledges this in the long discussion of the meaning of intransitive *eat* as 'eat a meal' in Chapter 6, citing also Fillmore 1986: 96 and Rice 1988: 203–204 as arguing that it has this meaning. It is clear then that the understood 'a meal', or in this case, 'breakfast', gives an endpoint to the action, the same way an overt individuated object would, and so the telicity of the example is not due to the affectedness of the agent, but due to the delimiting understood argument. Næss compares this use with examples like *The potatoes cooked in ten minutes,* but in this clause the potatoes are not an affected agent, and even when there is a highly affected participant, as in *I was cooking out there in the sun* (meaning 'I was very hot'), the clause is not necessarily telic. See also Section 3 below.

5. Note that what is being referred to here as "ergative" is not morphosyntactic ergative alignment, but a semantic model of event profiling. That is, it is a conception of the nature of transitivity, whether a transitive clause is one with an added patient or is one with an added agent, and not directly related to any alignment systems. The term "ergative" is used because of the similarity of the conceptualisation of this model to the morphosyntactic pattern of morphosyntactic ergative alignment, as can be seen from the discussion of the Tibetan grammarian view.

6.   Halliday (1994, Ch. 5) makes a clear distinction between Goal, the affected argument of an action (cf. the concept of undergoer in RRG discussed above), and Range (or Scope), which is the argument that delimits or marks the domain of the activity expressed in the proposition (cf. the discussion of the second argument of activity predicates in RRG above). Range is further divided into entity-type Range, that is, an entity that exists, such as the mountain in *I climbed the mountain (in one day),* and process-type range, that is, the name of the activity (often a nominalization of the verb), such as golf in *I played golf.* A clause with an entity-type Range often has an agnate form with a locative expression, e.g. *I played (the) piano,* vs. *I played on the piano.* Notice that in some conceptions of transitivity this would involve a difference in transitivity, while in others they would both be considered intransitive.

7.   The passive can be used either when the agent is not salient, or less salient than the patient, as the *by me* phrase is an oblique and can be dropped, or it can be used when the actor is in focus, as it puts the reference to the actor in the clause final focus position.

8.   Compare Mithun's (1994: 255–7) discussion of the nature of absolutive arguments and the privileged semantic relationship they have with the verb they appear with.

9.   See the discussion of Hopper and Thompson's view of transitivity in §2 above, particularly their recent findings about the genre specificity of their correlation of transitivity features with foregrounding. See also Martin's (2004) analysis of Tagalog.

10.   Incidentally, Hopper & Thompson use (8) as an example of a "less than ideal patient", as if it were on a par with *I am drinking beer,* but while (8) is intransitive, it seems the motivation isn't because of the nature of the patient, but the nature of the experiencer.

11.   This is the case with temporary, non-ownership possession. With true ownership, a transitive clause is used (derived with the use of the causative suffix), possibly reflecting the greater involvement of the possessor with the item possessed (LaPolla with Huang 2003: 102):

(i)   *Khumtsi dzəgṵ   kən   a-ha   ṣə-ẓ.*
        PN   money very one-PL exist-CAUS
        'Khumtsi has a lot of money.'

12.   The difference between these two English uses of *eat* does not relate to the difference in Aktionsart found between the activity use, which includes both *He is eating* and *He is eating pizza* on the one hand, and the active accomplishment use, such as *He is eating a pizza,* which is telic due to the individuated nature of the pizza. In the example mentioned in footnote 4, *I ate in five minutes, and then rushed off to work,* there is a conventionalised understood object ('breakfast') that delimits the action, making it telic, but the understood object is not referential, as in the Chinese examples.

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Abbreviations

AGT	agentive marker	LOC	locative marker (also used for dative)
CAUS	causative marker	PFV	perfective marker
CL	classifier	pl	plural
DAT	dative marker	PN	proper name

DEF	definite marker	SFP	sentence final particle
ERG	ergative marker		

Appendix

Questions to ask about transitivity in individual languages
The following are a few questions related to transitivity that linguists examining data in individual languages might think about:

1. Are there some morphological or syntactic constructions in the language you are working on that can be explained using the concept of transitivity (however it is defined)?
2. If so, how must transitivity be defined for it to help you in understanding the language you are working on?
3. What do you think the motivation for each of the transitivity-related constructions is?
4. Does transitivity correlate with referent tracking (alignment and voice)?
5. Are the structures or morphology involved in the marking of transitivity also involved in disambiguation other than referent tracking?
6. Are they affected by the individuation of the actor argument or the non-actor argument?
7. Do they correlate with foregrounding or backgrounding or genres?
8. Do they correlate with the clause's Aktionsart?
9. Are there any other dependencies between transitivity and other systems? (For the kind of dependencies we mean, see Aikhenvald & Dixon 1998.)

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