marked as ergative in appropriate contexts, with a concomitant shift in the position of the ergative split.

Thulung and the other Tibeto-Burman languages of Nepal are in an intense contact situation with Indo-Aryan Nepali, as we saw in this case, with Nepali creating the pressure for a shift in the pronoun system which then has consequences in other areas, such as case marking. It is interesting to speculate on further contact-induced changes in Thulung, as the number of fluent speakers dwindles and Nepali makes further inroads into the language.

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8 *Why languages differ: variation in the conventionalisation of constraints on inference**

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> Language is the frail bridge that we fling across the chasm of the inexpressible and the incommunicable.
>
> Matisoff 1979[2000]:2

1 Introduction

Sperber and Wilson (1996) and Wilson and Sperber (1993) have argued that communication involves two processes, ostension and inference, but they also assume there is a coding-decoding stage of communication and a functional distinction between lexical items and grammatical marking (what they call 'conceptual' vs. 'procedural' information). Sperber and Wilson have accepted a basically Chomskyan view of the innateness of language structure and Universal Grammar. In this paper I will also assume

* This paper presents a view of language and communication that developed as a synthesis of what had originally been separate interests in grammaticalization, pragmatics, typology, and Sino-Tibetan linguistics, informed overall by the fact that language use is an aspect of human interaction. These are of course the very areas and approach of Prof. James A. Matisoff, and his influence on this paper and all of the work I have produced over the years cannot be overestimated. It is with great respect and affection that I submit this paper in his honor. Earlier versions of this paper were presented at City University of Hong Kong, the University of Melbourne, and the Australian National University. I would like to thank all those who participated in the discussions at those times, and I would also like to thank Sasha Aikenvald, Nick Enfield, Ruth Kempson, Steven Nicolle, Michael Pickering, Dan Sperber, and Elizabeth Traugott for sending me written comments.

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that communication involves ostension and inference, but propose the hypothesis that there is no innate language structure, and no deterministic coding-decoding process, as all aspects of interpretation involve inference. The inferential process involved in communication is the creating of a context in which the ostensive act achieves relevance (makes sense). I also reject the idea of a functional difference between conceptual and procedural information, and argue that the role of all aspects of language use in communication is to constrain the inferential process, to help the addressee construct a context in which the communicator's ostensive act can be seen to be relevant. Contrary to most work in pragmatics which assumes that context disambiguates language, I am proposing that it is not context that disambiguates language, but language that disambiguates the context of interpretation. That is, rather than assume that the form of the utterance is given and the context is the manipulable variable, we should recognise that in real-world communicative situations, speakers have no choice in terms of the context they are communicating in, but as communicators have choices in terms of the form of the utterance they use. The more explicit the linguistic form, the more constrained the addressee is in constructing the context of interpretation. On this view a language and the rules for its use in a particular society are a set of social conventions which have evolved in the particular way they have in that society in response to the need to constrain the inferential process involved in communication in particular ways thought to be important in that society.[1] These conventions (or some subset of them) become habits of the individual speakers of the language. These conventions and habits are no different in nature from other types of conventions and habits that have developed in the society for performing particular actions, such as the conventions in the U.S. of eating with a fork, or of men wearing ties on formal occasions, or of driving on the right-hand side of the road. As each society develops (evolves) its own particular sets of conventions (linguistic and non-linguistic), each set (in totality) is unique to that society and so manifests the way that society construes and deals with the world. That is, the habits and conventions for carrying out actions (including communication) of a society reflect habits and conventions of thought. The significance of this view of language to typology is that there is no assumption of a universal genetically-encoded grammar, and each language is seen as a unique entity reflecting a unique society, and so in doing linguistic work, we must look at

[1] I am purposefully avoiding use of the word 'culture', as it is a problematic term for many in the anthropological tradition. What I am interested in here are the conventionalized methods and tools that a society develops for carrying out certain actions. For example, in a restaurant serving Italian food in the U.S., the table will by convention be set with at least one fork and a plate, while in a restaurant serving Chinese food in Beijing the table will by convention be set with chopsticks. Some conventions may be written into law, such as driving on the right-hand side of the street in the U.S., to ensure that everyone in the society follows the convention, but they are still conventions. As people follow the conventions on a regular basis, they become habits of thought and action, so that not following a particular convention will feel and often be considered 'wrong', and will often be difficult to change.

each language on its own terms and determine which functional domains it obligatorily constrains the interpretation of, to what extent it constrains them (if it does), and what formal mechanisms it uses to constrain the creation of the context of interpretation. It is in these ways that languages differ.

2 Ostensive-inferential communication

In human communication, one person (the communicator) does something (an ostensive act) with the intention to cause another (the addressee) to become aware of some phatic or factual information. The process by which the addressee becomes aware of the information is an inferential one. The hearer uses inference to recognise the communicative intention of the speaker, and, given the recognition of that intention and the particular form of the ostensive act, the addressee can (usually) infer the intended information. The ostensive act can be linguistic, but it need not be communication can (and often does) occur without language.[2] What is necessary for communication is not the exchange of symbolic expressions, but the successful determination of the reason for the communicator making the particular ostensive act that he or she made. In terms of a linguistic ostensive act, what is communicated is not what the communicator says, but what the addressee infers to be the intention behind the communicator making that particular ostensive act, that is, saying those particular words. Language is not the basis of communication, but simply an instrument used to help the interpreter more easily infer the speaker's communicative intention, as it constrains that inferential process by reducing the number of assumptions that could potentially be part of the context of interpretation. Even when the ostensive act is linguistic, there are often a great number of degrees of explicitness possible, depending on the speaker's estimation of the hearer's inferential abilities and current knowledge state; the more explicit the utterance, the more constrained the interpretation, as in the six different possible answers to the question given in (1) (all of which have the same 'meaning'; of these, the first is attested).

[2] Cf. Keller (1994: 25): A language facilitates communication, but it is not the condition of its possibility. To communicate with the help of conventional instruments such as linguistic ones is a special kind of communication, although this is for us the normal and prevailing way to communicate. We are so used to it that many think that the common possession of a stock of signs together with syntax is logically required (the condition of possibility) in order to communicate at all. If this were the case, we could neither meaningfully pose the question of how we as a species acquired language phytogenetically, nor how small children can learn their mother tongue ontogenetically. The reason is that the construction of rule hypotheses presupposes (among other things) successful communication.

(1) Q: Do you want something to drink?
A1: (points to soup bowl)
A2: I have soup.
A3: No. I have soup.
A4: No, because I have soup.
A5: No, since I have soup, I don't need anything to drink.
A6: No, I don't want anything to drink. Since I have soup, I don't need anything else to drink right now.

A1 does not constrain the interpretation very much, and so the addressee must (a) infer that the communicator is pointing at the soup bowl and not something else, (b) must notice that the bowl is full, and (c) must infer that the fullness of the bowl is somehow relevant to the communicator's communicative intention, and (d) then infer that the relevance is that soup is something to drink, and then (e) infer that since the communicator has something to drink, she might not need something else to drink, and then (f) conclude that the communicator's communicative intention in pointing at the soup bowl was to alert the addressee to the fact that she does not require anything to drink, as she has soup, and that is enough. A2 constrains the interpretation somewhat more than A1, in that it narrows the context of interpretation by explicitly mentioning the soup (thereby eliminating steps (a–c) above), and so the addressee can then start with the assumption that having soup is relevant. The other inferences (d–f) still must be worked out, though. A3 constrains the context of interpretation even more by supplying the negative answer to the question; A4 makes explicit the cause and effect relation between the negative answer and the fact of having soup. A5 constrains the process of interpretation more than A4, and A6 constrains it more than A5. It is important to notice two things here: (i) there is no difference in communicative function between the linguistic and the non-linguistic responses; (ii) the additional words, such as *No* in A3, and the additional marking of semantic and grammatical relations, such as *because* in A4, both have the same function, to constrain the context of interpretation to a greater degree than not using those words.

The difference between non-linguistic communication and linguistic communication, or brief speech and highly explicit speech, is like the difference between ripping bread into pieces with your hands and cutting it carefully with a knife, a difference of tool or mode, with resulting differences in precision. What is important is the separating of the two parts of the bread; we should not mistake the tool used (the knife) for the process of separating the two parts. We often communicate with our hands or other body parts, such as pointing at the wrist to ask the time, or nodding the head, or wagging the finger with pouted lips to show disapproval (there are both conventionalised and non-conventionalised gestures). The entire process of interpretation involves inference, whether the ostensive act is linguistic or not. Interpretation of a linguistic ostensive act involves identification of the ostensive act as a linguistic act and recovery of its form. We are not usually conscious of this aspect of communication as involving inference, yet psycholinguistic studies (for

example, Warren 1970) show that we do use inference to construct the form of the utterance we are hearing. In a multilingual situation, such as where I work in Hong Kong, a place where three different languages (Mandarin, Cantonese, and English) are regularly used by the same people, and you don't know when they will use which language, the inference necessary to determine which language the person is using when they start to talk to you often becomes a conscious process.

Inference is also involved in identifying referents and delimiting the possible intended senses of words and structures, and then there is inference involved in deriving any implicatures that must be created in the processing of the resulting proposition. Interpretation then is not simply decoding a signal. Even interpreting something as code-like as *1 + 1 = 2* involves inference of a non-binary number system based on the appearance of the number *2* rather than *10*. All linguists would agree that the pragmatic aspects of meaning, such as resolving ambiguities, correcting mistakes, identifying referents, identifying illocutionary force, recognising irony and humor, and completing incomplete utterances, must be interpreted by inference, but I would argue that **all** aspects of interpretation involve inference. The inference involved in interpretation is essentially guesses at what the communicator's intended message might be. These guesses are possible because of the unconscious assumption of the principle of relevance, given in (2).

(2) The principle of relevance (Sperber and Wilson 1996:260, 270):

1. Human cognition tends to be geared to the maximisation of relevance.
2. Every act of ostensive communication communicates a presumption of its own optimal relevance, such that;
   a. The ostensive stimulus is relevant enough for it to be worth the addressee's effort to process it.
   b. The ostensive stimulus is the most relevant one compatible with the communicator's abilities and preferences.

In order for the addressee to be able to infer the communicator's intention, the communicator must choose and tailor the utterance, in the case of linguistic communication, in such a way that the hearer will not have to expend unnecessary effort to create a context that will allow him/her to achieve relevance (arrive at the intended interpretation). In doing this, the speaker takes into consideration guesses as to what information is available to the hearer at the time of utterance for use in interpreting the utterance. A speaker must decide what to make explicit and what to make implicit (and also, among implicatures, what to make stronger or weaker implicatures), and this is done on the basis of the speaker's estimation of the hearer's processing abilities and contextual resources, but also partly on politeness considerations and what we think of as 'style'[3] The

[3] An example of the use of a particular utterance form in order to convey weak implicatures for the sake of politeness is the following:

more information that the speaker assumes the hearer is able to access in the processing of an utterance, the less explicit the utterance can be. Answer A1 in (1) above was interpretable in the situation in which it occurred, an interaction between a husband and wife at the dinner table, but would not be interpretable in a situation such as an interaction between a waiter and a customer in a restaurant. The wife could assume the husband could assemble a context of interpretation in which such a minimally explicit ostensive act would be relevant, but she could not make such an assumption in dealing with a waiter; here a form which constrains the context to a much greater degree, possibly as much as A5 or A6, would be necessary to communicate the same intention.

The degree to which the hearer is forced to deduce a particular interpretation depends on the degree to which the form of the utterance constrains the hearer in choosing the contextual assumptions necessary to achieve relevance in interpreting the utterance. In (1) we saw that having more words or more grammatical marking in the utterance can more greatly constrain the interpretation. The order of elements that the speaker chooses also influences the hearer's interpretation, as the hearer begins to assemble the context of interpretation as soon as the first word is uttered (or possibly earlier), and this initial set will influence the eventual set used for the overall interpretation. This is true both at the clause level and at the phrase level. Halliday (1994:197), for example, shows how the order of elements in the noun phrase in English is related to the degree to which the element helps the hearer identify a particular referent. In fact all aspects of language can be shown to constrain the interpretation, and that is in fact their *raison d'être*.

As mentioned above, work in Relevance Theory, while recognising the importance of constraining the context of interpretation, assumes a distinction between conceptual and procedural information (for example, Blakemore 1987, 1988a,b, 1990; Wilson and Sperber 1993; Nicolle 1997). For example, it is argued that one way the speaker can constrain the interpretation of implicature is to use discourse connectives such as *so* and *after all*, which are said to contain procedural information (procedures for manipulating conceptual representations), that is, information on how to interpret the proposition, to alert the hearer to the fact that one part of the utterance has a particular relationship to another part of the utterance, such as providing additional evidence or an explanation. In (3a–b) is an

A: Would you like to go see a movie tonight?

B: Thanks, but I have an important test tomorrow morning.

The implicated conclusion, a strong implicature, is that B cannot go to the movies that night, but there is a weak implicature that were it not for having that test the next day B WOULD go with A to the movies, and it is in order to convey this weak implicature that this particular form of utterance is chosen. (The proposition conveyed by the weak implicature need not be true; it may be that the speaker is just trying to be polite (save A's 'face')—the strength of an implicature is directly proportional to the degree to which the speaker takes responsibility for the hearer making that particular interpretation. In this case, if B wanted to be sure A made that interpretation, B could add *How about next week*, or some such expression.)

example with two possible interpretations (from Wilson and Sperber 1993:11). In one interpretation the statement in (3a) provides evidence for the conclusion in (3b); in the other the conclusion in (3a) is confirmed by the evidence presented in the statement in (3b). In this case it would be possible for the speaker to constrain the hearer's choice of one or the other of these two interpretations of the conceptual information by adding procedural information (either *so* or *after all*) to the beginning of the second clause, as in (4a) and (4b) respectively.

(3) a. Peter's not stupid.
    b. He can find his own way home.

(4) a. Peter's not stupid, so he can find his own way home.
    b. Peter's not stupid, after all, he can find his own way home.

Discourse connectives such as these are said by Wilson and Sperber to not encode concepts (that is, they do not contribute to truth conditions); they just constrain the inferential phase of the comprehension, narrowing down the search for relevance, and thereby make the search easier, and make the interpretation selected more determinate.

Gumperz (for example, 1977, 1982, 1989, 1992a, 1992b) has also argued that hearers interpret the meaning of an utterance based on inferences about the speaker's underlying strategies and intentions, and that these inferences are drawn on the basis of interpretive frames (contexts) evoked by certain linguistic or non-linguistic contextualisation cues produced by the speaker. But as with Relevance Theory, Gumperz sees a distinction between lexical content and contextualisation cues.

Work by both Gumperz and those working in the Relevance Theory framework assume that language involves two types of elements, those that express conceptual information, and those that simply constrain the interpretation of the elements which express conceptual information. I would argue that in fact there is no functional difference between the two types, as both types of elements constrain the creation of the context of interpretation for inferring the speaker's intention. In Gumperz's terms, I would say *all* of language is a contextualisation cue. The goal of communication is not to decode the meaning in words (a view which is implied in the conceptual-procedural distinction), but to understand the speaker's communicative intention. This can happen with or without language, and the only purpose of language in this process is to constrain the inferential deduction of the communicative intention. Therefore the so-called 'conceptual' items are also constraining interpretation.[4] If I hand an assistant a piece of paper and wave my hand towards someone else (who may be in a crowd of people) with the intention that the assistant should give the paper to him, the interpretation of the action and the person it is to be given to is quite

[4] The difference between lexical and grammatical items is the generalness of use; lexicalization (idiomization) and grammaticalization are the same process (conventionalization), but differ in terms of generalness. See below for discussion.

unrestrained (though may be unproblematic in that context). If, instead, I say *Give it to him,* the interpretation of the person it is to be given to is still relatively unconstrained, but if I say *Give this paper to the tall man with the red hat by the back door,* or *Give this paper to the teacher,* then I have constrained the interpretation of the referents involved considerably, and the constraining is mainly done by the extra lexical items. (In this example there are both grammatical and non-grammatical elements, but this would not be true in all languages). Given an expression like *the teacher,* do we want to say that the 'procedural' marking (the definite marking) helps us interpret the 'conceptual' item *teacher,* or do we want to say that the phrase *the teacher* (rather than pointing or using a more general noun phrase) helps us identify the relevant referent? One might argue that *the* is helping to constrain the identification of the teacher by alerting the hearer to the cognitive accessibility of the referent of *teacher,* and this is true, but the use of the word *teacher* itself, as opposed to a less specific term, is also helping to constrain the context of interpretation. That is, both items are helping the hearer to identify a particular referent. Communication does not necessarily involve language, but the use of any amount of language constrains the interpretation more than not having language involved, and generally the more explicit the language involved, the more constrained the interpretation. In this case, *teacher* would constrain the interpretation of a particular referent more than, for example, *him,* or *person.* The function of both lexical and grammatical means in constraining interpretation is the same.[5] For example, those making a distinction between so called 'conceptual' information and 'procedural' information might say that adding the expression *I guess* to an English declarative clause such as in *I guess he's coming* would be adding conceptual information, while adding an evidential particle marking a guess to a similar clause in some other language that has grammaticalised evidential marking would be considered as adding only procedural information, yet the function/information of both is the same. **It is precisely because they have this function that lexical items can grammaticalise into grammatical marking.**

3 The development of language structure

Givón (1979a, Ch. 5; 1979b) has argued that language develops from pragmatic, loosely structured linguistic modes to tighter, more structured modes, and that these modes can be seen in the differences between child language and adult language, between pidgin languages and standard languages, between spoken and written registers, between informal and formal registers, and between unplanned and planned discourse. Communication in the pragmatic mode depends largely on word order and the lexicon alone, while

[5] Langacker (1987) argues that there is no difference between 'conceptual' and 'procedural' from the point of view that all linguistic structures are meaningful. This is similar to what I am saying, but only if we interpret 'meaningful' as 'having a role in constraining the creation of the context of interpretation'.

communication in the more syntacticised mode depends much more on conventionalised constructions and morphology in tightly structured relationships. Grammar develops as the originally free collocations of lexical items become fixed in a particular structure. Paul Hopper (1987, 1988) has developed this idea into the conception of grammar as 'emergent' from discourse. He has argued that rather than taking grammar as a given (what he called *'a priori* grammar'), and then possibly seeing how discourse can affect grammar after it is established, linguists should see discourse as prior to grammar, and giving rise to grammar, as repeated patterns of discourse develop into what we think of as grammar. Grammar is then not seen as fixed structure, but something that is constantly evolving (see also Langacker 1987, Ono and Thompson 1995).

The emergent grammar view of the development of language structure is a natural corollary of the theory of ostensive-inferential communication just presented. The discourse patterns that lead to the development of grammar are those that are repeatedly used for constraining the interpretation of utterances in a particular way. For example, in Old English the word *lic* 'like' plus the instrumental suffix *-e* were used so often after an adjective to make explicit an adverbial relation to a verb that it became conventionalised and developed into the adverb-forming suffix *-ly* used obligatorily in many contexts in English today (Lass 1992). The frequent use of a demonstrative adjective to show that a referent was cognitively accessible conventionalised into definite marking in English (Pyles and Algeo 1982). In Mandarin Chinese the frequent use of a preverbal locative phrase where there was an implicature of an on-going event led to the development of a progressive marker from the locative verb *zài.* What begins as a conversational implicature over time becomes conventionalised, so it is then a conventional implicature, and then can become further conventionalised until it is simply a part of the grammar that forces a particular interpretation. The differences between these three (conversational implicature, conventional implicature, and obligatory marking forcing a particular interpretation) is the degree to which speakers are free to use or not use them to constrain the hearer's inferential process, and also the degree to which the form forces a particular interpretation. We can think about grammaticalisation and the fixing of particular patterns in language use like the creation of a path through a field (see Keller 1994). One can cross a field any number of ways, and there was originally no difference between the part that eventually became the path and the rest of the field, except that people found it expedient to all go the same way through the field, and so the grass was worn away, creating the path. Eventually people start using the path just because it is there, without thinking about whether it is the best way to go through the field. At some point, either out of simple conventionalisation or because of some social factor (for example, attitudes towards preserving the grass that is left), it may become recognised as the 'unmarked' way to go through the field and crossing any other way would be considered 'marked'. This conventionalisation is the same whether it is the fixing of a particular word order or construction, the fixing of a lexical item in a particular context such that it becomes

grammatical marking, or involves the extension of the use of already existing morphology. What we think of as a grammatical construction (or 'constructional schema'—Langacker 1987; Ono and Thompson 1995; Barlow and Kemmer 1994) is also simply a pattern of usage that was used often enough by enough people to constrain the hearer's interpretation in a particular way that that usage became conventionalised.

The fixing of repeated patterns into grammar is nothing more than the development of conventionalised forms that restrict interpretation, and Givón's cline of forms from more pragmatically to less pragmatically based types correlates with the degree to which interpretation is constrained grammatically rather than lexically. The development of grammar out of repeated discourse patterns then can be seen as the fixing of constraints on the search for relevance during the process of interpretation.[6]

There are at least four types of conventionalisation that affect language structure. Morphological means for constraining the interpretation of particular functional domains develop out of the repeated use of particular lexical items for constraining interpretation in a particular context. An example from English is the development of definite marking from the frequent use of a demonstrative pronoun for constraining the identification of the referent of an expression to a contextually accessible referent.

Already available morphological marking may be extended in new ways and become conventionalised in that new use. The extension of the use of the reflexive marker from direct reflexive situations to middle situations is a good example of this. In this extension a marker that originally was used only to mark direct reflexives comes to be used in some middle situations optionally with an emphatic sense to narrow the range of possible interpretations (for example, the use of *myself* in *I stood myself up* constrains the interpretation of the purposefulness of the action), and later comes to be used so often that it becomes obligatory for many verbs. This happened in the Romance languages (see Kemmer 1993), and also in the Tibeto-Burman language Dulong (LaPolla 1995b; see example below).[7]

[6] Though I am presenting this from the point of view of constraints on interpretation, I do not assume that linguistic change is hearer-driven. From one point of view we can say it is speaker-driven, as the patterns can only become conventionalized if speakers choose to use the patterns over and over again. From another point of view the conventionalization process takes time, and involves the same people as speakers and hearers. That is, a speaker uses a particular pattern and other people pick up on that (we are creatures of habit and imitation), and repeated use of that pattern by a number of people causes it to become grammaticalized (such as the same-subject interpretation of English clause-coordination). The same is true of lexicalization. Language development is an 'invisible hand' phenomenon; it is an epiphenomenon which results from the actions of many individuals (Keller 1994), and so we cannot say it is speaker or hearer driven.

[7] Once this happens, there is then no formal distinction between reflexives and middles, and so some languages then reinforce or renew the direct reflexive marking, again being driven by the desire to constrain the interpretation. This has happened, for example, in Dutch (Kemmer 1993).

A third type of conventionalisation is the fixing of syntactic (rather than morphological) constraints on interpretation, such as many of those associated with the concept of 'subject' in English, for example the cross-clause same-subject constraint in coordination with a reduced second clause (see discussion below). This development is simply the fossilisation of a frequent pattern of coreference. Like in the path analogy given above, a particular coreference pattern between the two clauses became so common it became the unmarked and assumed pattern through conventionalisation.

A fourth type of conventionalisation is a type of secondary grammaticalisation where a form that has grammaticalised from a lexical item and at first only constrains the interpretation of the external described situation later further grammaticalises in the direction of constraining the interpretation of subjective (speaker-oriented, expressive) aspects of the interpretation, with a stage in between of marking textual cohesion (that is, the path of development is 'propositional ((> textual) > (expressive))'; Traugott 1990:497; see also Traugott 1982, 1988, 1989, 1990; Traugott and König 1991). An example of the full set of changes is English *since,* which developed from the propositional sense 'after, from the time that' to a marker of temporal relation, and from inference from the temporal relation to a marker of a causal relation (Traugott 1990:497).

4 Why languages differ

Language is a tool which aids in the process of inference and so is shaped by the demands of that process, just as a hammer is shaped the way it is because the main use it is put to is hammering nails. The development of particular types of linguistic structure is not teleological, any more than the evolutionary development of species is. It is in fact a type of evolution, though an aspect of socio-cultural evolution rather than biological evolution. This applies equally to the development of the lexicon and the development of morphosyntax (which are actually not two separate things—see below). Language is what Keller (1994) calls 'a phenomenon of the third kind'. That is, it is not a natural phenomenon, and it is not an intentionally created artifact of humans. Language is the cumulative result of the actions of many individual humans, but their actions are not with the intention to create language; language is the unintended byproduct of their attempts to communicate effectively (constrain the addressee's inferential process effectively) on an individual level. It forms as if guided by some invisible hand, much the way economies and paths in fields develop (see above).

Just as the evolution of species is related to particular environments, many of the conventions of a people are responses or adaptations to particular environmental factors, such as building houses on stilts where there is frequent flooding. We find conventionalisations of language also related to particular environments. For example, it is no coincidence that the Qiang people of Sichuan, China, who live on the sides of mountains along river valleys, have conventionalised in their language (Qiang; Tibeto-

Burman) a complex system of direction prefixes including prefixes marking 'up-river' versus 'down-river' and 'up the mountain' versus 'down the mountain' (LaPolla to appear), as in (5).

(5) Qiang directional prefixes (*ʁue* 'throw')

təʁu 'throw up (the mountain)'	*zəʁu* 'throw towards the speaker'
ɦaʁu 'throw down (the mountain)'	*daʁu* 'throw away from the speaker'
səʁu 'throw down-river'	*əʁu* 'throw inside'
nəʁu 'throw up-river'	*haʁu* 'throw outside'

There has been work (e.g. Bernstein 1971, Perkins 1980, Trudgill 1996, 1997) showing that the size and complexity of the speech community will influence the use patterns of the language spoken, and this in turn will influence the form that the language takes. For example, complex inflectional deictic systems such as the one we find in Qiang are said to be more often found in small homogeneous communities rather than large complex communities (Perkins 1980).

We often find the same types of structures appearing in totally unrelated languages, but again, in parallel with evolution, where both sharks and dolphins have similar body shapes even though they are unrelated creatures, and bats, birds, and butterflies all have wings, similarities among conventions are not due to some predetermined or universal genetic imprint, but due to similar adaptations to similar environments. For example, many societies have independently developed bowl-like implements in response to the need to drink liquids and the nature of liquids.

The particular patterns we find used to constrain the interpretation reflect particular ways of construing and representing the world. As language structure is formed from repeated discourse patterns that constrain the hearer's interpretation in particular ways, it necessarily must be the case that those aspects that were being constrained were salient to the speaker and also assumed by the speaker to be salient or relevant to the hearer, at least in the contexts where the pattern was used. For example, Pawley and Lane (1998) argue that to understand the grammaticalisation of serial verb constructions in Kalam (Papuan, New Guinea), it is necessary to understand that in reporting an event, a speaker of Kalam is expected to make reference to a sequence of associated actions that express whether the actor was at the scene of the event or moved to the scene; what the actor did; whether the actor then left the scene, and if so whether the actor took the affected object along or not; and what the final outcome was. That is, where in English we would usually mention a single action to represent a series of related actions, for example, *I cut firewood,* in Kalam the individual associated (prerequisite and consequent) actions would be made explicit. The interpretation of these aspects of the action are then generally more constrained in Kalam than in English. The expression of the various aspects of the overall multi-scene event or action in Kalam can be elaborately spread over many clauses, spread over just a few clauses, or, in the case of relatively familiar multi-scene events, can be done with a

serial verb construction. It is the fact of the salience of mentioning all these different aspects of an event, plus the fact that some types of action sequences are performed regularly, that caused these serial verb constructions to become conventionalised (grammaticalised). In this case it is easy to see the 'smoking gun' of the demand on event narration that led to this grammaticalisation, but we do not need to find the 'smoking gun' in all cases to know that the grammaticalised patterns reflect the salience of the type of information being constrained.

Another example of how construal of the world affects the sort of conventionalisations that develop is discussed by Heine (1994, see also Heine 1997a, 1997b). He argues that there are four main basic event schemas (conceptual source structures) that give rise to the different types of comparative constructions found in the world's languages, and that how a particular group of people construe the comparative relation determines the type and structure of the comparative construction used by those people (X = the comparee (the thing being compared), Y = standard of comparison, Z = quality; this is necessarily brief—see Heine 1997a, Ch. 6 for more detailed discussion):

The Location Schema: the relation is construed in terms of relative location: X is Y at Z; e.g. Rawang *ədú nū apūŋ mədàm yāŋē* [Adeu TOP Apung above/on tall-INTRANS.NPAST] 'Adeu is taller than Apung'.

The Action Schema: the comparee is seen as a kind of agent which surpasses, defeats, exceeds, etc. the standard of comparison in some way: X surpasses Z with regard to Y; e.g. Cantonese *ŋɔ^{13} ko^{55}-kwɔ^{33} lei^{13}* [1SG tall-surpass you] 'I am taller than you'.

The Polarity Schema: the relation is construed as antithetic juxtaposition of two antonymical qualities: X is Y, Z is -Y; e.g. Hixkaryana *kaw-ohra naha waraka, kaw naha kaywerye* [tall-not he.is Waraka tall he.is Kaywerye] 'Kaywerye is taller than Waraka' (Stassen 1985:184, cited in Heine 1997a:117).

The Temporal or Sequence Schema: what comes earlier is seen as having more of the quality than what comes later: X is Y, then Z; e.g. Javanese *enak daging karo iwak* [is.good meat than fish] 'Meat is better than fish' (Stassen 1985:60, cited in Heine 1997a:118; *karo* is also used as a consecutive conjunction)

One subset of conventions often influences another subset of conventions. For example, in Australia and the US open-plan kitchens are popular, but in Hong Kong, as many people have maids, open plan kitchens are not popular. One set of conventions (related to housework) has influenced another set of conventions (related to house-building). In terms of the set of conventions related to communication (language and language use), we can also find that it is influenced by sets of conventionalisations involved in other (non-linguistic) sets of conventions. For example, the conventions of language use in Javanese are very much influenced by the conventions of the caste system and social status in the society in general (Errington 1988). The Jinghpaw people of China and Myanmar do not have a word for 'toilet' (i.e. a place to defecate); as they don't fertilise their fields, they do not save human waste and so do not construct toilets, they just

go out in the woods. Here the conventions of farming have influenced the conventions of architecture, and the latter have influenced the conventions of language.

There are also sometimes competing motivations (DuBois 1985) for one pattern or another, but the process of a particular form becoming conventionalised is the same. For example, English lost the distinction between singular and plural second person pronouns because of a repeated pattern of using the plural pronoun when referring to a singular referent out of politeness considerations (that is, constraining the context of interpretation to the individual was seen as less polite than not constraining it in that way, and then the form used to constrain the interpretation to the singular individual disappeared from the set of conventions), but some Southern (U.S.) dialects have conventionalised a second person plural form *y'all* from repeated use of *all* after *you* to constrain the interpretation of singular vs. plural referents.

To say that the original development of a particular pattern is motivated does not imply that the motivation will always be transparent. In many discussions of ethnosyntax, the opaqueness of certain structures is taken to be evidence that it is not possible to show a link between language and other sets of conventions. Yet in many aspects of our lives, once a particular way of doing something is conventionalised, the original motivation may be lost, while the conventionalised behaviour continues, simply because it is already a convention. For example, when British people first began drinking tea, they were forced to put the milk in the cup before the tea because the ceramics produced in Britain at that time were not able to withstand the heat of the tea directly without cracking, and so the milk was put in first to protect the teacup. Later they had access to better ceramics, and so the motivation for putting the milk in before the tea was gone, but by that time the practice had become conventionalised, and is still continued by many people to this day. Another example is that early clocks had chains with weights descending out the bottom of the clock, as the weights ran the clock. Modern clocks are now largely electronic, but are often still designed to have the weight chains (or stylised representations of them) because that particular conception of a clock had become so conventionalised. In language, we have many expressions that are no longer motivated by their semantics, but reflect earlier lexical uses or ways of construing the world. For example, we often use fixed expressions in English such as *pig in a poke, pass the buck, put it in the hopper,* or *the stars in the firmament,* yet few speakers of English know what a poke is, or what a buck is, or what a hopper is (why it is called a hopper), or that the word *firmament* derives from a view of the heavens as a fixed dome. We often say *dial a phone,* even though our phones now have push-buttons rather than dials. In Chinese the motivation for the old word for 'crow', *wū,* is not at all transparent, but if we reconstruct the original form of the word we can see that it was onomatopoetic *(*ʔa).* In Chinese also the words for 'cash money', *xiànjīn* [current-gold], and 'bank', *yínháng* [silver company], were originally motivated by the fact that gold and silver were the conventional currencies. This is no longer the case, but the names continue to be used. The same is true of grammatical patterns/morphology: the original

motivation may no longer be transparent, but that does not mean there never was any motivation for the pattern, such as the *-r-* in *children,* a remnant of an old plural marker, now redundant because of the *-en* plural marker, but retained nevertheless.

I mentioned above Heine's work showing that how speakers of a language construe a particular situation, such as a comparative relation, determines the type and structure of the linguistic construction used by those people in talking about that situation. Heine (1994) also shows that there are clear areal distribution patterns (that cross genetic lines) for the different event schemas behind the different comparative construction types. Heine's conclusion is that 'areal distribution plays a major role in the cognitive patterning underlying the development of comparative constructions in the languages of the world, and areal distribution is suggestive of massive linguistic and cultural communication' (Heine 1994:66). That is, because of massive contact, the speakers of the languages of an area come to construe an aspect of the world in the same way, that is, share the same event schema, and this leads them to have similar linguistic constructions for representing that schema. The influence of language contact on language development is then not always directly linguistic. Learning another language means learning to think in a different way, or to construe the world in a different way, and this may then affect our native language. This is often what calquing is. Calquing is not necessarily direct linguistic influence, the way loan words are. It is often the result of influence in the way people construe events or situations. Substratum effects can also be of this type, that is, the effect of a way of thinking or the effect of deep-seated habits of language use. That is, if our native language obligatorily constrains the interpretation of some functional domain, when we learn a second language, we will tend to want to constrain the interpretation of that domain in the new language. For example, in Taiwan Mandarin we regularly find a complementiser *fu*^{55} (= 'to say'), which is due to the fact that the majority of the speakers of Taiwan Mandarin speak Southern Min Chinese as their first language, and this language has a complementiser *kɔŋ*^{53} (= 'to say') which helps to constrain the interpretation of complements. When speaking Mandarin, the Min speakers felt the need for such a complementiser because of their habit of constraining the interpretation in this way in their own language, and so created a comparable one based on the Mandarin word for 'say'. This is filling a perceived gap. The same sort of thing happens when English speakers learn Chinese. I mention below that in Chinese no genitive phrase is necessary in an expression that would translate as 'I washed my hair', but English speakers learning Chinese often will add a genitive phrase in that context when speaking Chinese because they feel it is needed to constrain the interpretation. In a similar way, due to their habit of marking tense in every finite clause, English speakers learning Chinese will overuse the perfective aspect marker in Chinese, essentially using it in any situation they would normally use a past tense in English. This is because they feel the need to constrain the interpretation of the utterance by marking it as past tense, but as Chinese does not have tense marking, they use the closest thing they can find (the perfective marker) to fill the

perceived gap. The feeling of needing to constrain the interpretation in a particular way may also come from outside one's own language. For example, the third person pronoun in Chinese does not inflect for animacy or gender, but in the early 20th century many Chinese intellectuals learned English, French, or German, and came to feel the need to constrain, at least in writing, the interpretation of the referent of the third person pronoun, and so developed different ways of writing the third person pronoun in Chinese for male, female, inanimate, and godly referents.

The spread of borrowed words and borrowed patterns is the same process as that for native words and patterns. Borrowed words and patterns may introduce new concepts/tools, but the ultimate meaning of the word or pattern will be determined by the use to which it is put. For example, the English word *gungho* is a loan of Chinese *kuŋ*^{55} *xɤ*^{35} 'industrial cooperative' in Chinese, but in English it means 'to have great spirit or enthusiasm' (derived from the enthusiastic spirit which American soldiers felt characterised the workers in China's early industrial cooperatives). This is the same with other tools. In the Philippines, a fork and a spoon are often used when eating, due to Western influence, but instead of the fork being used to move the food to the mouth, the fork is used only to push the food onto the spoon, and then the spoon is used to carry the food to the mouth. That is, the 'use/meaning' of the fork in that system is different. Also, a set of conventions is a system, and sometimes if you try to change one aspect of a system, you have to change others because of a mismatch. For example, in Taiwan now it is common to use large plates to hold the rice when eating (instead of the traditional bowls), due to Western influence, but they still use chopsticks to eat, and as these two tools are not very compatible, the Chinese spoon is used to take the food off the plate, where it can then be better accessed by the chopsticks. That is, they use the spoon to pick up the food off the plate, and then use the chopsticks to eat the food off the spoon.

Our language use is a set of habits we form, and these habits are very hard to change. We are very much creatures of habit, and once we have a habit, it is hard to change, including habits of language and even thought. The most simple example is the habit we form in learning our first language: we learn to categorise certain sounds together as allophones of a single phoneme, and to distinguish among other sounds our language treats as distinct phonemes. This is entirely a habit, but as anyone who has learned a second language (or taken a class in phonetics) knows, it is difficult to break the habit and make distinctions we are not used to making. The habit even influences our perception, as (for example) a native English speaker will really 'hear' a voiceless unaspirated stop as if it is the same sound as a voiced stop (for example, hear the initial sound in *pei*^{214} *tɕiŋ*^{55} 'Beijing' as /b/). Another good example is phonotactics. There is a set of permissible syllable types in English, and the habit of speaking those types and only those types is so strong that when a writer makes up a new syllable, it will invariably conform to that template (Whorf 1940[1956]). This is also what is involved in second language learner

accents. The point is not that you cannot learn another set of phonotactic constraints, just that it is difficult because it is an ingrained habit.

5 How languages differ

It has been said that languages differ not so much in what they can say, but in what they must say. This is looking at it from the speaker's point of view. From the hearer's point of view, we can say that languages differ not so much in what can be understood, but in what must be understood. All languages can constrain the interpretation of just about any functional domain, but most languages have developed obligatory grammatical marking that obligatorily constrains the interpretation in certain functional domains to some extent. Which domains the speakers of a language will chose to constrain, and how they constrain the interpretation, are the two major ways languages differ from each other. Just as societies differ as to what tools they use for a particular activity, for example using chopsticks as opposed to using the hands or a fork for eating, and these tools can vary in terms of specificity (for example, Chinese people traditionally use fewer specialised tools for eating than Westerners), the tool we think of as language can differ between cultures in terms of how specialised its structures are. I would like to turn now to some examples of the ways that languages can differ in terms of specialisation, and show how this relates to interpretation.

For a number of years I have been arguing that Chinese and most other Sino-Tibetan languages do not work the same way, in terms of pivots and grammatical relations, as either languages with largely nominative-accusative structure, such as English, or those that have largely ergative structure, such as Dyirbal (LaPolla 1988, 1990, 1993, 1995a, 1996, 2002; Van Valin and LaPolla 1997, Ch. 6). For example, in a language with an [S, A] pivot for coordination (the accusative pattern), such as English, an argument shared by two conjoined non-passive clauses can be represented by a zero pronoun in the second clause only if it is in the A or S role in both clauses, as in (6a).

(6)a. The man went downhill and Ø saw the dog.
b. *The dog went downhill and the man saw Ø .
c. The dog went downhill and Ø was seen by the man.

It is not possible to have the representation of the actor of the first clause coreferring with a zero pronoun representing the undergoer (O role argument) of the second clause without using a passive construction, as shown in (6b). It is not possible to say **The dog went downhill and the man saw*. If the argument the two clauses have in common is the undergoer of the second clause, in order for the two clauses to be conjoined, the representation of the argument (here the zero pronoun) must appear as the single direct argument of a passive construction, as in (6c).

In a language with an [S,O] pivot for coordination (the ergative pattern), such as Dyirbal (Dixon 1980:461ff), a shared argument which appears as a zero pronoun in the second of two conjoined clauses must be in the S or O role in each clause, as in (7a). If the argument in the second clause is instead in the A role, in order for the two clauses to be conjoined and for the argument to be represented by a zero pronoun in the second clause, the shared argument must appear as the single direct argument of an antipassive construction, as in (7b). It is not possible to say the equivalent of *The man went downhill and saw the dog* with a transitive second verb and a zero anaphor referring to an A argument, as in (7c) (from Dixon 1980:461-2).[8]

(7) a. *Balan guda buŋa-n baŋgul yara-ŋgu bura-n.*
she+ABS dog+ABS descend-PAST he+ERG man-ERG see-PAST
'The dog went downhill and was seen by the man.'
(Lit.: The dog went downhill and the man saw Ø.)

b. *Bayi yara buŋa-n bulralŋanyu bagun gudagu.*
he+ABS man+ABS descend-PAST see+PAST+ANTI he+ABS dog+DAT
'The man went downhill and saw the dog.'
(with antipassive indicator *≥a-y* on the second verb).

c. **Bayi yara buŋa-n bura-n baŋgul guda.*
he+ABS man+ABS descend-PAST see-PAST he+ERG dog+ABS
'The man went downhill and saw the dog.'
(with transitive verb and A argument (*yara≥gu*) unexpressed).

In Chinese we don't find either the English or the Dyirbal type of restriction on cross-clause coreference. In Chinese it is possible for the shared argument of a conjoined structure to be deleted regardless of whether it is in the A or O role, as we can see from the examples in (8):

(8) a. *Xiǎo-gǒu$_i$ zǒu dào shān-dìxià, nèi-ge-rén jiù kànjiàn-le Ø$_i$.*
little-dog walk to mountain-bottom that-CL-person then see-PFV
'The little dog went downhill and was seen by the man.'
(Lit.: 'The little dog went downhill and the man saw Ø.')

b. *Nèi-ge-rén$_i$ zǒu dào shān-dìxià, jiù Ø$_i$ kànjiàn-le xiǎo-gǒu.*
that-CL-person walk to mountain-bottom then see-PFV little-dog
'The man went downhill and saw the little dog.'

[8] Abbreviations used in the examples: 1, 2, 3 1st, 2nd, 3rd person; ABS absolutive; AGT agentive; ANTI antipassive; CL classifier; CSM change of state; DAT dative; DIR directional; ERG ergative; LOC locative; INF inferentially derived conclusion; INTRANS.PAST third person intransitive past; NPAST non-past declarative; PFV perfective; PL plural; PROG progressive; PS predicate sequence; R/M reflexive/middle; SG singular; TMDYS past tense, 1 day-1 year ago; TMHRS past tense, within today; TMYRS past tense, years ago; TRANS.PAST 3rd person transitive past.

The result of this situation is that in languages with grammatical constraints on the control of anaphor like those we've just looked at, those constraints force a particular interpretation of an utterance. For example, if the words 'The man saw the dog and went downhill' were said in English, the interpretation would have to be that the MAN went downhill; but if the equivalent words were used in Dyirbal *(balan guda baŋgul yaranŋgu buran buŋan),* the meaning would have to be that the DOG went downhill. This forcing of the interpretation holds even if the resulting interpretation would be nonsensical given what English speakers normally assume about the world, as in (9), from Comrie (1988:191):

(9) The man dropped the melon and burst.

Because of the grammatical constraint on conjunction reduction in English, this sentence has to be interpreted as saying that the man burst after dropping the melon. That is, when there is a coordinate structure such as this, the rules of English syntax force the interpretation that the zero pronoun is coreferential with the S or A role argument of the first clause, and block the inclusion in the context of interpretation of the assumption that when someone drops something, it is more likely that the thing dropped bursts rather than the person doing the dropping. In a language such as Chinese, though, where there is no such grammatical constraint on interpretation, the equivalent sentence would not force such an interpretation, even with the man being the topic of the utterance, as assumptions from real world experience would be included in the context of interpretation and influence the interpretation more than the syntactic structure. Over the years I have asked well over a hundred native speakers of Chinese to translate this sentence into Chinese and then tell me who or what burst. The answer is invariably 'Of course the melon burst.' They are generally quite surprised when I tell them that the English sentence MUST mean that the man burst.

In Rawang, a Tibeto-Burman language spoken in Northern Burma, we have the same lack of constraints on the interpretation of clause coordination, as evidenced by the pair of sentences in (10):

(10) a. *Vpūngí Vdǿsvng vdip bǿà nǿ ngǿa:pmì*
Vpūng-í Vdǿ-svng vdip bǿ-à nǿ ngǿ-ap-ì
Apung-AGT Adeu-LOC hit PFV-TRANS.PAST PS cry-TMDYS-INTRANS.PAST
'Apung hit Adeu and cried.' (Adeu cried)

b. *Vpūngí Vdǿsvng vdip bǿà nǿ vhǿshì a:pmì*
Vpūng-í Vdǿ-svng vdip bǿ-à nǿ vhǿ-shì
Apung-AGT Adeu-LOC hit PFV-TRANS.PAST PS laugh-R/M
ap-ì
TMDYS-INTRANS.PAST
'Apung hit Adeu and laughed.' (Apung laughed).

Here the structures are exactly the same, though the actor of the second clause is interpreted differently due to real world expectations of who would be more likely to cry or laugh after an act of hitting. In fact the interpretation is quite unrestrained; although I've written 'Adeu cried' and 'Apung laughed' after the free translations, actually the interpretation could be that the one who cried or laughed was either one of these two people, or even a third person, such as someone standing nearby watching what was happening between Adeu and Apung. Most Sino-Tibetan languages are similar to Chinese and Rawang in not having syntactic constraints that force particular interpretations of cross-clause coreference.

Let's look at some other ways that the grammar of English constrains interpretation. One way is with verb agreement. Aside from the obvious effect that verb agreement has on the identification of particular arguments, it can also constrain the interpretation of the syntactic structure. To borrow an example from Green (1996:144), the use of singular versus plural agreement in (11a) and (11b) forces two different analyses of the structures. In (11a) pickles and ice-cream must be interpreted as two different items about which the same predication is made, while in (11b) they must be interpreted as one item (a dish with two things combined) about which a predication is made.

(11) a. Pickles and ice cream are really great.
b. Pickles and ice cream is really great.

In Chinese it is not possible to constrain the interpretation in this way, as there is no agreement marking, so there would be only one form for both these meanings in Chinese; the inferential process involved in deciding on the proper structure (and therefore the proper interpretation) would not be constrained by the linguistic form in the way that it is in English.

In terms of whether a language constrains the interpretation of the relations between elements of a complex clause structure or not, we can give the example of verb juxtaposition in Lahu. Matisoff (1991:403) gives an example with the verb *qɔ̂* 'hoe' in simple juxtaposition with 12 other verbs, and contrasts the use of this one syntactic form (simple juxtaposition) in Lahu with the use of six different types of construction for expressing the same relations in English (see (12)). There is nothing in the grammar of this Lahu construction that constrains the interpretation of the relationship between the two verbs, while in English the interpretation is constrained to a greater degree by the different constructions used.

(12) complementary infinitives	*qɔ̂ šа*	'easy to hoe'	*ga qɔ̂*	'help to hoe'
-ing complements	*qɔ̂ kì*	'busy hoeing'	*tà qɔ̂*	'start hoeing'
modal auxiliaries	*qɔ̂ câ*	'should hoe'	*ğa qɔ̂*	'must hoe'
adverbs	*qɔ̂ bà*	'hoe away'	*qɔ̀ʔ qɔ̂*	'hoe again'
prepositional phrases	*qɔ̂ pî*	'hoe for smn'	*phôʔ qɔ̂*	'hoe in a group'
subordinate clauses	*qɔ̂ ni*	'hoe and see'	*ca qɔ̂*	'go and hoe'

Tense marking also restricts the search for the relevant interpretation. For example, to interpret the proper time frame for the situation expressed by the Chinese sentence in (13a), the hearer must depend on inference based on the context, whether overall what is being talked about is something that happened in the past or a current situation. In English, though, as English has grammaticalised obligatory tense marking, the equivalent of (13a) would be (13b), (13c), or (13d), all of which constrain the interpretation of the time frame. (As can be seen from this example, the identification of the gender of the referent (and therefore the identification of the referent) of some pronouns is also constrained by the form of the pronoun, and this too in Chinese is unconstrained.)

(13) a. *Tā* *qù* *xuéxiào.*
3SG go school
b. She/He went to school.
c. She/He is going to school
d. She goes to school./He goes to school.

We can see that compared to Chinese, English obligatorily constrains the interpretation of the time frame, limiting the identification to either a past or non-past situation, but within those broad categories, say, for example given a past tense form, to determine how far in the past the action was the interpreter of the utterance must rely on linguistically unconstrained inference. That is, if I say *I have had lunch,* then you will probably draw the inference that I ate within the last hour or two, or at least within today; if I say *I have been to the doctor,* then you may make the inference that it was within the last few days; if I say *I have been to Tibet,* then you will not make the inference that it was within the last one or two hours, or even within the last few days, as it could have been quite some time ago, but the differences among these three interpretations are not due to anything in the grammatical structure, they are due purely to inferences based on the real-world understanding of the actions involved. The search for the proper interpretation of the length of time from an overtly marked past action to the time of the speech act is not further constrained grammatically in English. If we then compare English to Rawang, we can see that in Rawang there is a four-way past tense system which marks whether the action took place an hour or two ago, a few hours ago but within this day, sometime from yesterday up to a year ago, or more than a year ago. The examples in (14) all are of the verb *dī* 'to go'.

(14) a. *àng* *dī* *á.m-ì*
3SG go DIR-INTRANS.PAST
'S/he left, went away (within the last 2 hours).'
b. *àng* *dī* *dár-ì.*
3SG go TMHRS-INTRANS.PAST
'S/he went (within today, but more than two hours ago).'

c. *àng* *dī* *ap-mì.*
3SG go TMDYS-INTRANS.PAST
'S/he went (within the last year).'

d. *àng* *dì* *yàng-ì.*
3SG go TMYRS-INTRANS.PAST
'S/he went (some time a year or more ago).'

The point is that languages differ quite a lot in how much they constrain the search for the most relevant interpretation, and in what aspects they choose to constrain. As can be seen from these examples, while Rawang constrains the interpretation of the time frame more than English, it does not constrain the search for the referent of a pronoun as much as English does (and we saw Rawang does not have the cross-clause coreference constraint that English has). From this we can see that we can not talk about **languages** as being more or less grammaticalised or their interpretation more or less constrained, only particular **functional domains** being more or less grammaticalised or their interpretation more or less constrained in a certain language.

An interesting three-way contrast of what is or is not left to inference in different languages can be seen from a comparison of Chinese, Tagalog and English. The normal way of saying 'Let's go' in Chinese involves just a verb and a particle, as in (15a), and only the use of the hortative particle constrains the interpretation of the actor referent (so it could be 'you go' or 'we go', but not 'he goes'); in Tagalog, as in (15b), it is normal to just say *Tayo na,* which is the 1st person plural inclusive pronoun plus a change of state marker, with no verb, and leave the interpretation of the action suggested unconstrained (it could mean 'Let's go' or 'It's our turn'), while in English both the pronoun and the verb must be specified, so the interpretation of the actor and the action are both obligatorily constrained.

(15) a. *Zǒu* *ba!*
go HORTATIVE.PARTICLE
'Let's go.' or '(Why don't) you go.'

b. *Tayo* *na!*
1PL.INCL CSM
'Let's go.' or 'It's our turn.'

Languages can also differ in terms of the type of grammaticalisation used to constrain the interpretation of a particular functional domain. For example, in the Chinese sentence in (16a), there is no marking to constrain the interpretation of whose hair is being washed, and so the determination of this relationship is purely a matter of inference; in most contexts it would mean the person is washing his or her own hair, but given the right circumstances (such as a professional hair-washer in a barber shop) it could mean the person is washing someone else's hair. In both English and Rawang, on the other hand, the interpretation of whose hair is being washed is obligatorily constrained, but in different

ways. In English, example (16b), the NP which has *hair* as its head must include a possessive pronoun, but in Rawang, example (16c), there is no marking on the NP; the interpretation is constrained by the obligatory use of the reflexive/middle marking (see LaPolla 2000).

(16) a. *Tā* *zài* *xǐ* *tóufǎ.*
3SG PROG wash hair
'S/he is washing (her/his) hair.' (Lit.: 'S/he is washing hair.')

b. He is washing his hair.

c. *àng* *nī* *zýl-shì-ē.*
3SG hair wash-R/M-NPAST
'S/he is washing her/his hair.'

In both English and Rawang the interpretation of the relationship between the actor and the undergoer is constrained, but by very different grammatical categories.

6 Summary and implications of this view of language

A speaker (communicator) performs an ostensive act in order to communicate. This gets the attention of the hearer (interpreter), and the hearer must first infer that the speaker has a communicative intention and that it is directed at the hearer. Then the hearer must infer the reason for the communicator to make that particular ostensive act in the context of the communicative activity. All of this is done using inference; all aspects of interpretation involve the creation of a set of assumptions, a context, which can be added to whatever part of the signal or message has been recovered up to that point (it is a dynamic process) to deduce the most likely form and possible motivation for its production. This inference is possible because of the assumption that an ostensive act involves a guarantee of relevance, and that the communicator will chose the form for the ostensive act that will most likely lead to the intended interpretation. Because of this assumption, the speaker must tailor the ostensive act in such a way that the hearer will not have to expend unnecessary effort to create a context that will allow him/her to arrive at the intended interpretation. In doing this, the speaker takes into consideration guesses as to what information is available to the hearer at the time of utterance for use in interpreting the utterance. The speaker may constrain the hearer's construction of the context of interpretation in many ways. The most straightforward reflection of this constraining process is the amount of lexical content that the communicator includes in the utterance. Grammaticalised marking (including intonation) can also be used to help the hearer process the utterance by constraining the search for relevant assumptions to include in the context of interpretation. The grammatical marking performs the same role in constraining or guiding the interpretation of the utterance that an increase in the number of lexical items can have. Lexicalisation and grammaticalisation is the conventionalisation of repeated

patterns of language used for constraining the context of interpretation in a particular way. As each society of language users determines what functional domains will constrain and how it will do it, languages come to differ in terms of what will be constrained and what will not, in terms of the degree to which interpretation of a particular functional domain is constrained, and how particular functional domains are constrained. This is why we get the variety we do among the languages of the world. As individual speakers also have some choice in what they constrain and how they do it (and develop their own habits, parallel to societal conventions), we also get variety from speaker to speaker within a particular society of language users.

What I am arguing for involves a different way of viewing structure. Rather than assuming that language structures are the building blocks of relatively effortless deterministic interpretation and treating ambiguous expressions as aberrant, we should assume that forms used in communication are inherently indeterminate (Reddy 1979; Grace 1987), and look at structure from the point of view of how it constrains interpretation, that is, how interpretation is made more determinate by, for example, the grammaticalisation of subject or other grammatical categories. Most linguistic studies, even many of those that use natural language data rather than made-up sentences, still take the grammar as given, and only look for the 'interface' between semantics and syntax or pragmatics and syntax. For many, such as Susumo Kuno (for example 1987) and Ellen Prince (for example 1988), pragmatics is simply another module of the package, and not the foundation of communication and therefore of grammar.[9] The view I am presenting here is that the fundamental aspect of communication is not the linguistic structure, but the interaction of the speaker and hearer in performing a communicative activity. The role of the context in the performance of this activity involving the interpretation of utterances is not to simply supplement semantic meaning; the context is the base on which all communicative activity depends. That is, rather than saying that the context constrains the interpretation of the linguistic form, I argue that it is the linguistic form that constrains the context (that is, constrains the creation of the context of interpretation).

To take one example of what I mean by looking at grammar in a different way, we can look at Ekkard König's (1995) excellent study of the meaning of converb constructions. This paper focuses on how the converb constructions are vague and so need to be enriched by contextual factors. That is, König takes the form of the converb construction as something basic and then tries to see how contextual factors help us to interpret the meaning of the converb construction. He says that general background assumptions and contextual information and general principles of language use 'make an important contribution to an interpretive enrichment of the nonspecific basic meaning of converbs.' (p. 83). An alternative possibility is to look at the utterance and try to interpret the speaker's communicative intention, and see how the use of a particular structure, such as a

[9] For arguments against the modular view of pragmatics, see Wilson and Sperber (1986).

converb construction, constrains our search for the proper interpretation of the speaker's intention, that is, how the use of a particular grammatical form constrains our search through general background assumptions and contextual information and general principles of language use in order to help us create the context of interpretation that will lead to the intended interpretation. Rather than taking the grammatical form as basic and trying to interpret its meaning in different contexts, we should see inference as the basis of communication, and try to determine how a particular grammatical form develops to aid the hearer in constructing the proper context in which the ostensive act achieves relevance.

The view of grammar I am presenting here means not trying to define what, for example, a 'subject' is, the way Keenan (1976) did, assuming it is some sort of 'thing', but seeing what we call 'subject' in English as a set of constraints on the interpretation (identification) of referents in certain syntactic constructions such as clause coordination, etc., and seeing which constraints individual languages have or have not grammaticalised as part of their grammatical system (see Van Valin and LaPolla 1997, Ch. 6).[10] It also means not inventing covert movements and structures to try to explain all differences of interpretation as differences in syntactic structure.

One consequence of this view is that there is no difference in quality or type between lexicalisation and grammaticalisation. Both are processes of conventionalisation, and differ only in the generalness of application. That is, lexicalisation affects only a single specific item (whether long or short), whereas grammaticalisation applies more generally to a class of items. This forms something more like a continuum, rather than discrete categories. This view also implies that much of language use involves recall of complete forms, including sentences, from memory rather than pure generation of totally new forms, as these remembered forms are what become fixed syntactic patterns (constructional schemata). As with so many other things, Bolinger (1961, 1976; see also Pawley 1985, Grace 1987) was ahead of his time when he argued for something like schemata, what he

[10] In earlier papers (LaPolla 1990, 1993, 1996) I have compared patterns of syntactic behavior in Chinese with those in accusative, ergative, active, and Philippine type languages, and have shown that Chinese does not pattern like any of those systems. I have argued this is because Chinese has not grammaticalized a syntactic pivot for any of its constructions. Chinese therefore should not be considered accusative, ergative, active, or of the Philippine type, but is it another type, possibly called a 'neutral' type, or is it a non-type? Given the facts mentioned above, and others of a similar nature, the tendency has been to see Chinese as another syntactic type, to try to make a syntactic relation out of topic or topic chain (Huang 1989, Shi 1989, Her 1991), or to see 'topic prominence' as a syntactic type in opposition to 'subject prominence' (as many have done based on Li and Thomspon's (1976) original proposal of these concepts). I would like to argue instead that a lack of evidence of constraints such as we find in Chinese is precisely that, a lack of constraints. When we say 'type', we mean a set of constraints of a certain type, and if a type is a set of constraints, then the lack of evidence of constraints in Chinese is evidence of the lack of a type, not a separate type. There are ways that Chinese has grammaticalized constraints that English has not, such as numeral classifiers, but in terms of the constraints associated with subject in English, Chinese simply has not grammaticalized them, and so what we get is less constrained inference.

called 'idioms', and combinations of schemata, what he called 'syntactic blends' to form new syntactic structures, and attempted to show 'the permeation of the entire grammatical structure by threads of idiom' (1961:366). He argued against a purely generative view of grammar, suggesting that our use of grammar was partly creative and partly a matter of memory:

> At present we have no way of telling the extent to which a sentence like *I went home* is a result of invention, and the extent to which it is a result of repetition, countless speakers before us having already said it and transmitted it to us in toto. Is grammar something where speakers 'produce' (i.e. originate) constructions, or where they 'reach for' them, from a preestablished inventory, when the occasion presents itself? ... Probably grammar is both of these things ... (Bolinger 1961:381).

As Matisoff (1979[2000]:xv) says in talking about the prepatterned, collocational nature of language use,

> Entire conversations can be made up of formulaic expressions so naturally that the interlocutors are not disturbed by their lack of "generative originality"—indeed, quite to the contrary: there is great comfort and security to be derived from fitting into a well-worn communicative groove.[11]

The book in which this quote appears is a collection of hundreds of Yiddish psycho-ostensive expressions, showing just how prepatterned and collocational language use can be. A corollary of this view of language is that there are then no clear lines between lexicon, morphology and syntax, as they form continua of generalness and rigidity (the degree to which they are fixed) (see Bolinger 1976:3; cf. also Langacker 1987).

Looking at language this way makes possible explanations not only of why a particular type of marking develops, but also of why the use of marking that has already developed becomes extended in predictable ways, such as the development of agentive marking from ablative marking or the extension of reflexive marking to middle situations (see LaPolla 1995b). The development is in the direction of greater specificity and a more constrained set of possible interpretations, utilising resources already present in the language when possible.

This view of language development also has a number of other important implications for linguistic theory. I will mention three here:

(a) As languages differ in terms of constraining interpretation, both in terms of constraining or not constraining a particular type of interpretation (functional domain), and also in the degree to which the interpretation is constrained and how it is constrained, the differences between languages are gradient differences, not simple parameters.

[11] See also Aijmer (1996) on preset conversational routines.

(b) As these constraints are the result of grammaticalisation, they are therefore not genetically hard-wired.

(c) (a second order conclusion) The human language ability then can not be an autonomous and genetically programmed module; language development and use must be based on general cognitive structures. In short, from the point of view presented in this paper, saying that there are genetically determined parameters for language features, such as [± configurational], makes no more sense than saying that there are genetically determined parameters for other conventionalised behaviors, such as [± necktie-wearing].

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9 *From discourse to grammar in Tamang: topic, focus, intensifiers and subordination*

MARTINE MAZAUDON

1 Introduction

Although the general classification of Tibeto-Burman languages remains uncertain, the Tamang language of Nepal belongs clearly in the broad group which Robert Shafer (Shafer 1955) called the 'Bodish Section' of the 'Bodic division' of Tibeto-Burman, of which Tibetan is the best known member. The Bodish section consists of two main branches, the Bodish Branch, containing classical Tibetan and all the so-called 'Tibetan dialects', which share the innovation of *bdun* for 'seven', and the 'Tamang Branch', earlier named 'Gurung Branch' by Shafer on account of the fact that the Gurungs, being soldiers in the British army, were the most visible members of this group. For the earlier scholars, the Tamang branch consisted of Tamang (also called 'Murmi'), Gurung and Thakali (also called 'Thaksya'), to which have been more recently added Manangke, Nar-Phu and the Seke dialects (from the group of villages known as Panchgaon, the 'five villages' in Nepal), plus Chantyal, which is in a very bad state of repair. All of these have dialectal variants or sub-dialects. All languages of the Tamang Branch share a four-tone tonal system resulting from a recent two-way tonal split of what can be reconstructed as an earlier two-tone system, not shared by Tibetan in any of its dialects. If not reconstructible to Proto-Tibeto-Burman, as I believe it is not (but this remains an open question), this proto two-tone system is a common innovation of the Tamang Branch.

Except for the northernmost members of the group, the Seke and Manang dialects, which underwent some recent Tibetan influence on their grammar, languages of the Tamang branch have a very plain verbal morphology, exhibiting none of the developments

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