

# Changing valency Case studies in transitivity

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# I Introduction

R.M.W. DIXON AND ALEXANDRA Y. AIKHENVALD

This volume consists of a number of detailed case studies of transitivity across a selection of languages – from North, Central and South America, New Guinea, Australia, the China/Myanmar (Burma) border, North-east Africa and the Caucasus. In the introduction we summarize the theoretical pre-suppositions and parameters, suggest generalizations that can be made on the basis of comparison of the individual studies, and draw attention to useful directions for further research.

§1 describes varieties of predicate arguments and clause types. §2 deals with classes of verbs, and transitivity-encoding devices. Then §3 presents an overview of derivations which change valency. In §4 we discuss derivations which typically reduce valency – passive, antipassive, reflexive, reciprocal and anticausative (plus the ubiquitous middle). §5 considers derivations which typically increase valency – applicative and causative (there is a full discussion of causatives in chapter 2). In §6 we emphasize the need for a holistic approach; every derivational process is likely to have syntactic, semantic and discourse/pragmatic aspects, each of which interrelates with and helps explain the others. §7 briefly discusses the propensities of different groups of verbs – according to their semantics – for taking part in the various derivations that affect valency. In §8 we look briefly at syntactic alternatives to valency-changing derivations; in some languages there may simply be alternative construction types, with no derivational link. §9 gives a short preview of each of the following chapters. Finally, in §10 we suggest a number of fruitful lines for further research.

## 1 Predicate arguments and clause types

Most languages have one or more minor clause types which typically involve two NPs, either with or without a copula (e.g. 'My son (is) a doctor'); these are left aside in the following discussion. We here focus on what is the major clause type in every language, consisting of a predicate and a variable number of predicate arguments. The predicate most frequently has a verb as its head (although in some languages a noun, or even a pronoun, may function as head of an intransitive predicate). It is useful to distinguish between core and peripheral arguments. The number and nature of core arguments is determined by the choice of which verb (or other word) is predicate head. The core arguments must be stated – or else be understood – for the clause to be acceptable and to have sense. Peripheral arguments (sometimes called 'adjuncts') are less dependent on the nature of the verb; they may optionally be included to indicate place, time, cause, purpose and the like.

In the following English sentences, peripheral arguments are enclosed in round brackets and core arguments in square ones.

- (1) (On Monday morning,) (in the garden,) [John] danced (around the fountain)
- (2) (On Monday morning,) (in the garden,) [the monkey] bit [John] (on the finger)
- (3) (On Monday morning,) (in the garden,) [John] gave [Mary] [a book] (for her birthday)

The peripheral NPs can be omitted and we still get full sentences – *John danced*, *The monkey bit John* and *John gave Mary a book*. However, core arguments may not be omitted – for example, *\*The monkey bit* or *\*John gave Mary* are not acceptable sentences in English. It will be noted that some peripheral NPs – such as *on Monday morning* and *in the garden* – may occur in a wide variety of clauses. Others are more restricted, being determined partly by the verb and partly by the reference of the core argument(s). For instance, *on the finger* is an acceptable peripheral argument only with a verb like *bite* (or *hit* or *sting*) and an O NP with a human referent; one could not say *\*The monkey saw John on the finger* or *\*The monkey bit the banana on the finger*.

There are two universal clause types:

intransitive clause, with an intransitive predicate and a single core argument which is in S (intransitive subject) function;

transitive clause, with a transitive predicate and two core arguments which are in A (transitive subject) and O (transitive object) functions.

That argument whose referent does (or potentially could) initiate or control the activity is in A function. That argument whose referent is affected by the activity is in O function (see Dixon 1994: 113–27).

In some languages a further argument has special status. This typically refers to a recipient or a beneficiary or a thing that is seen or an object that is liked or wanted; and is commonly shown by dative case or marked on the predicate by a special set of bound pronominals. It can be represented by E (standing for ‘extension to core’). In most languages there is an extended transitive (or ditransitive) construction type, with A, O and E; this typically refers to giving, showing or telling. In a few languages (e.g. Tonga, Trumai, Tibetan, Newari, Motuna) there is also an extended intransitive clause type, with S and E; this is typically used for seeing, hearing, liking and wanting (see Dixon 1994: 122–4). That is:

- |                           |   |   |   |   |
|---------------------------|---|---|---|---|
| (a) intransitive          |   | S |   |   |
| (b) extended intransitive |   | S |   | E |
| (c) transitive            | A |   | O |   |
| (d) extended transitive   | A |   | O | E |

In every language in which they occur, extended intransitive and extended transitive clause types are greatly outnumbered – in dictionary and in texts – by plain intransitive and plain transitive. For instance, in chapter 8 LaPolla reports just two extended transitive and around three extended intransitive verbs in Dulong/Rawang. The types are clearly distinguishable since the S in a plain intransitive and the S in an extended intransitive have the same morphological marking and the same syntactic behaviour; similarly for A and O in plain and extended transitive.

We can usefully distinguish ‘transitivity’ and ‘valency’. There are two main transitivity types – intransitive (with core argument S) and transitive (with A and O) – and plain and extended subtypes of each (depending on whether or not E is also in the core). Valency relates to the number of core arguments. Thus (a) is monovalent and (d) is trivalent while there can be two different kinds of bivalent clauses – (c) with A and O, and (b) with S and E.

In some languages there is distinct marking for A, O, E and peripheral arguments. In others E and peripheral are treated in the same way. In a further group no distinction is made between O and E. In a few languages all of O, E and peripheral arguments are marked in the same way. Thus, using w, x, y and z for marking schemes (where z may indicate a variety of markings for various types of peripheral arguments):

	A	O	E	peripheral	
(i)	w	x	y	z	very many languages, e.g. Latin
(ii)	w	x	y-----y		e.g. Jarawara
(iii)	w	x-----x		z	e.g. Kinyarwanda
(iv)	w	x-----x-----x			e.g. Creek

In Jarawara any NP that is not in S, A or O function is marked by the all-purpose preposition *jaa* (Dixon, forthcoming). In Kinyarwanda O and E follow the verb, and can occur in either order (Kimenyi 1980). In Creek there are two case markers, *-t* on a subject and *-n* on a non-subject NP.

Languages vary as to how straightforward it is to distinguish between core and peripheral arguments, and thus to decide on the transitivity of a verb. Tariana (see chapter 5) is like Kinyarwanda in having the same morphological marking for O and E, but these two syntactic functions can be distinguished by the fact that only O can go into derived S function in a passive. The fact that the same marking is used for all non-subject functions in Creek leads Martin to suggest (in chapter 12) that the standard notion of transitivity is not relevant for this language; he has not been able to uncover any syntactic test that sets O apart, in the way that Aikhenvald has for Tariana (see further discussion in §9 below).

## 2 Verb classes

Verbs can be classified according to the clause types they may occur in. At one extreme we find languages (like Latin and Dyirbal) where each verb is either strictly intransitive (occurring just in intransitive clauses) or strictly transitive (occurring just in transitive clauses).

Most languages show a wider range of transitivity classes of verbs. A typical pattern (found in English and in many other languages) is:

- (a) some verbs are strictly intransitive, occurring only in an intransitive clause (with an S core argument), e.g. *arrive*, *chat*.
- (b) some verbs are strictly transitive, occurring only in a transitive clause (with A and O core argument), e.g. *recognize*, *like*.
- (c) some verbs are ambitransitive (or labile) occurring in either an intransitive or a transitive clause. Note that there are two varieties of ambitransitives, according to which of the two core arguments of a transitive construction is identified with the S argument in an intransitive:

- (c-1) S = A ambitransitives, e.g. *follow*, *win* (these are called agentive ambitransitives by Mithun in chapter 3);
- (c-2) S = O ambitransitives, e.g. *melt*, *trip* (called patientive ambitransitives by Mithun).

There can be additional divisions. In Tariana (chapter 5), intransitive verbs divide into two subtypes:

- (a-1) S<sub>a</sub> verbs, where S is marked in the same way as A in a transitive clause; these verbs typically refer to volitional activity, e.g. *-emhani* ‘walk’;
- (a-2) S<sub>o</sub> verbs, where S is marked in the same way as O in a transitive clause; these verbs typically refer to non-volitional activity, e.g. *leka* ‘split’.

This is called a split-S system, with every intransitive verb being either of type S<sub>a</sub> or of type S<sub>o</sub>. Other languages have a fluid-S system, where some verbs can take either S<sub>a</sub> or S<sub>o</sub> marking, depending on whether or not the referent of the S argument is in control of the activity (e.g. ‘slide’ versus ‘slip’ – see Dixon 1994: 70–83).

There are languages with much larger systems of transitivity classes. The classes Onishi lists for Motuna include: (i) S<sub>a</sub> intransitive; (ii) S<sub>o</sub> intransitive; (iii) S = O ambitransitive (describing a spontaneous process or event in the intransitive); (iv) S = A ambitransitive (where the patient is irrelevant or unimportant in the intransitive); (v) a further variety of ambitransitive where the intransitive is reflexive, i.e. S = A = O. There is a full discussion in chapter 4.

A number of languages have affixes to verbs to encode their transitivity. In Fijian for instance, most verbs are ambitransitive; they take a suffix when used in a transitive clause but lack the suffix when used intransitively, e.g. *bale-ta* ‘fall on’, *bale* ‘fall’ and *rogo-ca* ‘hear’, *rogo* ‘be audible’. What the suffix does not indicate is the kind of ambitransitivity involved – *bale(-ta)* is of type S = A while *rogo(-ca)* is of type S = O (see Dixon 1988: 45, 200–14).

In chapter 9, Amberber describes derivational prefixes in Amharic; these include intransitivizer *tə-* and causative *as-*. Some verbs may only occur with one of these prefixes, e.g. intransitive *tə-dəssətə* ‘be pleased, be happy’ and transitive *as-dəssətə* ‘please, make happy’ (note that *dəssətə* cannot be used alone). In these circumstances *tə-* and *as-* serve as markers of transitivity, similar to Fijian. In chapter 11, Comrie describes similar valency-encoding suffixes in Tsez. In some languages, a causative affix has become lexicalized – so that it now has a semi-idiomatic meaning – and may function as a marker of transitivity (see Rice’s account of Athapaskan languages, in chapter 6).

### 3 Changing valency

Most languages have some verbal derivations that affect predicate arguments. Typically, they may reduce or increase the number of core arguments; alternatively, the number of core arguments may be retained but their semantic roles altered.

Passive and antipassive prototypically apply to transitive verbs and derive intransitives, with the original O becoming S in a passive and A becoming S in an antipassive. Causative and applicative prototypically apply to intransitive verbs and derive transitives, with S becoming O in a causative and A in an applicative. That is (see also Kazenin 1994):

PROTOTYPICALLY APPLYING TO	(a) ARGUMENT REASSIGNMENT	(b) ARGUMENT REASSIGNMENT
(i) TRANSITIVE	O becomes S, passive	A becomes S, antipassive
(ii) INTRANSITIVE	S becomes O, causative	S becomes A, applicative

The two varieties of ambitransitives relate to the two columns – S = O type to (a) and S = A type to (b).

We then need to consider what happens to the other transitive argument in row (i) – A for passive and O for antipassive. And to ask where the other transitive argument comes from in row (ii) – A for causative and O for applicative.

In §4 we examine in detail the derivations from row (i) – various kinds of passive and antipassive and also anticausative, reflexive and reciprocal. Then §5 deals with row (ii) – various kinds of applicative and causative (which is also discussed, at length, in chapter 2).

Each of these derivations has several aspects: syntactic, semantic and discourse-pragmatic. In some instances it may be tempting to suggest that a certain derivation is basically syntactic, and that the syntactic change has certain semantic consequences. In other instances it may seem appropriate to say that a given derivation can best be specified semantically, with the meaning shift having certain syntactic consequences. It may, in fact, be difficult to distinguish between these (and other) alternatives. In §6 we argue in favour of an integrated approach, which will best provide an overall characterization for each derivation, in the languages in which it occurs.

One must also bear in mind that a given derivation may, in addition to its productive use (with constant semantic effect), also be involved in lexicalized forms, in which it has an idiosyncratic meaning. See, for example, Mithun's discussion, in chapter 3, of applicatives in Yup'ik.

#### 4 Valency reduction

There are a number of types of valency-reducing derivation, which will be discussed in turn: (1) passive and anticausative; (2) antipassive; (3) reflexive and reciprocal. Finally, we shall comment on the term ‘middle’.

##### (1) Passive

We work in terms of the following criteria for a prototypical passive (this accords with most, but not all, of the uses of passive in the literature – see below).

- (a) Passive applies to an underlying transitive clause and forms a derived intransitive.
- (b) The underlying O becomes S of the passive.
- (c) The underlying A argument goes into a peripheral function, being marked by a non-core case, adposition, etc.; this argument can be omitted, although there is always the option of including it.
- (d) There is some explicit formal marking of a passive construction – generally, by a verbal affix or by a periphrastic verbal construction (or by using a different kind of pronominal suffix, as described by Mithun in chapter 3 for Yup'ik).

Some languages have a derivation which satisfies criteria (a), (b) and (d) but in which the underlying A must be omitted (although it is understood that there was an underlying A argument, i.e. there was some agent who affected the patient). This is an ‘agentless passive’.

A number of languages have a valency-reducing derivation where the S of the derived verb corresponds to the underlying O, and there is no marker of (or implication of the existence of) the underlying A. This is, effectively, the inverse of a causative and is often called an ‘anticausative’.

These three possibilities can be summarized (where ‘S : O’ is to be read ‘S of the derived intransitive corresponds to O of the underlying transitive’):

		example
(i) prototypical passive	S : O	original A becomes a peripheral argument and may either be included or omitted ‘the glass was broken (by John)’
(ii) agentless passive	S : O	original A not stated (but understood to be in underlying structure) ‘the glass was broken’ (implied: by someone)
(iii) anticausative	S : O	no A stated or implied ‘the glass broke’

It will be seen that the two varieties of passive both indicate that the original O (derived S) came into a certain state because of the involvement of an agent (original A). In contrast, the anticausative implies that it came into the state spontaneously. (The anticausative is like an S = O ambitransitive pair, except that here an explicit derivation is involved.) Anticausatives are described for Athapaskan in chapter 6, and for Amharic in chapter 9. In chapter 10 Reid describes a constructional alternation in Ngan'gityemerri which has anticausative effect. And it seems that what LaPolla (in chapter 8) calls (general) intransitivizer and what Martin (in chapter 12) refers to as a 'middle' in Creek could equally be termed anticausatives.

A prototypical passive has three effects:

- (I) to focus attention on the original O (the derived S);
- (II) to downgrade the importance of the original A, e.g. when one either does not know or does not want to specify its identity;
- (III) to focus on the state the original O (new S) is in, as a result of the activity.

These effects may have varying weighting in different passive derivations. In chapter 7, Campbell describes two passives in K'iche'. The 'simple passive' can only be used if the original A is 3rd person; a 1st or 2nd person A cannot be 'downgraded' in this derivation, in terms of (II) above. The 'completive passive' has no constraints on the types of arguments involved, but just emphasizes the result of the activity, in terms of (III) above.

There are a number of kinds of variation on the prototypical profile of a passive. In a few languages, a peripheral argument of an intransitive clause may become passive subject (e.g. *This bed has been slept in*, in English). And in some languages the passive derivation may be extended to apply to some intransitive verbs, with an impersonal sense – this is described for Tariana by Aikhenvald (chapter 5) and for the Athapaskan language Dogrib by Rice (chapter 6).

Languages with multiple transitivity classes may have further varieties of passive. In Tariana, a language with split-S marking on intransitive verbs, the original O becomes S<sub>a</sub> (not S<sub>o</sub>) in a passive derivation. In Athapaskan languages there are two passive construction types; in the so-called 'personal passive' the underlying O receives subject marking, while in the 'impersonal passive' it receives object marking.

In some languages active clauses may not allow certain argument combinations. For instance, in K'iche' (chapter 7) an active clause may not have A as 3rd person when O is a 2nd person reverential pronoun; for this combination of A and O a simple passive construction must be employed.



The term ‘passive’ has been used in a wide variety of senses. Indeed, Siewierska (1984: 255) concluded a survey of the variety of constructions that have been called ‘passive’ with: ‘as a group the whole body of so called passives does not have a single property in common’. In Japanese studies there is a tradition of referring to a derivation marked by suffix *-(ra)re* as an ‘adversative passive’. But in fact this appears to increase the valency of the verb to which it is attached, e.g. from the transitive ‘Ziroo (NOM) drum (ACC) practise’ (‘Jiro practises the drums’) can be derived the adversative clause ‘Taroo (TOPIC) Ziroo (BY) drum (ACC) practise-*(ra)re*’ (‘Taro was adversely affected by Jiro’s practising the drums’) (Shibatani 1990: 319). From a cross-linguistic typological perspective, ‘passive’ is not an appropriate label for this derivation.

## (2) Antipassive

Antipassive is syntactically like passive, with O and A interchanged. That is, the criteria for a prototypical antipassive are:

- (a) Antipassive applies to an underlying transitive clause and forms a derived intransitive.
- (b) The underlying A becomes S of the antipassive.
- (c) The underlying O argument goes into a peripheral function, being marked by a non-core case, adposition, etc.; this argument can be omitted, although there is always the option of including it.
- (d) There is some explicit formal marking of an antipassive construction (same basic possibilities as for passive).

Corresponding to an agentless passive there can be a patientless antipassive, where the underlying O is not stated (but there is understood to be one). For instance, in the Mayan language Tzotzil, *-maj-* is the verb ‘hit’; when the patientless antipassive suffix *-van* is added we get an intransitive verb *-maj-van-* ‘have a disposition towards hitting [people]’, where the patient ‘people’ cannot be stated but is implied (Robinson, ms.).

The syntactic iconicity between passive and antipassive may be misleading. In fact they have quite different semantic effects. An antipassive construction downgrades the original O, and focuses on the underlying A argument – on the fact that its referent is taking part in an activity which involves a patient (underlying O argument) while paying little or no attention to the identity of the patient. Thus, while passive generally focuses on the resulting state (that is, on the effect on the patient of what the agent has done), antipassive focuses on the activity itself (that is, on the agent’s performing the activity).

We should now examine whether the possibilities (i–iii), outlined above for passives and anticausative, all have correspondents where  $S : A$ . Relating to a basic transitive clause ‘John [A] ate the mango [O]’ these would be:

		example
(i') prototypical antipassive	$S : A$	original O becomes a peripheral argument and may either be included or omitted 'John [S] ate (the mango [peripheral])'
(ii') patientless antipassive	$S : A$	original O not stated (but understood to be in underlying structure) 'John [S] ate' (implied: something)
(iii') [correspondent of anticausative]	$S : A$	no O stated or implied 'John [S] ate'

Now it would seem unlikely that a language would be able to distinguish between (ii') and (iii') here. A transitive verb like ‘eat’ implies the existence of some O argument, even if this is not stated. The rather different semantics of passive and antipassive (relating to the difference between A and O) means that alternative (iii') is scarcely plausible. That is, whereas one can clearly distinguish between (ii) and (iii), for  $S : O$ , it appears unlikely that a language would distinguish between (ii') and (iii'), for  $S : A$ .

Antipassives are most common in languages with ergative characteristics (there is a useful typological survey in Cooreman 1994); they feature in just two of the chapters in this volume. The ‘absolutive’ antipassive in K'iche' (described by Campbell in chapter 7) has prototypical properties; its major function is to enable the original O argument to be omitted or demoted. Mithun reports (in chapter 3) that in Yup'ik an O argument should be definite. If there is an underlying O which is indefinite then the absolutive antipassive derivation must be applied, and the erstwhile O now takes ablative marking.

We do encounter unusual construction types, which will not easily fit into any of the profiles provided by typological theory. There is a second antipassive-like derivation in K'iche', which Campbell calls an ‘agent-focus antipassive’. This focuses on the underlying A, which appears to go into S function in the antipassive; this enables it to function in question, relative and focussing constructions (as in many Mayan languages, these appear to operate in terms of an S/O pivot). Campbell describes the agent-focus antipassive as being morphologically intransitive but, in some respects, syntactically transitive. Verb agreement is usually with the S argument in an intransitive clause

(including the absolutive antipassive) but in an agent-focus antipassive the verb may agree with either A or O, according to a person/number hierarchy: non-3rd > 3pl > 3sg (where 2nd person reverential pronouns behave like 3rd person). And there are complex constraints on permitted argument combinations in agent-focus antipassives – see figure 7.2.

### (3) Reflexive/reciprocal

Cross-linguistically there are two basic strategies for expressing reflexive and reciprocal with transitive verbs. The first is to retain a transitive structure, placing a reflexive or reciprocal pronoun in the O slot. (The fact that a reflexive/reciprocal pronoun goes in the O slot – not the A slot – appears to be a universal, applying to both accusative and ergative languages.) The other strategy is to employ a verbal derivational suffix which derives an intransitive stem with reflexive and/or reciprocal meaning. The S of this derived verb then indicates the coreferential A and O for a reflexive (S = A = O), and the set of participants involved for a reciprocal. In chapter 5 Aikhenvald describes the reciprocal suffix *-kaka* in Tariana; from transitive *-kolota* ‘meet’ is derived the reciprocal *-kolota-kaka* ‘meet (each other)’. In chapter 8, LaPolla mentions that the general intransitivizing suffix in Dulong/Rawang includes in its range of functions the marking of a reciprocal derivation.

It is often the case that a detransitivizing derivation in a given language will combine several of the functions listed above. In the Australian language Diyari, for example, the verbal derivational suffix *-thadi-* can have passive, antipassive or reflexive sense (details are in Austin 1981: 151–7). For Amharic, Amberber shows (in chapter 9) that the prefix *tə-* can mark passive, anticausative or reflexive. (Haspelmath 1990 is a useful survey of the other senses of passives, across more than twenty languages.)

The term ‘middle’ is used with a frightening variety of meanings in present-day linguistics. The traditional sense was related to ‘middle voice’ in Greek – ‘that the “action” or “state” affects the subject of the verb or his interests’ (Lyons 1968: 373). Commencing with Keyser and Roeper (1984), linguists following various formalist predilections have used ‘middle’ with a totally different sense, to describe constructions in English and some other languages where a non-subject argument is moved into subject position in the presence of an appropriate adverb, e.g. *Bureaucrats bribe easily*.

Kemmer (1993) takes as her starting point Lyons’s explanation of the Greek middle and surveys a number of languages in which she recognizes a

‘middle’ without, however, providing explicit criteria. She concludes (243): ‘(1) The middle is a semantic area comprising events in which (a) the Initiator is also an Endpoint, or affected entity and (b) the event is characterized by a low degree of elaboration . . . The first property is a subspect of the second. (2) Middle marking is in general a morphosyntactic strategy for expressing an alternative conceptualization of an event in which aspects of the internal structure of the event that are less important from the point of view of the speaker are not made reference to in the utterance.’ In Kemmer’s terms, ‘middle’ often covers reflexive, reciprocal and passive, as well as constructions like ‘I did it myself.’

Contributors to this volume use ‘middle’ in several different ways. Amberber (following a suggestion from M. Shibatani) puts forward ‘middle’ as a cover term for passive, anticausative and reflexive, all marked by the prefix *tə-* in Amharic (chapter 9). In chapter 12 Martin uses ‘middle’ as a label for suffix *-k-* in Creek; this appears to correspond to what other contributors call anticausative. LaPolla (in chapter 8) characterizes the verbal suffix *-shi* in Dulong/Rawang as ‘reflexive/middle’ – this covers things like ‘he is killing a mosquito (on himself)’ and ‘he is bringing clothing (for himself)’, where the parenthesised element conveys the sense of the middle suffix. Discussing Athapaskan languages, Rice follows Kemmer in using ‘middle’ to cover the many senses of the argument-reducing affix *d* – passive, reflexive, reciprocal, self-benefactive, anticausative, iterative, errative, repetitive/perambulative and several more (see (59) in chapter 6).

Motuna has a wide variety of construction types, for some of which there are no obvious labels in the typological literature. In chapter 4, Onishi uses the term ‘middle’ for a clause type (marked by special cross-referencing suffixes) which is, essentially, an extended intransitive.

This plethora of different uses for ‘middle’ scarcely makes for typological clarity. We would recommend that the term be restricted to its original Greek-based sense (or else avoided entirely). Some of the derivations presently characterized as ‘middle’ could simply be termed ‘(general) intransitivizer’.

## 5 Valency increase

We have seen that passive and antipassive show similarities (with A and O interchanged) but also important differences. The tableau at the beginning of §3 suggests that causative and applicative also show similarities (with A and O interchanged). In fact these are outweighed by the considerable differences between these two valency-increasing derivations.

## (1) Causative

The characteristics of a prototypical causative are:

- (a) Causative applies to an underlying intransitive clause and forms a derived transitive.
- (b) The argument in underlying S function (the causee) goes into O function in the causative.
- (c) A new argument (the causer) is introduced, in A function.
- (d) There is some explicit formal marking of the causative construction.

Chapter 2 provides a full typology of causative constructions, dealing with their form, syntax and meaning. For the purpose of comparison with applicatives we can here note two important characteristics of causatives. The first is that if a language has a causative derivation, it always applies to intransitive verbs, forming transitives. In some – but by no means all – languages a causative derivation will also apply to transitives. The second characteristic is that the new argument (the causer) could generally not be included in the underlying intransitive. (There are exceptions but they are rather rare. Dixon and Aikhenvald (1997: 82) show how in Jarawara the causer may sometimes also be included in the underlying transitive, as a peripheral argument marked by *ehene* ‘due to’.)

## (2) Applicative

We here need two prototypical schemas, depending on whether an applicative derivation applies to an intransitive or a transitive clause.

EITHER

- (a) Applicative applies to an underlying intransitive clause and forms a derived transitive.
- (b) The argument in underlying S function goes into A function in the applicative.
- (c) A peripheral argument (which could be explicitly stated in the underlying intransitive) is taken into the core, in O function.
- (d) There is some explicit formal marking of an applicative construction, generally by an affix or some other morphological process applying to the verb.

OR

- (a) Applicative applies to an underlying transitive clause and maintains transitivity, but with an argument in a different semantic role filling O function.

- (b) The underlying A argument stays as is.
- (c) A peripheral argument (which could be explicitly stated in the underlying intransitive) is taken into the core, in O function.
- (d) The argument which was in O function is moved out of the core into the periphery of the clause (and may be omissible).
- (e) There is some explicit formal marking of an applicative construction, generally by an affix or some other morphological process applying to the verb.

In chapter 12, Martin describes two applicative derivations for Creek. There is what he calls a ‘dative applicative’, marked by prefix *im-*; the argument which moves into O function can be a benefactive (e.g. X in ‘he is singing for X’ or ‘he is making a doll for X’), or a malefactive (e.g. ‘he is cheating on X’) or a source (e.g. ‘he is running from X’), among other possibilities. There is also an ‘instrumental applicative’, marked by prefix *is-*, which codes an instrumental argument (e.g. ‘Bill is writing a letter with X’); Martin notes that this derivation does not necessarily increase valency.

For Amharic, Amberber (in chapter 9) describes two applicative derivations. That marked by *-bb-* can place an instrumental, malefactive or locative argument in O function, while that marked by *-ll-* places a benefactive in O function.

In a causative derivation a new argument is introduced – this is always in A function and it has constant meaning, that of being a causer. That is, causative derivations all have common semantics, of causation. Applicative derivations all have a common syntactic effect, with a peripheral argument being brought into O function, but the semantic role of this argument varies, and with it the meaning of the applicative construction. We encounter a range of meanings. These include (where X is the new O argument): comitative (‘do it in the company of X’), benefactive (‘do it for the benefit of X’), malefactive (‘do it to X’s disadvantage’), instrumental (‘do it using X’), locative (‘do it at/on X’), presentative (‘do it in the presence of X’) and others such as ‘laugh at X’, ‘cry over X’, ‘be frightened of X’. Occasionally, we find a language in which a verb can take two applicative devices, of different types, e.g. in Pajonal Campa (South Arawak) ‘give’ may take both presentative and benefactive applicatives (see note 14 in chapter 5 below).

As just described for Creek and Amharic, one applicative derivation can cover several of these meanings, with varying combinations showing up in different languages; for example, benefactive and malefactive are coded by the same derivational suffix in Creek but by different affixes in Amharic. In

Yup'ik (chapter 3), Mithun shows that the most productive applicative suffix, *-(u)te*, can have comitative or benefactive sense, or can indicate the addressee for a verb of communication ('talk to X').

In chapter 10, Reid describes the valency-increasing affix *-mi-* (which developed from an incorporated noun meaning 'eye') in Ngan'gityemerri; this can have comitative ('she lives with X') or dative ('she's waving at X') functions. (This is a typologically unusual development, since noun incorporation generally either decreases or reassigns valency, but does not increase it – see Mithun 1984.)

The great majority of applicative derivations apply to intransitive verbs, and many of them will also apply to transitives. Both of the applicatives in Creek and both of those in Amharic apply to verbs with any transitivity value. Just occasionally we find an applicative that applies only to transitives, e.g. the instrumental applicative *-b'e-* in K'iche', described by Campbell in §6 of chapter 7.

The transitivity potentiality of an applicative is likely to depend upon its meaning. Specification of an instrument is most common in transitive clauses – the agent uses the instrument to affect the patient (e.g. 'Mary cut the meat with a knife') and instrumental applicatives are thus mostly applied to transitives. If any applicative is only used with transitive verbs it is likely to be the instrumental, as just noted for K'iche'.

As with passive, there can be types of applicative which deviate from the prototypical schemas. Aikhenvald describes how in Tariana one function of the derivational suffix *-i(ta)* is to mark that a peripheral argument is now obligatory (however, it remains in peripheral function), e.g. 'show it to X' (see §4.5 of chapter 5). In Dulong/Rawang, LaPolla describes (in §3.2.2 of chapter 8) a benefactive derivation with unusual syntax. When the suffix *-ā* is added to an intransitive verb, a benefactive argument moves into the core, but the original S argument does not receive ergative marking (which is usually included on an argument in A function). When *-ā* is added to a transitive verb, the original A and O stay as is with a new argument, which has benefactive meaning, being marked by a postposition.

Onishi describes the wide range of syntactic effects of the applicative suffix *-jee* in Motuna; this increases the valency of the verb by adding a new argument in O, E or S<sub>0</sub> function, according to the type of verb involved. With 'be angry' we get S becoming A and an NP referring to what the subject was angry over (which was marked by purposive suffix *-ko* in the underlying intransitive) coming into O function. For extended intransitives such as 'know' and 'want', with core arguments in S and E functions, S goes into A and E

into O function in a *-jee* applicative. With a transitive verb such as ‘make’, the A stays as is, underlying O goes into E function, and a benefactive/malefactive argument comes into O function. There are several other syntactic possibilities, set out in §4.1.2 of chapter 4.

## 6 An integrated approach

There is a tendency in modern linguistics to compartmentalize things. One asks whether something is a syntactic mechanism; or, alternatively, has semantic effect; or, alternatively, has discourse function. Many of the chapters in this volume show that one must adopt a wider perspective. Each of the types of derivation that is discussed has three aspects:

- (1) SEMANTIC. For instance, there may be two causatives, distinguished in terms of whether the causee undertakes the activity willingly or unwillingly.
- (2) SYNTACTIC. For instance, an argument will be added to the core in a prototypical causative or applicative derivation; and an argument will be removed from the core in a prototypical passive or antipassive derivation.
- (3) DISCOURSE/PRAGMATIC ROLE. For instance – as discussed by Onishi for Motuna in chapter 4 – an applicative may place what was a peripheral argument into O function, so that it can be identified as topic within a segment of discourse.

These three aspects interrelate. The basic SEMANTIC effect of a causative derivation is to introduce an additional participant, the causer, which naturally has the SYNTACTIC effect of adding an argument. In some languages passive encodes the SEMANTIC information that an activity is completed, and also has the SYNTACTIC effect of placing an underlying O argument into derived S function, to satisfy an S/A pivot constraint, which interrelates with DISCOURSE organisation (a pivot being a grammaticalized topic).

Derivations vary and languages vary. In many languages a passive or antipassive tends to have a predominantly syntactic effect and a causative to be largely semantic. (This, according to Shibatani, forthcoming, explains why a causative mechanism is found in the overwhelming majority of languages, but passive and antipassive have a more restricted distribution.) But a passive or antipassive will always have some semantic component. If a language has more than one passive or antipassive these will be distinguished, at least in part, by their meanings. England (1983) reports a number of distinct passives



in the Mayan language Mam – one is used when the underlying A acts purposely; one is used when the A has lost, or does not have, control of the action (done accidentally); one is used when the underlying A ‘went to do it’. In Dyirbal there are two antipassives with different semantics, one referring to an actual and the other to a potential or habitual act (Dixon 1972: 91–2).

In languages where there is a pivot (that is, a syntactic constraint involving coreferential arguments in clause linking – Dixon 1994: 152–81) some of the valency-changing derivations will typically feed the pivot. Passive can feed an S/A pivot (including switch-reference) – as described by Aikhenvald in chapter 5 for Tariana – putting an argument that is in non-pivot function (O) into derived pivot function (S). Similarly, antipassive can feed an S/O pivot, putting an argument that is in non-pivot function (A) into derived pivot function (S). Applicative puts a peripheral argument into O function and may thus be used to feed an S/O pivot. For instance, to link together ‘I’ll take the fish-spear(O)’ and ‘I’ll spear the fish (O) with the fish-spear’, the second clause is put into applicative form, with ‘fish-spear’ becoming O and ‘fish’ now taking dative case. Now the two clauses share the same O and can be conjoined, with the second occurrence of ‘fish-spear’ omitted. (This example comes from Wargamay, a language with an S/O pivot – Dixon 1981: 79.)

As noted just above, a causative tends to be largely semantic. But there are languages in which a causative may be used for purely syntactic reasons. Aikhenvald (forthcoming) shows how in Tariana a causative construction can be employed to satisfy the ‘same subject and same object’ constraint on serial verb constructions. Oswalt (1977) shows how in some Pomo languages, in a clause such as ‘I want him to go’ or ‘I hope that he will go’, the verb ‘go’ will take the causative suffix, so that it should have the same surface subject as the main verb ‘want’ or ‘hope’. (Nichols 1985 describes a similar situation in Chechen-Ingush.) And in chapter 3 Mithun shows how causatives can be used for discourse purposes in Yup’ik. There is a text where the topic is ‘grandmother’. One clause is to be ‘I stand in the doorway’, but this is put into causative form ‘grandmother having me stand in the doorway’, to integrate it into the text segment with ‘grandmother’ as topic.

Valency-changing derivations may also feed a constraint that all the verbs in a verb complex should have the same transitivity value; see, for instance, example (18b) from Dulong/Rawang, in chapter 8. (A similar situation applies in many Australian languages.)

We need, in fact, to stand even further back and consider in the most general terms the mechanisms which a language employs. There are examples of a certain suffix, say, which appears to have a range of different functions

– sometimes changing the syntax, sometimes having no syntactic effect but just changing the meaning. What we have here is a single linguistic mechanism, which speakers conceive of and operate with as a unitary idea. However, the implications of the idea, within the language, are wide-ranging, appearing sometimes to be purely syntactic and other times to be simply semantic.

Consider the verbal derivation suffix *-:ji-n* in the Australian language Yidiny. Dixon spent several years collecting examples of the seemingly diverse effects of this form. Eventually, he was able to unify them in a single principle. The prototypical situation in Yidiny is for the syntactic argument which is in A function to be identical with the semantic role of ‘controlling agent’. The suffix *-:ji-n* is used to mark any instance of this identity NOT holding. In a purposeful reflexive situation (e.g. ‘he cut himself deliberately’) we do have a controlling agent (underlying A) but it is identical with the patient (underlying O) and is mapped onto S in a derived intransitive construction; this is marked by *-:ji-n* since the controlling agent is no longer in A function. Yidiny has an antipassive construction, to feed its S/O pivot in relativization and coordination; the underlying A argument goes into S function and the underlying O now takes dative or locative case. Again, the controlling agent is not in A function and *-:ji-n* is used to mark this. In each of these instances *-:ji-n* has syntactic effect, marking the derivation of an intransitive from an underlying transitive clause. But *-:ji-n* is also used when the A argument is something inanimate, which is inherently incapable of control (e.g. ‘the fire burnt me’), or when the A argument is human but achieves some result accidentally (e.g. ‘by chance I saw the coin on the roadside’). In these two instances the clause remains transitive, with an A argument, but this is not a controlling agent and hence the inclusion of *-:ji-n*. (A fuller discussion is in Dixon 1977: 274–93; a similar example from Kuku-Yalanji, another Australian language, is summarised in Dixon 1994: 151.)

It is often useful to identify what is the primary function of a given derivation. For instance, in her discussion of Yup'ik in chapter 3, Mithun concludes that the primary functions of some derivational affixes are ‘not to alter argument structure, but rather to focus on the state resulting from an action’. That is, the effect on argument structure is simply a concomitant property.

In chapter 6, Rice provides an overview of the varied functions of the affix *\*d* in Athapaskan languages. There is undoubtedly some unitary concept involved (which may differ a little from language to language). When *\*d* is applied to a transitive verb its effect might tentatively be described as ‘lowered differentiation of arguments’. Like *-:ji-n* in Yidiny it appears sometimes to have syntactic effect (passive, reflexive, reciprocal) but in other

instances its effect is basically semantic, e.g. to indicate collectivity. We also find *\*d* used on intransitives with meanings such as unintended ('errative'), iterative and perambulative. (See the excellent discussion by Thompson 1996.) What is needed here is an intensive, text-based study of the general meaning of *\*d* – as a unitary concept – in each language in which it occurs. And then an inductive study of common elements of meaning of *\*d* across all Athapaskan languages, leading to a hypothesis about the meaning of *\*d* in proto-Athapaskan (or, at one level higher, proto-Na-déné) and the semantic – and consequential syntactic – changes that have taken place in each individual language.

One thing which is patently clear – from consideration of *\*d* in Athapaskan, *-:ji-n* in Yidiny, and similar problems – is that one can only make any progress in a deep understanding of how a language works by first looking at the meaning, and then at how some semantic specifications may have syntactic effect while others leave the syntax unchanged and simply constrain the interpretation.

The idea of a 'syntax first' (or 'autonomous syntax') approach to language tends to hold back linguists from obtaining significant insights into how languages are used and understood. What is needed – and has been attempted in most of the chapters in this volume – is an understanding of the underlying semantic and syntactic distinctions that a given language employs, and how these interrelate, and function in discourse context. And then, as a secondary step, how these underlying contrasts are realized.

## 7 Semantic classes of verbs

Languages vary in their syntactic profiles, and this can motivate the types of valency-changing derivations that they employ. For instance, in some languages a high proportion of underived verbs are transitive; coupled with this there are generally valency-decreasing derivations. In other languages a relatively large number of underived verbs are intransitive; in association with this there are normally some valency-increasing derivations. (Nichols 1982 provides an illuminating discussion of this for Ingush.)

Within a language, the meaning of a verb helps determine its underlying transitivity value. Hopper and Thompson (1980) set forth ten semantic parameters in terms of which transitivity can be measured. Some verbs receive 'high transitivity' values for most parameters and typically belong to the syntactic class transitive (e.g. 'take', 'hit', 'discover'); other verbs score at the 'low transitivity' end of most parameters and are generally intransitive (e.g. 'sit', 'slip', 'yawn'). There are some verbs that fall in the middle section

of the transitivity scale (e.g. ‘look (at)’, ‘laugh (at)’); these have the syntactic value of transitive in some languages and intransitive in others. (If there is an extended intransitive class, they are prime candidates to be members of the class.)

One interesting observation is that if a ‘middle section of the transitivity hierarchy’ verb is syntactically transitive, then it will often be used intransitively, through application of a valency-decreasing derivation. If, on the other hand, it is syntactically intransitive, then it will often be used transitively, through application of a valency-increasing derivation. Compare two languages from the north-east of Australia. Guugu-Yimidhirr has a transitive verb *di:ŋa-* ‘laugh at’; from this is derived the intransitive stem *di:ŋa-:dhi-* ‘laugh’, by application of the detransitivizing derivational suffix *-:dhi-*. Yidiny has an intransitive verb *mangka-* ‘laugh’; this is often used with the valency-increasing derivational suffix *-ŋa-*, used in its applicative sense, giving the transitive stem *mangka-ŋa-* ‘laugh at’.

The meaning of a subclass of verbs will often incline it towards occurring with a certain kind of valency-changing derivation. For instance, if there is a class of verbs which typically have a human O argument (such as *annoy*, *tire* and *please* in English) these will typically occur in a passive construction, placing the underlying O in derived S function. This relates to the fact that, in many kinds of discourse, if one core argument in a clause is human and the other non-human, there is a preference for the human argument to be coded as surface subject.

It is possible roughly to discern two broad classes of verbs:<sup>1</sup>

- (1) Verbs which describe an action that either can happen spontaneously to a patient or can be engineered by an agent, are likely to be S = O ambitransitives. If they are transitive they are particularly likely to take passive and/or anticausative derivation. If they are intransitive they are particularly likely to undergo causative derivation. This class covers meanings such as ‘break’, ‘fall’, ‘spill’, ‘bend’, ‘extend’, ‘stretch’, ‘change’, ‘move’, ‘turn’, ‘enter’, ‘burn’ and ‘frighten’.
- (2) Verbs which relate to an action which may be described just in general terms or, alternatively, with respect to some particular patient, are likely to be S = A ambitransitives. If they are transitive they are particularly likely to take antipassive derivation. If intransitive they

<sup>1</sup> The terms ‘unaccusative’ and ‘unergative’ are currently used by some writers in investigation of this kind of phenomenon. However, these terms are used with many other senses, without any solid cross-linguistic criteria being involved. In view of this we prefer not to employ them here. See Dixon (1999).