

Narrative and the origins of discourse

Construing experience in stories around the world

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Abstract

This paper summarises findings of discourse analyses of traditional stories from eleven language phyla around the world. The aim is a preliminary exploration of relationships amongst diverse languages in patterns of discourse, using a systemic functional language model. Several techniques were developed for managing and displaying the analyses, including translations of the stories, patterns of theme and participant identities, staging of texts and conjunctive relations between messages, and relations between elements of clauses and between clauses in sequences. These techniques are exemplified with one story from the south Indian language Kodava. Some variations across languages in strategies for realising these functions are then illustrated. Intriguing commonalities are found in discourse patterns in all the stories, realised by diverse but finite sets of options for grammatical strategies. Finally a map is displayed of relations between discourse features and the discourse systems they realise, and some suggestions are mooted for explaining commonality and diversity.

Introduction

Scholars in many fields have long been fascinated by the widespread distribution of various patterns in traditional stories, as much as in languages in general. This paper contributes some innovative techniques for multilateral comparison of discourse patterns, that can pinpoint some of their relationships across languages and hopefully help to explain them. Its focus is on discourse semantics (following Martin & Rose 2003), in contrast to the traditional focus of historical linguistics on phonetics, grammar and lexis, and of narrative studies and comparative mythology on genre and field. The approach here attempts to bridge the concerns of both perspectives, seeking to describe how grammatical variations are motivated by discourse functions, and how narrative tropes are construed by language. Such a discourse oriented contrastive study has recently become possible as transcripts of traditional stories with interlinear glosses are now regularly being included in published grammatical descriptions. Traditional stories are particularly useful for cross-linguistic comparison, as they are likely to display the richest oral resources available to speakers for engaging listeners and constructing a complex field. The study is thus well controlled for genre, mode and tenor, focusing on variation across languages within these parameters.

The analyses involve five steps: 1) standardising the mode of transcriptions and translations, and then using simple charts to display 2) patterns of participant identities and clause Themes, 3) staging of texts and conjunctive relations between messages, 4) relations between elements within clauses, and between clauses in sequences, and 5) variations in strategies for realising these functions. These charts radically simplify the task of identifying discourse functions and grammatical

strategies in whole texts, and comparing them across languages, and are potentially useful in a wide variety of applications.

Stories from eleven language phyla were analysed, including the Nilo-Saharan language *Kunama* from Eritrea, Afroasiatic *Oromo* from Kenya, Indo-European *Scots Gaelic* and *English*, *Tsakhur* from the Caucasus, Dravidian *Kodava* from south-west India, Sino-Tibetan *Chinese* and *Athpare* from Nepal, Mon-Khmer *Vietnamese*, Austronesian *Saliba* from northern New Guinea, Papuan *Koiari*, central Australian *Pitjantjatjara* and northern Australian *Warrwa*, Tungusic *Even* from Siberia, and Amerindian *Teribe* from Panama. Although this is only a preliminary survey, the sample represents a broad cross-section of the world's major language families (see Map 1). There is not the space to display all these stories here, rather the discussion focuses on the methods used to compare them, and some of the results, illustrating the analyses with just one story. The other stories and analyses can be obtained electronically by contacting the author at d.rose@edfac.usyd.edu.au.



Map 1: World language families and languages surveyed

Preparing the texts

The survey of grammatical descriptions found a variety of conventions for transcribing and glossing languages, that derived less from the diversity of languages than from preferences of linguistic schools or individuals. They were generally based on the Graeco-Latin categories of traditional linguistics, so that analysts often struggled to categorise unfamiliar patterns. Working across many languages with a theory that distinguishes metafunctions (ideational, interpersonal, textual), strata (discourse, grammar, phonology) and ranks (clause, group, word, morpheme) made it possible to compare functions and strategies for realising them, and so to harmonise the transcriptions and translations, recognising rather than reducing the unique characteristics of each language. This involved adjustments in orthography, layout, and grammar at each rank, using the following five steps:

1. Orthography may be adjusted to render a text readable for a general audience. Most descriptions use standard English orthography, but some use idiosyncratic graphophonetic conventions that can be anglicised. Minor phonetic inaccuracies are unlikely to affect the discourse analyses.
2. Each ranking clause (i.e. not embedded in a lower rank) is given its own line, and each message is numbered. A message is a unit of discourse realised by an independent clause, or by a dominant clause together with non-finite dependent clauses (message 2 in *Shantenu Raaje* below), or by a projecting clause with projected clauses (message 5).
3. Word groups realising an interpersonal or experiential function are spaced apart and aligned in the original clause and its interlinear gloss, to clearly distinguish functions at clause, group and word ranks.
4. Within each group, each word and grammatical morpheme is translated or labelled (a group may consist of a single word). To make the interlinear glosses easy to read, grammatical functions are glossed as far as possible with English grammatical items, including pronouns, auxiliary verbs and prepositions, rather than formal labels. Labels are used where functions are not realised by grammatical words or morphemes in English, such as Medium (-MED), Range (-RNGE), dependent clause (-DEP) or reported locution (-REPT) (See below for explanation of Medium and Range. These functional labels for grammatical morphemes are preferred over traditional labels such as ERGative and ACCusative, that confuse form and function at different ranks. See Rose 2001a for extended discussion.)
5. In the clause rank translations, functional word groups are ordered to follow the textual patterns of the original text as closely as possible, rather than being 'free translations'.

This approach produces explicit and visible steps from the original text, to the interlinear glosses, to the clause rank translation. As the glossing approach is transparent, and the focus is on discourse patterns rather than phonetics, analyses then require only the interlinear glosses, reducing the size and complexity of discourse analysis charts.

The story illustrating the analyses here is transcribed from an oral narrative, *Shantenu Raaje* that derives from the Hindu epic, the *Mahabharata*. This myth was originally told in Sanskrit, but is retold here in Kodava, a South Dravidian language with about 70,000 speakers in the Coorg district of south-west India (Ebert 1996). The myth encodes a message about appropriate marriage, in which King Shantenu falls in love with a woman who marries him but then throws all their children into a river.

Shantenu Raaje told by Kaveri Baumgartner

- | | | | |
|---|--|---|---|
| 1 | <i>ori kaala-ti</i>
one time-at | <i>Hastinapura-ti-ra</i>
Hastinapura-of [Shantenu call-who] king | <i>Shantenu ennu-e raaje</i>
Once upon a time, the king of Hastinapura, who was called Shantenu, |
| | <i>pole-ra bari-ki</i>
river-of side-to | <i>boote-yaadoo-ki pooc-i</i>
hunt-do-to go-he | went to the riverside to hunt. |
| 2 | <i>boote-yaadi-yend-ippe-ka</i>
hunt-do-ing-DEP-while | <i>ori baari caay-karti ponnali-na</i>
one great beauty-FEM woman-RNGE | <i>nootic-i</i>
see-he |
| | While hunting, he saw a very beautiful woman. | | |
| 3 | <i>aven-gi</i>
he-MED | <i>na ponni-na</i>
that woman-RNGE | <i>nooti-ti</i>
see-having |
| | <i>priiti aac-i</i>
love become-he | Having seen that woman, he fell in love | |

- 4 *aval-a* *aven-da ponni* *maad-andu-ndi* *aase aac-i*
her-RNGE his woman make-must-REPT wish become-he
and longed to make her his wife.
- 5 *aaceengi* *ava* *ennic-i* *naanti* *nii-da ponni* *app-i*
but she say-she I your woman become-I
However she said "I will become your woman,
aaceengi *niini* *nan-na* *ori visheytu prashne keet-iroo-kaay-a*
but you me one any question ask-ever-may-not
but you may never ask me any question."
- 6 *ave* *antu* *aval-a* *mangal* *aac-i*
he then her-RNGE marriage become-he
He then married her
- 7 *aven-gi* *ori kuuni* *aac-i*
he-MED one child become-he
and he had a child.
- 8 *aaceengi* *kuuni-na* *ava* *pole-ki* *caadic-i*
but child-RNGE she river-into throw-she
But the child she threw into the river.
- 9 *innaane* *avenda aare kunni-na* *ava* *pole-ki* *caadic-i*
this way his six child-RNGE she river-into throw-she
In the same way, his next six children she threw into the river,
- 10 *el-ane kunni-na* *kuuda* *pole-ki* *caadic-i*
seventh child-RNGE also river-into throw-she
and the seventh child she also threw into the river.
- 11 *ett-ane kunni-na* *pole-ki* *caadoo-ki poope-ka*
eighth child-RNGE river-into throw-to go-while
When she was going to throw the eighth child into the river,
ave *keetati* *ennegi* *kunni-na* *caaduv-iy-ndi*
he ask why child-RNGE throw-you-REPT
he asked why she was throwing the child.
- 12 *akka* *ava* *ennic-i* *niini* *naa-da takki-na* *benbere-ki itt* *anaanunde*
then she say-she you me-to word-RNGE behind-to put because
Then she said "Because you have put a question to me after all,
naani *nii-na* *butt-iti poop-i*
I you-RNGE leave-DEP go-I
"I am going to leave you,
aa kunni-na *kuuda* *itt-endi poop-i*
that child-RNGE also put-ing go-I
"and that child I will also take."
- 13 *Shantenu raaje* *baari bejara-ti* *aramane-li* *injat-i*
Shantenu king great sadness-in palace-in was-he
Shantenu the king was very sad in the palace.
- 14 *ori dina* *ave* *puna* *boote-yaadoo-ki pooc-i*
one day he again hunt-do-to go-he
One day he went hunting again.
- 15 *alli* *ori ceriya kinnen-a* *kaamb-e kitic-i*
there one small boy-RNGE see-ing get-he
There he caught sight of a small boy.
- 16 *aa kinnen-gi* *ii raaje* *daari-ndi* *got-und-i*
that boy-MED that king who-REPT know-he
That boy knew who the king was
- 17 *aaceengi* *raajen-gi* *adi* *aven-da moven-ndi* *got-ille*
but king-MED that his son-REPT know-not
but the king didn't know that it was his son.

- 18 *akkaneke* *aven-da ponni* *ali-ki* *ban-ti ettu-va*
 just then his woman there-to come-having reach-she
 Just then his wife arrived there.
- 19 *ava* *ennuv-a* *adi* *nii-da moven*
 she say-she that your son
 She said "That is your son,
 aven-a *aramane-ki* *kaaki-yandi poo-lu*
 him-RNGE palace-to take-to go-may
 "and you may take him to the palace."
- 20 *annane* *enni-ti* *ava* *kang-at-aac-i*
 this say-having she see-not-become-she
 Having said this, she disappeared.

This is the first half of the *Shantenu Raaje* myth, but is sufficiently complete in itself to exemplify the discourse patterns found across the corpus. In the second half of the story Shantenu falls in love with the daughter of a fishmonger, who refuses to let her marry him as he already has a son who will inherit his kingdom. Accordingly his son selflessly leaves home and becomes a great religious sage *Bishma*. This episode commences the *Mahabharata* epic.

Theme & participant identities

The first analysis displays interactions between the Theme of each message and tracking of participant identities through the discourse. Theme is defined by Halliday (1994:38) as "the ground from which the message is taking off". In all the languages surveyed, Theme is realised by first position in a message, while some also use 'topic marking' morphemes. In the analysis here, each Theme extends up to and includes the first participant identity, as this displays the role of Theme in tracking identities, together with the roles of elements that may precede the thematic participant. In stories these are most commonly conjunctive and circumstantial elements. This extends Halliday's (1994:38) description of Theme in English as "up to and including the first experiential element", but is consistent with his approach to text analysis, in which he treats prepositional phrases and dependent clauses as circumstantial Themes, preceding Subject Themes (1994:64-6) (see Rose 2001b). Themes of each message in *Shantenu Raaje* are underlined as follows, with conjunctive and circumstantial Themes in italic and participant Themes in bold. Theme analysis is displayed in Table 1.

- 1 *one time-at* **Hastinapura-of** [**Shantenu call-who**] **king** river-of side-to hunt-do-to go-he
- 2 *hunt-do-ing-DEP-while* **one great beauty-FEM woman-RNGE** see-he
- 3 **he-MED** that woman-RNGE see-having love become-he
- 4 **her-RNGE** his woman make-must-REPT wish become-he
- 5 *but she* say-she I your woman become-I, but you me one any question ask-ever-may-not
- 6 **he** then her-RNGE marriage become-he
- 7 **he-MED** one child become-he
- 8 *but child-RNGE* she river-into throw-she
- 9 *this way his six child-RNGE* she river-into throw-she
- 10 **seventh child-RNGE** also river-into throw-she
- 11 *eighth child-RNGE river-into throw-to go-while he* ask why child-RNGE throw-you-REPT
- 12 *then she* say-she you me-to word-RNGE behind-to put because, I you-RNGE leave-DEP go-I, that child-RNGE also put-ing go-I
- 13 **Shantenu king** great sadness-in palace-in was-he

- 14 one day he again hunt-do-to go-he
 15 there one small boy-RNGE see-ing get-he
 16 that boy-MED that king who-REPT know-he
 17 but king-MED that his son-REPT know-not
 18 just then his woman there-to come-having reach-she
 19 she say-she that your son, him-RNGE palace-to take-to go-may
 20 this say-having she see-not-become-she

textual/circumstantial	Shantenu	woman	children
1 <i>One time-at</i>	Hastinapura-of [Shantenu call-who] king		
2 <i>hunt-do-ing-DEP-while</i>	(he)	<i>one great beauty</i> woman-RNGE	
3	he		
4	(he)	<i>her-RNGE</i>	
5 <i>but</i>		she	
6	he		
7	he-MED		
8 <i>but</i>			<i>child-RNGE</i>
9 <i>this way</i>			<i>his six child-RNGE</i>
10			<i>seventh child-RNGE</i>
11			<i>eighth child-RNGE</i>
12 <i>then</i>		she	
13	Shantenu king		
14 <i>one day</i>	he		
15 <i>there</i>			<i>one small boy-RNGE</i>
16			that boy-MED
17 <i>but</i>	King-MED		
18 <i>Just then</i>		his woman	
19		she	
20 <i>This say-having</i>		she	

Table 1: Theme and participant identities

As well as showing participants' identities, the analysis in Table 1 also distinguishes their experiential roles as Medium, in **bold**, Ranges in **bold italic**, and circumstantial elements in *italic*. Medium is the core participant in each clause that acts, senses, says, or is ascribed an attribute or identity, "the one through which the process is actualised" (Halliday 1994:163). Ranges are additional participants that are acted upon or for, sensed, said or said to, or an attribute or identity ascribed to the Medium, and additional Agents are also possible. Circumstantial elements are more peripheral places, times, manners, and so on, including dependent 'adverbial' clauses.¹

The analysis displays clearly how major participants are introduced and tracked through the Themes of each message, as the speaker's persistent angle on the field, while the activities they participate in change as new information in each step. It also shows that the most frequent experiential role of these thematic identities is Medium.² The consistency of this twin pattern has two major consequences in all the languages surveyed. Firstly, if the Medium is not made explicit, its identity is automatically presumed from the preceding message, as in 2 and 4 (*he*), which then allows another identity to be presented thematically, such as 2 *one great beauty woman-RNGE*. Secondly, if a circumstance or Range precedes the Medium it has the effect of foregrounding this element and/or the message. A common strategy across languages is to start with a circumstance of time or place to introduce major participants, such as 1 *At one time the king...* and 2 *While hunting one great beauty...* This signals that the identity is especially significant, and/or that a new

phase of the story is beginning. Existential clauses in various languages are a variant on this strategy (Rose 2001b). Presenting a Range before the Medium strongly foregrounds its identity, such as 'child' in 8-11, translated as an English marked Theme, *the child she threw into the river*. So each message is 'grounded' in the identities and roles of major participants, and potentially also in time, place and the preceding events.

The Theme analysis also shows how a switch in thematic identity signals a shift from one phase of the story to another, shown by lines across the table. Themes in the first phase introduce the major identities and set the story in time, and Shantenu is explicitly or implicitly Theme in each message. In 5 the identity switches to the woman when she agrees to marriage with a proviso. In 6-7 it switches back to Shantenu as he marries and has a child, then in 8-11 to the children as they are thrown in the river, and back to the woman in 12 as she announces she is leaving. In 13 Shantenu's identity is re-presented as he reacts with great sadness. In 14 the next phase is signalled by the circumstantial Theme *one day*, the next in 15-17 by circumstantial *there* and identity switch to *one small boy*, and the last in 18-20 by the conjunction *just then* and identity switch to *his woman*.

So major identities are introduced and tracked through Themes, phase shifts are signalled by identity switches, and may be marked by circumstantial or Range Themes, or by explicit conjunctions. These were common discourse strategies across all the languages surveyed. All used sequencing for these strategies, and some also used topic marking to indicate participant and circumstantial Themes. In some languages first position is also used to realise the Medium role, as in Chinese, Vietnamese and to some extent English.

Conjunction & staging

The next analysis shows how stories are constructed as complex activity sequences on three scales of discourse, as sequences of messages, as sequences of phases consisting of one or more messages, and as sequences of stages consisting of one or more phases. At the scale of generic stages, all the stories surveyed were either **narratives**, in which the protagonists resolve a complication, **exemplums**, in which an incident is not resolved but is interpreted for or by the listener, or **anecdotes** in which characters react to a remarkable event without interpreting it (see Martin & Plum 1997, Martin & Rose in press for these story genres). The stages of each genre were highly predictable across the languages. For example, the Orientation stage of *Shantenu Raaje* presents an apparently normal activity sequence of falling in love, marrying, and having a child. But normalcy is disrupted in the Complication stage as the woman throws the children in the river and leaves Shantenu. The disruption is finally resolved by the son re-appearing, and the woman allowing Shantenu to take him home.

Phases on the other hand are shorter discourse segments that are more variable than generic stages (Gregory & Malcolm 1981, Hoey 1983, Martin & Rose 2003). Four types of phases that function to sequence events and engage the listener in the story, were found across all the stories, including **settings** that introduce major participants, activities and locations, **events** that sequence expectant activities, **problems** that counter expectancy to create tension, characters' **reactions** to problems, and **solutions** that release tension. There were also a number of less frequent phase types, particularly narrator's **comments** on the events. Story genres and phases are summarised in Table 2.

story genres	staging
recount	Record
anecdote	Event^Reaction
exemplum	Incident^Interpretation
narrative	Complication^Resolution

story phases	engagement function
setting	presenting context
event	expectant sequence
problem	creating tension
reaction	inscribing value
solution	releasing tension
comment	narrator's voice

Table 2: Story genres, stages and phases

For *Shantenu Raaje*, Table 4 shows how the first setting phase 1-4 presents Shantenu, the woman, the river, and the normative activities of hunting and falling in love. In 5 the woman's proviso to marriage creates a minor tension, but in 6-7 this tension is released by marrying and having a child. Major tension is then created by the two problems of throwing the children in the river in 8-11, and leaving him in 12, of which Shantenu's reaction in 13 is the consequence. The sequence of Shantenu *falling in love, losing his children*, and his *great sadness* invites us to empathise and so desire and expect a resolution for him. Consequently the apparently normal setting in 14 of again going hunting strongly signals the Resolution stage for us. The tension is strung out by the minor problem in 15-17 of not recognising his son, so the final solution is an even more satisfying release. Note that solutions are not obligatory consequences of problems, but are expected by the genre. Across cultures it was found that these phase types are a key resource for constructing such story sequences.

At the next level, messages are linked into sequences by conjunctive relations between them. Conjunctive relations in all the stories were of the four general types described in Martin & Rose 2003, including **addition, time**: successive and simultaneous, **comparison**: similar and different, and **consequence**: consequential and concessive. In English each of these types of relations can be realised by explicit conjunctions. However the relations are not defined by their form of realisation, but by their meaning, and languages vary widely in the extent to which conjunctive relations are grammaticalised as conjunctions; even in English, conjunctive relations are more often realised by other means. Across languages these strategies include circumstances, the sequence of activities or of moves in a dialogue, ordinal numbers, the aspect of verbs, and appraisals signalling that one figure is an obligatory consequence of another. Conjunctive relations, their modes of expression, and abbreviations used in the analysis are displayed in Table 3. The analysis of stages, phases and conjunction in *Shantenu Raaje* is displayed in Table 4.

conjunctive relations	
additive	add
successive	succ
simultaneous	simul
similar	similar
different	differ
consequence	consq
concessive	conces
modes of expression	
conjunction	conj
continuity item	contin
circumstance	circ
activity sequence	sequ
exchange move	move
number	num
verb aspect	aspct
appraisal	appr

Table 3: Conjunctive relations

stage	phase	conjunction	message
Orientation	setting		1 one time-at Hastinapura-of [Shantenu call-who] king river-of side-to hunt-do-to go-he
	' <i>hunting and falling in love</i> '	simul:circ	2 hunt-do-ing-DEP-while one great beauty woman-RNGE
		succ:aspect	3 he that woman-RNGE see- having love become-he
		consq:appr	4 her his woman make- must -REPT wish become-he
	problem	conces:conj	5 but she say-she I your woman become-I
	' <i>proviso</i> '		but you me-RNGE one any question ask-ever-may-not
		solution	succ:conj
Complication	' <i>marrying and child</i> '	succ:sequ	7 he-MED one child become-he
		conces:conj	8 but child-RNGE she river-into throw-she
		similar:circ	9 this.way his six child-RNGE she river-into throw-she
		add:contin	10 seventh child-RNGE also river-into throw-she
	problem2	succ:num	11 eighth child-RNGE river-into throw-to go-while
			he ask why child-RNGE throw-you-REPT
		succ:conj	12 then she say you me-to word-RN behind-to put because
' <i>leaving</i> '		I you-RNGE leave-DEP go-I	
		that child-RNGE also put-ing go-I	
	consq:appr	13 Shantenu king great sadness -in palace-in was-he	
Resolution	setting	succ:circ, contin	14 one day he again hunt-do-to go-he
	' <i>hunting again</i> '	succ:circ	15 there one small boy see -ing get-he
		succ:sequ	16 that boy that king who-REPT know -he
		diff:conj	17 but king that his son-REPT know-not
	solution	succ:conj	18 just.then his woman there-to come-having reach -she
		succ:sequ	19 she say -she that your son him palace-to take
succ:aspect		20 this say-having she see-not-become-she	

Table 4: Stages, phases and conjunctive relations

Shantenu Raaje displays a representative range of conjunction types and realisation strategies. Each such strategy may serve more than one function, such as locating an event in time or place, relating it to the preceding event, and signalling a new phase or stage. Firstly, the Orientation is signalled and located temporally by the circumstance *at one time*. Event 2 happens simultaneously, realised circumstantially

by *while hunting*, and succession to event 3 is realised by completed aspect *having seen*. Shantenu's reaction in 4 is a consequence, and this obligatory relation ('therefore') is appraised by desire and obligation, *he wished he must make her his wife*. The counterexpectant problem in 5 is signalled by a concessive conjunction *but*, and the solution in 6 is signalled by successive *then*. Succession is then implicit in the activity sequence from *getting married* in 6 to *having a child* in 7. The major problem in 8 is again signalled by concessive *but*. The problem is elaborated by similar events in 9, indicated circumstantially by *this way*, and 10 is added by *also*. Succession from 10 to 11 is then made explicit by ordinal numbering, from *seventh child* to *eighth child*. The continuing problem in 12 is signalled by successive *then*, and Shantenu's reaction in 13 is the consequence, appraised by the intense affect of *great sadness*. The Resolution is signalled in 14 with a temporal circumstance *one day* that implies succession (i.e. 'one *later* day'), which is also explicit in the continuity item *again*. The minor problem in 15 is signalled with a spatial circumstance *there* that also implies succession (i.e. 'when he reached *there*'). Succession is then implicit in the activity sequence from *see* to *know*, and the difference between the king and his son in 16 and 17 is indicated by contrastive (not concessive) *but*. The final solution is signalled in 18 by successive *just then*, followed in 19 by the activity sequence from *she arrived* to *she said*, and in 20 by completed aspect *having said this*. These strategies for realising conjunctive relations between messages contribute to constructing the sequence of activities within each phase, the sequence of phases within each stage, and the sequence of stages in the story genre. They are found across the languages surveyed.

Nuclear relations & activity sequences

The next analysis displays relations between elements of clauses, and the activity sequences they construct. The term 'figure' is used here for the experiential meaning of a clause (Halliday & Matthiessen 1999, Martin & Rose 2003, Rose 2001a). From the nuclear perspective on transitivity (Halliday 1994:161-73), each figure includes a nucleus with Medium and Process or inner Range, plus outer Ranges and Agents, plus more peripheral Circumstances, diagrammed in Figure 1.

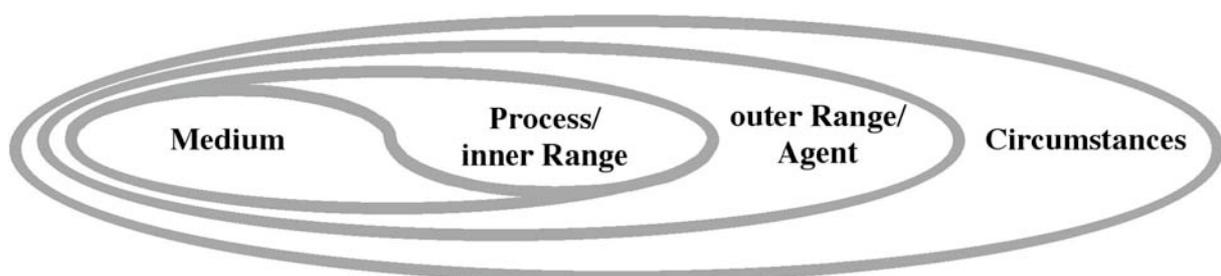


Figure 1: Nuclear perspective on transitivity

In the analysis in Table 5, each figure is given its own line, including non-finite and projected clauses. The elements of each figure are then re-arranged into columns according to their nuclear roles, Medium, Process, Range, Agent or Circumstance. Participant identities are distinguished by font (here bold **Shantenu**; bold italic *woman*; italic *child*), enabling us to see at a glance which identity is referred to by pronouns or ellipsis. Identities realised by verbal affixes are indicated with 'v'.

	conjunct	Medium	Process	Range/Agent	Circumstance
1		Shantenu king	hunt-do-ing go-he		river-of side-to
2		∅	hunt-do-ing-DEP-while		
3		v he-MED	see-he see-having	woman-RNGE that woman-RNGE	
4		v	love become-he		
5	but	she /	make-must-REPT wish become-he	her-RNGE his woman	
	but	you	say-she become-/ ask-ever-may-not	your woman me one any question	
6		he	marriage become-he	her	
7		he-MED	become-he	one child	
8	but	she	throw-she	child-RNGE	river-into
9	this.way	she	throw-she	his six child-RNGE	river-into
10	also	v	throw-she	seventh child-RNGE	river-into
11		v he v	throw-to go-while ask throw-you-REPT	eighth child-RNGE child-RNGE	river-into why
12	then	she you /	say put leave-ing go-/ put-ing go-/ great sadness-in	word-RNGE me-to you-RNGE that child-RNGE	behind-to
	also	v	put-ing go-/ was-he	that child-RNGE	
13		Shantenu	was-he	great sadness-in	palace-in
14	again	he	hunt-do-to go-he		one day
15		v	see-ing get-he	one small boy	there
16		that boy-MED	knows-he		
17	but	that king king-MED that	= know-not = =	who-REPT his son-REPT	
18	just then	his woman	come-having reach-she		there-to
19		she that child	say-she = take-to go-may	your son him	palace-to
20	so	∅ she v	say-having see-not-become-she		

Table 5: Nuclear relations and activity sequences (v = verbal reference)

The analysis exemplified in Table 6 makes a number of experiential patterns apparent and easily comparable across languages, at the levels of grammar and discourse. Here we have space for just a few examples of patterns observable across languages.

Grammatical patterns

1. Identities may be presumed by pronouns *he*, *she*, *I*, *you*, by verbal affixes *-he*, *-she*, *-I*, *-you*, or by both or neither (i.e. by ellipsis or lexical repetition). Pronouns and verbal affixes indicate person (1st/2nd/3rd), usually number (singular/dual/plural), and sometimes gender, to make reference clear. (A few languages also distinguish 'inclusive' and 'exclusive' person at word rank, others do so in pronoun groups.)
2. Participant roles (Medium/Range) are distinguished by the forms of pronouns or verbal affixes *he*, *she*, *I* vs. *me*, *her*, *him*, by nominal affixes/adpositions *that boy-MEDIUM*, *king-MEDIUM* vs. *woman-RANGE*, *child-RANGE*, or by sequence (Medium/Theme). Languages varied in their combinations of these strategies, with verbal affixes the most common.
3. Circumstantial roles are distinguished in all the languages by nominal affixes/adpositions or by adverbs.

4. All the languages displayed similar options in types of figures (material, mental, verbal, relational) and participant roles. Types of figures are distinguished by criteria such as options for:
 - Presence or absence of a process. In most languages relational figures need not include a process (16 *that king (is) who-REPT*, 17 *that (is) his son-REPT*), but relations can be verbalised (5 *I become your woman*).
 - Additional outer Ranges, e.g. Receiver and Verbiage in verbal processes (5, 12), Recipient in material processes of giving (12 *you put word-RNGE me-to*), Range:attribute in caused relations (4 *make her-RNGE his woman*).
 - Projected locutions in verbal processes and ideas in mental processes (3, 16, 17).
 - Morphological contrasts, e.g. between dependent clauses that expand the main clause (-DEP), or are projected by it (-REPT). In Kodava, reported locutions and ideas are indicated by inflection of the Process (4 *make-must-REPT*, 11 *throw-you-REPT*) or the Range in relational figures (16 *who-REPT*, 17 *his son-REPT*); but quoted locutions are not so inflected (5, 12, 19).
5. Verbal groups may be expanded to realise tense, aspect, phase, modality, polarity, and/or complex lexical processes. Kodava uses aspect *see-having*, inceptive phase *love-become*, and modality and polarity *ask-ever-may-not*, but does not use tense. Verb complexing is a major strategy in this and many other languages for creating complex processes, such as *hunt-do-ing go* 'go hunting', *make-must wish become* 'longed to make', *marriage become* 'get married', *put-ing go* 'taking', *see-ing get* 'catch sight of', *come-having reach* 'arrive', *see-not-become* 'disappear'.

Discourse patterns

1. Identities are introduced and tracked by a combination of lexical strings and reference chains. Some languages use only free pronouns to track identities, others use only verbal affixes, some use nominal deictics (*that king*, *his son*), while others simply lexicalise identities in each step. Most use varying combinations of these four strategies. Lexical strings and reference chains are complementary strategies that both keep track of identities and build the field.
2. Each figure is constructed as a configuration of lexical elements that instantiate the discourse semantic categories *people*, *things*, *processes*, *places*, *qualities*. These lexical elements are related to each other in the figure by their nuclear roles, e.g. 1 [Med] *Shantenu* [Pro] *hunt* [Circ] *river side*, or 4 [Med] *Shantenu* [Pro] *wish to make* [Rng1] *woman* [Rng2] *his wife*. Lexical and nuclear relations are complementary patterns that together constitute each figure. For this reason it is useful to treat lexis and grammar as complementary resources. Grammatical descriptions generally take lexical relations within clauses for granted, creating a misleading impression that grammar can be described independently of discourse.
3. Each phase is constructed by a combination of lexical, reference and conjunctive relations within a sequence of figures, e.g. (reference items and implicit conjunctions are lexicalised) 1 *Shantenu hunt at river side* -> 2 (*then*) (*Shantenu see woman*) -> 3 (*then*) (*Shantenu love woman*). That is, one figure provides a context for and expects the next, interpreted within the text's field and genre.
4. A sequence of phases is constructed by lexical, reference and conjunctive relations between phases, e.g. setting (*Shantenu love woman*) -> problem *but (woman) say never ask any question* -> solution (*then*) (*Shantenu marry*

(*woman*). That is one phase either expects the next, or expectancy is countered, e.g. by a problem phase.

These patterns of lexical, nuclear and conjunctive relations within and between figures, and within and between phases, are the means by which stories construe experience as recognisable sequences of activity. This may seem to state the obvious (as one reviewer complained), but only if the question ‘how?’ is never asked. These patterns and strategies are not simply ‘natural’, so it most significant that they were so consistent across all the languages surveyed.

Types of realisation strategies

The final set of analyses group the languages according to the strategies they use for realising discourse functions. While the discourse functions described above are common across all the languages, there are alternative grammatical strategies for realising each one. Four examples of criteria for grouping them are shown here, amongst many other possibilities. These groupings are based only on the data from the stories and the grammatical descriptions in which they were published; some of the languages may have strategies not shown here, but they are useful for indicating trends. Firstly, most languages use verbal affixes for tracking participants, most also use pronouns, and some use both, but four languages used no free pronouns in the stories. Some Australian and Papuan languages also use conjunctions that signal whether the Medium identity is the same or a switched from the preceding clause (Table 6).

		verbal reference		
		+verb ref	+conjunctive ref	-conjunctive ref
pronominal reference	-pronouns	<i>Athpare, Even Kunama, Tsakhur</i>		
	+pronouns	<i>Kodava, Oromo, Saliba, Teribe, Warrwa</i>	<i>Koiari Pitjantjatjara</i>	<i>Chinese, Gaelic Vietnamese</i>

Table 6: Reference (pronominal, verbal, conjunctive)

Most languages also used the same verbal affixes to indicate the roles of participants, as Medium or Range. Only four used nominal affixes/adpositions to indicate roles, and four relied on sequencing (Table 7).

		nominal inflection		
		-inflection		+inflection
verbal inflection	-inflection		<i>Chinese, Kunama, Vietnamese</i>	<i>Pitjantjatjara</i>
	+inflection	-verb-RNGE	<i>Gaelic, Even. Koiari,</i>	<i>Kodava</i>
	verb-MED		<i>Oromo, Tsakhur</i>	<i>Teribe</i>
		+verb-RNGE	<i>Athpare, Saliba</i>	<i>Warrwa</i>

Table 7: Participant roles (inflection)

Most languages used explicit conjunctions to realise time (‘then’) and/or concession (‘but’). Most also used additive conjunctions (‘and’). But two languages used no explicit conjunctions at all (Table 8).

	-time	+time	+concession	+time +concess
-addition	<i>Kunama</i> <i>Tsakhur</i>	<i>Chinese</i>		<i>Even, Oromo</i> <i>Warrwa</i>
+addition		<i>Athpare</i>	<i>Gaelic</i> <i>Koiari</i> <i>Teribe</i>	<i>Kodava, Saliba</i> <i>Pitjantjatjara</i> <i>Vietnamese</i>

Table 8: Explicit conjunctions

Finally most languages used verbal affixes for tense, and most also used verb series for realising complex lexical processes. A little under half did both (Table 9).

	tense	
	-tense	+tense
lexical verb complexes	-complexing	<i>Athpare, Gaelic,</i> <i>Tsakhur</i>
	+complexing	<i>Chinese, Kodava,</i> <i>Kunama, Saliba,</i> <i>Vietnamese</i>
		<i>Even, Koiari, Oromo,</i> <i>Pitjantjatjara</i> <i>Teribe, Warrwa</i>

Table 9: Verbal expansion

One result of these analyses is the inconsistency in groupings of languages from one set of grammatical criteria to another; apparently unrelated languages may use the same strategy for a discourse function, where related languages use different strategies. Nevertheless genetic relations between languages do appear in some strategies, and areal affinities in others.³ For example, the common strategy of switch reference conjunctions in some Australian and some Papuan languages suggests a genetic relation (Nichols 1997), since they have had no recent areal contact. Conversely, a range of common strategies seen here in Chinese and Vietnamese point to areal affinities these languages share with the Tai family (Alves 1995), although all three are genetically distant. On the other hand other Sino-Tibetan languages can have very different strategies from Chinese, such as Nepalese Athpare that uses topic marking, verbal affixes of participant roles, and tense (Ebert 1997). These kinds of relationships are traditionally explored from the perspectives 'below' of phonological and lexicogrammatical structures. Two advantages of the discourse analyses here are that grammatical structures are explicitly related 'above' to the discourse functions they realise, and can be readily compared across languages using the text analysis tables.

Relations between discourse systems & realisational strategies

One of the reasons that grammatical strategies vary so widely within and between language families may be that the clause is a relatively small structural space through which a large set of discourse functions must be realised. The resulting competition for realisational niches shapes the forms that grammatical structures take in each language. A small change in one strategy can distort the overall structural environment, affecting other realisational strategies (a phenomenon Saussure described for phonetic change). One outcome is that grammatical strategies may change relatively quickly, in centuries or millennia, whereas the discourse functions they realise may persist relatively unchanged for much longer, as long as their social functions persist. Multiple relationships between the discourse

systems that construct stories, and the various grammatical strategies through which they are realised, are summarised in Table 10 (see Martin & Rose, 2003 for descriptions of these systems).

IDENTIFICATION & IDEATION	<ul style="list-style-type: none"> • identities are presumed by pronouns or verbal affixes, that indicate identities by their person and number • pronouns and verbal affixes also indicate nuclear roles as Medium or Range
IDENTIFICATION & PERIODICITY	<ul style="list-style-type: none"> • major identities are presented and presumed in Themes of each message • switches in thematic identities signal shifts in phases
IDEATION & PERIODICITY	<ul style="list-style-type: none"> • as the default thematic role is Medium, Theme is used in some languages to realise the Medium role • as the default thematic role is Medium, circumstantial and Range Themes can be used to signal phase shifts
CONJUNCTION & PERIODICITY	<ul style="list-style-type: none"> • explicit conjunctions can be used to signal phase shifts • circumstantial Themes can realise conjunctive relations
IDEATION & CONJUNCTION	<ul style="list-style-type: none"> • time can be realised by the sequence of activities
APPRAISAL & CONJUNCTION	<ul style="list-style-type: none"> • consequence can be realised by modality or attitude
APPRAISAL & PERIODICITY	<ul style="list-style-type: none"> • reaction or comment phases can be signalled by attitude and modality

Table 10: Interactions between discourse systems & realisation strategies

Figure 2 then attempts to capture the web of relationships between discourse functions and grammatical strategies in a topological space. Table 10 explains the diagram anticlockwise from the top left. Discourse systems are represented by large circles, divided into their most general functional regions. Smaller circles represent specific functions, in which discourse systems interact. Realisation is represented by arrows between functions and discourse systems.

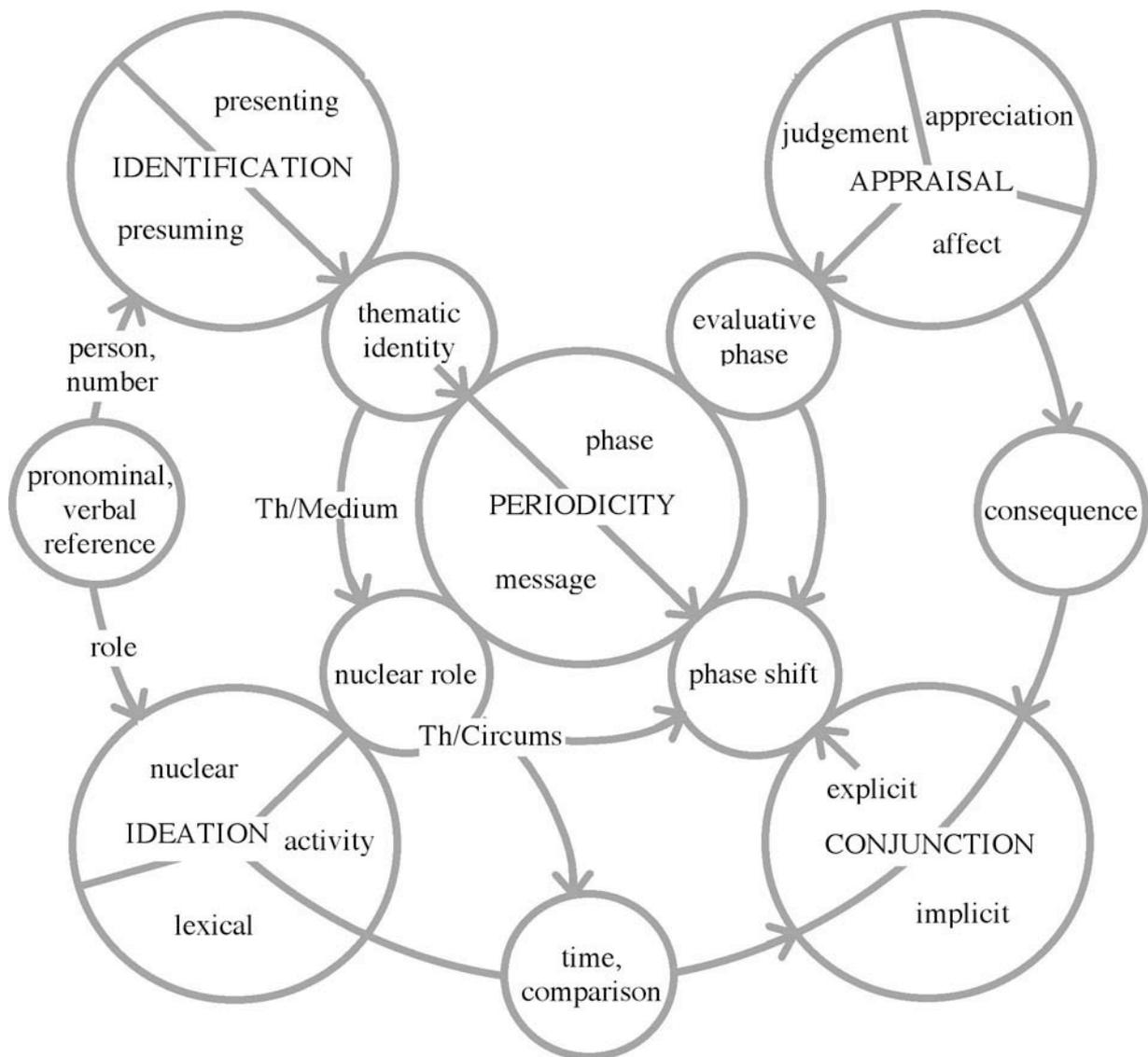


Figure 2: Topology of strategies for realising discourse systems

The diagram graphically illustrates the multiplicity of functions realised simultaneously in the clause, and the resulting constraints that limit variation in functions and strategies to the finite sets of patterns described above.

Conclusions

For the purpose of multilateral text analysis in this study, a set of simple descriptive techniques were developed for identifying patterns of discourse. The analyses demonstrate how stories in diverse languages use comparable discourse and grammatical strategies to construct coherent fields, independent of the context of speaking. Explanations for widespread patterns like these in languages and cultures have in the past been constrained by a binary association of human unity with biology and human diversity with culture (Haraway 1989). So whereas the principal accepted explanation for commonalities within language families has always been historical descent, beyond families this explanation is more often rejected in favour of various hypotheses, from neural 'hardwiring', through common biologies in common environments, to a 'collective unconscious'. This explanatory schism grew from a

twin assumption that ancestral populations of modern peoples diverged too early to be culturally related, and that language structures change too fast to show historical relationships beyond a few millennia. At the levels of phonetics and morphology this may be so, but as this study suggests, long-range relationships may be more apparent at higher functional levels (cf. Rose 2001a&b). Archaeological and genetic evidence now points to a very recent modern population divergence, following the 'symbolic revolution' of the Upper Palaeolithic (Klein 2000, O'Connell & Allen 1998). This cultural explosion has long been associated with the emergence of advanced language abilities, of which story telling was undoubtedly a significant component. It is a tantalising possibility that the concordances found here in the discourse patterns of stories may be plausibly explained by historical relations of common descent. Exploring this possibility will require sophisticated modelling of the evolution and reproduction of language systems over extended time, as well as a great deal more comparative discourse research, for which I hope the tools developed here will be useful.

NOTES

¹ Medium and Range partially overlap with traditional labels 'subject' and 'object', but as Halliday (1994:31) points out these labels confuse several independently varying functions. There was no evidence in any of the languages of an interpersonal Subject function that Halliday (1994:43) finds is default Theme in English, suggesting that the shift in English from Medium/Theme to Subject/Theme is unusual. However Subject is still typically also Medium in English, so for the purpose of comparison it is possible to apply the same Theme analysis to English texts.

² The finding of Medium/Theme as default pattern across languages challenges the alleged contrast between 'SO' and 'OS' language types, typically based on elicited or constructed clauses.

³ "Sprachbund, also called the linguistic area, is the claim that languages, regardless of genetic affiliation, can share linguistic typological traits and can thus blur the distinctions within a group of languages... Thus, the contact between peoples of different languages over an extended period of time can blur the original distinctions that showed two languages to be different. Ultimately, two languages that do not have close genetic affiliation may look more similar to each other than to other languages with which they actually do share genetic ties" (Alves 1995:21).

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