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ELICITATION AND DOCUMENTATION OF VALENCY-CHANGING CONSTRUCTIONS AND PROCESSES

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Documentation work can be more effective when we approach it knowing about the kinds of categories and patterns that occur cross-linguistically on the one hand, and appreciate the difference between structures one can elicit with reliable results and those whose value emerges more fully from spontaneous speech on the other. The discussion here centers around five sets of topics pertaining to valency, that is, the number of core arguments in a clause. The first are basic clause structures: the core/oblique distinction, transitivity, and common core patterns (nominative/accusative, ergative/absolutive, agent/patient, active/stative, hierarchical, indirective, secundative, and mixed systems). Second are core argument status and differential argument marking. Third are major constructions affecting argument structure: causatives, applicatives, reflexives, middles, reciprocals, passives, and antipassives. Fourth are some discourse functions of valency-changing constructions. Finally, fifth are some of the syntactic functions that argument-structure alternatives serve in various languages.

Good preparation can make any documentation project more effective. Knowing about categories and patterns that have been identified in other languages puts us in a stronger position to spot similar structures when we first approach a language new to us, and alert us to others to watch for. But also important is appreciating the difference between structures that can be elicited directly with reliable results, and those whose full

value and reliability emerge from spontaneous connected speech. It is here that we can see such things as idiomaticity, patterns of lexicalization, and the discourse functions of alternative constructions.

The term *valency* is usually used to refer to the number of core arguments or primary participants in a clause. A sentence like *I ran* has one, while a sentence like *I chased him* has two. Valency-changing processes alter this number. Some add a core argument, while others eliminate one. In what follows, some basic concepts pertaining to valency are discussed, then major kinds of valency-changing constructions that recur across languages are surveyed, along with variables to consider when investigating them.

1 Basic clause structure: Predicate and arguments

A first step in documenting valency-changing processes is to identify the basic clause structures of the language. A prototypical basic clause consists of a predicate (an event or state) and one or more participants (semantic agents, patients, goals, recipients, places, times, etc.). The roles of participants are categorized grammatically in different ways in different languages, and the evidence for the categories varies as well.

One obvious indicator of grammatical role is pronoun shape. In English *I chased him*, we know that the speaker was the chaser because of the shape of the pronoun *I*, and that some male was the one chased by the shape of the pronoun *him*. Pronouns may be free as in English, they may be clitics, or they may be verbal affixes as in Barbareño (Šmuwič), a language of the Chumash family of the California coast. The Barbareño data cited here are drawn from the field notes of John Peabody Harrington, who worked with speakers from 1913 until his death in 1961.

(1) Pronominal affixes: Barbareño Chumash

k-'ip	'I said'	*kiš-'ip*	'we two said'	*kiy-'ip*	'we (PL) said'
p-'ip	'you said'	*piš-'ip*	'you two said'	*piy-'ip*	'you (PL) said'
s-'ip	'he or she said'	*siš-'ip*	'they two said'	*siy-'ip*	'they (PL) said'

s'ip-it	's/he told me'
s'ip-in	's/he told you'
s'ip-us	's/he told him/her'
s'ip-iyuw	's/he told us/you all'

Participant categories may be coded on nouns or larger phrases by case affixes or clitics. Examples of suffixes can be seen in Hualapi, a Yuman language of Arizona in the American Southwest. Subjects are identified by the nominative case suffix *-ch* on nouns, instruments by the instrumental case suffix *-m*, and locations by the locative case suffix *-k*.[1]

[1] I am grateful to Balthasar Bickel for useful comments on an earlier draft. Abbreviations beyond the

(2) Case affixes: Hualapai: Watahomigie et al. 2001, 44-45

a. *Hélen-ch sála-m gwe ma:w-k-wi-ny.*
Helen-NOM hand-INS thing eat-EVID-SS-do-PAST
'Helen ate with her hands.'

b. *Gwe-v-ch gwègiviyá:m-a-k jiyál-v:-k-yu.*
thing-this-NOM car-DEF-LOC smear-STATE-SS-be
'Something is smeared on the car.'

They may be coded by the shapes of determiners associated with lexical noun phrases.

(3) Determiner shape: German

a. *Der Bruch hielt langsam.*
DEF.M.SG.NOM break heals slowly
'The break is healing slowly.'

b. *Bitte, reichen Sie mir den Hammer.*
please pass you to.me DEF.M.SG.ACC hammer
'Please hand me the hammer.'

Participant categories may also be defined behaviorally, in terms of patterns which depend on them. In certain complex sentences in English, *subjects* of complement clauses may be omitted if they are coreferential with the subject of an intransitive clause or the object of a transitive one. In reflexive constructions, a referent is identified with a reflexive pronoun if it is coreferential with the *subject* of its clause. Present-tense verbs agree (to a limited extent) with the *subject* of the clause.

(4) Behaviorally-defined categories

a. Omission of subject coreferential with a higher intransitive subject
He started. He was eating.
He started __ eating.

b. Reflexives for participants co-referential with the subject
John saw himself.
John sent a letter to himself.

c. Verb agreement with the subject
I know.
He know-s.

Leipzig glossing conventions include ACC ACCUSATIVE CASE; AGT AGENT; DEP DEPENDENT; EVID EVIDENTIAL; PAT PATIENT; PERS PERSONAL; R COREFERENTIAL; RDP REDUPLICATION; SS SAME SUBJECT; SML SEMELFACTIVE; SUBORD SUBORDINATIVE MOOD.

1.1 The core/oblique distinction

In a great many languages participant categories or grammatical relations fall into two major groups, though the robustness of the division varies across languages. The labels given to the groups vary across theoretical models. Some common labels are core/oblique, arguments/adjuncts, direct/indirect, primary/secondary, core/peripheral, grammatical/semantic, grammatical/local, governed/concrete, and terms/obliques. The criteria used for distinguishing the two groups vary as well. One is obligatoriness: arguments which are required for grammaticality are said to be core, and those which are not are oblique. In English one can say *I hiked up the mountain with my friend on Sunday*, or *I hiked up the mountain with my friend* __, or *I hiked up the mountain* __ __, or even *I hiked* __ __ __, but not just __ *hiked*. The subject *I* is obligatory, so it would be considered core, but *on Sunday*,*with my friend*, and *up the mountain* are not required for grammaticality, so they would be considered oblique. Similarly, I could say *My friend found a camera on the trail*, or *My friend found a camera* __, but not *My friend found* __ __, nor __ *found a camera*. The subject *My friend* and the object *a camera* are both necessary for grammaticality, so would be considered core arguments, but *on the trail*, which can be omitted, would be oblique. This criterion will not work for all languages: in many languages arguments need not be identified overtly in every clause, particularly if their reference is clear.

A second proposed criterion is the presence of adpositions (prepositions or postpositions). Determiner phrases or noun phrases without adpositions are considered core, while those with adpositions are oblique. In *I hiked up the mountain with my friend on Sunday*, *I* is not preceded by a preposition, so it would be core, but *up the mountain*, *with my friend*, and *on Sunday* would be oblique. In *My friend found a camera on the trail*, *my friend* and *a camera* are not preceded by prepositions, so they would be core, but *on the trail* would be oblique. This criterion is of course not applicable to languages without adpositions.

A third proposed criterion involves pronominal affixes or clitics. In some languages, core arguments are represented in every clause by clitics or pronominal affixes on the verb, whether or not coreferential lexical nominals are present as well. Obliques are not represented. In the Barbareño sentence in (5), the speaker was explaining that the noise of cars frightened horses. The subject 'noise' was identified by the pronominal prefix *s-* 'it' in the verb, and the object 'horses' by the plural pronominal suffix *-wun* 'them'. Examples of Barbareño connected speech, drawn from the Harrington (JPH) field notes, are cited by microfilm reel number, frame number, and text number.

(5) Barbareño: JPH 59.639.46

S^{h}utaxšik'i:nwun	*hilkawkaway'u:ʔ*
s-su-taxšik'in-wun	*hi = l = kaw-kawayuʔ*
3SBJ-CAUS-afraid-3PL.OBJ	DEP = ART-RDP-horse
it scares them	the horses
hihe?šušú:yepš	*hilsuwa?i:pi*
hi = he? = s-ušuyep-š	*hi = l = suwa?ip^{h}i*
DEP = PROX = 3SBJ-differ-IPFV	DEP = ART-noise
this strange	noise

'The strange noise [of the cars] frightened the horses.'

Other entities, like the coast in (6), are not mentioned in the verb.

(6) Barbareño: JPH 59.531.101

K'eswilwaš	*hilt'š'alayas*	*hilheʔspanay'iw'*	*himuhuw.*
k'e = s-wil-waš	hi = l = alayaš	hi = l = heʔ = s-panay'iw'	hi = muhuw
and = 3SBJ-be-PAST	DEP = ART = trail	DEP = ART = PROX-3SG.POSS-edge	DEP = coast

'And there was a trail along the coast.'

The noise, the horses, and the trail would be considered core under this criterion, because they are referenced in the verb, and the coast would be oblique, because it is not. Lexical nominals themselves are not marked for case in Barbareño. They are simply preceded by a general dependency marker (DEP) *hi* = .

The three criteria do not always yield the same grouping of participants as core and oblique within a language. Consider the English sentence in (7).

(7) *Susan has set the plate on the table.*

Speakers do not say __ *has set the plate on the table*, nor *Susan has set* __ *on the table*. Both *Susan* and *the plate* are core arguments by both the obligatoriness and adposition criteria. But speakers also do not say *Susan has set the plate* __. By the obligatoriness criterion, *the plate* would be core, but by the adposition criterion, it would be oblique.

Core/oblique distinctions recur across languages, but the robustness of the distinction varies. Where there is a distinction, the core most often contains two argument categories, but occasionally there is just one, and sometimes there are three. Any number of oblique categories may be distinguished. Common ones are datives for recipients ('to my mother'), instrumentals for instruments and tools ('with an eggbeater'), comitatives or associatives for companions ('with my friend'), locatives for places ('at the beach'), ablatives for sources ('from the woods'), allatives for goals ('to the water'), and perlatives for paths ('through the jungle'). Some languages have just one oblique category for all of these functions. Some group recipients, experiencers, and/or beneficiaries together as datives. Some group places, sources, and goals together as locatives. Some others make still finer locative and directional distinctions.

1.2 Organization of the core

Languages differ not only in the number of arguments in the core, but also in the categorization of referents within it. The three most common organizations of core arguments, also termed alignment patterns, are nominative/accusative, ergative/absolutive, and agent/patient, though there are more.

Nominative/accusative patterns

The languages seen so far, English, Barbareño Chumash, and Hualapai, partition the core into subjects (SBJ) and objects (OBJ). In Barbareño, the second person singular pronominal subject 'you' is a prefix *p-* whether the clause is intransitive or transitive, whether it describes an event or a state, and whether this person is in control (a semantic agent) or is not in control but affected (a semantic patient). In (8) below, the first clause 'you are hot' describes an intransitive state, and the subject 'you' is a semantic patient, affected but not in control. The second clause 'you drink too much water' describes an event, and the subject 'you' is a semantic agent. Both contain the subject prefix *p-* 'you'.

(8) Barbareño subjects and objects: JPH 59.212.1
Na non'o p-yints'i
when very 2SBJ-be.hot
'When you are hot,

ʔi ʔal-e-čʰo hi=non'o p-axʔiʔihiʔ hi=l=ʔoʔ
CLEFT NMLZ-NEG-be.good DEP=much 2SBJ-drink.excessively DEP=ART=water
it is not good that you drink too much water.'

In (9) both clauses are transitive. In the first 'you holler at them', the subject 'you' is again identified by the prefix *p-*. In the second 'they will not hear you', a different form is used for the object 'you', the suffix *-in*.

(9) Barbareño: JPH 59.88.9
ʔiyem'e p-saʔ-qʰalalan-us-wun
though 2SBJ-FUT-holler.RDP-BEN.APPL-3PL
'Though you holler at them,

ʔi=s-iy-e-itaq-in.
CLEFT=3SBJ-PL-NEG-hear-2SG.OBJ
they don't hear you.'

This is a nominative/accusative pattern. Subjects are identified by pronominal prefixes on the Barbareño verb whether the clause is intransitive or transitive, whether the referents are functioning as semantic agents or patients/themes/goals, and whether the clause describes an event or state. Objects are identified by different forms: pronominal suffixes.

Ergative/absolutive patterns

In Kapampangan, an Austronesian language of the Philippines, core arguments are represented by pronominal clitics in every clause, whether or not coreferential lexical nominals are also present. The clitics occur in second position in the clause. This is usually after the predicate, since basic constituent order is predicate-initial. The Kapampangan material cited here comes from the speech of Bernadette Mangaser, Clemente Roman, Osee Rull, and Pilar Roman. Examples are in the practical orthography, in which clitics are written as separate words.

(10) Kapampangan pronominal clitics

a. *Misyuk* *ka*.
whistled you
'You whistled.'

b. *Mate* *ka*.
will.die you
'You will die.'

c. *Dumine* *ka*.
will.be.ashamed you
'You will be ashamed.'

On the basis of just these sentences, this might appear to be a nominative/accusative system, with *ka* 'you' as subject whether it is a semantic agent or patient, in an event or state. But the same form *ka* 'you' appears in (11), where it corresponds to an English object.

(11) Kapampangan pronominal clitics
Ilkit da *ka*.
saw they you
'They saw you.'

In transitive clauses, a different pronominal form *mu* 'you' appears for the person seeing.

(12) Kapampangan pronominal clitics
Ilkit mu ku.
saw you me
'You saw me.'

This is an ergative/absolutive pattern. Participants that would be categorized as intransitive subjects in English ('You whistled') and transitive objects ('I saw you') are grouped together as *absolutives*, while those that would be transitive subjects ('You saw me') are *ergatives*.

The full set of Kapampangan pronominal clitics is below.

(13) Kapampangan pronominal enclitics

	ERG	ABS	OBLIQUE
1SG	*ku*	*ku*	*kanaku/kaku*
2SG	*mu*	*ka*	*keka*
3SG	*na*	*ya*	*kaya*
1DU.INCL	*ta*	*kata*	*kekata*
1PL.INCL	*ta:*	*tamu*	*kekatamu*
1EXCL	*mi*	*kami/ke*	*kekami/keka*
2PL	*yu*	*kayu/ko*	*kekayu/keko*
3PL	*da/ra*	*la*	*karela*

Most combinations of ergative clitics with third person absolutive clitics have become fused.

(14) Kapampangan clitic combinations

ERG	+ ABS SG		+ ABS PL	
1SG	*ku + ya*	*ke*	*ku + la*	*ko*
2SG	*mu + ya*	*me*	*mu + la*	*mo*
3SG	*na + ya*	*ne*	*na + la*	*no*
1DU.INCL	*ta + ya*	*te*	*ta + la*	*to*
PL.INCL	*ta: + ya*	*ta:ya*	*ta: + la*	*ta:la*
1EXCL	*mi + ya*	*mya*	*mi + la*	*mila*
2PL	*yu + ya*	*ye*	*yu + la*	*yo*
3PL	*da + ya*	*ye*	*da + la*	*do*

Kapampangan also distinguishes grammatical relations on determiners. These, too, follow an ergative/absolutive pattern. The determiners distinguish singular and plural number, and common nouns from personal (PERS) nouns, which are used to refer to specific persons.

(15) Kapampangan determiners

Inyang *di=ng* *Apones,*
when ERG.PL.PERS=LK Japanese
'When the Japanese (ERGATIVE)

binomba de, *i=ng* *Perl* *Arbor,*
bombed 3PL>3SG ABS Pearl Harbor
bombed Pearl Harbor (ABSOLUTIVE)

labí *ku=ng* *syam a* *banwa tua*
teen 1SG.ABS=LK nine LK year old
I was nineteen years old

at matanal, ku, ki=ng Adamson Unibersiti.
and studying 1SG.ABS OBL=LK Adamson University
and studying at Adamson University (OBLIQUE).'

Relations among constituents are marked by one of two linkers, *=ng* or *=a*. Most of the determiners contain the linker *=ng*.

(16) Kapampangan determiners

		ERG	ABS	OBLIQUE
Common	SG	*ni=ng*	*i=ng*	*ki=ng/ke=ng*
	PL	*re=ng*	*de=ng*	*kare=ng*
Personal	SG	*ng*	*i*	*ka=ng*
	PL	*ri*	*di/ri*	*kari*

Agent/patient patterns

In some languages core categories have a semantic basis. Participants who voluntarily instigate and control events are cast as grammatical agents, while those who are not in control but are affected are cast as grammatical patients (Mithun, 1991). Such a system can be seen in Central Pomo, a language of the Pomoan family indigenous to Northern California. The Central Pomo material cited here comes from the speech of Frances Jack, Florence Paoli, Salome Alcantra, Eileen Oropeza, Winifred Leal, and Jesse Frank.

(17) Central Pomo pronouns

a. Grammatical agent *'a:*
'a: wáq'i'le 'I would go'
'a: pʰdí:law 'I dove in'
'a: sbíč' 'I got up'

b. Grammatical patient *ṭo:*
ṭo: bačú: 'I'm tired'
ṭo: 'ṭʰál 'I'm sick'
ṭo: qʰóṭa 'I'm ticklish'

Transitivity makes no difference. The same first person singular pronoun *'a:* is used for grammatical agents of both intransitives and transitives, and the first person singular patient pronoun *ṭo:* is used for grammatical patients of both intransitives and transitives.

(18) Central Pomo pronouns

a. *'a: mú:ṭu 'é:y=čadi-w.*
1SG.AGT 3SG.PAT away=chase-PFV
'I chased him away.'

b. *Mu:l* *to:* *'é:y = čadi-w.*
3SG.AGT 1SG.PAT away = chase-PFV
'He chased me away.'

Both arguments in (19) are grammatical patients, because neither is in control.

(19) Central Pomo transitive
to: = wa *mto* *'yá:qan?*
1SG.PAT = Q 2SG.PAT remember
'Do you remember me?'

(Such languages have sometimes been termed 'split S' systems in the literature, where S is the single core argument of an intransitive clause. As can be seen here, the system is independent of transitivity. It is based on semantic role, in both intransitive and transitive clauses. A transitive clause may contain one grammatical agent and one grammatical patient as in (18), two grammatical patients as in (19), or two grammatical agents.)

The full set of Central Pomo pronouns is in (20).

(20) Central Pomo pronouns

	AGENT	PATIENT	OBLIQUE
1SG	*'a:*	*to:*	*k^{h}e*
2SG	*ma*	*mto*	*mk^{h}e*
3SG	*mu:l*	*mú:tu*	*mú:k^{h}et'*
3R.SG	*tí:*	*tí:to*	*tí:k^{h}et'*
1PL	*ya*	*yal*	*yá:k^{h}et'*
2PL	*maya*	*mayal*	*máya:k^{h}et'*
3PL	*mú:tuya*	*mú:tuyal*	*mú:tuya:k^{h}et'*
3R.PL	*tíya*	*tiyal*	*tí:ya:k^{h}et'*

(The 3R pronouns are used for referents that are coreferential with the third person subject of their clause or a higher clause, or one from whose point of view the sentence is presented.) Case is also marked on certain nouns referring to persons, also according to an agent/patient pattern.

Some languages show an organization of the core which is similar to agent/patient systems, but with a slightly different basis. In these systems, termed active/stative, the core categories are based not on control but on aspect, usually a distinction between events and states. Agent/patient and active/stative systems can appear at first glance to be the same, because events so often involve voluntary, controlled instigation, while states do not. To determine whether a system has an agent/patient or active/stative basis, one can examine cases where the two do not coincide: uncontrolled events such as

falling, drowning, and getting lost, and controlled states such as hiding, being conceited, and being lazy. Central Pomo pronoun choice is sensitive to control rather than aspect.

(21) Central Pomo involuntary events: patient forms

to:	*ló:ya*	'I fell'
to:	*qʰá: snám'kʰe*	'I'll drown'
to:	*'qá:č'*	'I got lost'

(22) Central Pomo voluntary states: agent forms

'a:	*'ná:č'*	'I'm hiding'
'a:	*ma:báhč'in*	'I'm conceited'
'a:	*'ebané:'t'aw*	'I'm lazy'

Agent/patient systems are much more common cross-linguistically than active/stative ones, though they have sometimes been mislabeled in descriptions.

In some languages with agent/patient systems, speakers can, in some instances, distinguish degree of control with pronoun or case selection. Central Pomo offers alternatives with a few verbs.

(23) Central Pomo alternatives

'a: sma mṭí:č'	'I (AGENT) went to bed'
to: sma mṭí:čka	'I (PATIENT) must've fallen asleep'

(=*ka* is an inferential evidential, indicating that I did not witness the event directly.) As in many such languages, however, pronoun choice is lexicalized with each verb. There are doublets for some verbs, such as 'go to sleep', but for the most part, speakers have no choice in pronominal paradigm.

While nominative/accusative, ergative/absolutive, and agent/patient systems are the most common cross-linguistically, additional systems and complexities occur. A few languages show tripartite systems, with separate paradigms for the single arguments of intransitives ('You whistled'), ergatives ('You saw me'), and objects ('They saw you').

Some languages show a hierarchical pattern. In Chimariko, also indigenous to Northern California, arguments are represented by pronominal prefixes on the verb, but usually only one argument can be mentioned per verb. Which one that is depends on a hierarchy that favors speech act participants (speaker and hearer) over others: 1,2 > 3. In intransitives, the single argument is identified by a pronominal prefix. In transitives, however, if a first person acts on a third (1 > 3), just the first person is identified in a pronominal prefix, because it is higher on the hierarchy. If a third person acts on a first (3 > 1), again just the first person is mentioned. The role of the first person as agent or patient is distinguished by the form of the pronominal affix: *y-/ʔi-* 1SG AGENT, *čʰ-* 1SG PATIENT; *ya-* 1PL AGENT, *čʰa-* 1PL PATIENT (with phonological complexities).

(24) Chimariko hierarchy: Jany 2009, 101, 124, 116, 124

a. *Y-ema-kuna-xana-t.*
1SG.AGT-eat-NEG-FUT-ASP
'I am not going to eat.'

b. *Pʰaasitaʔče y-ekʰo-tinda.*
that's.why 1SG.AGT-kill-ASP
'That's why I killed him.'

c. *Čʰ-awi-n.*
1SG.PAT-afraid-ASP
'I am afraid.'

d. *H-isuhnu-wu-k čʰ-uxaʔy-ni.*
3-wake-RET-PAST 1SG.PAT-make-ASP
'He (the rooster) woke me up.'

If a second person acts on a first person (2 > 1), both arguments are mentioned.

Some hierarchical systems show an additional feature termed inverse marking. Such systems are well-known in the Algonquian languages of North America. Examples here are from Blackfoot, a Plains Algonquian language spoken in southern Alberta and northwestern Montana.

First and second persons are identified by verbal prefixes, and third by suffixes. (The TI suffix marks the verb as transitive with inanimate object.)

(25) Blackfoot: Frantz 1991

a.	*Nitsííkska' si.*	*nitsííkooniihpa*
	nit-ii-okska'si	nit-ii-kooni-hp-a
	1-PAST-run	1-PAST-take.down-TI-3SG
	'I ran.'	'I took it down.'
b.	*Kitsííkska' si.*	*Kitsííkooniipa.*
	kit-ii-okska'si	kit-ii-kooni-hp-a
	2-PAST-run	1-PAST-take.down-TI-3SG
	'You ran.'	'I took it down.'
c.	*Ííkska' siwa.*	*Ikóónima.*
	íí-okska'si-wa	ii-kooni-m-a
	PAST-run-3SG	PAST-take.down-TI-3SG
	'S/he ran.'	'S/he took it down.'

Plurals are indicated by additional suffixes.

On the basis of just the verbs above, it might appear that we have a simple nominative/accusative system. The same first and second person prefixes appear with intransitive and transitive verbs, so it is not ergative/absolutive: *nit-tsííkska'si* 'I ran', *nits-*

ííkooniihpa ‘I took it down’. The same forms are used for semantic agents and semantic patients, and for events and states, so it does not appear to be an agent/patient system or an active/stative system: *nit-áyo’kaa* ‘I am sleeping’, *kit-áyo’kaa* ‘you are sleeping’, *ayo’kää-wa* ‘s/he is sleeping.’ But when we look at transitives with two animate arguments, things become more interesting. The same prefix *nit-* is used for the first person subjects, but also for first person objects. Similarly, the same suffix *-(w)a* is used for both third person singular subjects and third person singular objects.

(26) Blackfoot: Frantz 1991

Nit-sikákomimma-wa.	*Nit-sikákomimmok-wa.*
‘I love her/him.’	‘S/he loves me.’

The pronominal prefixes and suffixes do not distinguish the roles of the participants. The prefix *nit-* simply indicates that there is a first person argument, and the suffix *-(w)a* a third person singular argument. Their roles are indicated by suffixes, here *-a-* and *-ok*.

In the Algonquian languages, there is a hierarchy of 2 > 1 > 3 > 3’. Second persons (‘you’) take precedence over first persons (‘I’, ‘me’, ‘we’, ‘us’), and both take precedence over third person. If the subject is to the left of the object (higher) on the hierarchy, the direct suffix *-a-* appears, as in ‘I love her’ (1 > 3). If the subject is to the right of the object (lower), the inverse suffix *-ok-* appears (3 > 1).

(27) Blackfoot: Frantz 1991

a.	*Nitsikákomimmawa.*	*Nitsikákomimmokwa.*
	nit-ikakomimm-a-wa	nit-ikakomimm-ok-wa
	1-love-DIRECT-3SG	1-love-INVERSE-3SG
	‘I love her/him.’	‘S/he loves me.’
b.	*Kitsikákomimmawa.*	*Kitsikákomimmokwa.*
	kit-ikakomimm-a-wa	kit-ikakomimm-ok-wa
	2-love-DIRECT-3SG	2-love-INVERSE-3SG
	‘You love her/him.’	‘S/he loves you.’

In combinations of first and second persons, the second person ‘you’, which is higher on the hierarchy, takes precedence: it is the second person prefix that appears. These combinations have special suffix forms indicating the roles of the participants.

(28) Blackfoot: Frantz 1991

Kit-sikákomimm-o.	*Kit-sikákomimm-oki.*
‘I love you.’	‘You love me.’

Algonquian languages distinguish two kinds of third persons, what are termed *proximate* (3) and *obviative* (3’) The proximate is generally the most topical among third person referents. There can be no more than one proximate argument per clause. Any additional

third persons must be obviative. Proximates take precedence over obviatives in the inverse system. When a proximate referent acts on an obviative one ('He (PROXIMATE) saw the other guy (OBVIATIVE)'), a direct suffix appears in the verb. When an obviative referent acts on a proximate ('The other guy (OBVIATIVE) saw him (PROXIMATE)'), an inverse suffix appears.

Objects

Languages also differ in how they group semantic patients/themes/goals and recipients/beneficiaries. In some systems, termed *indirective*, indirect objects are distinguished from direct objects. In the English sentences in (29), both *the floor* and *the package* are direct objects, core arguments with no preposition. The recipient *my brother* is coded differently, an indirect object identified in a prepositional phrase.

(29) *I swept* *the floor.*
I sent *the package* to my brother.

In what are termed *secundative systems*, recipients and often beneficiaries are grouped with the patients/themes/goals of transitives as core arguments. This pattern can be seen in the Chimariko sentences in (30), where the pronominal prefix 'me' is the same whether I am a semantic patient or recipient.

(30) Chimariko secundative pattern: Jany 2009, 102, 118

a. *M-e-k^{h}o-xana-'*
2SG-1SG.PAT-kill-FUT-Q
'Are you going to kill me?'

b. *N-e-wu*
IMPER.SG-1SG.PAT-give
'Give (it) to me!'

Some languages show only indirective patterns, some only secundative patterns, and some both. English speakers, for example, can choose between *I sent the package to my brother* and *I sent my brother the package*.

The categorization of objects may also be a lexical matter, perhaps originally semantically based, but ultimately conventionalized. Well-known examples can be found in German. Most direct objects are marked as accusative, and indirect objects as dative.

(31) German accusative and dative cases

a. *Ich* *sehe* *den* *Zug.*
1SG.NOM see M.SG.ACC train
'I see the train (ACCUSATIVE).'

b. *Ich* *sagte* *dem* *Mann meine Meinung.*
1SG.NOM told M.SG.DAT man my opinion
'I told the man (DATIVE) my opinion.'

But what would be categorized as accusative direct objects in some other languages are marked as datives in German.

(32) German dative case
Ich *helfte* *dem* *Kind.*
1SG.NOM helped M.SG.DAT child
'I helped the child (DATIVE).'

In sum, participant categories may be distinguished by the forms of pronouns, pronominal clitics, or affixes; by nominal case clitics or affixes; by determiners; by constituent order; and/or by behavioral patterns. Where they are distinguished in multiple areas of the grammar, the patterns may coincide. In English, for example, both pronominal form and basic constituent order show nominative/accusative patterning. In Kapampangan, both the pronominal clitics and the determiners show ergative/absolutive patterning. In Central Pomo, both the independent pronouns and the case suffixes show agent/patient patterning. But in many languages, different parts of the grammar show different patterns.

1.3 Valency and transitivity

The term *valency* is generally used to refer to the number of core arguments in a clause. The term *transitivity* is often used in the same way, though it is sometimes used (more in keeping with its etymology) to refer only to object arguments. Some languages have avalent or zero-transitive clauses, with no core arguments. All languages have monovalent or intransitive clauses with just one core argument (no object), and divalent or transitive clauses with two core arguments (one object). Some also have trivalent or ditransitive clauses with three core arguments (two objects). The core arguments are underscored in the sentences below.

(33) Transitivity
a. Zero transitive Tahitian: Austronesian
'e *u:a.*
FUT rain
'It will rain.'

b. Intransitives *John left.*
Sally danced in the cornfield until dawn.

c. Transitives *John left the party.*
Sally chased the puppy all over the yard with a broom.

d. Ditransitives *She gave me two dollars.*
I bought her a new eggbeater.

It is important to distinguish formal transitivity, that is, the argument structure that is explicitly marked morphologically and/or syntactically, from semantic transitivity, simply whether the existence of an object is implied or not. Here the term *transitive* is used in the first sense, to refer to what is specified by the form.

Some languages distinguish transitivity very clearly. In Central Alaskan Yup'ik, spoken in southwestern Alaska, indicative mood suffixes have different forms for intransitives and transitives. Transitivity is also clear from the pronominal suffixes on the verb: they identify one argument in intransitives (INTR), and two in transitives (TR). The Yup'ik examples cited here are from the speech of Elena Charles, George Charles, and Elizabeth Ali.

(34) Central Alaskan Yup'ik

a. *Atanquq.*
atanqe-u-q
wait-INTR.IND-3SG
'S/he is waiting.'

b. *Atanqaa.*
atanqe-a-aa
wait-TR.IND-3SG > 3SG
'S/he is waiting for him/her.'

In many other languages grammatical transitivity is not always obvious. There may be no dedicated markers of transitivity, and overt mention of core arguments may not be obligatory. Meaning is not a reliable cue. In English it is often possible to describe essentially the same event with either a grammatically intransitive or transitive clause.

(35) Transitivity alternations

a.	*We met.*	INTRANSITIVE
	We held a meeting.	TRANSITIVE
b.	*We lunched.*	INTRANSITIVE
	We had lunch.	TRANSITIVE

Importantly, transitivity is not constant across languages. What is usually expressed in a transitive clause in one language may usually be expressed in an intransitive clause in another. A number of factors can enter into the coding of situations as intransitive or transitive. An early discussion of factors that can increase or decrease the degree of semantic transitivity is Hopper and Thompson 1980.

(36) Transitivity: Hopper and Thompson 1980, 254

		HIGH	LOW
a.	Participants	2 or more	1
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

Any of these factors can affect the encoding of situations as grammatically intransitive or transitive in a particular language.

When approaching a language for the first time, if the analysts and speakers share a contact language, one can lay the foundation for investigating valency-changing processes with direct elicitation of sentences with different valencies, varying such features as those listed above. The resulting data can provide a preliminary orientation to important forms, such as pronominal shapes, case markers, and perhaps even markers of transitivity. It is only a beginning, however.

2 Core argument status and differential argument marking

Many clauses that might be grammatically transitive in English or another contact language may not be transitive in the target language. Kapampangan provides a good example. Here the transitivity of a clause can usually be deduced from the number of pronominal clitics: one for intransitives and two for transitives, as seen earlier. It can also often be deduced from the case marking on determiners in lexical determiner phrases: if there is an ergative nominal, the clause is transitive. In addition, it is marked morphologically in the predicate, by prefixes, infixes, and/or suffixes which signal not only argument structure but also aspect and a number of other distinctions. The verbs in (37) are both based on a verb root meaning 'pass'; the first is intransitive (INTR) and the second transitive (TR), as would be expected from the English translations.

(37) Kapampangan transitivity

a. Intransitive
L-um-abas la.
pass.INTR 3SG.ABS
'They'll pass by.'

b. Transtive

Lasn-an de *i=ng* *bale* *ku.*

pass.TR 3ERG.PL > 3ABS.SG ABS = LK house 1SG.POSS

'They'll pass my house.'

Not all transitive clauses in English have transitive counterparts in Kapampangan, however. Indefinite referents, those not assumed to be identifiable to the listener, cannot have core status in Kapampangan. In (38) the candles and pictures were not core arguments when they were first mentioned. They are not represented by a pronominal clitic, they are not preceded by a determiner, and the verb is grammatically intransitive. Once introduced, however, referents can be immediately cast as core arguments. In the second sentence in (38) the candles and pictures are represented by an absolutive clitic *la* (*de* + *la* > *do*), they are preceded by a determiner (*deti* 'these'), and the verb is grammatically transitive.

(38) Kapampangan transitivity and definiteness

Mag-dala *la=ng* *kandila, at* *letratu.* [...]

INTR-bring 3PL.ABS = LK candle and picture

'They are bringing candles and pictures.'

Sindi-an do *pin* *deti=ng* *kandila.*

light-TR 3PL.ERG > 3PL.ABS really this.ABS.PL = LK candle

'They will light up these candles.'

Nonspecific and generic referents are treated in the same way. The first clause in (39) is transitive, with core arguments 'she' (the speaker's grandmother) and 'the windows'. There are two pronominal clitics, ergative *na* 'she' and absolutive *la* 'they' (*na* + *la* > *no*). The windows are preceded by the absolutive plural determiner *reng*. The verb is morphologically transitive. The second clause is grammatically intransitive, however. The only core argument is the grandmother. The dishes are nonspecific, so not part of the core. They are not represented by an enclitic and not preceded by a determiner. They are an adjunct, simply attached to the clause by the linker *=ng*.

(39) Kapampangan transitivity and specificity

Paglinis-an no *re=ng* *awing;*

clean-TR 3SG.ERG > 3PL.ABS ABS.PL = LK window

'She was always cleaning the windows;

man-os *ya=ng* *pinggan.*

INTR-wash 3SG.ABS = LK plate

she was washing dishes.'

Significant new participants are often first introduced with a presentative construction based on the predicate *atin* 'exist, have'. The introduced participant is indefinite, so

it is not a core argument. The clothes in (40) are not represented by a pronominal clitic and not preceded by a determiner. The clause is zero transitive.

(40) Kapampangan zero transitive presentative
Ati=ng pakasabit a imalan.
exist=LK hanging LK clothes
'There are clothes hanging.'

The newly introduced cave in (41) is not an argument, not represented by a clitic and not preceded by a determiner. There is just one core argument, the fort, so the clause is intransitive.

(41) Kapampangan intransitive presentative
['There is an island fort.']
Atin ya=ng kweba, lalam bunduk.
have ABS=LK cave under mountain
'It has a cave under the mountains.'
['There you'll find plenty of food and medicine …']

In clauses predicating negative existence, the non-existent entity is also not an argument in Kapampangan. The medicines in (42) are not represented by a pronominal clitic and not preceded by a determiner, and the clause is zero transitive.

(42) Kapampangan zero transitive absence
Ala pa=ng makayi=ng panulu.
none yet=LK many=LK medicine
'There were not too many medicines yet.'

In the Kapampangan constructions seen so far, the three indicators of clause structure, verb morphology, pronominal clitics, and determiners coincide. Indefinite participants, including non-specific and generic entities, are not core arguments, but are simply linked to the clause as adjuncts. Issues of argument structure can be more intricate, however, with what is sometimes called *differential argument marking*. In Kapampangan, mass referents can be identified as core arguments by the verb morphology, but they are not represented by pronominal clitics. In (43) the food is definite but mass. It is the sole argument of the intransitive predicate 'lack variety', and it is preceded by the absolutive determiner *ing*, but there is no pronominal clitic.

(43) Kapampangan differential argument marking with mass
Ampo=ng maka-sawa i=ng pamangan.
and=LK INTR-be.boring ABS=LK food
'And the food lacks variety.'

Abstractions are treated like masses. In (44), 'your challenge' is an argument of the transitive verb 'accept' and represented by the absolutive determiner *ing*, but not by a pronominal clitic. The only clitic is the ergative *ku* 'I'.

(44) Kapampangan differential marking with abstraction
Tatanggap-an ku i=ng amun mu.
accept-TR 1SG.ERG ABS=LK challenge 2SG.POSS
'I accept your challenge.'

Complement clauses are treated as abstractions. In (45) the predicate 'notice' is transitive, the agent 'he' is ergative, and the complement 'that he was already tired' is preceded by the absolutive determiner *ing*. It is not represented by a pronominal clitic, however.

(45) Kapampangan differential marking with complement
Apansin-an na [*ing ma-pagal ne*].
noticed-TR 3SG.ERG ABS INTR-tired already.3SG.ABS
'He noticed [that he was already tired].'

There are no dummy (pleonastic) arguments comparable to English 'it' in *It is hot*, though the Kapampangan counterparts of such expressions are still grammatically intransitive. When the verb 'be hot' has a definite argument, like the bread in (46), the argument is represented by the absolutive pronominal clitic *ya* 'it' and preceded by the absolutive determiner *ing*. When there is no referent, there is no pronominal clitic.

(46) Kapampangan referentiality

a. *Ma-pali ya i=ng pandesal.*
INTR-be.hot 3SG.ABS ABS=LK bread
'The bread is hot.'

b. *Ki=ng Pilipinas,*
OBL=LK Philippines
'In the Philippines

ma-pali mu=ng ma-pali.
INTR-be.hot always=LK INTR-be.hot
it is always very hot.'

One step further removed from core argument status are nouns in a construction similar to noun incorporation in other languages. The nouns in these constructions typically involve body parts and other intimate possessions. In the second line of (47) 'you are moving your head', the verb 'move' is morphologically intransitive, and there is just one core argument, absolutive 'you'. The head is not represented by a pronominal clitic

and not preceded by a determiner. It directly follows the verb without a linker, simply qualifying it.

(47) Kapampangan lexicalization
Néni nu=ng uruan na ka,
now if=LK cut.hair.TR 3SG.ERG 2SG.ABS
'Now if he is cutting your hair

atsaka ka galogalo buntuk makanian,
and.also 2SG.ABS move.INTR head like.that
and you are moving your head around like that,

pulpuk-an na ka keng gunting keni.
hit-TR 3SG.ERG 2SG.ABS OBL scissors here
he'll hit you with the scissors.'

This example also illustrates the fact that lexicalization patterns differ across languages. While the act of cutting hair is usually described in English with a transitive verb 'cut' and object 'hair', the Kapampangan counterpart combines the cutting and the hair in a simple verb root *uru*.

In sum, Kapampangan distinguishes argument structure in predicates, pronominal clitics, and determiners, but the patterns differ subtly from those in some other languages. Only definite (identifiable) referents can be cast as core arguments, so what might be expressed in a transitive clause in English might be intransitive in Kapampangan, and what might be intransitive in English might be zero transitive in Kapampangan. There is also differential argument marking: masses and abstractions, including complement clauses, can be marked as core arguments by the verb morphology and determiners, but they are not referenced by pronominal clitics. Non- referential entities like weather may also count as arguments for verbal morphology, but they are not referenced by pronominal clitics or lexical nominals. Certain entities, particularly body parts and intimate possessions in certain constructions, are neither arguments nor adjuncts, but form a tight unit with the verb. Such details may of course be involved in valency-changing processes.

3 Argument Structure Alternatives

Most languages offer alternative constructions for expressing a given proposition. Some constructions increase valency: they add an argument to the core. The most common of these are causatives and applicatives. Some constructions decrease valency: they eliminate an argument from the core. The most common of these are reflexives, middles, reciprocals, passives, and antipassives. The basics of some valency-changing constructions can be discovered fairly easily through direct elicitation, but others emerge more

reliably from spontaneous speech, and some can be appreciated fully only by considering the contexts in which they occur.

3.1 Causatives

Causative constructions add a semantic agent to the set of core arguments, a *causer*. The referent caused to do or be something is typically called the *causee*.

(48) Causative terminology
The dog made the mailman run for his life.
CAUSER CAUSEE

Causatives vary in several major ways across languages. An obvious one is their form, the degree of synthesis. Usually multiple causative constructions coexist within a language, and they may be of different structural types.

(49) Formal expression: Degree of synthesis

a. Analytic
Two verbs in separate clauses
I forced him [to go].

Double-verb predicate: French
Je ferai manger les épinards à Yvette.
I make.FUT eat the.PL spinach.PL to NAME
'I'll make Yvette eat the spinach.'

Serial verb constructions: Tariana from Aikhenvald 2000, 161
Na:-na du-ra du-pita du-yą-nhi
3PL-OBJ 3SG.F-order 3SG.F-bathe 3SG.F-stay-IPFV
'She ordered them to bathe.' (Subjects all match.)

b. Morphological: affix, reduplication, ablaut, etc.
I'll short-en the skirt.
He felled the tree.

c. Lexical
Two separate lexemes: *eat/feed, die/kill, fall/fell*
I fed the baby.

One invariant lexeme: *spill, break, trip*
I spilled my coffee.

When multiple causative constructions coexist within a language, they may have different shades of meaning.

(50) Common semantic distinctions

a. Direct versus indirect causation

b. Degree of control on the part of causer

c. Degree of control on the part of causee

The degree of synthesis often mirrors directness and degree of control: synthetic (morphological and lexical) constructions may involve more direct causation than analytic (syntactic) constructions.

A third way causative constructions vary is in their effect on argument structure. Most causatives can be applied to intransitive bases (*awake/awak-en*), but only some are applied to transitives. As noted, causatives add a semantic agent, the causer, to the set of core arguments. If the base was intransitive, the causative counterpart is usually transitive. If the base was transitive, the causative counterpart may be ditransitive (with three core arguments) or transitive (with two), with one of the original arguments cast as an oblique or omitted entirely.

(51) Syntax and argument structure

a. Valency of base: intransitive or transitive

b. Valency of derived causative

Intransitive	→	Transitive
Transitive	→	Transitive or Ditransitive

c. Grammatical coding of original arguments

Intransitive base: One argument (*She sang.*)

Causative: Usually accusative/absolutive/patient causee

He allowed her to sing.

Transitive base: Two arguments (*They took him to the game.*)

Causative: Both accusative/absolutive/patient, or one oblique

She made them take him to the game.

Morphological causatives in a nominative/accusative system can be seen in the Hualapai examples in (52). Hualapai contains a number of causative prefixes, among them *ji-*, as in *yuwk* 'come'; *ji-yúwk* 'make someone come, send someone this way'. The basic verb 'come' has one argument; the causative has two.

(52) Hualapai causative: Watahomigie et al. 2001, 287-8

a. *Mi-yúw-wa!*

2-come.here-IMP

'(You) Come here!'

b. *Hma:ny ba m'-ji-yúw-wa!*
child.PL PL 2>3-CAUS-come-IMP
'(You) Send the children over here!'

The Hualapai morphological causatives vary in productivity, but, as in other languages, all are derivational. Watahomigie et al. note (2001, 276) that the causative prefix *δa-* is the most productive, and there are large numbers of causative verbs in the language formed with it, such as *δa-qéchk* 'make small' from *qechk* 'be small'. The bases of some of the modern causatives no longer exist in the language independently: *δa-thbak* is 'iron (clothes)', but there is no longer a verb **thbak*. Once a causative stem has been formed, it may continue to develop semantically without regard to its components, as can be seen with the pair *gwank* 'beat up, kill'; causative *ji-gwánk* 'kill more than one' (Watahomigie et al., 2001, 283).

Barbareño Chumash, also with a nominative/accusative system, has a general causative prefix *-su-*. The speaker cited below was describing how shells were made into money. Both clauses contain causatives of intransitives, 'be hot' and 'be white'. The causers (the craftsmen) were subjects in both causative clauses, and the causees (the shells) objects.

(53) Barbareño causative: JPH 59.537.102
S-iy-s-yints'i-wun *tšu=s-iy-su-ʔow'ow-wun.*
3SBJ-PL-CAUS-be.hot-3PL.OBJ so.that=3SBJ-PL-CAUS-be.white-3PL.OBJ
'They make them hot so that they make them white' = 'They heat them to bleach them.'

When the base is transitive, the causee is the object of the Barbareño causative, but only one object can be coded in the verb with a pronominal object suffix. The original object of the transitive base is not referenced in the causative verb, though it may still be identified by a lexical nominal in the sentence. The causative construction in (54) was formed from a transitive base, 'swallow'. The object is the causee, the single swallower, not the plural ants (which would be identified by the plural object suffix *-wun*).

(54) Barbareño causative of transitive: JPH 59.570
M'étši? ʔal-malawa-waš hi=l=tišʔil'il
always NMLZ-eight-PAST DEP=ART=red.ant.RDP
'It was always eight red ants

hi=l=ʔ-am-su-aqliwin.
DEP=ART=NMLZ-INDF.SBJ-CAUS-swallow
that they made him swallow.'

Central Alaskan Yup'ik provides examples of causative constructions in an ergative system. The language has a rich inventory of causative suffixes (Mithun, 2000).

(55) Yup'ik causative suffixes

-vkar-/-cete-	'let, allow, permit, cause, compel'
-te-	'let, allow, cause, compel'
-nar-	'cause'
-rqe-	'intentionally or deliberately cause'
-cetaar-	'try to cause'
-narqe-	'tend to cause'
-cir-	'let, wait for, make'
-(r/l)i-	'become or cause to become'

The ranges of meaning of the most productive Yup'ik causatives can be seen in (56), all drawn from spontaneous speech. (The form *-vkar-* generally occurs after a vowel, and *-cete-* after a consonant.)

(56) Yup'ik general causative *–vkar-/-cete-*

a. 'invite'

nerevkarluki-llu	*tamalkuita*	*yuut*
nere-vkar-lu-ki = llu	*tamalkuita*	*yug-et*
eat-CAUS-SUBORD-R > 3PL = too	all	person-PL
causing them to eat too	all	people

'and they gave a feast for everyone' (lit. 'and they made everyone eat')

b. 'permit'

alularcecungramku (…)

alular-cet-yug-ngrar-mku

operate.motor-CAUS-want-CONCESSIVE-1SG > 3SG

'even if I wanted to let him operate the motor (Daddy would not ask him to)'

c. 'let'

igtevkaraa

igte-vkar-aa

fall-CAUS-TR.IND-3SG > 3SG

'he dropped it' ('he let it fall')

d. 'have'

qeralivkarluku-ll'

qer'aq-li-vkar-lu-ku = llu

fishrack-make-CAUS-SUBORD-R > 3SG = too

'and I had him build fishracks'

e. 'force'

tuai-q',	*ilateng,*	*anevkangnaqluki …*
tuai = wa	*ila-tent*	*ane-vkar-ngnaqe-lu-ki*
and.then = EMPH	relative-R/3PL	go.out-CAUS-try-SUBORD-R > 3PL

'They would try to force their relatives out.'

Some uses of the other causative suffixes are below.

(57) *-rqe-* 'deliberately cause'

Qiarqaa.
qia-rqe-a-a
cry-CAUS-TR.IND-3SG > 3SG
'He intentionally made her cry.'

(58) *-cir-* causation without direct effort

Tuntuviit,	*anerciraqluki*
tuntuvag-et	*aner-cir-aqe-lu-ki*
moose-PL	exit-CAUS-SUBORD-R > 3PL

'We would wait for the moose to go out.'

(59) *-cetaar-* 'try to cause'

Naucetaarvigtun	*ayuqelartut.*
nau-cetaar-vig-tun	*ayuqe-lar-tu-t*
grow-try.to.cause-place-AEQUALIS	be.alike-habitually-INTR.IND-3PL
like a place to try to grow things	they are the same as

'They are like flower pots.'

(60) *-narqe-* 'tend to cause'

Aling	*epsalngunarqellrullini-wall'*
aling	*epe-yar-lngu-narqe-llru-llini = wall'*
o.my	suffocate-would-be.indisposed.from-tend.to.cause-PAST-apparently = EMPH

'It sure was tedious!'

(61) *-naite-* 'tend not to cause'

takumcunait-uq
takumcu-naite-u-q
pity-tend.not.to.cause-INTR.IND-3SG
'He does not engender pity.'

(62) *-(r/l)i-* 'cause to become' (added to stative bases)

Uqnariqapiarluku	*camilini-llu*	*yuut.*
uqnaarqe-i-qapiar-lu-ku	*camiliini = llu*	*yug-et*
burning.hot-CAUS-very-SUBORD-R/3SG	sometimes = also	person-ERG.PL
making it very hot	sometimes also	people

'And sometimes the people would make it (the steambath) very hot.'

Yup'ik also contains verb stems which can be inflected either intransitively or transitively. Some of the transitives have a causative sense.

(63) Yup'ik pairs

a. *Ciamuq.*
ciame-u-q
crush-INTR.IND-3SG
'It got crushed.'

b. *Ciamtaa.*
ciame-ta-aa
crush-TR.IND-3SG > 3SG
'S/he crushed it.'

This is not unlike English verbs like *break*, *rip*, *scatter*, *spill*, *stretch*, etc.

When Yup'ik transitive bases are overtly causativized, the causee may be cast as an oblique. In the Yup'ik construction below the doctor is oblique (ALLATIVE).

(64) Yup'ik oblique causee

Ciin	*yungcaristamun*	*kitugtevkarluku*	*pillrunrituceciu*
ciin	*yugngecarista-mun*	*kitugte-vkar-lu-ku*	*pi-llru-nrite-ce-ciu*
why	doctor-ALL	repair-CAUS-SUBORD-R > 3SG	do-PAST-NEG-Q-2SG > 3SG
why	by doctor	getting to fix him up	didn't you do to him

'Why didn't you (ERG) get him (ABS) fixed up by the doctor (ALLATIVE)?'

In most languages, causative constructions may themselves be causativized with periphrastic constructions, like *The king made the general make the captain make the soldiers clean the bowl.* Languages vary in the possibility of constructions with multiple morphological causatives within a word. Yup'ik shows such constructions.

(65) Yup'ik causative of causative

Igtevkartaanga
igte-vkar-te-a-anga
fall-CAUS-CAUS-INTR.IND-3SG > 1SG
'He made me drop it.' ('He caused me to cause it to fall.')

The meanings of causatives are usually transparent: 'cause, force, permit, allow' etc. Such distinctions can often be captured through elicitation. But spontaneous speech can sometimes reveal further functions that might not have arisen under elicitation alone.

Kapampangan causatives are pervasive, used not only for basic causation but also for requests. In causatives of intransitives, the causer is ergative and a definite causee is absolutive.

(66) Kapampangan causative of intransitive

a. *Ma-tuling ya.*
INTR-be.black 3SG.ABS
'It is black.'

b. *Pa-tuling-an mo re=ng sapatus ku.*
CAUS-be.black-TR 2SG.ERG>3PL.ABS ABS.PL=LK shoe 1SG.POSS
'Blacken my shoes!'

c. *Pe:-tuling-an mo na re=ng sapatus ku?*
CAUS.PFV-be.black-TR 2SG.ERG>3PL.ABS already ABS.PL=LK shoe 1SG.POSS
'Did you blacken my shoes?'

When the base is transitive, the causee may be cast as oblique.

(67) Kapampangan causative of transitive 0.96 0b9

a. *I-lakó me i=ng letratu.*
TR-remove 2SG.ERG>3SG.ABS ABS=LK picture
'Remove the picture!'

b. *Pa-lakó me i=ng letratu kaya.*
CAUS-remove 2SG.ERG>3SG.ABS ABS=LK picture 3SG.OBL
'Make him remove the picture.'

Causatives in an agent/patient system can be seen in the Central Pomo examples below. There is one general causative suffix *-ka*, which can be added to both intransitive and transitive bases. The causer is cast as a grammatical agent, and the causee may be cast as a grammatical patient, but only if it is a person with whom the speaker feels some empathy, or a personified animal. The causative is used not only for general causation but also for invitations.

(68) Central Pomo causatives

Ya-l qʰadí:č-hi
1PL.PAT invite-SAME
'He invited us and

mi: ṭí:ṭo č'a:l cámp-či-ka-w='kʰe
there 3SG.R with camp-SML-CAUS-PFV=IRR
asked (us) to camp with him there

ma'á qa-wá-'-ka-w='kʰe.
food biting-go-IPFV.PL-CAUS-PFV=IRR
and eat the food (he had grown in his garden).'

It is generally possible to elicit some causative constructions directly, but particularly in the case of morphological causatives, it is important to be sensitive to speakers' sense not just of whether a certain formation could exist in the language, but also whether it already does. Morphological causatives are derivational: speakers use them to create vocabulary which then becomes part of the language. They may be highly productive, somewhat productive, or no longer productive at all, though their products may still survive in the language. The English causative *fell* in *felled the tree*, for example, is marked by ablaut, but modern speakers would be unlikely to form a new causative by ablaut.

3.2 Applicatives

Other valency-changing constructions which add an argument to the core are applicatives. The added argument is usually an object in nominative/accusative systems, an absolutive in ergative/absolutive systems, and a grammatical patient in agent/patient systems. In all languages that have them, applicatives can be added to intransitive bases. In some, applicatives can be added to transitive stems as well. The added argument might displace an original object/absolutive/patient, or not. The original object/absolutive/patient may remain a core argument in a ditransitive clause, it may be cast as an oblique, or it may be eliminated entirely. A useful typological survey of applicatives is in Peterson 2007.

Languages vary in how many applicatives they contain and their functions. Some languages have just one all-purpose applicative. Some have just one applicative which adds an argument with a specific semantic role: beneficiary, instrument, companion, location, direction, reason, etc. Some have multiple applicatives, each of which adds a particular kind of participant. The added core argument often, but not always, represents a participant that could otherwise be expressed as an oblique, giving speakers choices.

Applicatives in a nominative/accusative system can be seen in the Barbareño examples in (69). Barbareño has four applicatives: benefactive, instrumental, locative, and directional. In the first clause in (69), the verb contains a benefactive applicative suffix *-us-* added to the intransitive verb 'work' (a Spanish loan) to derive a transitive verb 'work for'. The grammatical object of the derived verb is the semantic beneficiary, here the Austriaco family. This can be seen from the third person plural object suffix on the verb. The benefactive applicative in the second clause was added to the verb 'listen' to derive the transitive verb 'listen to, hear (someone)', again with third person plural object suffix *-wun* 'them'.

(69) Barbareño benefactive applicative: JPH 59.643.48
ʔakimpi hu=k-talawaxan-<u>us</u>-wun *hi=l=ʔustliyaku:ʔ*
during REM=1SBJ-work-<u>BEN.APPL</u>-3PL.OBJ DEP=ART=NAME
'When I <u>worked for</u> the Austriacos,

s-am-qili-itaq-us-wun
3SBJ-INDEF-HAB-listen-BEN.APPL-3PL.OBJ
you would hear them

hi = mal'i *s-iy-axlulun* *hi = ho? = s-iy-kaltu.*
DEP = when 3SBJ-PL-sip.RDP DEP = REM = 3POSS-PL-soup
when they sipped their soup.'

The instrumental applicative in (70) was added to a verb root 'make' to derive a stem 'make with'.

(70) Barbareño instrumental applicative: JPH 59.180.10
?al-e-čʰo *hi = s-am-eqwel-in*
NMLZ-NEG-be.good DEP-3SUBJ-INDF-make-INS.APPL
it is not good making with

hi = l = kaltu *hi = he? = l = wuluw'ul.*
DEP = ART = soup DEP = PROX = ART = crayfish

'Crayfish are not good for making soup with.'

The locative applicative in (71) was added to a verb root 'lean' to derive a verb 'lean against'.

(71) Barbareño locative applicative: JPH 59.385.15
['It made a good seat]
?ikʰu s-e-wil-waš *hi = l = ?-am-nexpey-pi.*
but 3SUBJ-NEG-be-PAST DEP = ART = NMLZ-INDF-lean-LOC.APPL
but there was nothing to lean against.' (The seat had no back.)

It is useful to note whether applicatives cooccur with other valency-changing morphology. The Barbareño verb 'soften with' in (72) contains both a causative and an applicative.

(72) Barbareño instrumental applicative: JPH 59.181.17
S-am-su-lom'in?-in *hi = l = kal* *hi = ho? = l = mays.*
3SBJ-INDF-CAUS-be.soft-INS.APPL DEP = ART = lime DEP = DIST = ART = corn
'They soften the corn with lime.'

Applicatives, like causatives, are derivational: they are used to create lexical items. Here, too, it is important to be sensitive to speakers' senses of which forms actually exist and which could be created. As lexical items, they may have meanings not precisely equivalent to the sum of the meanings of their components. They are created for specific purposes and may evolve over time independently as units.

3.3 Reflexives

Reflexive constructions (REFL) may or may not affect valency. They signal that two distinct grammatical roles are filled by the same referent, usually one of which is a subject or agent. In some languages reflexive constructions are regular analytic transitives.

(73) English transitive reflexive

I	*cut*	*myself*
SUBJECT		OBJECT

Counterparts to these constructions in other languages may contain special reflexive pronouns, like *myself*, or simply basic pronouns: French *Je me suis coupée*, lit. 'I me am cut.' They may distinguish person and number, as in English (*myself, ourselves, yourself, yourselves,* …), or not. In Kapampangan there is a single form *sarili* 'self' followed by a possessive pronominal clitic. Reflexives often originate in lexical items such as 'body', 'head', or 'soul'.

(74) Kapampangan transitive reflexive

a. *Kinungua ya=ng gunting*
get.INTR 3SG.ABS scissors
'She got some scissors

at siksak ne i=ng sarili na.
and stab.TR 3SG.ERG>3SG.ABS ABS=LK self 3SG.POSS
and stabbed herself.'

b. *Paksabyen ne i=ng sarili na.*
talk.TR 3SG.ERG>3SG.ABS ABS=LK self 3SG.POSS
'She talks to herself.'

c. *Migsalita ya tungkul ki sarili na.*
talk.INTR 3SG.ABS about OBL self 3SG.POSS
'She talked about herself.'

In many languages reflexives are morphologically derived intransitives formed with verbal affixes, like the suffix *-č'* in Central Pomo.

(75) Central Pomo derived intransitive reflexive

a. *'a: pʰ-wí-w.*
1SG.AGT visually-perceive-PFV
'I saw (it).'

b. *'a: pʰ-wí-č'.*
1SG.AGT visually-perceive-REFL.PFV
'I saw myself.'

The Central Pomo reflexive suffix does not vary with person.

(76) Central Pomo derived intransitive reflexives

a. *'a:* *ča-q^{h}á:-č'=la.*
1SG.AGT by.mass-cut-REFL=PERSONAL.ACT
'I cut myself.'

b. *Mu:l ča-q^{h}á:-č'=ya.*
3 by.mass-cut-REFL-DIRECT.OBSERVATION
'He cut himself.'

For the most part, reflexives can be elicited with confidence. Among the features to probe are whether coreferential non-core participants, such as obliques and possessives, take reflexive forms as well.

3.4 Middles

In middle constructions, the semantic roles of agent and patient or experiencer have begun to merge. In many languages, middles have developed from reflexives, so the two may still have the same or similar forms. In French the reflexive and middle functions are expressed with the same construction. In 'I cut myself', the roles of semantic agent (the cutter) and semantic patient (the one cut) are distinct. In 'I went for a walk', the distinction has been blurred. First and second person forms are the same as object pronouns, while third person forms are distinct.

(77) French reflexives

a. *Je me suis coupée.*
I me am cut.F
'I cut myself.'

b. *Elle s'est coupée.*
she self-is cut.F
'She cut herself.'

(78) French middles

a. *Je me suis promenée.*
I me am walked.F
'I went for a walk.'

b. *Elle s'est promenée.*
she self-is walked.F
'She went for a walk.'

It is easy to imagine the kinds of bridging contexts that might give rise to the extension of reflexive to middle constructions. In French *Je me suis baignée* 'I bathed myself',

I am both the bather and bathed, but the semantic agent and patient roles are intertwined. Middles often show a fading of one of these roles. In *Je me suis promenée*, literally 'I walked myself', the patient role has faded: 'I took a walk'. In other middle constructions, the agent role has faded.

(79) French middle
La porte s'est overte.
the door self-is open-F
'The door opened.'

Middle constructions such as this imply a spontaneous event, while stative passives like *La porte est ouverte*, focus on a resultant state.

Middle constructions often become lexicalized, and their meanings may continue to evolve without regard to their components. For these reasons, the functions of middles across lexical items in a language may not always be easy to extract.

3.5 Reciprocals

Other constructions which may or may not reduce valency are reciprocals (RECP). They signal that two parties are involved, each acting on the other. In some languages they have the same form as reflexives, though there is always a dual or plural subject or agent. Like reflexives, they may be analytic or synthetic, and they may be grammatically transitive or intransitive.

(80) English reciprocal
They saw each other.
SUBJECT OBJECT

(81) French reciprocal
Ils se sont vus.
they REFL are seen.PL
'They saw each other.'

In Kapampangan, though reflexives are formed with a separate noun *sarili* 'self', reciprocals are verbal detransitivizing prefixes.

(82) Kapampangan reciprocal
Maninum lang serbesa,
'They are drinking beer

atsaka mi-pagkwentu ke=ng balita.
and RECP-tell.stories.INTR.IPFV OBL=LK news
and telling each other stories about the news.'

Some clauses that would be intransitive in English are expressed in reciprocal constructions in Kapampangan and other languages.

(83) Kapampangan reciprocal
Parati kami=ng mi-papate.
always 1PL.EXCL.ABS=LK RECP-quarrel
'We were always quarreling (with each other).'

(84) Kapampangan reciprocal
Ikami ngun angga=ng mi-pisan-pisan,
1PL.EXCL all every=LK RECP-cousin-cousin
'All of us cousins
miy-akit-akit kami kari=ng,
RECP-see-see 1PL.EXCL.ABS there=LK
would get together there
lalam da ri=ng mangga.
under 3PL.POSS 3PL.POSS=LK mango
under the mango trees.'

Reciprocals can generally be elicited with confidence in order to discover their forms, though as seen here, their occurrences are not precisely the same from one language to another.

3.6 Passives

Widespread valency-reducing constructions are passives (PASS), which eliminate a subject, ergative, or agent from the set of core arguments. The most common passives are formed from a transitive base, rendering it intransitive. The erstwhile subject/ergative/agent is either cast as an oblique or eliminated altogether.

(85) English passive
Basic transitive: *The news stunned John.*
Passive: *John was stunned (by the news).*

The passive construction may be analytic, synthetic (morphological), or a combination of the two. In English it is a combination of a verbal auxiliary and past participle form of the verb. In Central Pomo the passive marker is simply a verbal suffix.

(86) Central Pomo passive suffix
Mu:l bašá 'el lóq=li šṭʰóm-a'-ya-w qʰá=wi.
that buckeye the thing=with boil-IPFV.PL-PASS-PFV water=with
'The buckeyes are boiled in something, in water.'

Agents of passives are never mentioned in Central Pomo.

Cross-linguistically, passives serve various functions. They may be foregrounding devices, promoting a participant to subject status: *I was stung by a bee*. They may be backgrounding devices, removing an agent from the core: *He was robbed*. They may focus on a resultant state: *It was cracked*. In English, basic passives are ambiguous between dynamic and static senses, while *get*-passives are unambiguously dynamic.

(87) Dynamic and static senses

a.	*The vase was cracked.*	dynamic/static
	The vase was cracked by my nephew.	dynamic
	The vase was cracked but I bought it anyway.	static
b.	*The vase got broken.*	dynamic only

German also has distinct constructions.

(88) German dynamic and static senses

a. *Das Haus wird verkauft.*
the house becomes sold
'The house is being sold.' (You still have a chance to buy it.)

b. *Das Haus ist verkauft.*
the house is sold
'The house is sold.' (Too late.)

In all languages with syntactic or morphological passives, passive constructions can be formed from transitive bases. In some, they can also be formed from intransitive bases, backgrounding the agent.

(89) German passive of intransitive

a. Basic intranstive
Er hat die ganze Nacht gehustet.
he has the whole night coughed
'He coughed all night long.'

b. Passive
Es wird gehustet.
it becomes coughed
'There's coughing.'

The sentence in (90) was just uttered by a guest at a Christmas party as it was getting late.

(90) German passive of intransitive: Dieter Stein, p.c.
Aha, es wird jetzt wohl allgemein gegangen.
it becomes now well generally gone
'Looks like everybody's leaving now.'

This construction, like those described for Dutch by Kirsner (1976), is used only for activities by humans or animals.

Passives are most often described with reference to subject and object categories: the object of an active clause (*A bee stung me*) is promoted to subject status (*I was stung by a bee*), and the original subject is expressed as an oblique or not at all (*I was stung (by a bee)*). Such descriptions raise the question of whether passive constructions are dependent on these categories. Constructions with the same semantic/discourse motivations and the same effect on transitivity do in fact occur in agent/patient systems. One Central Pomo passive was seen earlier. Some more are below.

(91) Central Pomo passives
Mé:n ʔi-n mú:t̪u t̪é t̪e:-ya-w.
so is-as 3SG.PAT tell-PASS-PFV
'Then a voice spoke to her (*lit.* she was told), …

Ná:mač' ná:mač' ʔčí:-ya-w ʔe ma-t̪ʰe-l.
forever forever take-PASS-PFV COP 2SG.POSS-mother-PAT
"Your mother has been taken away forever."

Note that there is no change in argument categorization here, because the categories are semantically based: patients ('she', 'your mother') remain semantic and grammatical patients. Central Pomo passives have only a demotional function, serving to eliminate unknown, vague, or unimportant agents.

In keeping with this function of agent demotion, Central Pomo intransitives can be passivized.

(92) Central Pomo passive of intransitive
a. Basic intransitive
Mú:t̪uya mi: bat̪í-w.
3PL.AGT there PL.lie-PFV
'They slept there.'
b. Passive of intransitive
Mi: bat̪í:-ya-ʔle.
there PL.lie-PASS-COND
'There (people) would sleep.'

In investigating passive constructions, it is good to watch for combinations of passives with other valency-changing processes. Central Pomo shows passives of causatives.

(93) Central Pomo passive of causative

a. Causative
Mu:l báč-ka-w.
that grow-CAUS-PFV
'He/she planted it.'

b. Passive of causative
Báč-ka-ya-w hínṭil yačó:-ʔkʰe.
grow-CAUS-PASS-PFV Indian them-for
'It was planted for the Indians.'

Sensitivity to idiomaticity is particularly important here. These Central Pomo examples were drawn from unscripted connected speech. Lexicalization undoubtedly has played a role in their formation: the stem 'grow-cause' = 'plant' was undoubtedly lexicalized before speakers began passivizing it. (Further discussion of Central Pomo passives is in Mithun 2008.)

In ergative/absolutive systems, passivization has less effect on participant categories. The absolutive of a (transitive) active construction ('He robbed me (ABS)') would correspond to the absolutive of its (intransitive) passive counterpart ('I (ABS) was robbed'). Some ergative/absolutive systems, such as Warlpiri, are said to have no passives. Others do have passives, or constructions with similar functions. Kapampangan has several constructions comparable to passives in other languages, but they are not promotional, since the absolutive of the transitive base remains the absolutive of the intransitive passive. The prefix *maka-* is akin to a stative passive, forming intransitives which focus on the resultant state.

(94) Kapampangan resultant state

a. *Migising ne.*
INTR.wake already.3SG.ABS
'He woke up.'

b. *Gising-an da nya mu.*
wake-TR 3PL.ERG already.3SG.ABS just
'They'll just wake him up.'

c. *Maka-gising ne.*
INTR-wake already.3SG.ABS
'He is awake.'

(95) Kapampangan resultant state
Maka-gapus ya gamat.
INTR-bind 3SG.ABS hand
'His hands are bound.'

(96) Kapampangan resultant state
Maka-buklat ya.
INTR-open 3SG.ABS
'It is open.'

The prefix *ma-*, which also forms descriptive intransitives like *ma-suerti* 'be lucky', is used more as a dynamic passive.

(97) Kapampangan dynamic intransitive
At nu=ng e la ma-suerti,
and if=LK NEG 3PL.ABS STATE-lucky
'And if they are not lucky,
siguradu la=ng ma-dakap at ma-pangan.
surely 3PL.ABS=LK INTR-catch and INTR.eat
'they'll surely get caught and be eaten.'

(98) Kapampangan dynamic intransitive
Istu=ng me:basa ke pago,
if=LK got.wet 1PL.EXCL.ABS shoulder
'If our shoulders got wet,
ma-paldu kami.
INTR-spank 1PL.ABS
'we would get spanked.'

Some languages contain constructions that are not technically passives and do not detransitivize, but serve similar agent-backgrounding functions. In these, the subject/ergative/agent is indefinite, but the clause remains transitive. Such a construction is pervasive in Barbareño Chumash.

(99) Barbareño indefinite agent: JPH 59.639.46
K'e s-wil-waš hi=l=alayaš
and 3SBJ-be-PAST DEP=ART=road.RDP
'And the roads
hi=l=ʔ-am-ʔuqsuy-wun hil=l=ʔaseyt
DEP=ART=NMLZ-INDF.SBJ-sprinkle-3PL.OBJ DEP=ART=oil
hi=l=ʔ-aximay.
DEP=ART=NMLZ-be.black
were sprinkled with crude oil.'

The free translation here, an English passive, was provided by the speaker, Mary Yee. The fact that the clause is still grammatically transitive is evident from the third person

plural object suffix *-wun* on 'sprinkled'. Third person plural and indefinite pronouns are often diachronic sources of passive markers. The transition from transitive to passive can be gradual, so a construction may show some properties of a basic transitive and some of a passive.

The Barbareño indefinite subject construction occurs in combination with both causatives and applicatives. Here again the speaker translated this construction with an English passive, and the applied instrumental object as an English oblique agent.

(100) Barbareño indefinite subject of causative: JPH 59.673.73
K'e = li?ya hi = ho? = l = ?-ut'imay-mu? *hi = l = iy-?al-aqšan*
and = all DEP = DIST = ART = NMLZ-bury-LOC DEP = ART = PL-NMLZ-die
'And all the burial places of the dead

?i *s-am-su-soqolk'oy?-in* *hi = l = yuxwowo-n*
CLEFT 3.SBJ-INDF-CAUS-surround-INS.APPL DEP = ART = tall-IPFV
hi = l = ponp'on'.
DEP = ART = RDP-pole
were surrounded by long, vertically-placed poles.'

As noted earlier, some languages contain verb stems that can be used as intransitives or transitives without overt derivation. For some stems, the transitive use seems to have a causative sense, like English *scatter, spill, ring, drop* etc. and Yup'ik *eglerte-* 'move'; 'move/drive/pilot (something)' ('cause to move'), *iir-* 'be in hiding'; 'hide (something)'. For other stems, the intransitive use seems to serve a passive-like function, like the *ilair-* 'get untangled'; 'untangle', *kape-* 'get stabbed'; 'stab', *kapkaanar-* 'get trapped'; 'trap'. Of course the transitive use of a verb meaning 'trap' could also be understood as a semantic causative: 'cause to get trapped', and the transitive use of a verb 'get untangled' could be understood as 'cause to get untangled'. Neither verb is formally derived.

(101) Yup'ik

a. *Ilairaa.*
ilair-a-aa
untangle-TR.IND-3SG > 3SG
'She untangled it.'

b. *Ilairtuq.*
ilair-tu-q
untangle-INTR.IND-3SG
'It got untangled.'

There is no overt passive morphology in this example, but the intransitive version lacks an agent. Yup'ik indicative clauses show ergative/absolutive patterning, so what was

untangled ('her hair') is the absolutive of both the transitive 'she untangled it (ABS)' and the intransitive 'it (ABS) got untangled'.

Some languages contain what is termed an *adversative* passive, a passive which includes as part of its meaning an indication that the resultant state is undesirable. Yup'ik contains such a suffix, *-(s)ciur-* which signals an undesirable resultant state.

(102) Yup'ik

a. *Neraa.*
nere-a-aa
eat-TR.IND-3SG > 3SG
'He is eating it.'

b. *Ner'uq.*
nere-u-q
eat-INTR.IND-3SG
'He is eating.'

c. *Neresciurtuq* *qimugtemun.*
nere-sciur-tu-q qimugte-mun
eat-ADVERSATIVE-INTR.IND-3SG dog-ALL
'It got eaten by a dog.'

This suffix is added only to verb bases that can be inflected as transitives, and it produces stems that must be inflected as intransitives. Adversative passives are said to be particularly pervasive in Southeast Asian languages (Shibatani, 1996).

3.7 Antipassives

The last major valency-changing constructions to be discussed here are antipassives, which eliminate the object/absolutive/patient of a transitive base from the set of core arguments. The clause becomes intransitive, and the erstwhile object/absolutive/patient is either cast as an oblique or not mentioned at all. In nominative/accusative systems, the subject of the transitive base ('I (SUBJECT) ate my lunch') is still the subject of its antipassive counterpart ('I (SUBJECT) ate.') (These English glosses are not prototypical antipassives, since they contain no dedicated antipassive markers.) In ergative/absolutive systems, however, antipassives result in greater reorganization of argument categories. The absolutive of the transitive base is eliminated from the core and the clause becomes intransitive ('I ate (my lunch'). The original ergative ('I') is an absolutive when there is no longer an object.

(103) Kapampangan transitive and antipassive

a. *Ibuklat ne.*
i-buklat na ya
TR-open 3SG.ERG > 3SG.ABS
'He (ERG) will open it.'

b. *Mamuklat ya.*
maN-buklat ya
ANTIPASS-open 3SG.ABS
'He (ABS) will open up (as a shop or house).'

(104) Kapampangan transitive and antipassive

a. *Inulu na ku.*
in-ulu na ku
TR-cure 3SG.ERG 1SG.ABS
'She (ERG) cured me.'

b. *Manulu ya.*
maN-ulu ya
ANTIPASS-cure 3SG.ABS
'She (ABS) cures (people).'

Antipassives are typically used when a semantic patient/goal/theme etc. is unimportant to the discourse, indefinite, unknown, obvious (as in fishing for *fish*), non-specific, or generic.

One can get a head start on discovering many of the valency-changing constructions described here with direct elicitation, particularly causatives, reflexives, and reciprocals. Elicitation can be useful for identifying the markers involved, but it is important to specify in the field notes that the examples did come from elicitation. Once particular markers are identified, one strategy that can sometimes yield useful results is to ask speakers for other words containing that marker, with at least a sentence context. (This is often easier for speakers if the marker is a separate word or a prefix at the beginning of the word, without much phonological fusion.) It is important to specify in the field notes that such examples were volunteered by the speaker on request. If the speaker adds further comments about usage, these should be included as well. Particularly in the case of derivational morphological formations it is important to be sensitive to collocations, idiomaticity, and lexicalization. It is all too easy to lure bilingual speakers into producing translations of sentences from a contact language into the target language which they would never utter spontaneously. And without a rich context, it can be easy to miss the finer aspects of their functions.

4 Discourse functions of valency alternatives

Most of the valency-changing constructions described here offer speakers choices of which participants to identify within the core. As seen in sections 1 and 2, certain semantic factors can affect argument structure, such as animacy, definiteness, and telicity. In some languages, inanimate participants cannot be cast as subjects. In some, indefinite participants cannot be cast as core arguments. When all participants are eligible for core argument status, however, speakers have choices. The reasons behind their choices often emerge only from examination of discourse. Both sentences in (105) came out of spontaneous conversations. Both are based on the verb root *aus* 'call'. But in the first, the recipient was cast as oblique, and in the second as absolutive. The reasons behind the speakers' choices become clear from the context.

(105) Kapampangan *aus* 'call'

a. *M-in-aus ya kanaku ana.*
INTR-PFV-call 3SG.ABS 1SG.OBL QUOT
'She called me (OBLIQUE) up and said …'

b. *In-aus da ka nabengi pero ala ka.*
DIR.APPL.PRF-call 3PL.ERG 2SG.ABS last.night but none 2SG.ABS.
'They called you (ABSOLUTIVE) up last night but you weren't there.'

After the first sentence 'she called me', the recipient 'me' (oblique) was not mentioned again in the conversation. After the second sentence 'they called you', the recipient 'you' (absolutive) continued as part of the subsequent discussion.

In (106) both the story and the recipient 'me' were identifiable, so both were eligible for core argument status. The speaker chose to cast the story as part of the core. He continued by relating the story, with no further mention of himself.

(106) Kapampangan oblique recipient
K-in-uentu ne kanaku ing istoria na ning bye.
tell-TR.PFV 3SG.ERG > 3SG.ABS 1SG.OBL ABS story 3SG.POSS 3SG.GEN life
'She told me the story (ABSOLUTIVE) of her life.'

Directions can be expressed as either oblique or core. In (107a) the river is oblique, as is common for directions and locations. In (107b), however, the mountain has been made part of the core with a directional applicative.

(107) Kapampangan direction

a. Oblique
Munta la ki = ng ilug
go.PFV.INTR 3PL.ABS OBL = LK river
'They went to the river.'

b. Core

At pota=ng labasnan mya ing bunduk
and later=LK pass.by.APPL 1PL.EXCL.ERG>3SG.ABS ABS mountain
'And then we passed by the mountain

at e me simpungan,
and NEG 1PL.EXCL.ERG>3SG.ABS bump.PFV.APPL
and we did not bump it.'
['We were very happy, clapping our hands.']

The sentence in (107b) was part of a discussion about a road which seemed to hit a mountain. The context (in translation) is below.

(108) Kapampangan context
'And one of the things which we liked very much when we were on our way to Bataan and Olongapo was to be able to see many mountains up close. This is because Pampanga is one of the provinces in what they call the Central Plain of Luzon. That's why all around you, you will not see any mountains except for that one mountain of the Pampanga region, which they call Mount Arayat. But Bataan and Olongapo are mountainous provinces. One thing which we liked very much was the road which seemed to hit the mountain. It's that illusion where it seems that you are bumping the mountain. Because you're only a child, this simple thing can give you joy and excitement.'

The mountain was central to the discussion.

It might be thought that just as in nominative/accusative systems the most topical referents tend to be cast as subjects, perhaps those in ergative/absolutive systems are cast as absolutives. In fact examination of spontaneous speech shows that absolutives are no more topical than ergatives. What is significant is inclusion in the core. Over stretches of speech centered around a particular topic (in the generally understood sense rather than the specialized sense sometimes used in Philippine linguistics), that topical participant is cast sometimes as absolutive, sometimes as ergative, depending primarily on the status of other participants. In (109) there was no attempt to detransitivize the second sentence in order to shift the agent ('I') to absolutive status. The agent was absolutive in the first clause because the musicians were indefinite, and ergative in the second because the auditorium was definite.

(109) Kapampangan topicality
Menarkila ku=ng mosikos,
hire.INTR 1SG.ABS=LK musicians
'I (ABS) hired musicians,

geyat *ke* *ita=ng auditorium.*
decorate.TR 1SG.ERG>3SG.ABS that-LK auditorium
I decorated the auditorium.'

Because the core categories of agent/patient systems are generally based on clause-level semantics rather than information structure through larger stretches of speech, the most usual discourse function of valency-changing processes is the elimination of unknown or peripheral participants entirely, most often with passivization, rather than shifting of status between oblique and core, or within the core.

5 Syntactic functions of voice

In a number of languages, valency-changing processes are used for syntactic purposes, most often to cast a particular referent as a subject or absolutive. The subject or absolutive category functions as what is termed a pivot.

5.1 Subjects

Many languages have clause-linking constructions that require that the linked clauses have coreferential subjects. In Yup'ik, technically the subject of a dependent subordinative clause must be coreferential with the subject of the associated main clause.

(110) Yup'ik subordinative mood
Taillruut *taukut*
tai-llru-u-t tauku-t
come-PAST-INTR.IND-3PL that.RESTRICTED-PL
'They came

aqvaluta.
aqva-lu-ta.
fetch-SUBORDINATIVE-R>1PL
and (they) got us.'

Causatives are sometimes exploited to ensure coreferentiality, however, even when causation is not present. Jacobson provides the wonderful example below.

(111) Yup'ik subordinative mood: Jacobson 1995, 333

Yuurtellruunga	*apa'urluqa*	*tuqurraarcelluku*
yug-urte-llru-u-nga	apalur-ka	tuqu-rrar-cete-lu-ku
person-become-PAST-ITR.IND-1SG	gf-1SG>3SG	die-first-CAUS-SUBORD-R>3SG
I was born	my grandfather	(I) letting him die first

'I was born after my grandfather died.'

Similar uses of causatives have been noted in other unrelated languages. In some languages passivization is exploited for such purposes.

5.2 Absolutives

Kapampangan contains a number of syntactic constructions that require absolutive status, primarily because they are based on nominalized clauses.

Nominalization

Kapampangan clauses can be nominalized to refer to the absolutive of that clause. Often that participant would have absolutive status in any case. The clause in the first line, 'my mother has to buy X', is transitive. It has been nominalized to refer to the absolutive, X, her purchase.

(112) Kapampangan nominalized transitive
[*I=ng* *na=ng saliw-an na* *kanita=ng Ina=ng* *ku*]
ABS.SG=LK only buy-TR 3SG.ERG then-LK mother=LK 1SG.POSS
'[What my mother has to buy]

manuk *a* *piritu na.*
chicken LK fry 3SG.ERG
is the chicken which she will fry.'

If, however, the referent would not otherwise be absolutive, valency-changing processes are exploited to ensure that it gains absolutive status. In the clause 'they built the road', the builders would normally be ergative. In the nominalization 'the ones who built the road', an antipassive construction has eliminated the road from the core (even though it is definite), leaving the builders as the sole argument of the grammatically intransitive clause, the absolutive.

(113) Kapampangan nominalized transitive
['Of course, now that you're big,']
balu *mu* [*i=ng* *de=ng* *ginawa* *ki=ng* *dalan a* *reta=ng*]
know 2SG.ERG ABS=LK 3PL.ABS=LK made.INTR OBL=LK road LK those=LK
you know that [the ones who built the road]

syempre … *e de* *peparalanan*
of course NEG 3PL.ERG>3SG.ABS CAUS-pass.TR
of course did not allow

ki=ng *bunduk* *ing* *dalan.*
OBL=LK mountain ABS road
the road to pass through the mountain.'

Clefts

Nominalized clauses form the basis of a number of other constructions. Among these are clefts. The cleft construction below begins with the predicate '(it was) he', followed by the argument 'the one who found the solution'. This argument is a nominalization of 'he found the solution', referring to the agent, the finder. The clause would normally be transitive because the solution is definite, and 'he' (the finder) would be ergative. But if the nominalized clause is to refer to the finder, the finder must be absolutive. The clause was accordingly antipassivized, and the solution cast as oblique.

(114) Kapampangan cleft
Bala na ing iya [ing mekanakit ki=ng solusyan].
think 3SG.ERG ABS 3SG ABS managed.to.find.INTR OBL=LK solution
'He thought he was [the one who found the solution].'

In (115) the fish was definite and the center of the discussion. Normally the clause 'he ate the fried fish' would be transitive, and the eater ergative. But to ensure that the eater was absolutive, the clause was antipassivized and the fish was eliminated from the core.

(115) Kapampangan cleft
Balu mu i=ng aliwa aku
know 1SG.ERG ABS=LK different 1SG
'You know that I was not

[i=ng mengan kari=ng pritu=ng asan.]
ABS eat.INTR OBL.PL=LK fried=LK fish
[the one who ate the fried fish].'

Questions

Content questions are also formed with nominalized clauses. The question 'What do you want?' has an initial predicate 'it is what', followed by one argument, 'the thing you want'. The focus of the question is the absolutive of the nominalized clause: 'you want the thing'.

(116) Kapampangan content question
Nanu=ng buri mu?
what=ABS.SG want 2SG.ERG
'What is [the thing you want]?' = 'What do you want?'

If the focus of the question would not otherwise be absolutive, valency-changing processes are exploited. The question 'Who will tie the bell around his neck?' consists of an initial predicate 'be who' followed by the nominalized clause 'one will tie the bell around his neck'. If the clause were a sentence on its own, the person tying would

normally be ergative. If the nominalization is to refer to the agent however, the person tying, that person must be absolutive. The clause is accordingly antipassivized and the bell removed from the core, leaving the person the sole core argument of an intransitive.

(117) Kapampangan content question
Ninu [*ing mitali* *ki=ng* *kampana ki=ng* *batal na*]?
who ABS tie.INTR OBL=LK bell OBL=LK neck 3SG.POSS
'Who is [the one who will tie the bell around his neck]?'
= 'Who will tie the bell … ?'

Relative clauses

Nominalized clauses also serve as relative clauses in Kapampangan, linked to the head noun by a linker *=na* or *=a*. Within this modifying clause, the coreferential argument must be absolutive. Often it would be absolutive in any case, like the food in 'we will bring the food' in (118).

(118) Kapampangan relative clause
Manyali *ya=ng* *pamangan* [*a dalan* *mi*].
buy.PL.INTR 3SG.ABS=LK food LK bring.TR 1PL.EXC.ERG
'She'll buy food [that we'll bring]'.

If the coreferential participant would not otherwise be absolutive in the modifying clause, various valency-changing processes come into play. The sentence in (119) is from the description of the mango harvest. The speaker had said, 'Our older cousins would climb up and fill the baskets with mangoes, then lower the full baskets.' The two relative clauses in (119), 'X left us behind' and 'X empties the baskets' would otherwise be transitive, and X would be ergative in each. The clauses were accordingly detransitivized, the first to a resultant stative, the second to an antipassive, leaving X as the single core argument of each, an absolutive.

(119) Kapampangan relative clauses
Ikami=ng [*mala-lakwan ke* *lalam*]
1PL.EXCL=LK INTR-leave 1PL.EXCL.ABS below
'We [who are left below],

ikami=ng [*mi-lilikas* *kareng basket* *a* *reni*].
1PL.EXCL=LK INTR-empty OBL.PL baskets LK these
it is we [who empty the baskets].'

In isolation, the sentence 'you can ride on X', would normally be intransitive, and X would be either oblique or simply adjoined with a linker. In a relative clause modifying

the Ferris wheels and other rides, however, X (the rides) must be absolutive. An applicative construction was used to transitivize the clause ('ride-on') and draw the location into the core as an absolutive.

(120) Kapampangan relative clause
Ati=ng tsubibu … ampo=ng miyaliwa=ng,
exist=LK ferris wheels and=LK different=LK
'There are Ferris wheels and different …
rayds (English)
rides
[*a asake-n mu*].
LK can.ride-APPL 2SG.ERG
[which you can ride on].'

6 Conclusion

When beginning work on valency-changing processes in a language, it is important to determine basic clause structures early on. The first and second sections here surveyed major alignment patterns found cross-linguistically (nominative/accusative, ergative/absolutive, agent/patient) and some of the factors which can affect them and their marking. Subsequent sections surveyed major constructions that can alter valency: causatives, applicatives, reflexives, middles, reciprocals, passives, and antipassives,

Direct elicitation can be useful as a preliminary step in identifying basic patterns and the shapes of markers. To discover alignment patterns, one can ask for basic intransitive and transitive sentences, then alter variables known to affect transitivity and coding in some languages such as definiteness, humanness, animacy, specificity, count versus mass, person; control and volitionality; aspect and telicity, etc. By altering the person and number of referents in each role one can see forms of pronouns, pronominal clitics, pronominal affixes, and/or agreement affixes. Requesting sentences with added participants such as recipients, beneficiaries, instruments, companions, locations, sources, goals, etc., might shed light on a core/oblique distinction, the shapes of case markers, and indirective or secundative patterns. It is crucial at this stage to specify in the field notes that the resulting data came from elicitation, as either direct translations from a target language or as additional suggestions volunteered by speakers.

Some valency-changing constructions can also be elicited as a first step with relative confidence, such as causatives, reflexives, and reciprocals, again with care to note the fact that they were elicited or volunteered. One can probe whether causatives can be formed not just from intransitives but also transitives, and if they can, how the original transitive arguments are distributed in their causative counterparts. One might discover whether reflexive constructions are used only for coreferential semantic patients/themes/goals,

or also for obliques and/or possessors. Direct elicitation may be less successful with other valency-changing constructions. A language may or may not have applicative, middle, passive or antipassive constructions. Probing for them can put bilingual speakers ill at ease and/or lead them to produce questionable data as they try to replicate contact-language models. Some languages simply lack one or more of these, and where they exist, they can vary in productivity. Most or all are likely to be derivational. For an accurate record, it is crucial to be sensitive to lexicalization and idiomaticity, paying careful attention to differences between formations speakers know to exist in the language and what they might create by analogy when pushed. Instead of asking "Can you say X?", one might ask "Have you ever heard anyone say X"?

To gain a full understanding of the semantic, syntactic, and pragmatic characteristics of valency-changing constructions, however, it is crucial to document how speakers exploit them in spontaneous speech, in both monologue and conversation, in a variety of genres and settings. Valency-changing processes often offer speakers alternatives which might be semantically comparable, but which are chosen for discourse purposes beyond the sentences, as they shape the flow of information. If the final description is based primarily on spontaneous speech, patterns of lexicalization, as well as syntactic and discourse functions, are more likely to emerge, and a more reliable resource for further work.

Bibliography

Aikhenvald, Alexandra. 2000. Transitivity in Tariana. In *Changing valency: Case studies in Transitivity*, ed. R.M.W. Dixon and Alexandra Y. Aikhenvald, 145–172. Cambridge: Cambridge University Press.

Frantz, Donald. 1991. *Blackfoot grammar*. Toronto: University of Toronto Press.

Harrington, John Peabody. ms. The Papers of John P. Harrington in the Smithsonian Institution 1907-1957. Washington D.C.: Anthropological Archives, Smithsonian Institution. URL http://anthropology.si.edu/naa/harrington/harrington_mf3.html, (16 February, 2016.).

Hopper, Paul J., and Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 65:152, 99.

Jacobson, Steven. 1995. *A practical grammar of the Central Alaskan Yup'ik Eskimo language*. Fairbanks, AK: Alaska Native Language Center, University of Alaska.

Jany, Carmen. 2009. *Chimariko grammar: Areal and typological persepective*, volume 142. University of California Publications in Linguistics. URL http://repositories.cdlib.org/ucpress/.

Kirsner, Robert. 1976. On the subjectless "pseudo-passive" in standard dutch and the semantics of background agents. In *Subject and Topic*, ed. Charles N. Li, 385–416. New York: Academic Press.

Mithun, Marianne. 1991. Active/Agentive case marking and its motivations. *Language* 67:510–546.

Mithun, Marianne. 2000. Valency-changing derivations in Central Alaskan Yup'ik. In *Changing valency*, ed. R.M.W. Dixon and Alexandra Y. Aikhenvald, 84–114. Cambridge: Cambridge University Press.

Mithun, Marianne. 2008. Does passivization require a subject category? In *Case and Grammatical Relations*, ed. Greville Corbett and Michael Noonan, 211–240. Oxford, UK: Oxford University Press.

Peterson, David A. 2007. *Applicative constructions*. Oxford, UK: Oxford University Press.

Shibatani, Masayoshi. 1996. Applicatives and benefactives. In *Grammatical constructions: Their form and meaning*, ed. Masayoshi Shibatani and Sandra Thompson, 157–194. Oxford: Clarendon.

Watahomigie, Lucille J., Jorigine Bender, Philbert Watahomigie, Sr., and Akira Y. Yamamoto. 2001. *Hualapai reference grammar*, volume A2-003. Kyoto: Endangered Languages of the Pacific Rim, revised and expanded edition.