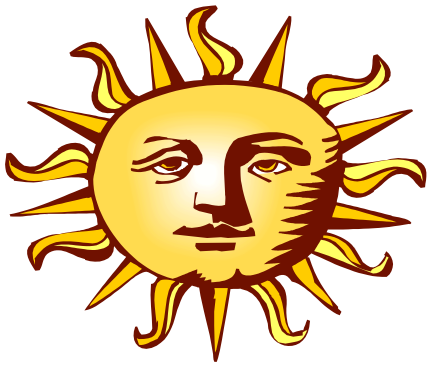
High Desert Linguistics Society

Proceedings of the Fourth Annual
High Desert Linguistics Society
Conference
Spring, 2001



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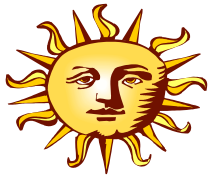

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The HDLS Conference in 2001 attracted a set of academically solid papers representative of an incredibly wide range of interest areas. As coordinators of the conference and editors for these proceedings, we were excited to find that the selection of papers generated a great amount of interest and some very lively and insightful discussions. Thus, HDLS 4 was successful in maintaining the spirit of HDLS' original mission statement for the annual conference:

> *to provide a forum in which students and other presenters meet to exchange ideas, research, and criticism in the spirit of collegiality and support*

HDLS would like to extend special thanks to our two keynote speakers: Shana Poplack and Sherman Wilcox. We are also very appreciative of the on-going support of the Linguistics Department at the University of New Mexico and the Department Administrator, Nancy Montoya. HDLS is also grateful for the high level of support from the faculty at UNM and the Department Chair, Professor Joan L. Bybee. We would also like to thank the officers of HDLS, President, K. Aaron Smith and Treasurer, Dawn Nordquist, as well as the Abstracts Committee: Candace Maher, Gabriel Waters, Catie Berkenfield and K. Aaron Smith. HDLS also acknowledges Laurel Standley for her work in coordinating the signed-language interpreting services for the conference.

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PASSIVE VOICE CONSTRUCTIONS IN MODERN IRISH

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1. INTRODUCTION.

This paper is about the passive construction, of which Irish has two primary forms, the personal passive and its variants, and the impersonal. An empirical question is posed as to whether a third passive form exists within the language, that of a functionally defined GET-passive.

The hypothesis in this paper is that the commonality underlying each of the passive constructions casts a different component of the event frame into the foreground, in the sense of a "windowing of attention" (Talmy 1996a).

Irish is a VSO language and therefore, in common with the other Celtic languages, the order of elements in the structure of transitive sentences is verb-subject-object. The verb and the subject are tightly bound.

The functional approach in this paper makes use of many of the insights of Role and Reference Grammar (RRG). In the Role and Reference framework (Van Valin 1993, Van Valin & LaPolla 1997), the semantic representation of sentences is based on the lexical representation of the verb. RRG employs a decompositional representation based on the theory of Aktionsart of Vendler (1967) and directly builds upon Dowty (1979, 1986, 1989, and 1991). The lexical representation of a verb or other predicate is its logical structure.

The semantic representation of an argument is a function of its position in the logical structure of the predicate and the RRG linking system refers to an element's logical structure position. RRG posits two generalised semantic roles, or in Van Valin's terminology, "semantic macroroles", which play a central role in the linking system. The macroroles are actor and undergoer, and they encapsulate the usually accepted clusters of thematic roles. They are the primary arguments of a transitive predication. In an intransitive predicate, the single argument can be either an actor or an undergoer, depending on the semantic properties of the predicate.

The relationship between the logical structure argument positions and macroroles is captured by the Actor-Undergoer Hierarchy (AUH). In this, the leftmost argument in terms of the hierarchy will be the actor and the rightmost argument will be the undergoer. Transitivity in RRG is therefore defined semantically in terms of the number of macroroles of a predicate.

The linking between semantics and syntax has two phases. The first phase consists of the determination of semantic macroroles based on the logical structure of the verb (or other predicate) in the clause. The second phase is concerned with the mapping of the macroroles and other arguments into the syntactic functions.

2. THE PERSONAL PASSIVE.

The language supports three variants of the personal passive construction, each of which involves the substantive verb in a periphrastic form. These relate to the nature of

the aspect and are, accordingly: the progressive, the prospective and the perfective (Ó'Siadhail 1989:294, Stenson 1981:145*ff*, Russell 1995:100*ff*).

They are passives (i.e. personal, not impersonal, passives) in the sense that a noun phrase, which does not represent the agent, appears as the subject of the substantive verb in the first argument slot following the substantive verb in the position reserved for the grammatical subject. The agent can optionally be represented obliquely by a prepositional phrase introduced by the preposition *ag* 'at' or *ó* 'from' and containing the nominal denoting the agent.

We can distinguish among three different, but related forms, of the personal passive by reference to the following schemata. The specific prepositions in each of the schema are a necessary part of the constructions.

Personal Passive[1]

(1) Perfective Passive [SUBV $NP_{\textbf{undergoer}}$ VA (+ $ag_{\textbf{PP}}$ $NP_{\textbf{actor}}$) …]

(2) A: Progressive Passive [SUBV $NP_{\textbf{undergoer}}$ (*dh*)$á_{\textbf{PP}}$ + $ADJ_{\textbf{possessive}}$ VN (+ $ag_{\textbf{PP}}$ $NP_{\textbf{actor}}$) …]
or
b: Progressive Passive [SUBV $NP_{\textbf{undergoer}}$ $i_{\textbf{PP}}$ $ADJ_{\textbf{possessive}}$ VN …]

(3) Prospective Passive [SUBV $NP_{\textbf{undergoer}}$ $le_{\textbf{PP}}$ VN (+ $ag_{\textbf{pp}}$ $NP_{\textbf{actor}}$) ….]

The personal passive construction reframes the event with a focus on the resulting state or the condition of the undergoer participant, depending on the particular variant of the personal passive. This state may be static if the action is completed, as in a perfective passive, or dynamic, as in a progressive passive construction. Each of these potential situations is reflected in the choice of the passive construction template employed. This process of reframing the event to focus on a resulting state or undergoer involves the use of a BE verb[2], that is, the substantive verb (but never the copula). It also involves the use of less finite verb form, i.e. a verbal adjective or verbal noun, the removal of the actor participant, or the demotion of the actor participant to an oblique position in the syntax. In the personal passive construction, the actor is subject to demotion or suppression while the undergoer carries the stative-resultative aspects of the event in focus. As we will see from our examples, the personal passive is usually not agent deleting but agent demoting.

We now examine the variants of the personal passive constructions, starting with the perfective variant of the personal passive, and following this, with the progressive and prospective variant constructions respectively.

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[1] Legend:

SUBV:	Substantive verb	VN:	Verbal Noun
VA:	Verbal Adjective	PP:	Preposition

[2] Irish has two forms of the verb 'to be', the copula *is* 'be' and the substantive verb *tá* 'to be'. The substantive verb is the only verb of 'to be' found with personal or impersonal passive constructions. The copula never takes the passive form. Please refer to Section 4 for details of the substantive verb and the impersonal passive construction.

2.1 PERFECTIVE VARIANT OF THE PERSONAL PASSIVE.

(4) *Tá an leabhar leite agam.*
Be:SUBV-PRES the:DET book:N read:VA at:PP+me:PN
LIT: 'Be the book read at me'.
The book is read by me**.**
[**BE'**(**leigh'**(0, an leabhar), **ag'**(mé))]

The agentive phrase is optional and the construction may equally well be expressed without any mention of the agent (5).

(5) *Tá an leabhar leite.*
Be:SUBV-PRES the:DET book:N read:VA
LIT: 'Be the book read'.
The book is read.
[**BE'**(**leigh'**(0, an leabhar))]

2.2 PROGRESSIVE VARIANT OF THE PERSONAL PASSIVE.

2.2.1 THE (A) TEMPLATE FORM OF THE PROGRESSIVE PASSIVE CONSTRUCTION.

(6) *Tá an doras dhá phéinteáil agam.*
Be:SUBV-PRES the:DET door:N to:PP+its:POSS-ADJ painting:VN by:PP+me:PN
LIT: 'The door is to its painting by me'.
The door is being painted by me.
[**do'**(0, [**BE'**(**dhá'**(**péinteáil'**(0, an doras), ag'(mé)))])]

(7) *Bhí hataí agus miotógaí dhá scabadh fríd an aer.*[3]
The hats and belongings were being scattered through the air.
Bhí hataí agus miotógaí dhá scabadh
Be:SUBV-PRES hats:N and:CONJ belongings:N to:PP+for:PP scattering:VN
fríd an aer
through:ADV the:DET air:N
[**frid an aer**'([**do'**(0, [**BE'**(**dhá'**(**scabaigh'**(0, hataí agus miotógaí)))])])]

(8) *Bhí an gloine á bhriseadh.*
Be:SUBV-PAST the:DET glass:NP to:PP+for:PP breaking:VN
LIT: 'The glass was to its breaking'.
The glass was being broken.
[**do'**(0, [**BE'**(**á'**(**bris'**(0, an gloine)))])]

(9) *Bhí an liúdar á rúscadh agus na bádaí gann.*
Be:SUBV the:DET coal-fish:N for:PP stirring:VN and:CONJ the:DET boats:N scarce:N
LIT: 'The coal-fish were for stirring and the boats were scarce'.
The coal-fish were being stirred but the boats were scarce.
[**do'**(0, [**BE'**(**á'**(**rúscaigh'**(0, an liúdar))) & (**gann'**(na bádaí)])]

[3] As a convenience to the reader, where the gloss of the data example runs over a line we will state the sentence under discussion in standalone format at the beginning of the example.

2.2.2 THE (B) TEMPLATE FORM OF THE PROGRESSIVE PASSIVE CONSTRUCTION.

The constructions below follow the (**b**) schema and involve the possessive adjective. In these examples the undergoer of the action is affected and this participant appears in position next after the substantive verb with the activity denoted in a non-finite form as a verbal noun.

These examples are passive and progressive (Ó'Siadhail 1989:295), reflecting an ongoing dynamic state. The verbs, here expressed in the non-finite verbal noun form, are a special class of passive form of stative verbs which refocus the view on the state in a certain way. Crucially, in these examples, the actor is the initiator of the action and is the subject. The same participant, however, is also in the *state of undergoing the action* denoted by the verb in verbal noun form. There is no demotion or promotion.

(10) Schema Template for first person singular participant:
Tá mé$_1$ i mo$_1$ ***VN.***
LIT: 'I am in my VN-ing'.
I am VN-ing.
[**BE'**(mé, (**i**'(**mo'**(VN))))]

(11) *Tá mé i mo chodladh.*
Be:SUBV-PRES me:PN in:PP my:POSS-ADJ sleeping:VN
LIT: 'I am in my sleeping'.
I am sleeping.
[**BE'**(mé, (**i**'(**mo'**(chodladh))))]

(12) *Tá mé i mo chónaí.*
Be:SUBV-PRES me:PN in:PP my:POSS-ADJ living:VN
LIT: 'I am in my living'.
I am living.
[**BE'**(mé, (**i**'(**mo'**(chónaí))))]

Common to each of these examples is the utilisation of the substantive verb followed by the clause subject, followed in turn by the preposition *i* 'in' and a possessive adjective coindexed with the subject, followed immediately by the verbal noun. No oblique actor is specified, or can be specified, because of the nature of the construction.

2.3 PROSPECTIVE VARIANT OF THE PERSONAL PASSIVE.

Constructions in the prospective variant of the personal passive are classified as imperfective as they do not denote an action that has finished. Instead, the action has not yet taken place but is expected to occur at some future time.

2.3.1 ACTIVE PROSPECTIVE CLAUSE.

(13) *Tá mé le leamh an leabhair.*
Be:SUBV me:PN with:PP reading:VN the:DET book:N
I am to read the book.
[**BE'**(**le'**(**léigh'** (mé, an leabhar))]

2.3.2 PASSIVE PROSPECTIVE CLAUSE.

(14) *Tá an leabhair le leamh agam.*
Be:SUBV the:DET book:N with:PP reading:VN at:PP+me:PN
LIT: 'Be the book to read at me'.
The book is to be read by me.
[**BE'**(**le'**(**léigh'**(0, an leabhar)), (**ag'**(mé)))]

(15) *Tá anál an tsaoil seo le mothú ag éinne ar leacacha an bhaile.*
LIT: 'The breadth of this life is to be felt by anyone on the pavingstones of the town'.
The breadth of life is to be felt by anyone on the town streets.
Tá anál an tsaoil seo le mothú ag éinne
Be:SUBV-PRES breadth:N the:DET life:N this:DET with:PP feeling:VN at:PP anyone:N
ar leacacha an bhaile
on:PP flagstones:N the:DET town:N
[**ar leacacha an bhaile'**([**BE'**(**le'**(**mothaigh'**(0, anál an tsaoil seo))), (**ag'**(éinne))])]

2.4 PERSONAL PASSIVE SUMMARY.

In the personal passive constructions of modern Irish, the actor is backgrounded by demotion to an oblique position within a prepositional phrase introduced by *ag* 'at/by', or it is deleted altogether. The next candidate participant in the logical structure to become the grammatical subject in the syntax is the undergoer. This gives the appearance that the object of the active verb is promoted to become the subject of substantive verb in the personal passive construction irrespective of variant. This is, however, a side effect of the defocusing (in the sense of Shibatani 1985) of the actor of the active clause in the passive voice construction.

A number of other voice constructions, specifically the reflexive, middle, and reciprocal (Nolan 2001), appear to have qualities in common with the personal passive. Described in terms of promotion and demotion, they all appear to "promote" or "upgrade" the grammatical object to subject status in some way and may even indicate a structural similarity between subject and object.

We now examine the impersonal passive construction.

3. THE IMPERSONAL PASSIVE.

3.1 THE IMPERSONAL PASSIVE CONSTRUCTION.

The impersonal passive verb form occurs with all verbs of Irish, across all tenses, whether intransitive or transitive, The impersonal passive form is also to be found productively with the substantive verb[4] across all tenses. It does not under any circumstances occur with the copula verb. The impersonal passive form can be followed by a prepositional phrase, but only one that is introduced by *le* 'by/with' or *ó* 'from'.

In (16), the matrix verb is in the impersonal passive form. No subject is expressed in the clause. A grammatical object is expressed in the form of a third person pronoun, marked with accusative case. The marker *féin* is post adjacent to the grammatical object of the sentence giving an emphatic interpretation. Emphatic use of *féin* with a

[4] Refer to Section 4 for discussion on the impersonal passive form of the substantive verb.

grammatical object is sanctioned, as simple proximity to the object entity is all that is required. This example illustrates the use of *féin* with an impersonal passive construction but deployed in an emphatic mode only, and not reflexively.

(16) *Tugadh é féin chun na modh-scoile i mBaile Átha Cliath ina dhiaidh sin.*
LIT: '(Someone) brought him (self) to the model school in Dublin after that'.
He himself came to the model school in Dublin after that.
Tugadh é féin chun na modh-scoile.
Came:V- IMPERS-PASS-PAST he:PN self:PART to:PP the:DET model-school:N
i mBaile Átha Cliath ina dhiaidh sin
in:PP Dublin:N in:PP after:ADV that:DET
[**cun'**(na modh-scoile$_3$, [**i'**(BAC$_4$, [**ina'**(diadh sin, [**do'**[x$_1$, [**tugadh'**(x$_1$, [**é$_2$**'(féin$_2$)])]])])])]
Where : **x$_1$** is an animate and human entity,
and BAC is used as an abbreviation for Baile Átha Cliath.

Example (17) has a construction that, at first glance, appears unusual in that it contains two conjoined clauses, both with the impersonal passive form of their respective verbs.

In addition, the first clause has apparently two arguments and the marker *féin* associated with the second of these in post adjacent position. The second clause has only one argument, the clausal object.

A contributor to the complexity of this sentence is these two arguments in the first clause, which look like subject and object. This cannot be, as the clause verb is in the impersonal passive form and cannot "promote" the object to subject position, in the sense of Givón (1984, 1990).

(17) *Tréigeadh an seanteampall é féin agus fágadh ina bhallóig é.*
LIT: '(Someone) deserted the old church itself and (someone) left it in ruins'.
The old church itself was deserted and left in ruins.

Tréigeadh ***an seanteampall*** ***é*** ***féin***
(Someone) deserted:V- IMPERS-PASS-PAST the:DET old:ADJ+church:N it:PN self:PART
agus fágadh ina bhallóig é.
and:CONJ (someone) left: V-IMP-PER-PAST in:PP ruin:N it:PN
[**do'**(x$_1$, [**tréig'**(x$_1$, [**an seanteampall$_2$'(é$_2$**'(féin$_2$))])])] &
[**do'**(x$_1$, **fág'**(x$_1$, [é$_2$, [**in'**[**a'$_2$**(ballóig)]]]))]
Where **x** is an animate and human entity, but unknown or irrelevant to the context.

The verb in the first clause actually has two participants as we can see in its logical structure. The first participant in LS is indefinite and specific, but human and animate. The second participant is specific but non-human and inanimate. The problem lies with a potential ambiguity in the clause, which is only removed by the insertion of *é féin*. A speaker uttering *Tréigeadh an seanteampall féin …* would be ambiguous between these two readings: 1) 'The old church itself was abandoned … ', and 2) 'Even the old church was abandoned … '.

To disambiguate the meaning to the intended first reading it is necessary for the speaker to replace *féin* with ***é féin*** in the clause, hence the apparent strangeness. The additional "argument" is a dummy and does not take an argument position or increase the valency in any way. The marker *féin* is used emphatically in this sentence and not reflexively. In the first clause, there is no visible human subject to act as reflexive antecedent, as the construction is an impersonal passive with no subject in the syntax.

All Irish verbs except the copula have an impersonal passive form. With the impersonal passive form of a verb, no specific definite actor is elaborated in logical structure. The actor is instead specific but indefinite. The actor remains specific because we are committed to its actual existence, but is indefinite to the degree that there is no subject available in argument structure. The *type* or *kind* of this specific indefinite actor is animate, usually human.

3.1.1 Impersonal Construction with an Actor Coded Obliquely.

The examples here provide evidence that the actor may be deployed obliquely in impersonal passive constructions. This appears to be a recent phenomenon in the language.

The example in (18) of the impersonal passive does not have an actor expressed in subject position and the verb stem has the appropriate impersonal ending. The inanimate and non-human undergoer of the sentence appears as the grammatical object. This example is interesting for two reasons. The first is that it deploys the phrase *le chéile* 'together' that is normally used as a trigger for reciprocity (Nolan 2001). Use of the marker phrase *le chéile* 'together' is not reciprocal here as no actors are expressed in subject position. The second reason is that the clause, while impersonal, has an actor coded obliquely via a prepositional phrase introduced by *ag* 'at/by'. The actor that is obliquely expressed is not plural, having singular number. The phrase *le chéile* in this example simply denotes manner in relation to the verbal action. Because English does not have an impersonal passive, the gloss does not quite capture the sense of the sentence. This is better expressed in the literal gloss.

(18) *Cuireadh an tuarascáil parlaiminte le chéile ag Astrid Thors MEP; ball de phobal na Suailainnise san Fhionlainn*.
LIT: '(Someone) put the parliamentary report together by Astrid Thors MEP; a member of the Swedish people in Finland'.
The parliamentary report was put together by Astrid Thors MEP; a member of the Swedish community in Finland.
Cuireadh *an* *tuarascáil parlaiminte le* *chéile* *ag*
Put:V-IMPERS-PASS-PAST the:DET report:N parliament:N with:PP together:PART by:PP
Astrid Thors *MEP;*
Astrid Thors:N MEP:N
ball *de* *phobal* *na* *Suailainnise san* *Fhionlainn*
member:N of:PP people:N the:DET Swedish:N in:PP+the:DET Finland:N
[**do'**(x_1, [**cuir'**(x_1, (**le chéile'**(an tuarascáil parlaiminte**,** (**ag'**(Astrid Thors MEP$_1$)))))])]
Where : $\mathbf{x_1}$ is an animate and human entity. In this instance, it is the entity expressed obliquely in the prepositional phrase, Astrid Thors MEP.

In example (19), we demonstrate another example of an oblique actor recorded within an impersonal passive construction. The impersonal matrix verb and the verbal noun in this example are both instances of different forms of the same verb coexisting in the same sentence and delivering different functions. No subject is syntactically expressed in the sentence, as to be expected. The grammatical object is inanimate and non-human, being the quantity of money to be allocated. This object of the impersonal passive is the subject of the verbal noun appearing to the left of the verbal noun phrase. The verbal noun is immediately followed by the prepositional pronoun *acu* 'by them', marked for accusative third person plural. This is co-referential in the logical structure with the specific

indefinite human animate actor denoted by $\mathbf{x_1}$. This specific indefinite human animate actor is not overtly expressed as grammatical subject in the syntax.

(19) *Caithfear 1.39 milliún Euro (£1.2 milliún) á caitheamh acu ar chúrsaí Bascaise do mhúinteoirí scoile*.
LIT:'(someone) will throw 1.39 million Euro (£1.2 million) for spending by them on Basque classes for school teachers'.
1.39 million Euro (£1.2 million) will be allocated for spending by them on Basque classes for schoolteachers.
Caithfear *1.39 milliún Euro (£1.2 milliún)*
Throw:V-IMPERS-PASS-FUT 1.39 million Euro (£1.2 million):NP
á *caitheamh* *acu* *ar* *chúrsaí* *Bascaise*
to:PP+for:PP spending:VN by:PP+them:PN on:PP classes:N Basque:N
do *mhúinteoirí* *scoile*.
to:PP teachers:N school:N
[**ar'**(chúrsaí Bascaise'**(do'**(mhúinteoirí scoile,
[**do'**(x_1, [**caith'**(x_1, (**á'(caith'**(1.39 milliún Euro**,** (**ag'**($siad_1$))))))])]))]
Where : $\mathbf{x_1}$ is an animate and human entity.

3.2 Discussion on the Impersonal Passive.

What is common to the impersonal passive constructions in this section is that the actor is backgrounded to the extent that it becomes indefinite, and not, in any way, in focus. The *type* or *kind* of the actor is available as animate, usually human. Crucially, the actor must be specific while indefinite for quite particular reasons. Semantically, the impersonal construction is transitive with two participants recorded in the logical structure, an actor and undergoer. The actor is, however, an "impersonal agent". The clause is syntactically intransitive in that only one argument is expressed in the syntax, that of the undergoer which links to grammatical object. The actor is unexpressed and consequently there is no overt subject in the syntax. However, as the object stays in the same position and maintains object marking, the situation that holds at the level of the semantics *must* be visible to the syntax. Specifically, the object is not "promoted" to subject in this construction and the unexpressed actor is noted in the syntax by the device of marking by a suffix on the matrix verb. The behaviour of the clause object is very evident when the nominal is a pronoun.

Haspelmath (1997) has recently examined indefinite pronouns across a substantial number of the world's languages, over nine different functional domains. These domains are: specific known, specific unknown, irrealis non-specific, question, conditional, indirect negation, comparative, direct choice and free choice. He finds that in most languages several indefinite pronouns overlap in their distribution, that is, some functions may be expressed by several different indefinite pronouns.

For Irish, Haspelmath (1997:278) identifies an inventory of three series of indefinite pronouns, all of which are derived from generic nouns. The series consists of 1) the non-emphatic *éigin* 'some' series, 2) the negative-polarity series marked by *aon* 'any', and 3) the emphatic *ar bith* 'at all' series. An example of an active clause with specific known/unknown is:

(20) *Dúirt* *duine éigin* *liom* *é.*
Told:V-PAST person:N some:PN with:PP+me:PN it:PN
Somebody told it to me.

[**do'**(duine éigin, (**dúirt'**(duine éigin, (**le'**(mé, é)))))]

The impersonal passive equivalent of the above clause, with exactly the same meaning, is:

(21) *Dúradh liom é.*
Told:V -IMPERS-PASS- PAST with:PP+me:PN it:PN
Somebody told it to me.
[**do'**(x, (**dúirt'**(x, (**le'**(mé, é)))))]

This evidence suggests that the impersonal passive, with the conflated specific indefinite subject, is an extension of the cline within the functional domain of indefiniteness. The agentive *indefinite* actor and syntactic subject of the active clause in (20) is made more indefinite in the impersonal passive (21) by the backgrounding to the extent that it is no longer explicitly expressed in the syntax of the impersonal passive. We still have a commitment to the actual and real existence of the actor that is now expressed at the semantic level only, in logical structure, and, because of this, it is *specific but indefinite*. The indefiniteness hierarchy may therefore be:

(22) *sé/sí/siad* 'he/she/them' ___ *duine* 'person' ___ *aon* 'any' ___ **Impersonal passive**
with conflated specific indefinite subject

Within these examples, the actor is backgrounded in the semantics of logical structure but still visible to the syntax as a conflated subject morphologically recorded on the verb. The evidence for this is that the object does not, and cannot, occupy the grammatical subject position in these constructions. The subject that is conflated is specific and indefinite, animate and human. Because this participant is *specific but indefinite*, the behaviour is very similar to that of normal pronouns when expressed in synthetic forms of the verb, for instance, the third person pronoun with these human attributes.

My argument here is that the behaviour of the impersonal passive is in line with synthetic verb type behaviours, i.e. 1st person singular and 1st person plural, and others, across the tenses. Irish commonly exhibits this mix of synthetic and analytic usage's, but to a greater or lesser degree depending on the region or locality (O Siadhail 1989, Stenson 1987). The impersonal passive behaviour is motivated by the use of the device of conflated subject as a means of backgrounding, but not fully deleting, the actor, and of highlighting the action of the verb itself.

We have, however, attested several examples above where an oblique agent is expressed at the end of the clause in the same position as the oblique agent of a personal passive. This appears to only occur in more recent usages of speech and may be indicative of a change in the underlying template on which the impersonal passive is constructed.

4. IMPERSONAL PASSIVE OF THE SUBSTANTIVE VERB.

4.1 THE SUBSTANTIVE VERB.

Irish has two forms of the verb 'to be', the copula *is* 'be' and the substantive verb *tá* 'to be'. The substantive verb can take a conjugation across all the tenses. For each of

those tenses it also has an impersonal passive form. The substantive verb therefore fully supports the impersonal passive construction.

All substantive verb constructions therefore have a corresponding impersonal passive construction. This means that a speaker may choose to utilise the active form of a matrix verb, or may instead utilise a substantive verb construction for the personal passive with any of the three variants discussed earlier in the first section of this paper. It also means that personal passive forms using the substantive may also directly take the impersonal passive form of the substantive construction.

4.2 The Impersonal Passive Form of a Substantive Verb.

An impersonal passive form of a substantive verb in a construction that is imperfective is illustrated in example (23). The state-of-affairs denoted by the clause is that of a progressing ongoing activity. The actor of the construction is backgrounded and does not appear anywhere in the syntax. The denoted action is represented by the verbal noun *obair* 'working', and this is fronted by the preposition *ag* 'at'. No verb undergoer is expressed and therefore no clause object is available to the syntax. The verb *obair* 'work' can also be deployed with the impersonal passive form of the verb *obair* itself, or in any of the variants of the personal passive.

(23) *Bítear ag obair.*
Be:SUBV-IMPER-PASS-HAB-PRES at:PP working:VN
LIT:'(Someone) was working'.
People were working.
[**do'**(x, [**BE'**(**ag'**(**obair'**(x)))])] where **x** is unspecified.

The example in (24) illustrates the impersonal passive form of the substantive verb, with a verbal noun form of a transitive verb denoting a progressing unbounded activity. No actor is expressed. The undergoer is expressed as the direct object of the verbal noun, that is, the direct object of the construction.

(24) *Bítear ag bhriseadh an gloine*
Be:SUBV-IMP-PASS-HAB-PRES at:PP breaking:VN the:DET glass:N
LIT:'(Someone) was breaking the glass'.
People were breaking the glass.
[**do'**(x, [**BE'**(**ag'**(**bris**(x, an gloine)))])] where **x** is unspecified.

The example in (25) contains three clauses of which the first utilises the impersonal passive form of the substantive verb. Like the previous example, there is no syntactic argument in subject position as, by definition, the verb is in the impersonal passive form. This particular clause also contains a verbal noun fronted by *á* 'to+for', usually deployed within the prospective passive variant of the personal passive. This clause is therefore an impersonal passive version of the progressive variant of the personal passive. The second clause contains a substantive verb and denotes the state of *a mac ar dhuine den fhuirinn* 'her son is a member of the crew'. The action of the first clause is concerned with the state denoted in the second clause.

(25) *Bhítear á aidhbhsiughadh díthe go rabh a mac ar dhuine den fhuirinn agus go rabh sé báithte.*

LIT: 'Someone was emphasising to her that her son was one person of the crew and that he was drowned'.
Someone was emphasising to her that her son was a member of the crew and that he was drowned.
Bhítear á aidhbhsiughadh díthe
Be:SUBV-IMPERS-PASS-HAB-PRES to:PP+for:PP emphasising:VN to:PP+her:PN
go rabh a mac ar dhuine den fhuirinn
to:PP be:SUBV-PRES her:POSS-ADJ son:N on:PP person:N of:PP+the:DET crew
agus go rabh sé báithte.
and:CONJ to:PP be:SUBV-PRES he:PN drowned:VA
[**do'**(í$_1$, ([**BE'**(x$_2$, (**á'**(**aidhbhsiugh'**(x$_2$)))] &
[**BE'**(a$_1$'(mac$_3$), (ar'(duinne, (de'(an fhuirinn)))))] &
[**BE'**(**báigh'**(sé$_3$))]

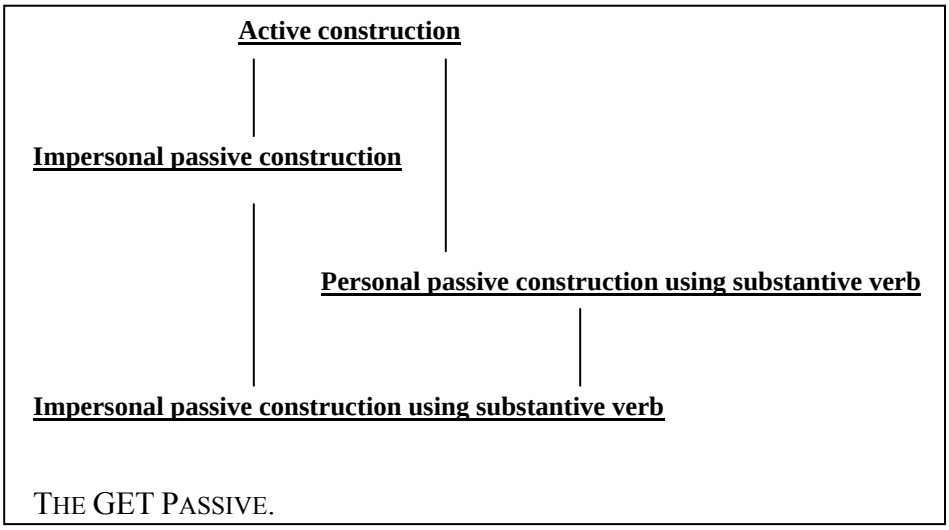
The third clause also contains a substantive verb and denotes the state of the son as *báithte* 'drowned'. The subject of this clause is *sé* 'he' and the state is recorded on the subject via a verbal adjective. This construction is therefore a typical example of a perfective variant of the personal passive. Its function is to describe the resultant state that holds after the action of the first two clauses in the construction.

We therefore have in the totality of this example an impersonal passive version of a progressive variant of the personal passive, followed by a substantive verb clause denoting a state-of-affairs of state and followed in turn by a substantive verb clause that employs the perfective variant of the personal passive.

4.3 Summary of the Impersonal Passive of the Substantive Verb.

The availability of the impersonal passive of the substantive verb means that a speaker has a considerable number of strategies that can be deployed as the situation demands. We diagram this map of possibilities in (26).

(26)



5. The GET Passive.

5.1 Background.

This section investigates whether there is a third passive construction to be found in Irish, that is, a GET passive. The GET passive is attested in many, but not all, of the world's languages (Siewierska 1984).

From the literature, the defining characteristics of the GET passive include the following, which may be used as a set of diagnostics tests to determine whether such a passive exists in Irish

(27) **GET Passive Characteristics**[5]

a. GET passives are "*normally used in constructions without an agent*" (Leech & Svartvik, 1994: 330).
b. GET passives place "*the emphasis on the subject rather than the agent, and on what happens to the subject as a result of the event*" (Quirk et al., 1985:161).
c. GET passives emphasise the subject referent's condition, which is "*usually an unfavourable condition*" (Quirk et al., 1985: 161).
d. GET passives "*describe events that are perceived to have either fortunate or unfortunate consequences for the subject*" (Siewierska 1984:135).
e. The GET passive is likely to have a human subject that is non-agentive, affected and involved, (Givón 1983:119*ff*).
f. The GET passive is more likely to be inchoative and punctual, that is, INGR rather then BECOME (Arce-Arenales, Axelrod and Fox.(1993:11*ff*).
g. A GET passive may have an agentive phrase in an oblique position, similar to a BE passive (Arce-Arenales, Axelrod and Fox. 1993:11*ff*).

5.2 *THE VERB* FAIGH.

Irish has a verb *faigh* 'get' that is a candidate for this construction in some of it usages. To determine whether it meets the required diagnostic characteristics, we need to look at its deployment over a number of GET constructions. The verb *faigh* has a different morphological shape over the tenses and for simplicity, we will use *faigh* to refer to these in a general way. The verb *faigh* has an impersonal passive form for each tense, a non-finite verbal noun and verbal adjective form. As well as having an impersonal passive form, the verb *faigh* can undergo each variant of the personal passive.

The verb *faigh* is transitive, taking two participants, an actor and undergoer. There is a quality about this verb in transitive usages under certain conditions that is particularly interesting. This is when the first participant is not an actor, but an undergoer, and the second participant is a nominal that represents a state. The action of the verb records, then, the fact of the first participant undergoing the state change identified by the nominal in the second participant position.

Even thought *faigh* constructions are transitive, there is a qualitative difference between the construction $fuair_{\mathbf{GET}}$ [X $NP_{\mathbf{entity}}$] and the construction $fuair_{\mathbf{GET}}$ [X $NP_{\mathbf{state}}$]. The second construction codes a state as a nominal, rather than as a verbal adjective as found in the perfective personal passive. The substantive verb is not employed.

The argument linked to subject position is that of the undergoer and not actor. The fact that the undergoer is coded in subject position reinforces the non-volitional and non-control attributes of the participant. No actor is coded. Indeed no actor coding in subject position is possible with this second construction in transitive form.

The construction is transitive with the undergoer coded as subject, and the state that affects the undergoer is strongly marked as a full nominal in clause object position. The relative coding of these arguments in the construction follows the animacy hierarchy

[5] Note: The underline in the quotations are mine in order to bring out certain points for discussion.

with the human and animate participant coded first as subject and the non-human and inanimate entity coded next as object. The focus of the event is on the resultant state that the undergoer will be in after the event.

Syntactically, the construction is transitive as can be seen from (28) and (29). Schematically the construction differs regarding the role of the participant that takes subject position in the syntax. In example (28) below, the **x** participant is expected to be the undergoer that receives the state change denoted by the second participant, the theme. The undergoer must be human and animate. The situation type is that of an achievement.

(28) *Fuair* ***x*** *bás.*
Got:V-PAST x:N death:N
LIT: '**x** got death'.
x got killed.
[(¬ (**bás'**(x)) & [**do'**(0, (**fuair'**(0, **bás'**(x)))) & **INGR** [**BE'**(x, bás)]]]

The above example may be compared to (29) where the **y** participant merely receives simple possession of the entity denoted by the second participant, the theme. No state change takes place in relation to the first participant. The first participant need not be human or animate in this version of the construction. The clause typically codes for an accomplishment situation type.

(29) *Fuair* ***y*** *an* *úl.*
Got:V-PAST y:N the:DET apple:N
y got the apple.
[**do'**(0, **fuair'**(0, an úl) & **BE'**(**at'**(y), an úl)

The situation types underlying the transitive clause are those of accomplishment (BECOME) or achievement (INGR), depending on whether the state change was instantaneous or gradual. This is reflected by either BECOME or INGR in the logical structure representations, along with possession of resulting state and the major state change on the undergoer actually affected by action of the verb, such that undergoer undergoes the state changes denoted in the second NP from the verb. Therefore, the first participant NP is not an actor but an undergoer, and the second participant NP is neither actor or undergoer but that of OTHER. Irish codes possession by use of the preposition *ag* 'at/by', as against ownership with *le* 'with' and we will see this reflected in the logical structure representations of these constructions.

In first example above in (28), **x** must prototypically be human and animate but, non-prototypically, must be animate at least. The NP *bás* 'death' is an nominal, from the verb *básigh* 'die', denoting the most prototypical state change that a human can undergo, that is, from animate to inanimate.

5.3 GET CONSTRUCTIONS THAT DEMONSTRATE THE STATE CHANGE.

5.3.1 STATE IS BENEFICIAL FOR UNDERGOER.

Example (30) illustrates a phenomenon that encodes a beneficial state change for the undergoer. The clause is transitive with two participants. The first participant is human and animate and the undergoer of the action, not the actor. The second participant codes the state change that the first participant will undergo. After the event has taken

place, the first participant will be transformed in a major way and will have, as a characteristic, the state denoted by the second participant. The state change will not be simple possession. What is important is the affectedness of the undergoer as a consequence of the event. The affectedness is beneficial to the undergoer in this particular example.

(30) *Fuair sé léigheas ar sin.*
Got:V-PAST he:PN healing/medicine:N on:PP that:DET
He got healed of that.
[[NOT [**BE'**(sé, léigheas)]] &
[**ar'**(sin, [**do'**(0, [**fuair'**(sé, léigheas)])])] & CAUSE BECOME [**BE'**(sé, léigheas)]]

The example in (31) is transitive with an undergoer participant as the clause subject. The object of the clause is complex with two conjoined nominals. A determiner with universal logical scope, *uile* 'every', ranges over the plural subjects, such that each member of the set of undergoers is affected by both of the states denoted in the complex sentence object. The affectedness represented by both states is beneficial to all of the undergoers.

(31) *Fuair an uile dhuine a chroí agus a aigneadh ar an tsliabh.*
Every person found their heart and their character on the mountain.
Fuair an uile dhuine a chroí
Got:V-PAST the:DET every:DET person:N their:POSS-ADJ heart:N
agus a aigneadh ar an tsliabh.
and:CONJ their:POSS-ADJ disposition:N on:PP the:DET mountain:N
[[NOT [**BE'**(an uile dhuine, a chroí agus a aigneadh)]] &
[**ar an tsliabh'**[**do'**(0, [**fuair'**(an uile dhuine, a chroí agus a aigneadh)])]] &
CAUSE BECOME [**BE'**(an uile dhuine, a chroí agus a aigneadh)]]

5.3.2 State Has Negative Consequences For Undergoer.

In contrast to the above examples, the affectedness in example (32) is detrimental to the welfare of the undergoer. The example in (32) is complex and contains two clauses. The first clause has a negative form on the verb *faigh* and shows that this phenomena is visible in this circumstance. An adverbial of time, with scope over the clause, gives the extent in time of the event. The second clause contains a substantive verb and a verbal noun fronted by the preposition *ag* 'at', diagnostic of an unbounded progressing activity. The first participant in the first clause is animate and human and the undergoer. No actor is coded. The second participant is inanimate and not human and denotes the state that affected the first participant, but expressed in the negative within the clause. The state of the undergoer acts as the depictive state for the second clause. The state-of-affairs of the second clause is an unterminated unbounded activity and this is a direct consequence of the resulting state of the first clause in the event action chain.

(32) *Ní fhuair sé a sháith am ar bith, agus bhí an t-ocras ag síor-phiocadh an ghoile aige.*
LIT: 'He did not get his sufficiency (of food) anytime at all, and the hunger was continually picking at his stomach'.
He never got enough to eat and the hunger was hurting his stomach.
Ní fhuair sé a sháith am ar bith,
Not:NEG got:PAST he:PN his:POSS-ADJ fullness:N time:N on:PP any:ADV
agus bhí an t-ocras ag síor-phiocadh.

and:CONJ be:SUBV-PAST the:DET hunger:N at:PP continual:ADJ+picking:VN
an ghoile aige
the:DET stomach:N at:PP+him:PN
[NOT [**BE'**(sé$_1$, (**a$_1$**'(sáith)))] &
[**ar bith'**(NOT [**do'**(0, [**fuair'**(sé$_1$, (**a$_1$**'(sáith))))])]] &
CAUSE BECOME [NOT [**BE'**(sé$_1$, (**a$_1$**'(sáith)))]]
& [**BE'**(an t-ocras, [**ag'**(**sior-piochadh'**(an ghoile, (**ag'**(sé))))])]

The example in (33) is transitive with a human animate undergoer as the first participant and a second nominal representing the state that will affect the first participant. An adverbial of time informs us as to when the event happened with respect to a certain point in tine known to the dialogue participants, that is, *ceithre bliana roimhe sin* 'four years before that'. The second nominal encodes the most major state change that a living human can undergo, that is, death. This is precisely what this example encodes. As a consequence of this event the animate human will be dead, that is, human but inanimate. The affectedness is not beneficial to the undergoer.

(33) *Fuair m'athair bás ceithre bliana roimhe sin.*
Got:V-PAST my:POSS-ADJ+father death:N four:NUM years:N before:ADV that:DET
LIT: 'My father got death four years before that'.
My father died four years before that.
[[NOT [**BE'**(sé, bás)]] &
[**ceithre bliana roimhe sin'**[**do'**(0, [**fuair'**(sé, bás)])]]
& CAUSE BECOME [**BE'**(sé, bás)]]

Example (34) and (35) demonstrate similar characteristics. The states described have two or more major negative consequences for the undergoer.

(34) *Fuair Brighid Ní Mhaoldoraidh íosbairt agus an-bhás ins an réagún a raibh sí.*
Brighid Ní Mhaoldoraidh got hardship and a violent death in the region that she was in.
Fuair Brighid Ní Mhaoldoraidh íosbairt agus an-bhás
Got:V-PAST Brighid Ní Mhaoldoraidh:N hardship:N and:CONJ violent-death:N
ins an réagún a raibh sí
in:PP the:DET region that:REL be:SUBV she:PN
[[NOT [**BE'**(Brighid Ní Mhaoldoraidh$_1$, íosbairt agus bhás)]] &
[**ins an réagún'**[**BE'**(sí$_1$, [**do'**(0, [**fuair'**(sí$_1$, íosbairt agus an-bhás)])])]]
& CAUSE BECOME [**BE'**(Brighid Ní Mhaoldoraidh$_1$, íosbairt)]
& CAUSE BECOME [**BE'**(Brighid Ní Mhaoldoraidh$_1$, an-bhás)]]]

(35) *Fuair sé cupla scannradh.*
Got:V-PAST he:PN several:DET frights:N
He got several frights.
[[NOT [**BE'**(sé, scannradh)]] &
[**cupla'** [**do'**(0, [**fuair'**(sé, scannradh)])]]
& CAUSE BECOME [**BE'**(sé, scannradh)]]

5.4 Discussion of the GET Passive Construction.

Not all GET constructions are functional GET passives, only those where the undergoer is the subject and the direct object encodes a state in which the undergoer will be transformed, in some non-trivial way. The GET passive is therefore not de-transitivising. It orders the participants such that the actor is not coded (or coded obliquely), and the undergoer is the clause subject.

A GET passive is not a syntactic passive in the same way that we understand a personal passive construction to be, rather it is a functionally defined passive that exhibits the characteristics mentioned earlier. In the type of GET construction that we have examined, we have found evidence that a particular subset of constructions precisely exhibits these characteristics under strictly defined constraints.

On the basis of this evidence, we claim that this is a functionally defined GET passive. We will place the functionally defined GET passive in relation to the other passive constructions analysed shortly. Before we can approach this we need to examine the word order in the passive constructions.

6. Word Order in the Passive Constructions.

We have already mentioned that Irish follows a **VSO** word order and that the subject is more closely bound to the verb than the object. Having looked at the form of each of the passive constructions, we can now briefly examine how word order is maintained through each. The word order in each construction including the active is reflected in (36). Clearly, we can see that the VSO order is maintained across each of the constructions.

(36)

Active:	VSOX
BE Passive:	SUBV Undergoer/$NP_{\mathbf{SUBJECT}}$ VA/VN (PP $NP_{\mathbf{IO}}$) (*ag* Actor/**NP**)
GET Passive:	V Undergoer/$NP_{\mathbf{SUBJECT}}$ NP**state**$_{\mathbf{OBJECT}}$
Impersonal Passive:	$V_{\mathbf{IMPER\text{-}PASS}}$+ *Indefinite_Human_Actor* ***SUBJECT*** Undergoer/$NP_{\mathbf{OBJECT}}$
BE Impersonal Passive:	$SUBV_{\mathbf{IMPER\text{-}PASS}}$+*Indefinite_Human_Actor* ***SUBJECT*** PP VN (Undergoer/$NP_{\mathbf{OBJECT}}$**)**

The need to preserve VSO order across all constructions can be understood to motivate the various construction schemata, and therefore, some of the behaviours of passives. For example, if the subject is deleted from the active clause with [V**S**O] then we are left with [VO], but this is confusing with intransitive and middle voice i.e. [**V NP].** If the subject is not deleted but simply demoted from [V**S**O] then we arrive at a structure of [VO**S]**, but this causes confusion with the interpretation of transitives using **[V NP NP**]. In the case of the impersonal passive where we have [V $NP_{\mathbf{DO}}$], the verb is marked morphologically to signal this fact, as we seen in our analysis.

The different construction templates are therefore necessary for the avoidance of structural confusion and the functional communication of the intended meaning of the speaker. Through out, the VSOX order is maintained. Indeed, from the evidence presented we can see that VSO order is maintained across each of the passive constructions discussed so far, and that it is necessary to do so, providing an interesting example of the conjunction of form and function.

7. A UNIFIED ANALYSIS OF THE PASSIVE VOICE CONSTRUCTIONS.

In this paper we have examined the personal passive (and each of its variants), the impersonal passive and the impersonal passive form of the substantive verb. Comrie (1977) has claimed that any explanation of the "*impersonal passive should be within the passive domain*". This means that ideally, the impersonal passive should be explainable in a unified way that includes the other passive voice constructions. We have demonstrated this in our analysis.

We posed a question as to whether a third passive forms exists, that of a functionally defined GET passive. To inform our analysis, we determined the characteristics of the GET passive from the literature in relation to its occurrence in the world's languages and these we used these as a set of diagnostics for testing our hypothesis. We demonstrated that sufficient evidence exists to suggest that our hypothesis is true, that Irish does have a functionally defined third passive construction, the GET passive.

7.1 WINDOW OF ATTENTION.

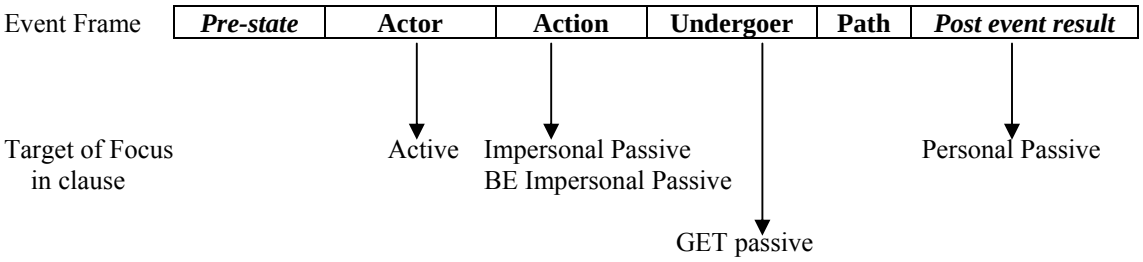
The commonality underpinning the passive constructions can be explained in terms of the windowing of attention analysis in the sense of Talmy (1996a), which concerns itself with operations on the event frame, i.e. backgrounding, foregrounding, or gapping of event participant elements. The strategies for different types of passive constructions are primarily motivated by the need to background the actor to some degree, or fully. This is informed by the need of a speaker to create a certain focus of some component of the event, that is, by focus considerations. This commonality between each of these passive forms is clearly demonstrated in (37). This indicates where the particular window of attention lies with each construction type.

(37) **Active Clause Construction:** The logical structure represents the event frame with the window of attention resting on the *actor*.
BE passive Construction: The logical structure represents event frame with the window of attention on the *resulting state on the undergoer*.
GET passive Construction: The logical structure represents the event frame with the window of attention on the *undergoer* that transforms to the resulting state.
Impersonal Passive Construction: The logical structure represents event frame with the window of attention on the *verbal action*.
BE Impersonal Passive Construction: The logical structure represents event frame with the window of attention on the *verbal action*.

7.2 EVENT FRAME.

We can posit an event frame that can highlight the following event structure in an adequate manner. Such a structure is indicated in (38).

(38) **Relationship between perspective on the event frame and clause type**



7.3 DIVERGENCES FROM THE CLAUSE PROTOTYPE.

In terms of divergences from a clause prototype, that is, the active transitive, we have found the following:

(39)

	Prospective passive:	SUB**V** **S**$_{undergoer}$ *le* VN (*ag* NP$_{actor}$)
	Progressive passive:	SUB**V** **S**$_{undergoer}$ (*dh*)*á* VN (*ag* NP$_{actor}$)
	Perfective passive:	SUB**V** **S**$_{undergoer}$ VA (*ag* NP$_{actor}$)
Prototype:	Active Transitive:	**V S O**
	Active Intransitive:	**V S** or SUB**V** **S** *ag* VN
	GET passive:	**V S**$_{undergoer}$ **O**
	Impersonal passive:	**V**$_{impersonal}$ + *Indefinite_Human_Actor* **SUBJECT** **O**$_{undergoer}$
	BE Impersonal passive:	SUB**V**$_{impersonal}$ + *Indefinite_Human_Actor* **SUBJECT** PP VN **O**$_{undergoer}$

By taking the active transitive clause as the base of the prototype we can project the divergences along two divergence dimensions. In one dimension we find substantive verb constructions with the undergoer as subject. These substantive verb constructions code for the three variants of the personal passive. In these, the verbal action is denoted by a verbal adjective in the first divergence and by a verbal noun in later divergences. The subject is optional in each. In the divergences dimension in the other direction following the prototype base we first have the active intransitive. This can take either of two typological forms. After the active intransitive form we get the functionally defined GET passive which has an undergoer as subject and an object NP that represents the state. This is followed by the canonical impersonal passive in the first instance and by the impersonal passive form of the substantive verb. There is a functional basis to these constructions in casting into focus particular elements of the event frame. Through each of these constructions the word order of VSO is maintained.

8. CONCLUSION.

We have analysed the passive constructions of modern Irish and demonstrated that they have an underlying commonality that is best explained in a functional analysis with an event frame perspective sensitive to prototypicality. This analysis takes the active transitive clause as the base prototype, from which the other constructions diverge. Included in this commonality is the functionally defined GET passive.

Throughout this paper we have seen evidence of a semantically motivated syntax. In this analysis we used a compositional approach in the tradition of Vendler (1967) and Dowty (1986, 1991) to characterise the interrelationship between the lexical semantics

and syntax of verbs in clauses. The insights of Role and Reference Grammar (Van Valin & La Polla 1997) allowed us to navigate a path through the well-documented problems that are associated with the use of thematic roles in describing argument structure. The analysis therefore does not depend on a taxonomy of discrete thematic roles. One important feature of RRG is the identification of an Actor-Undergoer hierarchy in the linking system between semantics and syntax.

We have characterised each of the passives found in modern Irish and provided evidence for the crucial role that event structure plays as a mediating factor between semantic and syntactic expression.

REFERENCES

Arce-Arenales, Manuel, Melissa Axelrod and Barbara A. Fox. (1993). Active Voice and Middle Diathesis. In Fox, B and P.J Hopper (1993). *Voice, Form and Function*. John Benjamins Publishing Company.

Comrie, B. (1977) . In Defense of Spontaneous Demotion: The Impersonal Passive, in: *Grammatical Relations. Syntax and semantics Volume 8*. Academic Press. London.

Dowty, David R. (1979). *Word Meaning and Montague Grammar*. Reidel. Dordrecht.

Dowty, David R. (1986). Thematic Roles and Semantics. *Berkeley Linguistics Society* 12: 340-54.

Dowty, David R. (1989). On the semantic content of the notion "thematic role". In B. Partee, G. Chierchia, and R. Turner (eds) *Properties, Types and Meanings*, volume 2, 69-130. Knuth. Dordrecht.

Dowty, David R. (1991). Thematic proto-roles and argument structure selection. *Language* 67: 574 - 619.

Givón, Talmy. (1981). Typology and functional domains, in: *Studies in Language* 5.2.

Givón, Talmy (1983). *Topic Continuity in Discourse: A Quantitative Cross-Language Study*. John Benjamin. Amsterdam and Philadelphia.

Givón, Talmy (1984). *Syntax: A Functional-Typological Introduction*. Vol. 1. John Benjamin. Amsterdam and Philadelphia.

Givón, Talmy (1990). *Syntax: A Functional-Typological Introduction*. Vol. 2. John Benjamin. Amsterdam and Philadelphia.

Haspelmath, Martin (1997). *Indefinite Pronouns.* Oxford Studies in Typology and Linguistic Theory. Oxford University Press. Oxford.

Langacker Ronald and Pamela Munro (1975). Passive and their Meaning, in *Language 51.4*.

Leech, Geoffrey & Svartvik, Jan (1994). *A Communicative Grammar of English*. Longman. London.

Nolan, Brian (2001). *Reflexive and Reciprocal Constructions in Modern Irish*. ALT conference on Reflexives, Middles and Reciprocals at the University of Tunis, Tunisia.

Ó Siadhail, Michéal. (1989). *Modern Irish*. Cambridge University Press. Cambridge MA.

Quirk, Randolph, and Crystal, David, (1985). A Comprehensive Grammar of the

English Language. Longman. London.
Russell, Paul. (1995). *An introduction to the Celtic Languages*. Longman London.
Shibatani, M. (1985). Passive and Related Constructions: A Prototype Analysis, in. *Language* 61.4.
Shibatani, Masayoshi. (1988). *Passive and Voice*. Typological Studies in Language. John Benjamin Publishing Company. Amsterdam, Philadelphia.
Shibatani & Thompson. (eds.) (1996). *Grammatical Constructions*, *their form and meaning*. Clarendon Press, Oxford.
Siewierska, Anna. (ed.). (1984). *The Passive: A Comparative Linguistic Analysis.* Croom Helm London.
Siewierska, Anna. (ed.). (1998). *Constituent Order in the Languages of Europe.* EmpiricalApproaches to Language Typology. Eurotype 21-1. Mouton de Gruyter. Berlin & New York.
Stenson, Nancy (1981) *Studies in Irish Syntax*. Narr, Tubingen.
Tallerman, Maggie. 1998. In (ed.) Siewierska, Anna: *Constituent word order in the Languages of Europe*. Empirical Approaches to Language Typology. Eurotype 21-1. Mouton de Gruyter. Berlin & New York.
Talmy, Leonard. (1978). Figure and Ground in Complex Sentences, in J. H. Greenberg (Ed). *Universals of Human Language iv: Syntax.* Stanford University Press. Stanford, California.
Talmy, Leonard. (1985). Lexicalisation patterns: Semantic Structure in Lexical Forms in T. Shopen (Ed), *Language Typology & Syntactic Description* iii: Grammatical Categories and the Lexicon. Cambridge University Press. Cambridge MA.
Talmy, Leonard. (1988). Force Dynamics, in language and cognition, *Cognitive Science* 12:49-100.
Talmy, Leonard. (1996a). Windowing of attention in language in *Grammatical Constructions*, *their form and meaning* by Shibatani & Thompson. Clarendon Press, Oxford.
Talmy, Leonard. (1996b). Fictive motion in Language and "Ception": The Emanation Type, in P. Bloom et al (Eds.), *Language and Space*. MIT Press. Cambridge MA.
Van Valin, Robert D. (1993). *A Synopsis of Role and Reference Grammar. In Advances in Role and Reference Grammar*, ed. R. D. Van Valin, Jr. 1-164. John Benjamins. Amsterdam.
Van Valin, Robert D. (1998) *Cross Linguistic Patterns of Linking*. MS. State University of New York ant Buffalo.
Van Valin, Robert D. and LaPolla, Randy J. (1997) *Syntax : structure, meaning, and function*. Cambridge textbooks in linguistics. Cambridge University Press. Cambridge MA.
Vendler, Zeno. (1967). *Linguistics in Philosophy.* Cornell University Press. Ithaca. NY.

TWO FORMS OF YES-NO QUESTIONS IN MANDARIN CHINESE: A FUNCTIONALIST ANALYSIS

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1. INTRODUCTION.

There are two basic forms of yes-no questions in Mandarin. One of them is known as the *-ma* question, which consists of an affirmative, and the particle *–ma* that is added to the end of the sentence as given in (1)[1]:

(1) Ni^{3} xi^{3}huan^{1} xiao^{3}bai^{2}tu^{4} ***ma***?
You like rabbit
'Do you like rabbit?'

The other type of yes-no question is called the *V-not-V* question, which is formed with the main verb followed by negation *bu*^{4} and the reduplicated verb. An example is indicated in (2) below:

(2) Ni^{3} ***xi^{3} (huan^{1}) bu^{4} xi^{3}huan^{1}*** xiao^{3}bai^{2}tu^{4}?
You like not like rabbit
'Do you like rabbits or not?'

Li and Thompson (1979, 1981) claim that the two types of yes-no questions in Chinese are different not only syntactically but also pragmatically. Furthermore, they state that *–ma* questions are used in either neutral or non-neutral context whereas *V-not-V* questions are restricted to use in neutral contexts. On the other hand, then, this paper provides a test of Li and Thompson's hypothesis. In order to provide a good source to test the hypothesis, language data was collected from native speakers of both child and adult conversation.

In addition to Li and Thompson's hypothesis, two types of yes-no questions are examined in terms of linguistic subjectivity. That is, I will propose that one of yes-no questions is associated with subjectivity but not the other. Accordingly, in the present paper, four research questions are posed: (1) In what circumstances would the speaker use *–ma* questions and *V-not-V* questions differently; (2) Is the *V-not-V* question only used in neutral contexts as Li and Thompson claim?; (3) What are the differences and/or similarities between adult and child conversational use of the two constructions of yes-no questions? and (4) which form of yes-no questions is more subjective than the other.

The present paper begins with a literature review regarding the two types of questions in Mandarin, including Li and Thompson's hypothesis. Next, language data from both child and adult speech are carefully examined in order to seek an answer to how native speakers use the two forms of yes-no questions differently. Then, the issue of

[1] The pinyin system is used to represent the Mandarin phonemes. Tones are identified as numbers form one to four, which is indicated as a superscript numeral following the morpheme (i.e. 1= high level, 2= high rising, 3= falling-rising, and 4= high falling).

linguistic subjectivity is addressed in order to examine the two types of yes-no questions in regard to subjectivity. Finally, conclusions about the use of yes-no questions are drawn.

2. PREVIOUS RESEARCH.

Li and Thompson (1979, 1981) state that the two constructions (i.e. '*-ma*' and '*V-not-V*') of yes-no questions in Mandarin are both syntactically and pragmatically different. As already stated, a *-ma* question is formed by adding a particle *–ma* to the end of the sentence while a *V-not-V* question consists of the main verb followed by a negative and a verb. Regarding the pragmatic difference between the two structures of yes-no questions, one of the examples shown by Li and Thompson occurs in the following context (1979, p201; 1981, p.550):

(3) Suppose you had always known that Wang did not eat apples. One day while having lunch with him, you were surprised that he had an apple for dessert; i.e., what he did was contrary to your assumption. Thus puzzled, you asked the question:

(a) Ni^{3} chi^{1} ping^{2}guo^{3} ***ma***?
You eat apple
'You eat apples'

(b) ??Ni^{3} ***chi^{1} bu^{4} chi^{1}*** ping^{2}guo^{3}?
You eat Not eat apples
'Do you eat apples'

Question A is perfectly natural in this situation. However, Li and Thompson (1979) argue that question (b) is strange in this context since "if the speech situation is in conflict with your assumption and you wish to ask a yes-no question to clarify the conflict, you cannot use *V-not-V* form for the question"(p.202). Another example has been indicated in the following situation: "a speaker sees that the hearer has returned" (Li &Thompson 1981, p.553) and asks the question:

(4) ou ni^{3} yi^{3}jing hui^{2} lai^{2} le ***ma***?
oh you already return come PFV
'Oh, are you back, already?'

Again, Li and Thompson argue that only particle questions in this context are appropriate because the speaker has "an assumption that the proposition in the question is true" (p.553).

Accordingly, Li and Thompson (1979) account for such data by means of a pragmatic constraint on the *V-not-V* construction of yes-no question, as given in (5).

(5) The *V-not-V* question is used only in a neutral context whereas the particle-question may be used in a neutral or a non-neutral context. [And neutral and non-neutral contexts are defined as follows]:

> A neutral context is one in which the questioner has no assumptions concerning the proposition which is being questioned and wishes to know whether it is true or not. Whenever the questioner brings to the speech situation an assumption, then that context is non-neutral with respect to that question (p.202).

In light of the statement in (5), therefore, it is acceptable for a speaker to use in a neutral context either a *–ma* question or a *V-not-V* question. One of the examples provided by Li and Thompson (1979, p.203; 1983, p551), is shown in (6).

(6) After seeing a movie with a friend, the speaker wishes to find out whether the friend liked the movie. [And either of the two forms of yes-no question can be used]

(a) ni^{3} ***xi^{3}huan^{1} bu^{4} xi^{3}huan^{1}*** zhei^{4} ge dian^{4}ying^{3}?
you like not like this CL movie

(b) ni^{3} xi^{3}huan^{1} zhei^{4} ge dian^{4}ying ***ma***?
you like this CL movie
'Did you like this movie?'

Either of the questions (i.e. *ma-* or *V-not-V* question) is correct because the speech context is neutral. To summarize, the pragmatic differences between two constructions of yes-no questions are: in a neutral context, it is acceptable if either the *V-not-V* or *ma-*question is used while in a non-neutral context, it is only permitted to use the *ma*-question.

However, Ree (1981) provides an example that does not follow Li and Thompson's predictions; that is, he challenged the hypothesis that the *V-not-V* and particle *-ma* questions have differing pragmatic uses and gave the following speech context (p.314) as evidence:

(7) Image a context in which you are looking for someone's house. After walking by a few houses, you see a little girl playing in front of a brick house that you think may be the one you are looking for. Since the speaker has "some inkling" that the girl may live in the house, [he would ask the question]:

ni^{3} ***zhu^{4} bu^{2} zhu^{4}*** zai^{4} jer^{4}?
You live not live here
'Do you live here, or not?'

In this non-neutral context (i.e. the speaker has an assumption), the *V-not-V* questions should not be used based on Li and Thompson's analysis. However, native speakers may find that the *V-not-V* question is more natural (Ree, 1981). The remainder of the present paper has to do with the analysis of language data in order to examine the hypothesis on the differences between the two constructions of yes-no questions. Specifically, the *V-not-V* form is examined to find out whether it is used only in a neutral context. Remember that the distinction between neutral contexts and non-neutral contexts depends on whether the speaker has an assumption about what the answer to the question is. If a speaker has no assumption, the context is viewed as neutral; if a speaker anticipates a certain answer, the context is non-neutral.

3. ANALYSIS OF THE DATA: CHILD CONVERSATION.

Language data was collected in the Spring of 1999, including both child and adult conversation (See Appendix A and B). *V-not-V* and the particle *–ma* constructions of yes-no questions taken from both conversations have been transcribed, and they are identified by situation types in order to clarify the analysis (See Appendix A and B). In this section, Li and Thompson's hypothesis on the difference between two forms of yes-no questions is tested. Yes-no questions from child conversation will be discussed before those from adult conversation. A comparison concerning yes-no questions between child and adult speech is also given.

The data consists of three participants—A, B and C—in child conversation. They are all girls and their ages are 4:07, 3:03 and 2:05 (year: month), respectively. A and B are sisters, and C is their cousin. Since they are relatives, they have an opportunity to get together very often. Spontaneous speech was tape-recorded in C's house when all participants were together at play. Thus, toys, picture books, etc were present around them.

It is interesting to find that only *V-not-V* questions occurred in the child speech. For example, the eldest participant (i.e. A) used only the *V-not-V* construction of yes-no question when she talked to the other two participants. It is evident that *V-not-V* questions appear frequently in child conversation although the *V-not-V* questions are syntactically more complicated than the particle *–ma*. Erbaugh (1985) claims that *V-not-V* questions are emphasized when either adults or older children address young children. If frequency of use of occurrence occur either adults talking to children or children themselves, it is not surprising to note that children frequently use in their conversation. Another reason is that *V-not-V* questions may serve the guideline for the listeners how to give either negative or positive responses. For instance, the sentence (8):

(8) ni^{3} ***qu^{4} bu^{2} qu^{4}*** xie^{2}xiao^{4}?
you go not go school
'Do you go to school or not?'

The verb *qu* 'go' is copied when the listener's response is positive, whereas *bu^{2} qu^{4}* 'not go' is used when the listener's response is negative.

The *V-not-V* questions in child conversation are examined in order to test the hypothesis whether they only appear in the neutral contexts or not. There are several similar patterns of the *V-not-V* questions addressed by A, the eldest child in the situation 1. They are shown in (9):

(9) (a) er^{4} gen^{1}wu^{3} *shi^{4} bu^{2} shi^{4}* hen^{3} xiang^{4}, ***dui^{4} bu^{2} dui^{4}***?
two and five be not be very alike right not right
'Are number two and five alike, right?'

(b) er^{4} gen^{1}wu^{3} ya *shi^{4} bu^{2} shi^{4}* hen^{3} xiang^{4}, ***dui^{4} bu^{2} dui^{4}***?
'Are number two and five alike, right?'

(c) si^{4} gen^{1} yi^{1} *shi^{4} bu^{2} shi^{4}* zhang^{3} de hen^{3} xiang^{4}, ***dui^{4} bu^{2} dui^{4}***?
four and one be not be look very alike right not right

'Do number four and one look alike, right? right? RIGHT? [hight pitch]

(d) si^{4} gen^{1} liu^{4} ***shi^{4} bu^{2} shi^{4}*** hen^{3} xiang^{4}
four and six be not be very alike
'Are number four and six alike?'

In this context, the speaker was looking for the listeners' confirmation that the two numbers are alike. Strong evidence of asking for confirmation from the third *V-not-V* question is that the speaker repeated her tag question (i.e. dui^{4} bu^{2} du^{4} [right not right] 'right?') three times, and with high pitch the last time. In doing so, she can attract the listener's attention and get their positive responses. Therefore, the context in situation 1 is not neutral because of the speaker's assumption, indeed her insistence on a given answer. In this non-neutral context, *V-not-V* questions are perfectly natural for the child speakers while the particle-*ma* questions are not used at all, contrary to Li and Thompson's hypothesis.

The *V-not-V* question in situation 2 was also used by A. However, the situation in 2, which is different from the situation 1, shows that the speaker was asking the listeners to do something, and she wanted to see if they did it very well or not. Thus, the *V-not-V* question was formed:

(10) quan^{2}bu^{4} tie^{1} hui^{2}qu^{4}, kan^{4} ***you^{3} mei^{2} you^{3}*** li^{4}hai^{4}
All paste back see have not have smart
'Please paste those to it, and see if you are smart or not?'

Even though the two respondents did not give an answer to the question, the speaker expected to see they could do a good job, and then she can give them a compliment such as *you are smart*. Thus, the speaker did have an assumption when she used this *V-not-V* question. By contrast, the particle *–ma* questions are not allowed in this non-neutral context because they are unnatural to native speakers. In this context the speaker attempted to encourage the addressees to reach an achievement (i.e. to complete a jigsaw puzzle); use of a *–ma* question, which carries doubt regarding the proposition, is therefore contradictory to the speaker's expectation.

Speaker B addressed the last situation, which is similar to the preceding one. She assumed that what she did is correct, and she was looking for the positive response from her sister, A. She then posed the question:

(11) Zhe^{4} yang^{4} ***dui^{4} bu^{2} dui^{4}***?
This look correct not correct
'Is this correct or not?'

By the same token, in this non-neutral context, the speaker can not use the *–ma* question type because it would lead the speaker to have an uncertain proposition. In summary, these children use only *V-not-V* questions in their speech. The yes-no questions are used in the non-neutral contexts when the children have an assumption and require the positive responses from the listeners.

4. Analysis Of The Data: Adult Conversation.

Adult conversation was tape-recorded when casual speech was carried out by speakers at home. There were two female native speakers—X and Y— participating in this conversation, one of whom is 25 years old and the other of whom is 30 years old. Both *-ma* questions and *V-not-V* questions appeared in the adult's speech. Five situations are identified. Contrary to child conversation, adults use the *-ma* construction to form a question. Only one *V-not-V* question can be found in adult speech. The V-not-V question is first to be studied to find any differences or similarities in the contexts in which the speakers for both child and adults use such question forms. In situation 3 in adult conversation, the *V-not-V* question (i.e. xiang^{1} bu^{4} xiang^{1} xin^{4} [believe-not-believe]) is used. The speaker, X, assumed that the listener, Y might not believe that Ms. Moritz came to visit to her yesterday. Thus, X posed the *V-not-V* question:

(12) Ta^{1} zuo^{2}tian^{1} lai^{2}, ni^{3} ***xiang^{1} bu^{4} xiang^{1} xin^{4}***?
she yesterday come you believe-not-believe
'She came here yesterday, can you believe it or not?'

This information was apparently not expected on the part of Y, yielding the response:

(13) Ta^{1} ze^{3}mehui^{4} qu^{4} na^{4}li^{3}?
She why go there
'Why did she go there?'

Thus, we see that *V-not-V* questions in adult speech also occur in non-neutral contexts just as they did in the child data.

The present paper now turns to examine the *–ma* questions in adult conversation, specifically in terms of the contexts in which such questions are generated. There are four situations in which *–ma* questions occur: 1, 2, 4 and 5. In situation 1, X might not know if the person who was mentioned by Y is her classmate or not. X wanted to know the answer and thus a *–ma* question was posed:

(14) Ta^{1} shi^{4} ni^{3}men ban^{1} tong^{2}xue^{3} ***ma***?
S/he is you class classmate
'Is she your classmate?'

Obviously, the speaker was to seek either a positive or negative answer in this neutral context; thus she had no assumption of the proposition. Situation 5, which had the same context as situation 1, was addressed by X who had no assumption about the proposition. She was seeking an answer whether Y checks her e-mail every day or not.

Structurally, situation 2 and 4 were different from Situation 1 and 5, since the negative markers (i.e. *bu* or *mei* 'not') occurred in the former syntax but not in the latter one. As Zhang (1991) noted, " …questions with negative markers [e.g. negative *–ma* question] often function as agreement which signals the speaker's strong conviction that something is true" (p354). Accordingly, in situation 2, in order to remind Y of what she had been told before, X had an assumption and thought that Y was supposed to remember it. The question was:

(15) Wo^{3} bu^{2} shi^{4} gen^{1} ni^{3} jiang^{3} guo^{4} le ***ma***?
I not be and you tell EXP PFV

'Didn't I tell you before?'

X's question implied that she did tell Y something before, and hoped that she could remember. Thus, X had positive assumptions in this non-neutral context. In situation 4, which is similar to situation 2, since Y's computer was broken, X was wondering why she didn't go to the school and check e-mail. She suggested that school is another place where Y could go and check the e-mail. Thus, X had a positive assumption for this question.

To summarize, in adult speech *V-not-V* questions are used in non-neutral contexts, which is similar to child speech. As for *–ma* questions, adults use them in either neutral contexts (e.g. situation 1 and 5) or non-neutral contexts (e.g. situation 2 and 4). Table 1 indicates and concludes the differences between child and adult conversation regarding the use of the two types of yes-no question in Mandarin. Perhaps a finer-grain analysis involving more tokens would reveal interesting facts about the distributional properties of *–ma* questions in neutral versus non-neutral contexts.

	Child Conversation	Adult Conversation	
Neutral Context	---	---	-*ma* question
Non-neutral Context	V-not-V question (positive assumption)	V-not-V question (negative Assumption)	Negative *–ma* question (positive assumption)

TABLE 1. THE DIFFERENCE USE OF THE TWO TYPE OF YES-NO QUESTION

5. LINGUISTIC SUBJECTIVITY.

Linguistic subjectivity is associated with a speaker's point of view in discourse. That is to say, speakers utilize language to utter their feelings, perceptions and opinions in discourse. For instance, using a personal pronoun such as *I* or epistemic modality is viewed as an indication of subjectivity in language.

With respect to the two types of yes-no question in Mandarin Chinese, it can be hypothesized that *V-not-V* questions have a higher degree of subjectivity than *–ma* questions. If this is the case, we would predict that the use of *V-not-V* questions is highly associated with speaker's involvement in discourse. On the other hand, we would predict that the use of *–ma* questions is not necessarily relevant to speaker's attitude or has a less degree of speaker involvement.

As mentioned earlier, whereas *V-not-V* questions are used in non-neutral contexts, *–ma* questions do occur in neutral contexts. That is to say, when speakers have either positive or negative assumptions in regard to the propositions, *V-not-V* questions are uttered. In contrast, if speakers do not have any assumptions toward the propositions, they could use *–ma* questions. Due to the speaker's assumptions in regard to propositions, *V-not-V* questions can be viewed as more subjective than *–ma* questions. This is because the *V-not-V* question reveals the speaker's assumptions whereas the *–ma* question is simply a proposition in which there is no speaker involvement in terms of anticipating an

answer. A best example of the *V-not-V* question mentioned earlier in (12) and (13) is repeated in (16), and an example of a *–ma* question is shown in (17):

(16) X: Ni[3] hai[2] ji[4]de Ms. Moritz ba? Ta[1] zuo[2]tian[1] lai[2], ni[3] ***xiang[1] bu[4] xiang[1]xin***?
You still remember she yesterday come you believe NOT believe
'You remember Ms. Moritz? She came here yesterday, can you believe it or not?'

Y: Ta[1] ze[3]mehui[4] qu[4] na[4]li[3]?
She why go there
'Why did she go there?'

(17) X: Ta[1] shi[4] ni[3]men ban[1] tong[2]xue[3] ***ma***?
S/he be you class classmate
'Is she your classmate?'

Y: Zai[4] tu[2]shu[1]guan[3] ren[4]shi[4] de
At library acquaint
'I was acquainted with her at the library.'

Unlike *–ma* questions, the negative *–ma* question conveys a subjective point of view since it occurs in non-neutral contexts in which the speaker is conscious and has an assumption toward a proposition. An example is shown in (18) below:

(18) X: Ni[3] ***mei[2]*** qu[4] xie[3]xiao[4] kan[4], xie[3]xiao[4] ye[3] bu[2] shi[4] ke[3]yi[3] kan[4] **ma**?
You not go school look school also not be can look
'You didn't go to school and check it, did you? Can you also check it at school?'
Y: Chun[1]jia[4] ya.
Spring break
'It's spring break.'

This evidence also supports Chu's (1998) argument that the negative *–ma* question "involves some expectation on the part of the speakers" (p.122).

In a theory of Cognitive Grammar, Langacker (1990, 1991) claims that the differences between subjectivity and objectivity have to do with viewing relations between a perceiver and an object of perception. Subjectivity vs. objectivity in discourse are not viewed as distinct categories. Rather, it is a matter of degree. According to Langacker, in terms of the two linguistic forms in which they share the same semantic domain, one can be viewed as a greater degree of subjectivity and the other is associated with a lesser degree of subjectivity. Langacker states that, "the entity construed subjectively is implicit and hence non-salient—to use theater metaphor, it remains offstage in the audience [e.g. *V-not-V* questions such as in (16) and negative *–ma* questions such as in (18)]—whereas the objectively construed entity is salient by virtue of being placed onstage as the focus of attention" [e.g. *–ma* questions such as in (17)] (1990, p7).

In Cognitive Grammar, we may pose the question as to how *V-not-V* and negative *–ma* questions can be associated with the ground[2] if they are viewed as more

[2] "Ground" is referred to as the speech event, its participants, and its immediate circumstances such as the time and the place of speaking.

subjective than *–ma* questions. Notice that the constructions of both *V-not-V* and negative *–ma* questions consist of negation elements such as *bu* or *mei*. According to Langacker's framework of Cognitive Grammar, he claims that "NEG [ation] should be considered an epistemic predication, or at least a close cousin—recall that the hallmark of such a predication is that it profiles the grounded entity rather than the grounding relationship" (1991b, p.134). Epistemic predications are defined as a kind of radical subjectivity because "they pertain to the speaker's knowledge of other entities and his assessment of their status" (1985, p. 116). In Chinese *V-not-V* and negative *–ma* questions are viewed as epistemic predications and therefore, they are more subjective than *–ma* questions.

6. CONCLUSION.

In conclusion, the findings of the use of *V-not-V* questions from both child and adult speech do not support Li and Thompson's hypothesis that they only occur in neutral contexts. Rather, the language data reveals that *V-not-V* questions are used in non-neutral contexts (i.e. the speakers have assumptions) from both child and adult speech. However, in non-neutral contexts of the use of *V-not-V* questions, children would use them with a positive assumption while adults would use them with a negative one. Regarding *–ma* question, it is basically permitted for use in neutral contexts, where speakers have no assumptions about the proposition. But, negative *–ma* questions, unlike affirmative *–ma* questions are used in non-neutral contexts with positive assumptions. In this regard, negative *–ma* questions in adult speech share the same properties with *V-not-V* questions in child conversation. That is to say, both question types occur in non-neutral contexts according to a speaker's positive assumption.

The use of *–ma* vs. *V-not-V* questions is associated with varying degrees of subjectivity. *V-not-V* and negative *–ma* questions, viewed as epistemic predications, are more subjective than *–ma* question because whereas the former are used in non-neutral contexts and reveal a speaker's expectation (i.e. the presence of the speaker's involvement), the latter is used in neutral contexts and there is no speaker involvement since s/he simply poses a question without expectation of a specific answer.

In future research, the two types of yes-no questions in Mandarin require more complex analysis. The difference between them has to do not only with speech contexts but also speakers' assumptions (i.e. negative or positive assumption). In addition, different age groups yield different uses of particular types of yes-no questions. Furthermore, sentential components such as negative markers can also affect the functions of yes-no questions. Previous research has shed light on the differences between the two forms of yes-no questions. Since the present study is limited to the analysis of yes-no questions from two single groups of adult and child speakers, more language data from a wider group of different speakers is required for further research in order to yield compelling evidence and to specifically highlight the differences between the two types of yes-no questions.

REFERENCES

Chu, Chauncey C. 1998. A discourse grammar of Mandarin Chinese. New York: Peter Lang.

Erbaugh, Mary S. 1985. “The acquisition of Mandarin.” The crosslinguistic study of language acquisition, Vol. 3, ed. by Dan. I. Slobin, 373-455. Hillsadale, NJ: Erlbaum.

Langacker, Ronald W. 1990. “Observations and speculations on subjectivity.” Iconicity in Syntax, ed. by John Haiman, 109-150. Amsterdam and Philadelphia: John Benjamins..

Langacker, Ronald W. 1990. Subjectification. Gognitive Linguistics 1.5-38.

Langacker, Ronald W. 1991a. Concept, image, and symbol: the cognitive basis of grammar. Berlin/New York: Mouton de Gruyter.

Langacker, Ronald W. 1991b. Foundations of cognitive grammar. vol.2. Standford University Press.

Li, Charles N. and Thompson, Sandra A. 1979. The pragmatics of two types of yes-no questions in Mandarin and it universal implications. Papers from the Regional Meetings, Chicago Linguistic Society 15.197-206.

Li, Charles N. and Thompson, Sandra A. 1981. Mandarin Chinese: A functional reference grammar. Berkeley: University of California Press.

Norman, Jerry. 1988. Chinese. Cambridge: Cambridge University Press.

Ree, Joe J. 1981. The problem of the pragmatics and universality of a disjunctive type of yes-no question. Papers from the Regional Meetings, Chicago Linguistic Society 17.311-317.

Zhang, Jiannan. 1991. Question and negation in Chinese. Papers from the Regional Meetings, Chicago Linguistic Society 27.349-358.

APPENDIX A

CHILD CONVERSATION:

Participants—A (Girl, Age 4:07)
B (Girl, Age 3:03)
C (Girl, Age 2:05)

Situation 1:

A: er^{4} gen^{1}wu^{3} **shi^{4} bu^{2} shi^{4}** hen^{3} xiang^{4}, dui^{4} bu^{2} dui^{4}?
two and five be not be very alike right not right
'Are number two and five alike, right?'

B: =dui^{4}= 'right.'

C: =dui^{4}= 'right.'

A: er^{4} gen^{1}wu^{3} ya **shi^{4} bu^{2} shi^{4}** hen^{3} xiang^{4}, dui^{4} bu^{2} dui^{4}?
'Are number two and five alike, right?'

B: =dui4= 'right.'

C: =dui4= 'right.'

A: si^{4} gen^{1} yi^{1} **shi^{4} bu^{2} shi^{4}** zhang^{3} de hen^{3} xiang^{4}, dui^{4} bu^{2} dui^{4}?
four and one be not be look very alike right not right

ke^{3}shi^{4} bi^{3}qi^{3}lai^{3} you^{4} bu^{2} shi^{4},? dui^{4} bu^{2} dui^{4}? dui^{4} bu^{2} dui^{4}? dui^{4}
but compare also not be right not right right not right right

bu^{2} dui^{4}la [high pitch]?
not right
'Do number four and one look alike, right?'
'But (they) aren't (after) comparison, right? right? RIGHT? [high pitch]'

B: dui^{4} 'right'

A: si^{4} gen^{1} liu^{4} **shi^{4} bu^{2} shi^{4}** hen^{3} xiang^{4}, bi^{3}qi^{3}lai^{3} you^{2} bu^{2} yi^{2}yan^{4},
four and six be not be very alike compare also not similar
dui4 bu2 dui4?
right not right
'Are number four and six alike, (but) they aren't (after) comparison, right?'

Situation 2:

A: quan^{2}bu^{4} tie^{1} hui^{2}qu^{4}, kan^{4} **you^{3} mei^{2} you^{3}** li^{4}hai^{4}?
All paste back see have not have smart
'Please paste those to it, and see if you are smart or not?

Situation 3:

B: Zhe^{4} yang^{4} **dui^{4} bu^{2} dui^{4}**?
This look correct not correct
'Is this correct or not?'

APPENDIX B

ADULT CONVERSATION:

Participants: X (Female, Age 30)
Y (Female, Age 25)

Situation 1:

X: Ta[1] shi[4] ni[3]men ban[1] tong[2]xue[3] **ma**?
S/he be you class classmate
'Is she your classmate?'

Y: Zai[4] tu[2]shu[1]guan[3] ren[4]shi[4] de
At library acquaint
'I was acquainted with her at the library.'

Situation 2:

X: Wo[3] bu[2] shi[4] gen[1] ni[3] jiang[3] guo[4] le **ma**?
I not be and you tell EXP PFV
'Didn't I tell you before?'

Situation 3:

X: Ni[3] hai[2] ji[4]de Ms. Moritz ba? Ta[1] zuo[2]tian[1] lai[2], ni[3] **xiang[1] bu[4] xiang[1] xin**?
You remember she yesterday come you believe NOT believe
You remember Ms. Moritz? She came here yesterday, can you believe it or not?

Y: Ta[1] ze[3]mehui[4] qu[4] na[4]li[3]?
She why go there
'Why did she go there?'

Situation 4:

X: Ni[3] mei[2] qu[4] xie[3]xiao[4] kan[4], xie[3]xiao[4] ye[3] bu[2] shi[4] ke[3]yi[3] kan[4] **ma**?
You not go school look school also not be can look
'You didn't go to school and check it, did you? Can you also check it at school?'

Y: Chun[1]jia[4] ya.
Spring break
'It's spring break.'

Situation 5:

X: Ni[3] duo[1]hui[4] mei[3]tian[1] kan[4] e-mail **ma**?
You do everyday look
'Do you check your e-mail every day?'

Y: Duo[1]hui[4]
'Yes, I do'

THE REPRESENTATION OF POSSESSION: AN INTERFACE BETWEEN SYNTAX AND SEMANTICS*

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1. INTRODUCTION.

Prenominal possessive constructions have been traditionally treated as adjectival since they may exhibit adjective-like agreement with respect to gender and number, as seen in (1).

(1) mon livre French
my (masc. sg.) book (masc. sg.)

To account for the properties governing agreement both number phrases (Valois 1991) and gender phrases (Picallo 1994) have been argued for. However, these possessives also demonstrate agreement with the possessor with respect to person. Reference to person captures the pronominal-like behavior these forms exhibit with respect to binding, as prenominal possessives are able to bind a reflexive and be bound by a c-commanding OP, as seen in (2) and (3) respectively.

(2) reflexive (Spanish)
Su_i foto del $mismo_I$
his picture of himself

(3) c-commanding QP (French)
La photo de $chaque_i$ photographe de sa_i ville préférée.
The picture of each photographer of his favorite town.

The possessive appears to collapse two-three functional categories: person, number, and gender; the number of categories depending on whether AGR (agreement) is further decomposed into Number and Gender. The problem arises as to how to represent all these dimensions of agreement. Previous accounts such as Giorgi and Longobardi (1991) and Picallo (1994) maintain an adjectival analysis which at best only considers number and gender. To capture both the adjectival and pronominal behavior of prenominal possessives, as well as account for the semantics of the possessive, I propose, following Bowers (1993), that the prenominal possessive is a predicate structure with two semantic roles.

2. PREDICATION.

A number of proposals have been made in the literature with repect to the analysis of predicate noun and adjective constructions of the type shown in (4), where *red* is predicated of the *barn*.

* I wish to thank the participants at the HDLS conference for their comments and discussion. All errors remain my own.

(4) We painted the barn red.

These constructions have been either analysed as complex predicates (Chomsky, 1965; Larson, 1988; among others) or as small clauses (Williams, 1980; Chomsky, 1981; Stowell, 1981; among others).

2.1 WILLIAMS 1980.

Williams (1980: 218) argues that "NPs do not have predicates in their complement structure," observing that English possessive *'s* structures with gerunds are permissible; whereas, these constructions in determiners are not. As shown in (5), he appeals to the distinction between obligatory control and nonobligatory control.

(5) a. *John's arrival dead
b. John's arriving dead (Williams 1980: 218)

He claims that obligatory control is a special case of predication and therefore should not be permitted in NPs. And, in fact, the control properties exhibited in NPs are those of nonobligatory control: (a) the antecedent need not c-command; (b) an antecedent is not necessary; (c) the controller can be outside the NP. These are illustrated in Williams' examples (73-75), repeated here in part as (6).

(6) a. the attempt by John to leave
b. any attempt to leave
c. John left orders not to be disturbed.

Williams offers no explanation of why predicates are absent from the complement structure of NPs, concluding that it "remains a mystery." (Williams 1980: 219)

It seems strange, in light of recent attempts to demonstrate parallels between IP structure and DP/NP structure, that such a "mystery" should arise. If we look more closely at DP structure in relation to the environments where predication is possible, perhaps we can come to, at least, a partial solution.

Following Williams there are two environments for predication. Grammatically governed cases meet certain structural descriptions, shown in (7) (Williams' example 16); while, the thematically governed cases involve predicates within a VP, where "the predication is of the theme of the verb of the VP," shown in (8) (Williams' example 17). By positing a Possessive Phrase where the structural conditions for grammatically governed predication can be met, we are able to account for predication in NPs. That there is no predication in the complement structure of NPs is due to a lack of thematically governed cases in NPs.

(7) a. NP VP John died
b. NP VP X John left nude./John left singing.
c. NP be X John is sick./John is near Larry.

(8) John gave Bill the dog dead.

2.2 NAPOLI 1989.

Napoli (1989) follows Williams in assigning a separate predication structure. She distinguishes this structure from lexical structure, noting that in predicate structures the role players receive semantic roles; whereas, in lexical structure the arguments receive theta-roles. The distinction between semantic roles and theta-roles relates to the number of roles available. Theta-roles are "a few gross semantic features like agent, patient, theme ..." while semantic roles are "unlimited, detailed semantic properties" (Napoli, 1989:30).

Emphasizing the semantic nature of predication, Napoli concludes that there is no "one-to-one correlation between semantic entities and syntactic entities" (Napoli, 1989: 78).

3. THE SEMANTICS OF PREDICATION.

While Napoli draws a sharp distinction betwen semantics and syntax to explain the nature of predication, others (Rothstein, 1983; Zubizaretta, 1987; Gunnarson, 1986; Culicover and Williams, 1986: Hornstein and Lightfoot, 1987) have proposed syntactic analyses. These range from Rothstein's distinction between primary and secondary predicates to the postulation of the governing of PRO by Hornstein and Lightfoot to the elimination of PRO by Culicover and Wilkins. All of these implying that the semantics can be, if only in part, captured in the syntax.

Chierchia (1985) arguing from the tradition of logical semantics claims that "there must exist some systematic relation between syntax and semantics" (Chierchia, 1985: 417). Assuming a Fregean view of properties which holds that properties have two modes of being as predicates and as singular terms, he argues that these modes are represented syntaxically in the English nominal system by the contrast between NPs and CNPs (common noun phrases). NP is associated with semantic type *e* (individual expressions) and are therefore nonfunctional; whereas, CNP is associated with semantic type $<e,p>$ (where *p* represents well-formed formulas) and are functional. Within the verbal system this distinction in modes of being is reflected in the contrast between finite and nonfinite.

I will assume Chierchia's contention that there does exist a syntactic instantiation of semantics within grammar. Further I will argue that by taking into account the semantics of possession, the syntactic behavior of possessive constructions can be accounted for.

3.1 THE SEMANTIC REPRESENTATION OF POSSESSIVES.

One aspect of possessives that has proved problematic is that the possessive demonstrates agreement with the possessor with respect to person and agreement with the possessed with respect to number and possibly gender. If we analyze possessives as two-place predicates then both these relationships can be realized: the pronominal nature of the possessive from a variable in Spec position being co-indexed for person with the possessive and the adjectival nature of the possessive from the complement variable being co-indexed with an NP providing number and gender agreement. If we take possession as an event of belonging, then as an event it requires participants. Possession would assign two roles, what Napoli (1989) refers to as semantic roles as opposed to theta-roles: possessor and possessed. The possessive relationship would then be represented semantically as in (9b).

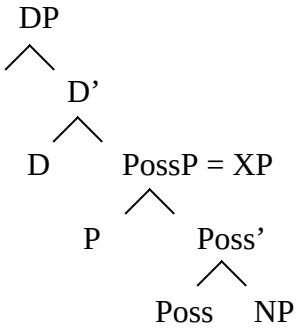
(9) a. my book
b. POSS (I, book)[1]

This semantic representation entails two semantic roles for the possessive: the possessor (I) and the possessed (book). In keeping with X'-theory, syntactically (in a first approximation) the possessive would be generated as a head with the possessor as a specifier (external argument/role - subject) and the possessed as a complement (internal argument/role).

3.2 THE SYNTACTIC REPRESENTATION OF POSSESSIVES.

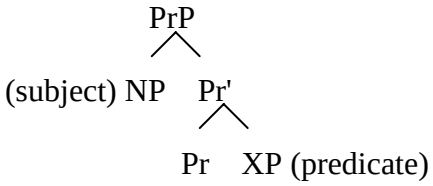
If the possessive is a predicate, then, its syntactic structure needs to reflect this relationship. I propose that the possessive is generated in its own projection with the possessor in Spec of a Possessive Phrase (PossP) and the possessed as a complement reflecting the external and internal roles of a two-place predicate, as shown in (10).

(10)



The structure I am proposing for the possessive follows Bowers (1993). He proposes a Predication Phrase having the structure shown in (11), his (8).

(11)



X = {V, A, N, P}

Applying Napoli's semantic roles to predication structure what would be the external argument is in the case of possessives the semantic role of possessor which is projected in the Spec position. The predication relation then holds between the semantic role in Spec and the complement of Pr which would be the possessed.

The possessive behaves differently and is generated in an XP because of the number of its semantic roles. Via Spec-Head agreement, the possessive agrees in person with the possessor. The possessive in French, Spanish and Italian raises via head-to-head movement to D to check

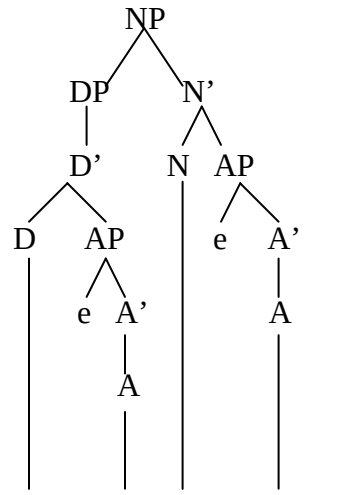
[1] This follows a suggestion by Montalbetti (p.c.). He, however, distinguishes between weak and strong possession, where weak possession is relativized to the object possessed. The non-relativized case he considers economic ownership. This distinct may also account for the variation wrt inalienable possession.

referenciality, following Chomsky (1992), where in French and Spanish the possessive and the definite article merge prior to Spell-out[2] forming a clitic-like element with reduced agreement. In Italian, the possessive also raises to D where it incorporates with D, but does not merge retaining the form article + possessive. This structure is able to capture the predicative relationship expressed by the possessive, while allowing for both the pre- and postnominal structures and their subtle variation in interpretation.[3]

3.2.1 PREDICATION STRUCTURE.

Projecting a predicate phrase within DP has been proposed (Dumitrescu and Saltarelli, 1995) to account for the semantic distinction between the adjectives that can occur in both pre- and postnominal positions. Noting that the postnominal position of these adjectives gives a restricted, extensional reading and allows for modification, they propose that these adjectives are projected as predicates with a referencial empty category that is saturated via theta-identification (along the lines of Higginbotham (1987)), as shown in (12)

(12)



The prenominal counterparts of these adjectives are projected as predicates that are saturated by the determiner D via theta-binding, allowing them to be open to metaphorical interpretation, as illustrated in (13).

(13) a. el pobre hombre
the poor=wretched man

b. el hombre pobre
the man poor=economically improvished

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[2] Spell-out refers to the point in a derivation where the actual form is realized (e.g. the verb *go* plus the past tense morpheme *–ed* becomes *went*). See Chomsky 1995 for a full discussion.

[3] For the purposes of this analysis, this structure is being proposed for Romance languages. It remains for future research whether this can be extended to other languages. Without argument, I am assuming at this point that it can be.

While their analysis does not extend to possessives, it demonstrates the role semantics plays in syntactic structure.

With respect to the adjectival-like agreement of the possessive, this would reflect the predication relation as claimed by Napoli (1991). The possessive would then be checked for referentiality in D, following Chomsky (1992).

If we check the pronominal reference in D, the problem remains as to how to account for the presence of the article with the possessive in Italian and Portuguese. I will propose that in Italian and Portuguese the pronominal reference is moved to head position with the determiner in Spec of DP. Then the article and possessive would agree under Spec-head. I suggest that this is also the case for French and Spanish, where there is no overt article. If, as Kayne (1994) suggests, the specifier is an adjoined position, there I propose that the article and the possessive are conflated or merged in French and Spanish, as suggested by Vergnaud and Zubizarreta (1992), in example (14) for pronouns and determiners, prior to Spell-out forming a clitic-like element with reduced agreement.

(14) a. [DP pronoun[D' determiner]] -> suppleted form (French)
b. eux + les = leurs
c. eux + le = leur

The merged form would retain the features both have in common, as seen in (15) for Spanish.

(15) a. mia/o + la/el -> mi
my-fm, sg/my-masc, sg + the-fm, sg/the-masc, sg my-sg
b. mias/mios + las/los -> mis
my-fm, pl/my-masc, pl. + the-fm, pl./the-masc, pl my-pl

Most notable in the prenominal possessive in Spanish is the loss of gender marking. Saltarelli (1986) notes that this loss of gender marking is characteristic of the progression from nominal to clitic object pronouns.

3.2.2 THE ROLE OF ARTICLES.

Stowell (1987) proposes that the determiner serves two logical functions in what he terms a common noun phrase (CNP). The determiner either closes the predicate by binding its open argument or it converts the phrase into a referential expression. Since a possessive is inherently referential the determiner would be necessary to serve as the head of a referential DP. Given the referential nature of possessives, the possessive form would need to raise to D to check the reference feature in French and Spanish similar to the verb raising in French as a result of strong AGR. There the article and the possessive in French and Spanish, since they agree in phi-features would through a process of cliticization merge. The PF conditions would reflect the morphological properties.

3.2.2.1 DEFINITE ARTICLES.

Being able to raise to the determiner position is critical in accounting for definiteness effects with the prenominal possessive in Spanish and French. The prenominal possessive in both Spanish and French behave as definites in existential constructions, while the postnominal

possessive in Spanish does not, as seen in (16). Note there is no postnominal possessive in Modern French.

(16) a. *Hay tus amigos en el jardin.
There are your+pl friends+pl+masc in the garden
b. Hay amigos tuyos en el jardin.
There are friends your+pl+masc in the garden
There are your friends in the garden.

The prenominal possessive raises to D where I claim (Antrim 1996, 1997, 2000) the possessive has merged with the definite article. This is possible only with the definite article since the definite article adds no additional semantic interpretation to the NP aside from definiteness. Chomsky's (1965) notion of recoverability would preclude the reiteration of definiteness with other determiners that contribute additional semantic information since the additional semantic information would not be recoverable, as in (17).

(17) a. *chaque mien livre
each my book
b. *quelques miens livres
some my books
c. *plusieurs miens livres
several my book
d. *ces miens livres
these my books

In (17a) *chaque* (each) carries the meaning of every one of two or more, in addition to the definiteness. In (17b) *quelques* (some) adds unspecificity. And in (17c) *plusieurs* (several) has the additional meaning of more than two but not many. Finally, in (17d) *ces* (these) has a deictic meaning. All of these constructions are possible in Italian, as illustrated in (18).

(18) a. ciascun mio libro[4]
each my book
b. alcuni miei libri/qualche mio libro
some my books
c. questo/quel mio libro
this/that my book (Giorgi and Longobardi, 1991: 154)

With respect to the occurrence of cardinals with possessives, as in (19) and (20) for Spanish and Italian respectively, there appears to be a preference for the postnominal possessive.

[4] There seems to a degree of acceptability wrt to the position of the possessive here. For some speakers there is a clear preference for the possessive to be postnominal.

(19) a. dos amigos míos
two friends poss-1p-ms-pl
two friends of mine
b. *dos mis amigos

(20) a. due amici miei
b. ?due miei amici

Cardinals, being weak binders, can co-occur with prenominal possessives in Italian, but not with prenominal possessives in Spanish. This provides further evidence for the definiteness of the prenominal possessive in Spanish.

A second environment where definiteness effects (DE) can be observed involves partitives. Partitive constructions in French and Italian allow for en/ne-cliticization only when the NP is indefinite, as shown in (21) for French.

(21) a. *Il s'est construit les maisons.
There is built the houses.
b. Il s'est construit trois maisons.
c. Il s'en est construit trois.

The definiteness of the possessive predicts that en/ne-cliticization with a possessive should be possible in Italian, but not in French.[5] This is the case, as seen in (22).

(22) a. Ne ho visto uno mio.
of them I have seen a my (It)
b. *Ne ho visto il mio.
c. *J'en ai trové la mienne. (Fr)
I of them have found the mine
d. *J'en ai trouvé ma.[6]
I of them have found my

Based on their occurrence in existential contexts, as well as the evidence from ne-cliticization, possessives in Italian and Portuguese can not be marked for definiteness, whereas those in Spanish and French are.

3.2.2.2 INDEFINITES.

Further support for the prenominal possessive in French and Spanish being definite comes from the use of the indefinite. In considering the formation of the indefinite, it is not possible to say in French *un mon livre,* since the NP would be specified as both indefinite and definite; whereas in Italian *un mio libro* is grammatical, the possessive being licensed by the indefinite determiner, un. The indefiniteness of *un* in French is clear despite the ambiguity

5 Note that with the dative construction the possessive is grammatical with en-cliticization.
i. J'en ai trouvé une a moi.

6 Recall that Spanish and Portuguese do not have a comparable cliticization.

between "one" and "a". Even interpreted as a number, un cannot occur with the possessive, as seen in (23a); although, a numeral can occur with the possessive, as seen in (23b).

(23) a. *mon un livre
my a/one book
b. mes trois livres
my three books

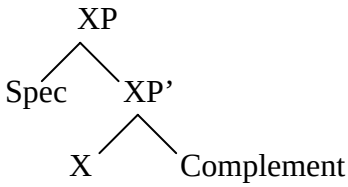
4. PROJECTING POSSESSION.

In Spanish and French the determiner and the possessive, through a process of cliticization and morphological merger are reduced to the present day prenominal possessive. In the case of the postnominal possessive in Spanish, the noun has moved as Cinque (1993) proposes, raising to D, following Longobardi (1994), and the possessive remains in situ. Since the possessive would not be adjoined to D, it would not acquire a definiteness feature thus permitting a partitive-like interpretation postnominally; although, it would still be within the feature checking domain for referentiality.

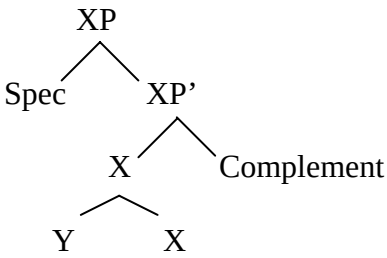
Projecting the possessive within a predication structure headed by POSS is consistent with Cinque (1993) placing adjectival elements to the left of the noun and then deriving variation as to surface placement via movement of the noun. Because of the nominal adjectival properties of the possessive, it must be in a configuration which allows for agreement. Because of the pronominal properties of the possessive, it must be in a configuration which allows for this feature to be checked. The former requires a position in relation to the noun with which it shares agreement features (i.e. gender, number), while the latter requires a position in relation to the Determiner, which licenses its referentiality.

The licensing (or checking) domain of a head, (Chomsky 1992-1995, Marantz 1995)), includes four configurations representing relationships to a head: the Specifier, an adjoined head, an adjunction to the maximal projection of a head, and an adjunction to the Specifier, as shown in (24).

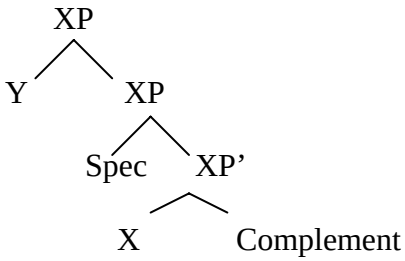
(24) a. Specifier



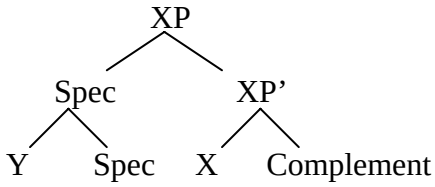
b. Adjoined Head



c. Adjunction to Maximal Projection

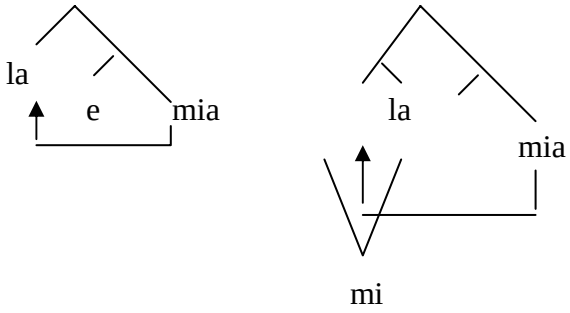


d. Adjunction to Specifier



If as I claim the determiner and the possessive merge in Spanish and French, then they must be in a configuration conducive to merger, such as that shown in (25b).

(25) a. Incorporation b. Merger

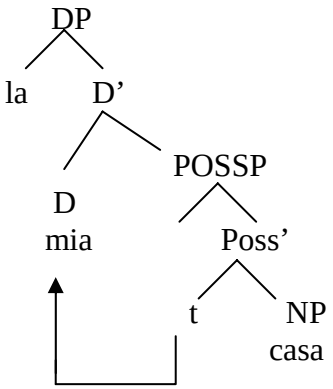


Therefore they are represented by the structure shown in (24d) - that of an adjunction to Spec. Structures (24a and c) would not account for the linear ordering of the article and the possessive and are, therefore, not considered. The structure in (24b) would not be available if following Hudson (1994) the determiner appears in the specifier of its own projection, which is headed by a nonovert referential element.

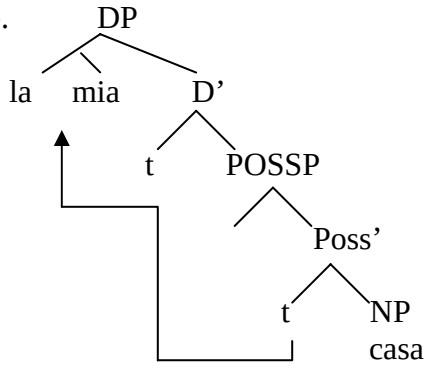
In Italian and Portuguese while the determiner and the possessive form a constituent, they still permit a limited amount of material to intervene. They are projected in an incorporation configuration, as shown in (25a).

Looking again at the structure proposed in (10), repeated here as (26), we can account for the Spanish and French prenominal possessive construction, as well as the Italian and Portuguese prenominal possessive construction.

(26) a.



b.



la + mia = mi

The possessive is projected in the Head of POSSP as a predicate. The agreement features are checked in their respective positions via Spec-Head agreement. Finally the possessive moves to the checking domain for its pronominal feature(s) and raises to the Head of DP in Spanish and French and then moves to the spec of DP, following Martín (1995) where I claim it adjoins to the determiner in Spec of DP and merges with the determiner, as shown in (26b).[7] In Italian and Portuguese the possessive raises to the head of DP and does not adjoin, as shown in (26a).

5. CONCLUSION.

In order to explain the behavior of prenominal possessives the semantics of possession needs to be reflected in the syntactic representation of possession. It is the semantics of possession as a two-place predicate that motivates the syntactic representation. This syntactic representation in turn provides the configuration necessary to account for the adjectival-like agreement in number and gender as well as accounting for the pronominal-like behavior with respect to the person feature reflecting referentiality.

REFERENCES

Antrim, N.M. 1996. On the status of possessives. Ph.D. Dissertation: USC.

Antrim, N.M. 1997. "Interfacing Syntax and Semantics: The Predication of Possession" in Texas Linguistic Forum 38: The Syntax and Semantics of Predication. R. Blight and M. Moosally, eds. Pp.1-14.

Antrim, N.M. 2000. Projecting Possession in the Noun Phrase. Paper presented at WECOL Fresno, CA. October 27-29.

Bowers, J. 1993. "The Syntax of Predication." *Linguistic Inquiry* 24: 591-656.

Chierchia, G. 1985. "Formal Semantics and the Grammar of Predication." *Linguistic Inquiry* 16: 417-443.

Chomsky, N. 1957. *Syntactic Structures*. The Hague: Mouton.

Chomsky, N. 1965.*Aspects of the Theory of Syntax.* Cambridge: MIT Press.

Chomsky, N. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, N. 1992. A Minimalist Program for Linguistic Theory. MIT Occasional Papers in Linguistics 1, Cambridge.

Chomsky, N. 1995. *The Minimalist Program*. Cambridge: MIT Press.

Cinque, G. 1993. On the evidence for partial N movement in the Romance DP. ms. Universita degli Studi di Venezia.

Culicover, P.W. and W. Wilkins. 1986. "Control, PRO and the Projection Principle." *Language* 62:120-153.

Dumitrescu, D. and M. Saltarelli. 1996. Two types of predication modification: evidence from the articulated adjectives of Romanian. Paper presented at the XXVI Linguistic symposium on Romance Languages held March 28-30, 1996 in Mexico, D.F.

Giorgi, A. and G. Longobardi. 1991. *The Syntax of Noun Phrases*. Cambridge University Press.

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[7] Note that if a similar structure is proposed for English, the adjunction to the maximal projection position would still be available for the possible occurrence of a quantifier with the possessive, as in (i).

i. all my books

Gunnarson, K.-A. 1986. “Predicate Structures and Projections of Lexical Dependencies.” *Linguistic Inquiry* 17: 13-47.

Higginbotham, J. 1987a. “Indefiniteness and predication” in *The Representation of (In)definiteness*. E.J. Reuland and A.G.B. ter Meulen, eds. Cambridge: MIT Press. 43-70.

Hornstein, N. and D.W. Lightfoot. 1987. “Predication and PRO.” *Language* 63:23-52.

Hudson, W. 1994. Pragmatic Constraints on Binding into Noun Phrases. PhD dissertation, USC.

Kayne, R. 1994. *The antisymmetry of syntax*. Cambridge: MIT Press.

Larson, R. 1988. “On the double object construction.” *Linguistic Inquiry* 19: 335-391.

Longobardi, G. 1994. Reference and Proper Names: a Theory of N-movement in syntax and logical form. ms. Università di Venezia.

Marantz, A. 1995. “The Minimalist Program” in *Government and Binding Theory and the Minimalist Program*. G. Webelhuth, ed. Cambridge: Blackwell.

Martín, J. 1995. On the syntactic structure of Spanish noun phrases. PhD dissertation: USC.

Napoli, D. 1989. *Predication Theory: a case study for indexing theory*. Cambridge: Cambridge University Press.

Picallo, C. (1994) Possessive pronouns in Catalan and the Avoid Pronoun Principle. Catalan Working Papers in Linguistics. U.A.B.

Rothstein, S. 1983. The syntactic forms of predication. PhD dissertation: MIT.

Saltarelli, M. 1986. Sincretismo funcional, evolución, y la Castellana. Actas del II Congreso Internacional Sobre El Español de America. Mexico, D.F.: Facultad de Filosofía y Letras.

Stowell, T. 1987. Subjects, Specifers, and X-Bar Theory. ms. UCLA.

Stowell, T. 1981. The Origins of Phrase Structure. PhD dissertation: MIT.

Valois, D. 1991. The Internal Syntax of DP. dissertation UCLA.

Vergnaud. J.-R. and M. L. Zubizarreta. 1992. “The definite determiner and inalienable constructions in French and in English.” *Linguistic Inquiry* 23:4.

Williams, E. 1980. “Predication.” *Linguistic Inquiry* 2.1.

Zubizarreta, M.L. 1987. *Levels of Representation in the Lexicon and in the Syntax*. Dordrecht: Foris Publications.

THE CHIAC VERB PARTICLE CONSTRUCTION[1]

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1. INTRODUCTION.

This paper is an examination of the verb particle construction (VPC) in Chiac, a dialect of French spoken by French/English bilinguals in Moncton, Canada. I adopt a cognitive approach, specifically that of Cognitive Grammar, in describing and analyzing this construction, which is exemplified in (1)-(3) below:

(1) *Ca m'a totally* ***turn-é off*** *la dope*
"It totally turned me off dope."

(2) ***Kick-le out. Kick-le out*** *du questionnaire.*
"Kick him out. Kick him out of the survey."

(3) *Yeah mes parents* ***freak-ont*** *right* ***out*** *après moi souvent.*
"Yeah, my parents always freak right out at me."

As these examples suggest, Chiac combines elements of both French[2] and English. This can also be seen in the following Chiac utterance[3].

(4) *Je m'ais fait arrested alright. Pour comme vandalizing pi la shit, total-er un car. Pi là mes parents étaient touT comme, ch'ais pas, c'était right pas comme, i care-aient pas comme ilS étaient comme "yeah, whatever" pi là. Moi, moi j'avais pas besoin de curfew pi la shit. I respectaient. Pi là je m'ais fait kick-é out du Mall pi Crystal. Look out. Je m'ais fait arrested but je m'ais fait kick-é out. Asteure ma curfew est onze! Onze! Un un zero zero man.*

"I got arrested, alright. For like vandalizing and shit, totaling a car. And so my parents were all like 'yeah, whatever' n' that. Me, I didn't need a curfew and shit. They respected (me). And then I get myself kicked out of the Mall and Crystal (Palace). Look out. I get arrested but I get kicked out. Now my curfew is eleven! Eleven! One one zero zero man."

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[2] Although the Acadian French of the region is different from Standard French in many respects, for this paper their differences will not be relevant.

[3] In my transcriptions of Chiac I use conventional French or English spelling with certain modifications. All word-final upper case letters represent a pronounced consonant where it might otherwise be silent (i.e. *touT* is pronounced [tut] rather than [tu]). Also, where the verb root is of English origin but takes French inflectional morphology, I separate the root and ending with a hyphen. Finally, *il* and *ils* are spelled *i* if pronounced [i] rather than [il].

The use of elements from French or English in Chiac is not random. There are clear patterns that suggest that this is a dialect rather than, for example, code-switching (cf. Young 2001 for a discussion of the classification of Chiac as a contact language). For example, the English conjunctions *but* and *so* are consistently used in Chiac. We almost never find their French equivalents *mais* or *donc*. And while code-switching is not unconstrained, such consistent use of conjunctions would be difficult to account for in terms of code-switching. The VPC is another example of systematicity in Chiac, as will become clear in the description and analysis that follow.

2. STRUCTURE OF THE VPC.

2.1. THE ENGLISH VPC.

Since French has no VPC, the Chiac construction undoubtedly arose as a result of Chiac speakers' knowledge of English. The structure of the English VPC, as defined in Lindner 1981, consists of a verb followed by a particle. Instances can be literal or idiomatic, such as:

(5) *The kite floated up.*
(6) *John ran up a bill.* (Lindner 1981: 2)

Formal properties include taking an object nominal before or after the particle[4], as in:

(7) a. *She called up her sister* b. *She called her sister up*

(8) a. *They sold off their assets* b. *They sold their assets off*

Other material such as adverbs and negation can generally not come between the verb and the particle (as in [9a], [10a], and [11]), whereas adverbs can come between a verb and a preposition (as in [9b] and [10b]).

(9) a. **Harry looked furtively over the client.*
b. *Harry looked furtively over the fence.* (Lindner 1981: 15)

(10) a. **He turned suddenly off the light.*
b. *He turned suddenly off the road.* (Lindner 1981: 15)

(11) **I freaked him not/didn't out.*

(12) *That stressed me right out.*

(13) *She ticks me right off.*

[44] There are particles in English, such as *after*, that must occur directly after the verb root. The particle verb cannot be separated by a nominal element. Thus, we can say *look after it* but not *look it after* (O'Dowd 1998: 17). These particles do not occur in my Chiac corpus, nor in Perrot's (1995) corpus.

In the English of the Atlantic provinces of Canada, at least, (12) and (13) are grammatical utterances, but *right* seems to be the only adverb allowed in this position.

2.2. THE CHIAC VPC.

Now let us consider the structure of the Chiac VPC. It generally takes the form of an English-origin verb root with French inflectional morphology, and an English-based particle. The object nominal, if the VPC is transitive, can be of French or English origin (see [1]-[3]).

As in English, the object nominal can occur before or after the particle:

(14) a. *C'est le gouvernement qui screw tout up.*
"It's the government that screws everything up." (G-94)[5]

b. *C'est un homme qui screw up touT.*
"It's one man who screws up everything." (G-94)

Finally, other material (adverbs, negation) *can* come between the verb and the particle in Chiac, unlike in English.

(15) *Les chezzes… i fuck-ont juste around*
"Chez… they just fuck around."

(16) *Je hang pas vraiment around avec mes parents*
"I don't really hang around with my parents."

(17) *Si tu écouteriont la musique française là i te kick-eriont pas out*
"If you were to listen to French music they wouldn't kick you out."

Before presenting my account of the Chiac VPC I shall first introduce Cognitive Grammar, the theoretical framework I use for my analysis.

3. COGNITIVE GRAMMAR.

3.1. THE THEORY.

Cognitive Grammar (CG) is a general theory of language that seeks to describe and account for linguistic structures in a cognitively plausible way. Thus, linguistic units posited within this model are hypotheses regarding a speaker's cognitive structures. CG makes use of general cognitive principles such as entrenchment, abstraction, comparison and symbolization in accounting for linguistic constructions and their use. Also crucial to CG, and especially relevant to a description of Chiac constructions, is the importance it places on usage: in essence, linguistic units are seen as both emerging from and sanctioning instances of usage.

[5] All corpus examples are mine unless they are followed by a letter-number combination in brackets. This refers to a particular group of speakers and page number in Perrot's (1995) corpus.

Language is defined in CG as a structured inventory of symbolic units (cf. Langacker 1987: 57). Such units are cognitive routines that are structured in the sense that some units may include others as components (i.e. a unit *junk drawer* subsumes the units *junk* and *drawer*, although the compound unit is not simply the sum of its parts). Each linguistic unit consists of a form (phonological pole) and a meaning (semantic pole) linked by a symbolic relationship. CG posits no units that are not phonological, semantic or symbolic. It therefore posits no modules, filters or other purely formal devices. As a result, there can, for example, be no sharp division between lexicon and syntax. Instead, the difference between lexical and syntactic units is a gradual one based on the specificity of the phonological and semantic poles. Prototypical lexical items are relatively specific, such as *table*, which can be represented as [TABLE/table][6]. It has a fully specified phonological pole, [tejb★l], and a relatively rich semantic pole involving a wide range of concepts associated with tables (has a flat surface, is made of wood, has legs, is used to put things on, etc.). Other units are much more schematic, such as the structure [N/…], which represents the form and function of a noun in a particular language. Its conceptual pole is defined only as a 'thing'[7] and its phonological pole is left completely unspecified (as represented by the ellipsis).

Cognitive Grammar does not simply treat language as a static, immutable system consisting of symbolic units. Rather, it posits mechanisms through which language is constantly emerging based on instances of usage (hence the term 'dynamic usage-based model' often used to describe CG). Usage events are held to be the input for (and the result of) linguistic structures. A usage event is defined as "a symbolic expression assembled by a speaker in a particular circumstance for a particular purpose" (Langacker 1987: 494). In other words, it is the result of a problem solving activity. Symbolic units that best convey the intended conceptualization are selected to encode this meaning, and all this takes place within a particular context, which includes the relation of the speech act participants to each other, the environment in which the conversation is occurring, etc. There is therefore no sharp distinction between semantics and pragmatics in CG.

Linguistic units, or schemas, emerge from usage events through the cognitive process of abstraction – specifically schema abstraction. A schema is: "the commonality that emerges from distinct structures when one abstracts away from their points of difference by portraying them with lesser precision and specificity" (Langacker 2000: 4). Linguistic schemas emerge in the following way. Given a number of usage events involving, for example, the word *cat*, the commonalities in the form and function are reinforced and acquire unit status while the differences are not. Slight differences in pronunciation are ignored while the basic form /kt͡ʃt/ is abstracted and entrenched. Similarly, conceptual differences (i.e. size, color, breed, behavior, context of mention etc.) are 'filtered out' while the commonalities (a schematic shape configuration, having whiskers, meowing, etc.) are entrenched and become part of the schematic linguistic unit.

This process works in exactly the same way for syntactic constructions. Consider SVO word order, for example. Based on thousand of usage events, an English speaker

[6] This is a standard notation for symbolic units. The square brackets indicate unit status, upper case words refer to the conceptual pole and the lower case words to the phonological pole. The slash indicates that a symbolic relationship holds between the poles.

[7] 'Thing' is a theoretical term in CG and refers to a region in some domain of conceptual space (cf. Langacker 1987: 494). Here it is only important to note how schematic the meaning of [N/…] is compared with that of [TABLE/table].

will abstract a schema representing the frequent relationship between word order and function. That is, a child will realize (subconsciously) that the first participant is usually the agent and the second participant the patient.

The role of schemas is to serve as templates for the categorization of conceptualization. In producing or interpreting speech, we must associate concepts with symbolic units in order to encode or decode meaning. The most appropriate linguistic expression for a conceptualization is referred to as its target structure. If a unit [A] is fully consistent with the target structure, then [A] is said to fully sanction it. In this case, "the relation between the sanctioning structure and the target structure is one of identity" (Langacker 1987: 66). This is, however, a rare situation. Usually, the speaker can find no unit or set of units that exactly corresponds with the conceptualization s/he is trying to evoke. For example, our conceptualizations are usually more detailed than the linguistic units we use to categorize them. Such would be the case when referring to our pet as a *cat*. This is hardly surprising given that linguistic units are formed through a process of abstraction.

Another possibility is that the target structure is in some way incompatible with the sanctioning units. Langacker provides the example of the term *mouse* being applied to a piece of computer equipment (Langacker 2000: 11-12). When this first happened (i.e. before this meaning of *mouse* acquired unit status), the speaker faced the challenge of finding a linguistic unit or units to categorize the concept of what is now called a computer mouse. Although the unit [MOUSE/mouse] was not fully compatible with the target (a computer mouse is not an animal, it does not eat cheese, etc.), there were shared concepts – especially with regard to form and size. Despite only partially sanctioning the target, the unit [MOUSE/mouse] formed the basis of categorization. The resulting usage event (MOUSE'/mouse), (where MOUSE' refers to the conceptualization of a computer mouse and the rounded brackets indicate non-unit status) provided input for further instances of categorization. Eventually, as the extended usage was repeated, the pattern was entrenched and eventually acquired the status of a unit [MOUSE'/mouse]. It is (in part) through usage events involving extensions of existing schemas that new structures emerge.

If units need not fully sanction a target in order to categorize it, how do we as speakers select from a variety of potential categorizing units that are all available to (partially) sanction the target? For instance, if I want to refer to the place where I live, there are numerous linguistic units that partially sanction that target: [HOME/home], [APARTMENT/apartment], [123 MAIN STREET/123 Main Street], [ABODE/abode], [DWELLING/dwelling], [THERE/there], etc. How do I select from these in order to best categorize my conceptualization of my residence in a particular context? First, the level of entrenchment of a unit will be relevant to whether it is selected or not. In most contexts and for most people, [ABODE/abode] will not be selected since it has a low degree of entrenchment. More often, [APARTMENT/apartment] or [HOME/home] will be selected since they are well-entrenched.

Specificity is another relevant factor in selecting appropriate units for categorization. The more features a target shares with a linguistic unit, the more likely it is to be selected to categorize it. Thus, low-level (i.e. specific) schemas have an advantage in competition. All things being equal, I am more likely to refer to my home as *home* than as *there* or *that place*, since the unit [HOME/home] is closer to (i.e. shares

more features with) the target concept than [THERE/there] does. And although the unit [123 MAIN STREET/ 123 Main Street] shares even more features with the target concept than [HOME/home] does, it is less entrenched. A unit such as [HOME/home] will be selected in a variety of contexts because it is both entrenched and moderately specific.

Given these basic principles of CG, I will now provide my analysis of the Chiac VPC.

4. CG ANALYSIS OF THE CHIAC VPC.

To show how the Chiac VPC emerged, I first posit a set of English and French-based units that these speakers would have and that form the basis of the Chiac VPC. I then show how, through processes of blending and schematization, the VPC might have emerged.

At an initial stage before the emergence of the Chiac VPC we can assume that English speakers (including Chiac speakers, who are French/English bilinguals) have linguistic units such as:

a. [[*freak*.INFL *out*] NML][8]	as in:	*He freaked out all his friends*
b. [[*freak*.INFL NML] *out*]		*He freaked all his friends out*
c. [[*screw*.INFL *up*] NML]		*I screwed up my chances*
d. [[*screw*.INFL NML] *up*]		*I screwed my chances up*
e. [*screw*.INFL *up*], etc.		*I screwed up*

Based on units such as these and countless others, we can infer the emergence (both for monolingual English speakers and Chiac speakers) of more schematic symbolic units, which will sanction novel instances of the VPC:

f. [[V_e P_e] NML_e]

g. [[V_e NML_e] P_e]

h. [V_e P_e] (cf. Langacker 1987: 475-480)

'V' here is schematic for a verb root plus inflection, and the subscript 'e' specifies that the unit must be English-based. For monolingual anglophones, it is unnecessary to specify the origin of the verb root or of any other element in the construction since they will have only English units at their disposal. For Chiac speakers, however, the origin of these elements must be specified since, although speakers have both French- and English-based units in their linguistic inventory, they will only use English-based ones in a VPC at this first stage (i.e. they will only use conventional instances of the English VPC).

We can also posit French-based constructions that Chiac and French speakers will have, such as ones for transitive and intransitive verbs:

[8] Here I use a short hand notation that combines the phonological and semantic poles. The square brackets still indicate unit status such that both [*freak*.INFL *out*] and [[*freak*.INFL *out*] NML] are linguistic units.

i. [V_f.INFL$_f$]
j. [[V_f.INFL$_f$] NML$_f$]

Here the subscript 'f' indicates that the verb root (etc.) is a unit in French. Again, for monolingual French speakers this would be an unnecessary detail, but for Chiac speakers this is not the only possibility. We can assume, however, that speakers have such schemas, which they use when speaking a more standard French - in the classroom, for example, where using English in one's French is discouraged. For Chiac and monolingual French speakers, the French transitive and intransitive verb schemas will have emerged from countless instances of inflected French verbs, such as *ét-ais, jou-ons, vois (le chien), boire (du café)* etc.

At a later stage in the emergence of the Chiac VPC, Chiac speakers, who have these French- and English-based constructions in their inventories, begin to blend them to create new schemas. For instance, schema j; [[V_f.INFL$_f$] NML$_f$] blends with lower level schemas such as a-e. The result is several new units such as:

k. [*freak*.INFL$_f$ *out*] / [[*freak*.INFL$_f$ *out*] NML]
l. [*screw*.INFL$_f$ *up*] / [[*screw*.INFL$_f$ *up*] NML]

These schemas will then sanction usage such as (3) and (14) above.

Although most instances of the Chiac VPC can be accounted for in terms of blended schemas such as k and l, there are some that cannot. The following, for example, differ from conventional English VPCs in more than just their verbal inflection. In (18), the argument structure of the verb is different in Chiac than in English, which takes a prepositional phrase in object position rather than a direct object. For (19) there is no conventional English VP combination with *jigg out* upon which the Chiac VPC could be based.

(18) *On a com-é out second place*
'We came out in second place.' (A-13)

(19) *J'ai jigg-é out as a matter of fact*
'I jigged out (?) as a matter of fact. (A-18)

To account for these, we need to posit productive VPCs in Chiac, and thus more schematic symbolic units such as m; [V_e.INFL$_f$ P_e] and n; [[V_e.INFL$_f$ P_e] NML]. These will account for the presence of English-based verb roots in the Chiac construction even if there is no equivalent VP combination in English. They also allow Chiac to make use of a verb particle combination from English without necessarily using the same argument structure.

In the examples we have seen thus far, the verb root has always been English-based. There are, however, a few occurrences where it is French-based:

(20) *les chezzes sont des type de mecs qu'essaient de* ***prendre over*** *la organisation à l'école*
'Chez are the kind of guys who try to take over the organization of the school.'

(21) *Usually je me trouve sur la samedi soir, si qui y'a rien qui **va on**, en train, soit watch-er la TV…*
'Usually I find myself on Saturday nights - if there's nothing going on – either watching TV …'

Such instances suggest the existence of even more schematic units where the source of the verb root is left unspecified – o; [V.INFL$_f$ P$_e$] and p; [[V.INFL$_f$ P$_e$] NML]. This schema also allows for new verb roots formed derivationally from non-verbs. Such is the case with example (22) below, since *to normal*/*normal-er* are not verbs in English, French or necessarily even in Chiac, but could potentially be derived from the adjectives *normal/normale*.

(22) *Trouves-tu pas que dans le grade dix j'étais weird? j'ai **normal-é out** trouves-tu pas ?*
'Don't you think I was weird in grade ten? I've normaled out (become more normal) don't you think?'

In addition to being used as main verbs, Chiac VPCs also occur as predicate adjectives, as in (23) and (24) below:

(23) *Si chu right **piss-é off** like, je peux juste jouer au piano*
'If I'm right pissed off, like, I can just play the piano.'

(24) *Level 42 … ça c'était awesome, but **c'est fermé down***
"Level 42 … that was awesome, but it's closed down." (E-61)[9]

Such predicate adjectives resemble the VPC in many ways, but unlike the construction I have described, VP combinations in predicate adjective position can also take English inflectional morphology. Thus, we find examples such as:

(25) *cause là si t'es **pissed off** …*
"Cause then if you're pissed off …"

(26) *je suis right **stressed out***
"I'm right stressed out."

This difference between the VPC in main verb vs. predicate adjective position suggests that these two are, in fact, separate constructions. Let us call the first the VPC and the second the VPPAC (Verb Particle as Predicate Adjective Construction).

Another difference between the two constructions is that I found no examples of VPPAC with French-based verb roots or non-conventional English-based verb roots. This suggests that a unit [COP [[V$_e$.INFL] P]], where the specific verb root is unspecified, may not yet have emerged or acquired enough activation to sanction usage. Nor does the VPPAC include a more schematic unit where the source of the verb root is not specified

[9] Here we can be reasonably certain that 'fermé down' is a predicate adjective rather than a VPC in the passé composé. This is because the verb 'fermer' takes the auxiliary 'avoir' in the passé composé. Furthermore, regardless of the verb root, Chiac speakers tend to avoid using 'etre' as an auxiliary in the passé composé – it is being replaced by 'avoir'.

(i.e. there is no VPPAC equivalent to schemas o and p). Rather, there are likely schemas for specific verb particle combinations, like [[COP [*pissed off*]], [[COP [*stressed out*]], as well as the more schematic [[COP [*piss*.INFL *off*] etc.

5. CONCLUSION.

This paper has explored the Verb Particle Construction in the French dialect of Chiac. Within the framework of Cognitive Grammar, I have suggested how this construction likely emerged through processes of blending and schematization of English and French constructions that are part of the Chiac speaker's linguistic inventory. In its most common form, the Chiac VPC consists of an English-origin verb root – one that participates conventionally in the English VPC – with French inflectional morphology and an English particle. I argued that this structure emerged as a result of the blending of two pre-existing (sets of) constructions: the English VPC and the French verb schemas (transitive and intransitive).

There are, in addition, a few instances of the VPC in Chiac which suggest that the construction is productive. English verbs that do not participate in the English VPC may occur in the Chiac VPC, although they do so infrequently. Similarly, verbs of French origin may also occur in the construction if they are calques of an English verb that occurs in the English VPC (e.g. *prendre over* for 'take over'). This productivity can be accounted for by positing the emergence of a more schematic unit which specifies that the verbal inflection is French-based and the particle is English-based, but does not specify the origin of the verb root or of the nominal, if the VPC is transitive.

Finally, we see that the Chiac VPC differs from the related predicate adjective construction with particle verbs. Although these seem very similar, only the predicate adjective construction occurs with English inflectional morphology on the verb. In addition, the predicate adjective construction does not appear to be productive with regard to the verb roots it can take. All attested verb roots are of English origin and occur in conventional English VP combinations. This indicates not only that the VPs functioning as predicate adjectives constitute a separate construction, but that this construction is not as well integrated into the Chiac system as the VPC is.

REFERENCES

Barlow, Michael and Suzanne Kemmer (eds.). 2000. *Usage-Based Models of Language*. Stanford: CSLI.

Langacker, R. 1987. *Foundations of Cognitive Grammar*. Vol. 1. Stanford: Stanford University Press.

_____. 2000. "A Dynamic Usage-Based Model". In Barlow and Kemmer 2000, 1-63.

Lindner, S. 1981. *A Lexico-Semantic Analysis of English Verb Particle Constructions with OUT and UP*. Ph.D. Dissertation. San Diego: University of California.

O'Dowd, Elizabeth. 1998. *Prepositions and Particles in English: A Discourse-functional Account*. Oxford: Oxford University Press.

Perrot, M-E. 1995. *Aspects fondamentaux du metissage français/anglais dans le Chiac de Moncton (Nouveau-Brunswick, Canada)*. Paris: Sorbonne Ph.D. thesis.

Young, Hilary. 2001. "The Classification of Chiac as a Contact Language". Ms.

AN ANALYSIS OF JAPANESE NEARLY SYNONYMOUS ADVERBS: *ITIBAN* VS. *MOTTOMO*

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1. INTRODUCTION.

This study presents a linguistic analysis of two nearly synonymous adverbs *itiban* and *mottomo*. The semantic similarity between the two adverbs causes difficulty for learners of Japanese to use them discriminatingly in given contexts. Reference books, including textbooks, dictionaries, and grammar books, generally provide definitions for adverbs but only simplistic explanations of their uses at best. They do not give enough information to guide a non-native speaker in the actual usage of these items, and even those comparisons among nearly synonymous expressions that do exist are not thorough. Therefore, the purpose of this study is to provide a sharper characterization of these adverbs, which would make it easier for Japanese learners in their acquisition of these adverbs.

2. OVERVIEW.

Itiban and *mottomo* roughly share the semantics of *most*; however, different environments can limit their uses as can be seen in the following examples:

(1) a Kono artist wa ima *itiban/mottomo* tyuumoku-sarete iru.
this artist top. now most pay.attention.Pass.Ct. is.Pr.
'This artist is attracting the most attention nowadays.'

b Nihon de *itiban/mottomo* takai yama wa Fuji-san desu.
Japan at most high mountain top. Mt.Fuji is.Pr.
'The highest mountain in Japan is Mt. Fuji.'

c *Itiban/*Mottomo* hajime-ni soup ga dasareta.
most beginning.at soup nom. serve.Pass.Past
'First of all, soup was served.'

d Zenbei de **itiban/mottomo* utukusii campus no hitotu da soo da.
all.America in most beautiful campus of one is.Pr I.hear is.Pr.
'I hear that it is one of the most beautiful campuses in all of the US.'

A Dictionary of Synonyms in Japanese (1994) simply states that *mottomo* is used as a more general word than *itiban* and does not say anything about linguistic differences between the two expressions. However, as is obvious in the above examples, there are cases where one can be used and not the other. Morita (1980) claims that *mottomo* cannot be used with expressions, such as *hajime* 'beginning' and *owari* 'end' that refer to a point 'in time or place', which may be used to explain the unacceptability of *mottomo* in (1c).

In addition, Morita (1980), Hirose & Shoji (1994), and Hida & Asada (1999) point out that *mottomo* may be used in referring to more than one item that belongs to a given top-ranked category, while *itiban* cannot be used in such a way. This may explain the unacceptability of using *itiban* in (1d). However, these are not the only features that constrain the use of these adverbs. In the next section, the various syntactic and semantic features potentially involved in constraining the use of each adverb are examined with a presentation of three syntactic rules and a semantic rule.

3. DIFFERENCES BETWEEN *ITIBAN* AND *MOTTOMO*.

3.1. MODIFICATION OF VERBS.

We begin our discussion of *itiban* and *mottomo* by asking whether these adverbs can modify verbs. As you see in example (1a), *itiban* and *mottomo* appear to modify certain verbs:

(1) a. Kono artist wa ima *itiban/mottomo* tyuumoku-sarete iru.
this artist top. now most pay.attention.Pass.Ct. is.Pr.
'This artist is attracting the most attention nowadays.'

However, the examples in (2) and (3) show that not all verbs can be modified.

(2) a. Kore ga *itiban/mottomo* tekisite iru.
this nom. most is.suitable.Ct. is.Pr.
'This is most suitable.'

b. *Itiban/Mottomo* kanasinde ita no wa kare da.
most feel.sad.Past is.Pt one top. he is.Pr.
'He was the saddest of all.'

c. Ano ko ga *itiban/mottomo* atugesyoo-site kuru.
that child nom. most put.heavy.makeup.Ct come.Pr
'She will show up with the heaviest make-up.'

(3) a. *Kore ga *itiban/mottomo* arimasu.
this nom. most exist.Pr.
'We have this the most.'

b. *Kare ga *itiban/mottomo* tukurimasu.
he nom. most make.Pr.
'He is making the most.'

c. **Itiban/*Mottomo* okita no wa Tanaka da.
most get.up.past one top. Tanaka is.Pr.
'Tanaka got up the most.'

The analysis of these examples suggests that these degree adverbs can modify only those verbs whose semantics contain an adverbial or adjectival element. For example, the verb *tekisite* in (2a) is verbal in that it carries verbal morphology, but it is a verb describing the adjectival semantic notion of *being suitable*. Such adjectival verbs are common in Japanese, but not so in English, and as such they are generally translated into English with a copulative verb plus the adjective, *be suitable*. Similarly in (2b) the verb *kanasinde* carries the adjectival semantic notion of *feeling sad*, in (2c) the verb *atugesyoo-site* contains the notion of *putting heavy makeup (on)*, and in (1a) the verb *tyuumoku-site* describes the notion of *paying attention* or *looking attentively*. A review of several other example sentences reveals the same pattern. Thus, I present the following syntactic rule:

Syntactic Rule 1

Both *itiban* and *mottomo* can modify only those verbs whose semantics contain an adverbial or adjectival element.

3.2. MODIFICATION OF ADJECTIVES[1]/ADVERBS.

In the previous section, Syntactic Rule 1 was presented, which seems to indicate that both adverbs should modify adjectives and adverbs. This subsection attempts to verify whether these two adverbs can indeed modify (nominal-)adjectives[2] and adverbs. Example (1b), repeated here for ease of reference, seems to indicate that both adverbs can modify adjectives.

(1) b. Nihon de *itiban/mottomo* takai yama wa Fuji-san desu.
Japan at most high mountain top. Mt.Fuji is.Pr.
'The highest mountain in Japan is Mt. Fuji.'

Let us observe more sentences:

(4) a. Kono eega ga *itiban/mottomo* omosirokatta.
this movie nom. most is.interesting.Past
'This movie was the most interesting.'

b. Kare ga *itiban/mottomo* genki[3] da.
he nom. most energetic/healthy is.Pr.
'He is the most energetic/healthy.'

[1] Though there seems to be no difference between a verb and an adjective in Japanese (a verb expresses the existence of an action or a state, an adjective expresses the existence of a mode of being, and the adjectives are translated as "IS such and such"), they are categorized in different word classes because they inflect differently. For this reason, I will discuss adjectives separately.

[2] Japanese nominal-adjectives are adjectival in meaning, but they are similar to nouns in that they do not inflect though the copulas that follow them do (i.e. *genki da* 'is energetic' / *genki desita* 'was energetic'.)

[3] *Genki* can mean energetic or healthy, depending on the context.

c. Kare ga *itiban/mottomo* hayaku okita.
he nom. most early get.up.Past
'He got up the earliest.'

As illustrated in these examples, these two adverbs can modify an adjective (4a), a nominal-adjective (4b), and an adverb (4c). A review of several other example sentences reveals the same pattern.

Syntactic Rule 2

Itiban and *mottomo* can modify (nominal-)adjectives and adverbs.

3.3. POINT IN TIME/PLACE.

This subsection examines Morita (1980)'s claim that was mentioned briefly in the overview section. He states that *mottomo* cannot be used with expressions such as *hajime* 'beginning' and *owari* 'end' that refer to a point 'in time or place', which seems to explain the unacceptability of *mottomo* in (1c), repeated below for ease of reference:

(1) c. *Itiban/*Mottomo* hajime-ni soup ga dasareta.
Most at.first soup nom. Serve.Pass.Past
'At the most beginning, soup was served.'

Consider more sentences to see if his observation is relevant.

(5) 5-page no *itiban/*mottomo* owari no moji ga yomenai. (Morita 1980)
5-page of most end of character nom. Read.can.Neg.Pr.
'I cannot read the character at the very end of page 5.'

(6) *Itiban/*Mottomo* hajime-ni aisatu o simasita.
Most at.first greeting acc. Do.Past
'I introduced myself at first.'

(7) Tanaka-san desu ka? Ano *itiban/*mottomo* mae-ni suwatte iru ko desu.
Mr/s.Tanaka is-Pr. Q. that most at.front sit.Cont. is.Pr. child is.Pr.
'Tanaka? It is that child who is sitting in the first row.'

These examples demonstrate that *mottomo* is inappropriate for use with an expression that indicates a point in time/place. When we consider the base meaning of *mottomo* 'to an extreme degree', the observation seems reasonable because a point in time/place does not contain any degrees. For example, the intended meaning of (5) is 'I cannot read the character at the very end of page 5.' Since a specific point at the periphery of a page that does not have any breadth or duration is intended, *mottomo* 'to an extreme degree' is inappropriate here. On the other hand, *itiban* 'No.1' is appropriate here because words on a page can be ranked as *itiban owari* 'the very last', *owari kara 2-ban-me* 'the second last', and *owari kara san-ban-me* 'the third from last.' Similarly in (6) the order of introduction is numbered as 'first, second, third, etc', thus the use of *itiban* is appropriate,

not *mottomo*. In (7) the location of a child is discussed and the specific location does not have any breadth/duration; hence, *mottomo* is inappropriate and *itiban* should be used to indicate 'the very first.' Now, consider the following:

(8) Kore wa kare no **itiban/mottomo* syoki no sakuhin desu.
This top. His of most beginning.period of work is.Pr.
'This is a work from the very beginning of his career.'

Here, *itiban syoki* 'the very beginning' is inappropriate because it implies that there is a list consisting of rankings, such as *itiban syoki*, *syoki kara 2-ban-me* 'the second from the beginning period', *syoki kara 3-ban-me* 'the third from the beginning period', etc. In contrast, *mottomo syoki* 'the earliest part of the beginning period' is appropriate because *syoki* 'the beginning period' has a duration, and can be divided into subperiods: *mottomo syoki*, *syoki no uti de sorehodo hajime denai kikan* 'the subperiod in the beginning period that is not that early', *syoki no uti no owari no hoo* 'the last part of the beginning period', and so forth. Therefore, Morita's observation (1980) is reasonable, that is, *mottomo* is inappropriate for use with an expression that indicates a point in time/place.

Syntactic Rule 3

Itiban can modify expressions that indicate a point in time/place; *mottomo* can modify expressions that indicate a duration/area.

3.4. HIGHER CLASS RANK.

This subsection discusses the semantic criterion of how these adverbs differ in their uses. Morita (1980), Hirose & Shoji (1994), and Hida & Asada (1999) point out that *mottomo* may be used in referring to more than one item that belongs to a given top-ranked category, while *itiban* cannot be used in such a way. Consider example (1d) repeated below:

(1) d. *Zenbei de *itiban* utukusii campus no hitotu da soo da.
all.America at most beautiful campus of one is.Pr I.hear is.Pr.
'I hear that this is one of the most beautiful campuses in all of the US.'

The unacceptability of the use of *itiban* in (1d) seems to support the observations by Morita (1980), Hirose & Shoji (1994), and Hida & Asada (1999). Let us examine more examples:

(9) Konseeki **itiban/mottomo* sugureta kagakusya no hitori ni kazoerareru.
this.century most excellent scientist of one as count.Pass.Pr.
'S/he is counted as one of the best scientists in this century.'

(10) Seekazokukyookai wa **itiban/mottomo* utukusii kentikubutu no hitotu da.
Saint.Family.Church top. most beautiful structure of one is.Pr.
(Hida & Asada 1999)
'Saint Family Church is one of the most beautiful structures.'

These examples also seem to support their observation; however, consider the following:

(11) Smith-san to Carter-san ga *itiban/mottomo* yoku dekiru.
Mr/s.Smith and Mr/s.Carter nom. most well can.do.Pr.
'Mr/s. Smith and Mr/s. Carter are the best.'

(12) *Itiban/Mottomo* suki-na no wa hamburger to curry rice to spaghetti desu.
most favorite one top. hamburger and curry rice and spaghetti are.Pr.
'My favorites are hamburger, curry rice, and spaghetti.'

The acceptability of (11) and (12) contradicts the observations by Morita (1980), Hirose & Shoji (1994), and Hida & Asada (1999), that is, their claim that *itiban* cannot be used when more than one item is involved. In these examples, more than one object shares the distinction of being top-ranked in a group. Thus I rather conclude that *Itiban* means 'number 1', and can only refer to the single highest ranked object in a group or an entire defined subset of a broader group that is ranked number one. In contrast, *mottomo* means 'to an extreme degree', and can refer to things that belong to a higher class when compared to others.

Semantic Rule:

> *Itiban* can only refer to the single highest ranked object in a group or an entire defined subset of a broader group that is ranked number one, thus cannot be used to express things that belong to a higher class in general; *mottomo* can be used to express things that belong to a higher class when compared to others.

4. SUMMARY.

In this paper, the characteristics of *itiban* and *mottomo* were examined. The following is the summary for the use of these adverbs.

Both Adverbs can modify (nominal-)adjectives/adverbs and verbs whose semantics contain an adverbial or adjectival element.

Itiban[4] means 'number 1', and can modify expressions that indicate a point in time/place. It can only refer to the single highest ranked object in a group or an entire defined subset of a broader group that is ranked number one. *Itiban* can modify nouns with connective particle *no* and can be used as the complement of a copula.

Mottomo means 'to an extreme degree', and can modify expressions that indicate duration/area. It is used to express things that belong to a higher class when compared to others. *Mottomo* cannot modify nouns or cannot be used as the complement of a copula.

[4] As for non-adverbial uses, *Itiban* can modify nouns, as in *itiban no densha* 'the first train', *itiban no tanosimi* 'the most pleasure'. It can also be used as the complement of a copula: e.g. *Kare ga itiban da*. 'He is the best/first.'

5. CONCLUSION.

I have presented a linguistic analysis of a pair of nearly synonymous adverbs. I hope this study is helpful for learners of Japanese in acquiring these adverbs as well as for Japanese teachers in explaining the differences.

REFERENCES

Alfonso, A. 1966. *Japanese Sentence Patterns.* Tokyo: Sophia University.

AJLT. 1984. *Japanese for Busy People.* New York: Kodansha Int'l.

Endo Simon, M 1984. *A Practical Guide for Teachers of Elementary Japanese*. Ann Arbor: U. of Michigan.

Gakken. 1990. *Japanese for Everyone.* Tokyo: Gakken.

Gomi. 1994. *Kotoba Zukan 3 & 4*. Tokyo: Kaisei-Sha.

Hida & Asada. 1999. *Gendai Hukusi Yoohoo Jiten*. Tokyo: Tokyodoo.

Hirose & Shoji. 1994. *Effective Japanese Usage Guide.* Tokyo: Koodansha.

Iguchi & Iguchi. 1998. *Nihongo Kyoosi (Japanese Teacher) Training Manual 2*. Tokyo: Babel Press.

Ishii. 1991. *Elementary Course in Japanese.* Tokyo: ALC.

Jorden & Noda. 1988. *Japanese: The Spoken Language I-III.* New Haven: Yale University Press.

Kawarazaki. 1975. "Hukusi no Doonyuu no Gutaiteki Kenkyuu (A concrete research on introduction of adverbs): Sasguga ni." *Nihongo Gakko Ronsyuu* 2: 17-29. Tokyo: Tokyo Gaikokugo Daigaku Huzoku Nihongo Gakko.

-----1976. "Hukusi no Doonyuu no Gutaiteki Kenkyuu (A concrete research on introduction of adverbs): Sekkaku." *Nihongo Gakko Ronsyuu* 3: 79-90. Tokyo: Tokyo Gaikokugo Daigaku Huzoku Nihongo Gakko.

Koogaku Tosyo. (ed.) 1989. *Gensen*. Tokyo: Syoogakukan.

Kokuritu Kokugo Kenkyuujyo. 1998. *Hukusi no Imi to Yoohoo*. Tokyo: Ookurasyoo.

Kuno. 1973. *The Structure of the Japanese Language*. Cambridge :The MIT Press.

Makino & Tsutsui. 1988. *A Dictionary of Basic Japanese Grammar.* Tokyo: The Japan Times.

-----1995. *A Dictionary of Intermediate Japanese Grammar*. Tokyo: The Japan Times.

Makino, Hatasa & Hatasa. 1998. *Nakama.* Boston: Houghton Mifflin Company.

Masuda, et al. (eds). 1974. *Kenkyusha's New Japanese English Dictionary*. Tokyo: Kenkyusha.

Maynard. 1990. *An Introduction to Japanese Grammar and Communication Strategies*. Tokyo: The Japan Times.

Miura. 1990. *Japanese words and their uses.* Vermont: Charles E. Tuttle Co.

Miyajima & Nitta. 1996. *Nihongo Ruigi-hyoogen no Bunpoo*. Tokyo: Kuroshio Publishing.

Mizutani, N. 1987. *Intermediate Japanese: An Integrated Course.* Tokyo: ALC.

-----1992. *Introduction to intermediate Japanese an Integrated Course.* Tokyo: ALC.

-----1992. Modern Japanese: An Integrated Course for Beginners. Tokyo: ALC.

Morita. 1968. "Ruigo ni Tuite (On Synonyms)." *Nihongo Kyooiku (Japanese Language Education 11)*: 14-27. Tokyo: Nihongo Kyooiku Gakkai.

-----1980. *Kiso Nihongo 1-3*. Tokyo: Kadokawa.
NFLC. 1993. *A Framework for Introductory Japanese: Language Curricula in American High Schools and Colleges*. Washington, D.C.: National Foreign Language Center.
Nitibei Kaiwa Gakuin. 1991. *Nihongo de Business Kaiwa*. Tokyo: Bonjin-sha.
Noto. 1992. *Communicating in Japanese.* Tokyo: Sotakusha.
Omaggio, A.C. 1986. *Teaching Language in Context*. Boston: Heinle & Heinle Publishers.
Sinmura (ed.) 1992. *Koojien*. Tokyo: Iwanami Syoten.
Syoogakukan (eds). 1994. *A Dictionary of Synonyms in Japanese*. Tokyo: Syoogakukan.
Tohsaku 1994. *Yookoso: An Invitation to Contemporary Japanese*. New York: McGraw-Hill.
Torii-Williams, E. 1999. "An Analysis of Similar Expressions: The Case of Sugu vs. Moosugu." *Canadian Association of Japanese Language Education Journal 3:* 91-100. Montreal: CAJLE.
Tsukuba Language Group. 1991. *Situational Functional Japanese.* Tokyo: Bonjinsha.
University of Nagoya. 1983. *A Course in Modern Japanese*. Nagoya: The University of Nagoya Press.
Yokomizo, S. 1997. *Drill no Tetsujin: Communicative-na Drill kara Role-Play e (The* Expert of Drills: From Communicative Drills to Role-Plays). Tokyo: Alc.

PERSPECTIVE CODING AND THE USE OF SPACE IN ASL VERBS[1]

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1. INTRODUCTION.

Verbs in American Sign Language (ASL) have been identified as perhaps the most morphologically complex lexical class in the language. One of the earliest detailed analyses of aspectual marking within the verb structure appears in Klima and Bellugi (1979), which showed that an intriguing feature of ASL morphological complexity is the extent of fusion. Rather than distinct and separable morphemes, aspectual meanings alter the phonological structure of the stem itself. Subsequently several classes of verbs have been identified (cf. Padden 1988, 1990) which can be differentiated by the verbal morphology the stems in each class attract. Certain verbs, for example, code subject and object agreement by positioning the beginning and ending points of the verbal movement at particular locations in the signing space. For these verbs, locating the form somewhere within the spatial matrix surrounding the signer is critical to the signer's intended meaning. Clearly, the space the language is constructed within is not just an empty volume housing arbitrarily articulated linguistic structures, but is something the signer can manipulate in meaningful ways.

The present study focuses on another aspect of the verb construction in ASL, that is, how argument perspective is coded within the construction. The analysis of subject and object agreement noted above entails that the movement of the verb indicate something about the role of these arguments in the clause, but for the purposes of this paper, whether the nominal at a particular endpoint of a verbal movement is the grammatical subject or object in the clause is not necessarily clear. Nonetheless, something about the semantic role of the entity can be quite clearly understood,[2] and therefore the present discussion will not deal with the question of subjecthood or objecthood, but will instead focus on the semantic roles of agent (or actor), and patient. More importantly, I argue that along with the previously identified morphemes within the verb complex, the structure of verbs allows for the inclusion of perspective, that is, how the situation coded by the verb, as the signer constructs it, is construed.

In ASL discourse, the signer has the option of "reference shifting" to portray an event from the point of view of a third person referent (Lillo-Martin 1995). When this takes place, the signer shifts physically in the signing space toward a locus associated with the third person referent, and can then use a first person pronominal to stand for the third person referent. This phenomenon has been noted in other signed languages as well, for example in Danish Sign Language (Engberg-Pedersen 1995), a language unrelated to ASL, which suggests that the spatial dimension in signed languages plays an important part in such constructions. The assumption is that the action coded by a clause can be portrayed neutrally by the signer with no

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[2]See Janzen (1998) for more discussion and for examples of nominals whose grammatical role is not clearly the subject of the clause.

shift to any argument's perspective, or the signer may choose reference shifting to incorporate such an alternate perspective on the event.

Results from the present study on ASL narrative discourse, however, suggest that argument perspective is obligatorily coded in the morphological structure of the verb, and that the absence of it is not just a neutral version of the construction. In naturally occurring ASL narrative discourse, signers encode argument perspective consistently, unless they are simultaneously coding their own (narrator's) perspective on the event, in which case the construction has a highly subjective reading. Such perspective coding is not simply reference shifting, because a signer's physical shift toward a third person spatial locus says nothing about the semantic role the argument has within the clause. Janzen, O'Dea and Shaffer (2001) argue that a reference shift may pick out a particular referent, but along with this, the signer is still free to code the argument perspective in the verbal morphology from this referent as agent or as patient, given a transitive verb. One key to how the signer is coding argument perspective involves the differential use of space.

Givón (1990) describes various ways that a speaker's conceptualization of an event may be coded depending on the perspective he or she wishes to convey. For ASL the distinction between agent and patient perspective is not marked on clausal nominals, in contrast to many languages where agent and patient perspective is marked by word order or nominal case marking. Instead, perspective in ASL is established in the verb complex by a particular combination of body shift, eye gaze, and verbal movement features. When a signer constructs a scene in the discourse, entities may be positioned in the space around the signer relative to one another. The present study shows, however, that this spatial layout may not remain static, with the signer using devices such as body shift to move around the space and thus identifying the actions of the various referents. Rather, the signer may remain essentially in a single position, and mentally "rotate" the space to portray various perspectives. This spatial rotation has a profound effect on how the signer articulates particular morpho-syntactic features clause by clause in the narrative structure.

The features of narrative discourse and the use of space reported here have surfaced as part of a larger study on word order and clause structure in naturally occurring ASL discourse, with three broad questions informing the present analysis. They are: 1) How does the signer construct grammatically complex units in three-dimensional space (and, how does the signer take advantage of that space within in the discourse structure)? 2) What is morphological (i.e., what do we understand as morphemic in a signed language, and in particular, within an obviously complex verb)? and 3) What are the features of perspective in an ASL clause, and how pervasively is such perspective coded? This final question comes as a result of the studies in Janzen, O'Dea and Shaffer (2000, 2001) on passives in ASL. It is clear that the situation coded by the verb can alternate in how it is viewed, but the question remains as to whether this perspective coding is obligatory in the morphology, or may just be present depending on whether or not the signer finds some optional discourse or stylistic motivation to include it.

2. PERSPECTIVE AS WE UNDERSTAND IT TO DATE.

How the signer indicates the perspective of a referent has been dealt with in various ways, but predominantly it involves some kind of body shift toward a location designated in the space in front of or around the signer that has been associated with a particular referent in previous discourse. Lillo-Martin (1995) discusses perspective as a Point of View (POV)

predicate, with predicate information portrayed from the POV of a third person singular (3s) referent. For Lillo-Martin, the POV predicate may include a first person singular (1s) pronominal reference (i.e., a point to the signer him or herself) standing in for the 3s reference, or it may include agreement features on the verb that correspond to 1s, and which can correspond either to reported speech or reported action. In Lillo-Martin's view, the POV shift itself is the *verb* of the POV predicate. This is shown in (1) from Lillo-Martin (1995:162, her example (9)) with the POV predicate indicated by ‹ $_a$shift› and with a body shift toward locus "a":

(1) ‹ $_a$shift›
$_a$MOM $_a$POV $_1$PRONOUN BUSY
'Mom (from Mom's point of view), I'm busy.'
'Mom's like, I'm busy!'

Aarons, Bahan, Kegl and Neidle (1994) differentiate between what they term *role shift*, which "involves binding the occurrences of 1st person within its domain" (1994:19), and *role prominence*, which establishes empathy with the grammatical subject of the sentence, but not coreference with it. The physical realization of role shift and role prominence are similar, except perhaps by degree, so they claim.

While these two analyses describe the structural features of such perspective shifting, van Hoek (1992) adds an important feature, that of the conceptualization of real space and its impact on the linguistic structure of signers, particularly how they use space in their discourse. Van Hoek discusses the spatial placement of pronominal and existential (i.e., location) indices which she labels INDEX.PRO and INDEX.THERE. The endpoints of these indexical signs are associated with locations in the signer's space. Van Hoek's argument is that the spatial loci chosen by the signer are not entirely arbitrary and are not ultimately fixed, meaning that certain cognitive and discourse principles determine where various referents are placed, and that if a referent moves from one location to another, both the original and final locus points may be used to reference the entity, depending on what the signer has to say about the entity. Van Hoek suggests that signers use spatial characteristics from their conceptualization of real spaces to determine spatial configurations in their signing space, which implies that such spatial placement is not an arbitrary decision.

In the discourse texts of the present study, a number of narratives are presented wherein the signer tells the story of a past event in which he or she was a participant. In these stories, the signers recall real referents in real situations, and link their conceptualization of these referents and their spatial relationships to the use of space in their present discourse. It appears that the spatial arrangements and orientation of the characters in the signers' narratives are at least partially determined by this conceptualization so that the loci associated with them are not chosen in an arbitrary way, and the narrative reflects the visual perspective of one of the characters in any given construction. It is possible for the perspective of a clause to be that of the signer as narrator (or signer as *meta*-narrator, see Demers 2000), which may involve either a shift within the signer's space or some other physical indicator that the clause is to be read as from this particular perspective, but additionally, the use of referent perspective is so pervasive in the texts that these facts make it appear unlikely that the signer will portray an event, coded within a clause, as perspective-neutral.

3. THE DATA.

The current study draws upon data from five narrative texts in ASL. All of these texts were recorded as part of interviews of Deaf ASL signers. The narrative texts are all from Deaf signers who have ASL as a first language, and who acquired it at an early age (at least by age five). All of the signers consider themselves members of a Deaf community, and other members of the Deaf community also consider them as members. To attempt to control for dialect differences, all signers are from the same area—the Winnipeg Deaf community in Canada. All are adults between the ages of 18 - 50.

All the texts chosen are either narrative stories or are a kind of informational monologue with narrative segments dispersed throughout the text. All five texts were spontaneously produced during the interviews. The interviewees were not aware of what was going to be asked of them beforehand; they were told only that samples of ASL use were being gathered. Thus the narratives all may be characterized as unplanned discourse.

The data for this study was gathered as part of a larger research project looking at grammatical features in discourse texts. The narratives were produced during an hour-long, casual interview with a Deaf interviewer, who also has ASL as a first language, and with no other people present in the room. All interviews were videotaped.

4. PERSPECTIVE CODING IN LINGUISTIC STRUCTURE.

The data in this study show that the way the situation is viewed is overtly coded as an integral part of the makeup of the verbal construction. This mental perspective maps onto the physical positioning of the signer whereby the signer may be showing not only that an event is taking place, but also the spatial orientation of entities as viewed from the perspective of one of the referents in the narrative. Reference to a third person, however, is not dependent on the inclusion of a 1s (for 3s) pronoun.

In narrative re-telling, the signer's use of discourse space is motivated by his or her conceptualization of a real space in some past event. This is made obvious in some cases by the narrator's memory lapses. In one instance, during the re-telling of an event taking place along a highway, the narrator cannot recall whether another entity was located on her left or right side at the time, halting her narrative while she tries to remember. It might be assumed that this conceptual motivation is enacted regularly (cf. van Hoek 1992), and while a more arbitrary choice of spatial positioning may be possible, it is not enacted in this type of discourse.

The lack of purely arbitrary spatial positioning choices may have a further consequence: the conceptualization of the event is not portrayed from a neutral perspective, but necessarily from the perspective of various characters in the narrative. There appears to be a tendency to portray verbal constructions (coding actions) from an agent's perspective, but this is not a requirement; the patient's perspective is clearly and easily portrayed in passive constructions in ASL, as demonstrated in Janzen et al. (2000, 2001). In mapping the conceptualization of space onto linguistic form, the signer has several options regarding how the space might be manipulated in the construction. The signer may either move into various positions around a structured space by reference shifting, which involves a physical body shift from one position and orientation to the space of another, or the signer may treat the space as if it is on a turntable, whereby the complex space is not fixed with the signer moving to (re)orient him or herself around it, but where the signer's position is static and the entire space is reoriented for each referent instead.

5. PERSPECTIVE OF THIRD PERSON AGENT.

The examples that follow illustrate these claims. First, example (2) shows the narrator portraying an action from the perspective of the actor. This is accomplished by so-called 'non-manual' features, that is, with a shift in eye gaze and a particular orientation to the space in front of the signer. Note that there is no overt linguistic item that says that in the first clause in (2) the police did or said something. The actor is identified (the police), then the action of the actor described (motioning for us to move over). This clausal structure is in keeping with the pervasive topic-comment clause construction in ASL, even though there is no morphological topic marker on the NP POLICE. (Note that the English translation does not provide equivalent grammatical phenomena, and syntactic categories may differ.)

(2) Text 1: Utterance 9[3]

eye gaze 2---------- left----- 2---------- left/down------ 2--

facial gesture _____t neg nod

rh POLICE MOVE.OVER+ REALLY HURRY_a++, NONE DISCUSS_a EXPLAIN_b

lh CL:4(line of cars) EXPLAIN_b-------)

'The police motioned for us to move over, quickly, (but) with no discussing why, no explanation about why.'

In this utterance, the signer is clearly indicating the perspective of the policeman: she uses her own body to enact the action of this entity. The policeman is named (as an NP), but is not positioned at any locus in the signer's space. Instead, the narrator assumes the perspective of the police—her own space *becomes* the policeman's space. And since the narrator is a character in this story herself, the third person reference in the agreement verbs DISCUSS and EXPLAIN includes her at the recipient end of the verbal movement. Thus in this utterance, the narrator has assumed the perspective of a 3s referent, and that perspective includes herself, but positioned out in the space away from her own body, ostensibly as an expected 1s referent, and at some distance from the actual 3s referent, the policeman. In this instance, contrary to what the literature on reference shifting might suggest, the signer shifts perspective, but does not reposition herself in her signing space, nor does she place the 3s referent somewhere in the signing space.

[3]Discourse texts are numbered 1-5. Note that data reported in this study come from only two of these five texts. "Utterance 9" represents the ninth transcribed utterance from the beginning of the narrative text. Upper case word glosses indicate ASL signs. Words separated by a period (e.g., MOVE.OVER) indicate that more than one English word is used to denote a single ASL sign. Plus signs (+) denote a repeated movement. Overlines indicate that a facial gesture is maintained throughout the phrase below it, with "t" representing topic marking (___t). Subscript letters represent spatial locations associated with entities positioned in the space around the signer. These are labeled "a," "b," etc., arbitrarily by the transcribers, with a dashed line indicating continuing reference to that locus. CL:xxx represents classifier constructions. In the eye gaze line, the signer looking at the addressee is labeled "2" (for second person), otherwise the direction of the eye gaze is described. *rh* and *lh* refer to "right hand" and "left hand," and "bh" in the gloss line means that an item is signed with both hands whereas only a single hand might be expected or sufficient. PRO.1 is a 1s pronoun; PRO.3 is a 3s pronoun.

6. ALTERNATING PERSPECTIVES.

The type of structure described in Section 3 above is expanded in example (3), where the perspectives of two referents are given in an alternating pattern.

(3) Text 1: Utterance 17

eye gaze 2----------

facial gesture
rh PRO.1 (LOOK?) gesture MOM WINDOW gesture
(frag-bh)[4] (what) (leaning on hand; looking out window)

lh LOOK

'We noticed something (down the road). Mom was leaning out the window, looking down the road.'

eye gaze 2----------

facial gesture t t t
rh SEE CL:O(strobe) LOOK CL:O(smoke) WITH ONE CL:3 CL:5 POLICE CL:5
(bh) (bh) (bh) (bh)

lh

'(Way down the road) we saw police lights flashing, then a cloud of dust getting bigger, and then a whole row of police cars fanned out with one vehicle out in front of them coming toward us.'

In (3), the first section sets up the scene, where the people in the car (the mother, the narrator herself, and two others) are sitting at the side of the road when finally some activity appears in the distance. Following this, the ASL structure is such that the gloss line, given here as (3'), represents a number of (main) clauses, bracketed and numbered to distinguish them, with each portrayal from an alternate perspective:

1 2 3 4
(3') [SEE] [CL:O(strobe)] [LOOK] [CL:O(smoke) WITH ONE CL:3 CL:5 POLICE CL:5]
(bh) (bh) (bh) (bh)

[4]The notation (frag) below an item indicates that what was signed was a fragment rather than a complete sign. At times this suggests that a lexical error has been made, which may or may not be corrected, and at times the fragmented sign appears to be an intended reduction in phonological form.

The perspective in these clauses alternates between that of "us/the mother" and the (eventual) police cars. Note that the classifier construction in clause 2 and the first part of clause 4 give no indication of who the referent is. Until it is stated lexically at the end of clause four, we are not told that it is a row of police cars, even though pragmatically the assumption might be made.

Of significance here is that characteristics of the real space being recalled, and thus conceptualized by the story-teller, are apparent in the spatial designation within the present discourse. Because this event took place along a highway, the important feature of the relative space is that the highway stretches out in front of the car, and thus forward from the narrator. The mother looks ahead down the road, for example, and the resulting direction of the movement in the verbs SEE and LOOK, more or less toward the addressee, is motivated by the features of the conceptualization of the space, and not in any arbitrary manner.

An additional, and very curious, feature of this discourse segment is that space is not used in a direct manner to show that the police cars are out in the distance. In other words, whereas the police cars first appeared way down the highway (those in the car saw the flashing police lights along with dust rising), this information is in fact signed quite close to the signer's body rather than more distally, which might be expected, especially if the signer was attempting to reflect the relative space between her own car and the approaching police. Further, there is no clear body shift to signify the actions of one entity and then the other, as distinguished by some differential placement in the signer's space. There is a slight body shift between the two, but this appears to be one of characters' stance—the mother is leaning against the car door and the narrator shows this with a gesture of her own body, whereas when showing the action of the police cars she moves out of the stance associated with the mother. What results is that the signer signs each clause from the same position and does not use body shifts to move around the space she has built to designate the actions of each salient entity.

The only explanation for this is that the signer is taking the perspective of each entity. It is clearer for the mother than it is for the police—recall the verbs SEE and LOOK moving forward from the signer's body toward what is in the distance. That she also takes the perspective of the police (in the distance) becomes clear from the final segment of clause 4 in (3'). The police are chasing another vehicle, which in the following discourse, the narrator identifies as a blue van. This vehicle is positioned in the signer's space distally to the more proximal locus where she has signed the two classifiers indicating the police lights and the dust. In other words, she has taken the perspective of the police *behind* this single vehicle they are pursuing. In fact, in the conceptualized space, the blue van is *between* the narrator's car and the police in pursuit.

Thus the conceptualized space is not fixed in the discourse, but rather, the signer pivots the space, as if it were on a mental turntable. The signer reorients the space so that each entity for whom the perspective is portrayed sees the space and the other entities in it from that perspective. The signer does not move around the space; the space rotates. The signer shifts reference, but this reference shift does not involve a body shift into various loci in the space.

7. THE USE OF SPACE AS A CONCEPTUALIZATION OF A REAL SPACE.

We have seen so far that elements of the real event as conceptualized by the signer motivate the arrangement of linguistic elements in the signer's present discourse. Positioning in

the discourse space is dependent both on how the (past) real space is conceptualized, and perhaps more importantly, how the signer conceptualizes herself within that space at the time of the event.

A test of the limits of this effect on the use of space in discourse might be with a reciprocal verb, for example LOOK.AT.EACH.OTHER, in which the two actors should be considered as equal, and semantically any inherent perspective would likely be shared.[5] This verb appears in the same text (Text 1) and is given in (4), where each of the reciprocal parts of the verb is articulated with one of the two hands:

(4) Text 1: Utterance 25

eye gaze 2---------- right---------

facial gesture
rh WE.2(1,3) SARAH PRO.1 $_{a}$LOOK.AT$_{b}$[6]

lh $_{b}$LOOK.AT$_{a}$

'Sarah and I looked at each other.'

eye gaze 2---------- down (slight)---------- 2---------- right----------

facial gesture eyes wide
rh BEFORE CL:O('fight' wiggle/twist) CL:bentV$_{a}$ DISCUSS++

lh CL:O('fight' wiggle/twist) CL:bentV$_{b}$

'We'd been arguing, but now sat still, and talked about (this event).'

The use of space in this example shows that even though this verb semantically suggests an entirely reciprocal action, the signer is clearly aligned with one actor in the verb structure: herself. The positioning of the sign in the signer's space is not neutral, that is, the two hands are not equally positioned one on either side of the signer's torso, but the sign is altogether slightly off center to the right, and the signer looks toward the right. Earlier in the discourse the signer had described who was in the car (such detailed positioning description is common in ASL discourse of this type), positioning herself in the back seat behind the driver and her sister Sarah in the back seat to her right. The verb LOOK.AT.EACH.OTHER is subsequently positioned to correspond to this spatial arrangement. Thus we have a supposedly reciprocal verb, but the articulation contains a perspective not equally shared by the two actors referred to by the verb. The second part of this utterance continues this spatial schema with the predicate classifier CL:bentV 'to sit (still)' articulated on both hands, and positioned once again in the identical locus just off to the right of the signer's center. The narrator tells of what she and her sister did,

[5]Note that the translation of (4) suggests that this is true for English.

[6]This transcription of LOOK.AT.EACH.OTHER is intended to show what is articulated on each hand, and includes the spatial loci labeled "a" and "b."

but maintains the perspective of her herself, and *not* that of her sister, through the multi-clausal event.

This suggests that a given perspective is not incongruent with a reciprocal verb. The action is reciprocal, but how the situation is conceptualized and portrayed in linguistic structure includes a particular perspective, in this case of only one of the two actors in the event. This example supports the notion that perspective is coded as part of the verb structure, even for a verb where a more neutral space might be assumed, thus posing a potential counter example for the current analysis.

8. UNOBSERVED ACTION.

The suggestion has been made above that perspective is something coded in the structure of the verb in ASL. As the story-teller produces the discourse, spatial positioning and eye gaze are relative to the orientation of the space surrounding the signer from the perspective of an actor for each action coded by a predicate verb. This implies, however, that there is always a character available who is observing the event scene, whom the narrator can empathize with and thus portray the scene from that person's perspective. What happens, though, if an action is "unobserved?" A "perspective" on the scene would seem incongruent, although the signer is still present telling the narrative, and the signer has a real body and face that can look around the present signing space. This might mean that a character is not available to observe an action taking place (or no character that the narrator wishes to empathize with in this sense), but the narrator him or herself can still look around at the entities that have been positioned in the signing space. In these narratives, the narrator frequently comments about the narrative events, in which case his or her eye gaze tends to remain on the addressee, and the perspective may be considered the narrator's instead of a character's in the story. Example (5) provides an interesting take on such a problem.

(5) Text 4: Utterance 14-15

eye gaze 2---------- far left---------- 2-----

facial gesture head turned far left----------head front
rh MAYBE PRO.3 CAMP++ CL:1(out—circles around—back)
(off screen)
lh PRO.3 gesture (5 hs)

'Maybe there at a campsite, (the dog) would wander away,'

eye gaze 2---------- 'a'---------- 2----------

facial gesture t wh-q nod
rh THAT LIST DIFFERENT+ gesture: 5 hs WHO gesture: 5 hs WOLF I.SEE

lh $PRO.3_a$----------

'That, or something like that, could happen. (You might wonder) who (got the dog pregnant). It would be a wolf.'

Here, along with the classifier item CL:1(out—circles around—back), the narrator turns his head to the extreme left, giving the distinct impression of *not* seeing the action of the classifier predicate. The effect is one of non-participation in the event. Thus a perspective is still apparent—but not of the dog, and not of the narrator; this perspective on the event as a whole must be construed by the addressee as that of the dog owner, even though no such referent has been deployed as of yet. The narrator is telling us that the dog owner is unaware of the event, or not present for it, and this is indicated by the extreme head gesture. The narrator is describing the dog's actions, but this event is not portrayed neutrally with regard to perspective, nor is it portrayed from the narrator's perspective on the scene. Instead, the narrator introduces a new character, however peripherally, and chooses to say something about this entity's (non)involvement in the event. It might be argued that perspective is restricted to human referents, so that it would be unnatural for the narrator to take the dog's perspective, but elsewhere in this narrative, the story-teller does exactly that, leaving us to conclude that the narrator expressly wanted to introduce the dog owner into this discourse segment and say something about this person's perspective.

9. CONCLUSION.

Data from the narratives in this study suggest that perspective is an integral part of the verbal construction in ASL. In narrative passages, the option of including perspective or not does not appear to exist, that is, the signer has options in how to frame a construction, but all options involve perspective at some level. The inclusion of perspective coding motivates and explains certain grammatical structures, such as that seen in the narrative about the advancing police cars, where the perspective of those watching the event unfold from their car parked by the highway was not maintained, but alternated between this perspective and that of the police in pursuit of

another vehicle. The positioning within the signer's space of all of these vehicles together cannot be explained without these perspective shifts, and the concomitant rotation of the conceptualized scene. An important observation here is that the signer did not use body shifts to shift reference in this passage. In addition, reorienting the space to portray the perspective of various referents is not dependent on inclusion of a 1s (or a 3s, for that matter) pronoun. A change in stance takes place, but this may be specific to the situation in this particular narrative. The combination of morphemic elements in the verb complex as a whole makes the perspective clear. These morphemes are of course composed of combinations of phonological parts: hand orientation, direction of movement, and the specific location of the hand relative to the signer.

Conceptualization of space based on real events motivates the signer's manipulation of space in ASL narrative constructions. Space is (re)oriented from various character perspectives rather than remaining as a static orientation in the discourse space. There is a tendency to portray verbal constructions that code actions from the actor's perspective, which in many cases is an agent of the action, but this is not a requirement. The patient's perspective is portrayed in passives, as shown in the studies in Janzen et al. (2000, 2001), marked by a difference in the configuration of morphological features in the verb complex.

The signer may shift between 'character' perspective and narrator perspective, but such a shift is not one to 'neutral' space. Narrator space is equally oriented to a particular perspective. This has not been explored in any detail in the present discussion, but is an area of study that deserves attention.

This study adds to our understanding of the complexity of form of predicate structure in ASL, with the inclusion of information the signer codes regarding not only the action itself and the referents coded in the agreement system, but also regarding the event as viewed by one of the referents, picked out by the narrator as the referent whose perspective is worthy of some interest. Many questions are of course yet unanswered, such as why and when the narrator chooses to alternate from character perspective to narrator perspective. Perhaps too, the present study does not account for all the morphological features of the complex verb structure that indicate such perspective and perspective shifts. Finally, this study has looked at discourse narrowly, examining only a certain type of narrative structure. Broadening the discourse range would undoubtedly tell us much about the ASL signer's portrayal of perspective and the effects it has on linguistic form.

REFERENCES

Aarons, D., Bahan, B., Kegl, J., and Neidle, C. 1994. "Subjects and agreement in American Sign Language." In *Perspectives on Sign Language Structure: Papers from the Fifth International Symposium on Sign Language Research, Volume 1*, I. Ahlgern, B. Bergman and M. Brennan (eds.). Durham: The International Sign Linguistics Association. 13-27.

Demers, H. 2000. "Is it possible that reference shift does more than convey point of view of intra-discourse characters?" Unpublished MS, University of Manitoba.

Engberg-Pedersen, E. 1995. "Point of view expressed through shifters." In *Language, Gesture, and Space,* K. Emmorey and J. Reilly (eds.). Hillsdale, NJ: Lawrence Erlbaum. 133-154.

Givón, T. 1990. *Syntax: A Functional-Typological Introduction, Volume 2*. Amsterdam: John Benjamins.

Janzen, T., O'Dea, B., and Shaffer, B. 2000. "Passive constructions in American Sign Language." *BLS 23*. 434-445.

Janzen, T., O'Dea, B., and Shaffer, B. 2001. "The construal of events: Passives in American Sign Language." *Sign Language Studies*, 1(3), 281-310.

Klima, E. and Bellugi, U. 1979. *The Signs of Language*. Cambridge, Mass.: Harvard University Press.

Lillo-Martin, D. 1995. "The point of view predicate in American Sign Language." In *Language, Gesture, and Space*. K. Emmorey and J. Reilly (eds.). Hillsdale, NJ: Lawrence Erlbaum. 155-170.

Padden, C. A. 1988. *Interaction of Morphology and Syntax in American Sign Language*. New York: Garland Press.

Padden, C. A. 1990. "The relation between space and grammar in ASL verb morphology." In *Sign Language Research: Theoretical Issues*, C. Lucas (ed). Washington, D.C.: Gallaudet University Press. 118-132.

van Hoek, K. 1992. "Conceptual spaces and pronominal reference in American Sign Language." *Nordic Journal of Linguistics*, 15(2), 183-199.

Wilcox, S. 1996. "Hands and bodies, minds and souls: Or, how a sign linguist learned to stop worrying and love gesture." In *Proceedings of WIGLS. The Workshop on the Integration of Gesture in Language and Speech. October 7-8, 1996*, L. Messing (ed). Applied Science and Engineering Laboratories Newark, Delaware and Wilmington, Delaware. 21-40.

THE JURY'S STILL OUT: SEMANTIC DISTINCTIONS IN LEGAL ENGLISH AND COMPREHENSION ISSUES FOR LAYJURORS

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1. INTRODUCTION.[1]

In order to understand word meanings, at least in a great number of cases, humans require an appeal to a prototype concept or a concept schema, which imposes some aspect of human experience (Fillmore 1975:123). This notion becomes problematic, however, when word meanings seem to fit neither the prototype, nor the framework defined by ordinary language.

Legal English is an interesting place to explore this issue because some legal language is based on its own semantic principles (Fillmore 1978:167) and these principles do not necessarily coincide with those found in ordinary language. In fact, the definitions for words that are used in the legal field are "frequently different from what might be proposed for the same words in ordinary language" (Fillmore 1978:169). A perusal of a law dictionary lends support to this claim, revealing that a number of common words used in a legal sense have very uncommon meanings; for example:

(1) *action* 'a lawsuit brought in a court' (*Black's Law Dictionary* 1990:28)
(2) *consideration* 'the inducement to a contract' (*Black's Law Dictionary* 1990:306)
(3) *residence* '[implying] something more than mere physical presence and something less than domicile'[2] (*Black's Law Dictionary* 1990:1308)

This paper examines some of the ways that the linguistic features of legal language get superimposed on ordinary language. A contrastive analysis of the semantics of *negligence* and *reasonable* and the idiomatic expression *beyond a reasonable doubt* is presented highlighting key differences between the models native English speakers have of these words. These lexical items were chosen as the focus because they are frequent enough both inside and outside of the courtroom (i.e., in the media) and appear to be sources for some of the comprehension issues that laypersons face as a product of the semantic distinctions between the legal and folk models of language. In line with the ongoing controversy over whether or not terms should be defined for the jury in ordinary English, as opposed to legalese (cf. Dumas 2000), this paper considers the following questions: how does legal language define *negligence* and *reasonable (doubt)* in accordance with a traditional checklist semantic model? In other words, what definitional elements must be present in order for X to constitute a case of *negligence* or *reasonable (doubt)* in the true legal sense? Secondly, how do these definitions differ from those in ordinary language? Finally, how do jurors deal with the discrepancies and are they even aware of them? To conclude, suggestions for changes that could be made as a means to simplify jury instructions are considered.

2. WHY DEFINING *NEGLIGENCE* MIGHT SEEM NEGLIGIBLE.

[1] Special thanks to William C. Burdine, Esq. for insightful discussions during the drafting of this paper.

[2] To further complicate this definition, apparently one can have several residencies, but only one domicile.

The term *negligence* is an interesting word to add to the list presented above of common words, i.e. in terms of relative frequency in ordinary English, but which can also have uncommon meanings specifically because the semantic contrast between the legal model and the ordinary English model, appears, at least superficially, to be based on minor semantic distinctions. If we consult a dictionary of American English, we find *negligence* defined as "a failure to exercise the care that a prudent person usually exercises" (*Webster's Dictionary* 1969: 566). The definition provided in a law dictionary does not stray very much from this in a general sense, though it is more extensive to the effect that it specifies that *negligence* includes both doing something one is not supposed to be doing and, likewise, failing to do what one is supposed to do:

> Negligence is the failure to use such care as a reasonably prudent and careful person would use under similar circumstances; it is the doing of some act which a person of ordinary prudence would not have done under similar circumstances or failure to do what a person of ordinary prudence would have done under similar circumstances (*Black's Law Dictionary* 1990:29).

However, what cannot be ignored is that while there are only subtle differences between these two dictionary definitions, it is in the actual application of the terms where the legal meaning of *negligence* becomes much more particular than the ordinary one. In fact, in order to have an act of negligence in a legal sense, four elements *must* be present: *duty*, *breach*, *proximate cause*, and *damages*. To determine the presence of each of these elements, the following questions apply respectively: (1) did the defendant have any obligation to the plaintiff and if so, to what degree did the defendant owe to the plaintiff under the circumstances? Note that the obligation will be heightened depending on the nature of the relationship, (2) did the defendant, by his/her conduct, violate that duty of care, (3) did the breach of duty by the defendant constitute the proximate or legal cause of the plaintiff's injury, and (4) did the plaintiff suffer actual harm to him/herself or his/her property that is measurable and compensable in money damages? (*Black's Law Dictionary* 1990:29).

Certainly, these semantic features have correlates in ordinary English, at least in the form of a risk of harm. For instance, a negligent parent is assumed to be in breach of his or her duty and be causing harm to the child. The difference in the legal definition is in requiring all four characteristics to be unequivocally present and demonstrable in a court of law. Unless evidence of all four elements can be proven, then there is no Cause of Action (a viable reason to file suit) because, from a legal perspective, one is not really dealing with an instance of *negligence*. In contrast, ordinary English meanings are often "left 'fuzzy', their application depending on cooperation and common sense or simply left unresolved" (Fillmore 1978:169) because in everyday life "we have no need to redefine the notions so that the borderline becomes a precise one" (ibid.). Thus, the major difference between the legal application of the definition of *negligence* and what we do in ordinary language lies in *the degree of precision required to create distinctions*. Law and legal language imply decisions, courses of action taken (or not), whereas ordinary language is an accumulation of content that may permit a decision or course of action, but which does not pre/proscribe it. Hence, ordinary language can often be *fuzzy*, as demonstrated by the 'negligent parent' example.

To complicate matters slightly, several subcategories of *negligence* also exist in the legal model that serve to stipulate its definition and application to an even greater extent. These subcategories include, among others, *actionable negligence*, *active negligence*, *collateral negligence*, and *comparative negligence*. Hypothetically-speaking, if a layperson encountered one of these terms, s/he would likely react in one of two ways: (1) accept it as a foreign concept and thus, an incomprehensible one because, again, ordinary English has no pragmatic need to categorize types of *negligence*, or (2) equate the meaning of the entire term to be the sum of its parts (adjective plus noun), leading to inevitable misinterpretation of the concept in its true legal sense. Either way, one's misunderstanding of the term would clearly be unhelpful in a legal proceeding.

2.1. HOW THE COURTS DEAL WITH DEFINING NEGLIGENCE FOR JURORS.

During the instructional task to jurors, judges obviously do not read from a legal dictionary in order to define terms, but rather, rely heavily on patterned instructions that have been standardized for each jurisdiction. These patterned instructions serve as a time-saving device for lawyers and judges, not to mention a way to eliminate the need to write instructions for every case and, at least in principle, to reduce the number of appeals for faulty instructions (Dumas 2000:51, citing Tiersma 1999). Unfortunately, while they have evolved with respect to consistency and economy of time and effort, pattern instructions are still filled with difficult legalese because they are often modeled upon the language of appellate opinions, which are written by judges, specifically for other judges to read (Dumas 2000:51). Thus, virtually the same comprehension issues a layperson faces when consulting a legal dictionary have been identified for layjurors and pattern jury instructions.

In Texas, judges base their jury instructions for *negligence* on a volume entitled *Texas Pattern Jury Charges* (now *Texas Pattern Jury Charges-General Negligence and Intentional Personal Torts)*, published by the State Bar in 1969 and continuously revised in response to the increase in number and complexity of negligence and intentional tort cases (Committee 1998: xxi). Since it is "impossible to prepare pattern charges for every factual setting that could arise" (Committee 1998: xxiii), the committee tried to prepare guides for the most usual types of litigation that might arise. Moreover, in striving to keep with the court's admonition that "a workable jury system demands strict adherence to simplicity", in some cases "the committee has... attempted to simplify questions and instructions..." (Committee 1998: xxiv).

We turn now to the definition of *negligence* proposed in the 1998 edition of the *Texas Pattern Jury Charges* that, according to the commentary included therein, is meant to be read by the judge in every case in which *negligence* is the issue at hand:

> "Negligence" means failure to use ordinary care, that is failing to do that which a person of ordinary prudence would have done under the same or similar circumstances or doing that which a person of ordinary prudence would not have done under the same or similar circumstances.
>
> "Ordinary care" means that degree of care that would be used by a person of ordinary prudence under the same or similar circumstances (Committee 1998: 19).

It is clearly necessary to also define *ordinary care*, since its use in defining *negligence* is rather vague. However, there does not seem to be any good reason to define either of these terms with language that includes the term *prudence*, unless that, too, gets defined, since it is an uncommon word in everyday English.

In certain circumstances (e.g. when there are claims of both *common-law negligence* and *negligence* per se), there is an *instruction* accompanying the definition of *negligence*: Such instructions consist of short narrative examples that are intended to illustrate the concept of *negligence*, for example, "the law *forbids driving the wrong way on a street designated and signposted as one-way*. A failure to comply with this law is negligence in itself" (Committee 1998: 49). After one of these instructions is read, the jurors must answer *yes* or *no* to a question, such as "did the negligence, if any, of *Don Davis* proximately cause the occurrence in question?" (Committee 1998: 53). Separate definitions would also be provided for the term *proximate cause*, but this paper will not pursue that possibility (cf. Committee 1998: 27-28).

At this point, the reader can surely imagine the comprehension difficulties that could amount from all these definitions and see that the attempt described above to guide judges towards providing jurors with more simplistic definitions and instructions leaves something to be desired. Even the instructions formatted as narratives, which by virtue of their format should help ground the abstract definition of a legal term in a real life, everyday context, may cause confusion by leading the juror to consider ideas that are not pertinent to the facts of the case they are deliberating.

3. A CASE FOR DOUBT: DEFINING *REASONABLE DOUBT*.

Reasonable doubt is another legal term whose meaning is potentially confusing for jury members. The confusion likely stems from how *doubt* and *reasonable* are used in ordinary English. First, it can be said that *doubt* is a gradable concept in English, based on its use with various qualifiers, for example: *I have serious doubts about it, I highly doubt it, there's no doubt about it*. Secondly, in our folk model of knowledge, it is understood that a *reasonable person* might doubt the validity of any claim judged as unlikely or unnecessary to be true, and therefore can be said to have *reasonable doubt* about something. However, even if a juror were to break down the collocation in this way, it would not provide him/her the correct legal meaning of *reasonable doubt*, thereby again supporting the notion that the meaning of an expression does not always equal the sum of its parts.

A search through the Switchboard transcripts (accessed via the Linguistic Data Consortium) a corpus of spontaneous, spoken American English, indicates a frequency rate for *reasonable doubt* of less than 0.001%, suggesting that it is not particularly salient in ordinary spoken English. However, *reasonable* is still the most frequent collocate for *doubt*, accounting for eleven out of seventy-seven occurrences, all of which were related in topic to the legal domain. Three concordance examples are included below:

(4) be proven beyond a shadow of a *reasonable doubt* that the person
(5) where you have to find it beyond a *reasonable doubt*
(6) You have to find whether they're guilty beyond a *reasonable doubt*

As a means to gather information about the pattern schema [reasonable x], we can refer to other occurrences of *reasonable* with the assumption that it will provide insight into a layperson's perspective of what the concepts *reasonable price*, *reasonable idea*, and *reasonable person*, etc. share in common with *reasonable doubt* in ordinary English. Listed below are some of the collocations collected from the corpus:

(7) *reasonable prices*
reasonable idea
reasonable person
reasonable question
reasonable start
reasonable return
reasonable job

In each of these collocations, part of the meaning requires a comparison between physical objects or ideas; a weighing of characteristics that makes one seem more *agreeable* than the other. A reasonable price could mean *inexpensive*, when compared with another price for the same item, or the price may represent the closest physical representation of the *value* a buyer has unconsciously placed on the item. In other words, *reasonable* captures the difference between the amount of money that the buyer *would be willing to pay for the item*, as compared with what would be *outside of this price range*. A *reasonable idea* means one that is conceptualized as being less extreme than the possibilities, and this implicitly gives it understandable rationale. Finally, a *reasonable person* means one who possesses sound judgment, as compared to somebody else, who either possesses a greater ability to make sound judgments (*she's very reasonable*) or less of an ability (i.e. *he's being unreasonable*, or *he's crazy*). The idea of sound judgment is closest to the target meaning of *reasonable doubt.*

If we follow the pattern exhibited by these three examples we would expect that *reasonable doubt* would also share the feature of comparison found in its folk meaning, since gradable adjectives generally refer to a comparison. According to *Black's Law Dictionary* (1990:1265):

> Reasonable doubt... is doubt based on reason and arising from evidence or lack of evidence, and it is doubt which reasonable man or woman might entertain, and it is not fanciful doubt, is not imagined doubt, and is not doubt that juror might conjure up to avoid performing unpleasant task or duty....Reasonable doubt is such a doubt as would cause prudent men to hesitate before acting in matters of importance to themselves.

It seems that a significant problem is not in the definition *per se*, but in the inherent subjectivity of what counts as *reasonable*. There seems to be an appeal to some common standard of *reasonableness* that may or may not exist. Another important issue is whether this term can even be usefully defined for jurors outside the frame of *(guilty) beyond a reasonable doubt*, in which the semantics of *beyond* also become relevant. According to *Black's Law Dictionary* (1990), ***beyond*** *a reasonable doubt* means "fully satisfied, entirely convinced, satisfied to a moral certainty...[the] phrase is the equivalent of the words *clear*, *precise* and *indubitable*" (ibid., additions mine). While *reasonable* still assumes gradability, it is the added term *beyond* that excludes all the continuum of

options for *doubt* and leaves us with the region on the scale of *almost certainty that X is the case* (where X is what is being judged as true or not). In any of the eleven contexts in which *reasonable doubt* or *beyond a reasonable doubt* is found in the spoken corpus, it is virtually impossible to know from the co-text whether the speaker truly understands the legal meaning of the item. It may be a case like *negligence*, whereby the core meaning of the concept is understood but the essential features are not because they are not crucial to or necessarily even a part of the understanding of the concept in ordinary English.

Some legal practitioners object to the use of ordinary language to define legal terms because it means a loss of the poetics of legal language and a loss of history (cf. Jackson 1995; Klinck 1992; Tiersma 1999 for discussions). Others have questioned whether or not it is the courts' duty to define a term such as *reasonable doubt* for the jurors. For example, in its 1991 decision, the Ninth Circuit explained that because *reasonable doubt* is a phrase of "common usage and acceptance", it requires "no definition beyond the language itself" (US. v. Nolasco, 926 F.2d 869, 871 [9th Cir. 1991] [en banc]). However, the fact that jury instructions frequently define far simpler words and phrases that are indeed part of ordinary language, such as *attempt* (6th Cir. Crim. Jury Instr. 5.01[1991]), *knowingly* (5th Cir. Crim. Jury Instr. 1.35 [1990]), *possession* (5th Cir. Crim. Jury Instr. 1.31 [1990]) and *agreement* (8th Cir, Crim. Jury Instr. 5.06B [1992]), makes the above claim rather odd. Model instructions also routinely define *conspiracy* and *circumstantial evidence* (5th Cir, Crim. Jury Instr. 1.08, 2.21 [1990]), terms that have, like *reasonable doubt*, become part of ordinary language through the media. Certainly, if the test is whether terms are *used* by laypersons, then many jury instructions could be eliminated. Ironically, the very fact that terms like *conspiracy*, *reasonable doubt*, and *negligence* are part of ordinary language makes them more prone to inaccurate definition by layjurors and in more need of explanation by the court.

Even judges, who have professional expertise and who learn to interpret the nuances of the law have difficulty construing the meaning of *reasonable doubt* (5th Cir, Crim. Jury Instr. 1.08, 2.21 [1990]). This is illustrated by the many cases in which trial courts have committed reversible error by incorrectly defining the term (5th Cir, Crim. Jury Instr. 1.08, 2.21 [1990]). In one case it was maintained that the trial court improperly raised the level of uncertainty meant by the term *reasonable doubt* by comparing it to the way in which one would doubt the wisdom of a young couple's buying a car. Considering that the judge defined the term by means of an analogy only and not by a definition again suggests that jurors must make use of some implicit standards for *reasonable* behavior. If judges have difficulty understanding this fundamental concept, then it should be expected that layjurors would face even more difficulties.

The results of empirical studies indicate that jurors do not understand the term *reasonable doubt*. For example, the *Michigan Juror Comprehension Project* tested 600 actual and potential jurors' comprehension on the meaning of certain jury instructions and reports that only one quarter of the jurors knew that *reasonable doubt* does not mean *any* possibility of doubt, *no matter how slight* (Kramer and Koenig 1990:414, emphasis mine). Similarly, less that 31% of those surveyed understood that *guilt beyond a reasonable doubt* does not mean *absolute certainty of guilt* (ibid.).

Another study (Kerr, Atkin, Stasser, Meek, Holt and Davis 1976) examined over 600 students who served as jurors in several mock trials. Some of the groups were given an instruction that defined *reasonable doubt*, while others were not. It was found that those mock panels that were not given instructions remained more uncertain about their

decisions and tended to disagree more often, thereby resulting in more hung juries. Similarly, studies in Florida found that potential jury members who were given instructions demonstrated more understanding of the legal principles than those who were not given instructions, however, both sets of jurors were confused about what was required by the reasonable doubt and presumption of innocence standards (Strawn and Buchanan 1976). These studies seem to be corroborated by anecdotal evidence, too. In Colorado, a juror returned home and consulted an English dictionary for the meaning of *reasonable doubt*, then shared her findings with another juror, before both of them decided that the defendant was not guilty (*National Law Journal* 1993:21). This alludes to the issue of whether or not it makes more sense to define *guilty beyond a reasonable doubt*, rather than just *beyond a reasonable doubt* or simply *reasonable*. Perhaps jurors could better deal with a specified proposition (*guilty*) in lieu of an abstract, unspecified proposition (*X beyond a reasonable doubt).*

4. IMPROVING JURY COMPREHENSION.

One of the aims of this paper is to give readers some reason to speculate that when terms such as *negligence* or *reasonable doubt* are not defined, layjurors may be left to grope for a meaning. As a consequence, both the prosecution and the defense may be adversely effected when the jury inadvertently applies an incorrect standard of proof (Cohen 1995:678). For instance, the jury could mistakenly think that the reasonable doubt test requires proof *beyond the shadow of a doubt* or the jury may erroneously interpret the standard as requiring stronger doubts than are necessary to acquit. In other words, both a failure to define X in simple terms and a failure to define X altogether can lead to jury comprehension issues.

After examining the treatment of the term *negligence* by the State Bar of Texas, an institution dedicated to simplifying terms for jurors, the reader may agree that there still remains a certain dissatisfaction in the results of that simplification process. At least from a linguistic standpoint, it may be felt that ordinary English should be used to talk about legal concepts as much as possible because otherwise the exercise of defining a term becomes rather circular. With a bit of tweaking, the state Bar's definitions could be simplified further, but we will leave this subject for future study.

With regard to defining *beyond a reasonable doubt,* it is clear that the semantic problem resides in several layers of lexical and constructed meanings of *beyond* (a metaphorical meaning); *reasonable* (referring to some common standards of 'reasonableness' of a person); *doubt* (referring to a scale of certainty); and finally, the entire frame *X (guilty) beyond a reasonable doubt*. Being able to unpack these layers using ordinary language is key to understanding them.

One mode of simplification would be to provide jurors with a definition in the affirmative, rather than the negative. For instance, we might state that *beyond a reasonable doubt* means *so likely to be true given the evidence, provided that no reasonable person could doubt it.* In other words, this definition might be more useful for the very reason that it states what the legal meaning *is*, as opposed to what it is *not*. Dumas (2000) suggests a revision that uses longer, but jargon-free text than that included in the Tennessee Pattern Instructions she analyzed. An excerpt from her revision is provided below:

> Proof beyond a reasonable doubt is a level of proof that leaves you as a juror firmly convinced of the defendant's guilt. In order to reach such a level of proof, you must consider all the evidence carefully, being certain to consider all facts carefully and impartially.
>
> If, after you have considered all the evidence in the case carefully, you are firmly convinced of the defendant's guilt, you should/must find the defendant guilty.
>
> If, however, you think there is a real possibility based upon rational consideration and common sense, that the defendant is not guilty, then you should/must find the defendant not guilty.
>
> Beyond a reasonable doubt does not mean absolute certainty; few things in this world are absolutely certain. Neither does it mean an imaginary doubt or a doubt that could be dreamed up if a few facts were different. It means a doubt that will not let your mind rest easy about the certainty of guilt (Dumas 2000:60).

It is difficult to say whether Dumas' (2000) approach to jury pattern reform exemplified above makes use of simpler syntax or shorter, less densely packed sentences than traditional pattern instructions do, but her instruction is structured according to a logical and coherent hierarchy, presenting the listener with a statement of the standard, along with an analogy, which seems easier to follow than traditional patterns. Moreover, the Subject is *you*, rather than *reasonable person* or *ordinary person*, whose purpose may simply be to show that "the law tacitly acknowledges the inevitability of juror self-identification with the reasonable person" (Power 1999:77), but nonetheless makes the identification of the addressee unmistakable.

One of the criticisms of such a reformulation is based on two of the key principles which underlie the model, namely that first, a juror must be "firmly convinced" of the defendant's guilt to vote guilty and secondly, a reasonable doubt is "a real possibility" that the defendant is not guilty. According to Power (1999:83), "the courts have wrestled with both concepts, usually finding them to be permissible". The wording, *firmly convinced* has encountered the least criticism; the District of Columbia Court of Appeals, for example, expressed the opinion that it is just a contemporary version of *abiding conviction*, a common component of the moral certainty formulation (Power 1999:83). The words *real possibility* apparently pose a greater threat, particularly when read aloud with emphasis placed on the word *real* because it "could suggest a burden on the defense to make a substantial showing that the defendant is not guilty" (Power 1999:84).

These criticisms aside, however, this type of *reasonable doubt* instruction does fit with the modern trend toward brevity and simplicity. It also encapsulates the concept of *proof beyond a reasonable doubt* in the affirmative. If this is all we need or want from an instruction, then perhaps this is as good as any, and better than most. The next step would hopefully be to test its use with layjurors.

5. CONCLUSION.

Due to the exactness required to define legal terminology, or what Fillmore (1978:167) calls "a checklist gone mad", we must avoid classifying legal language within the semantic parameters of ordinary language (Fillmore 1978:171). This, however, does not preclude judges from giving jurors the tools to understand legal concepts, using ordinary language.

There remains a degree of skepticism about suggested reformulations in jury instructions and talk about the reality of seeing the reformulations to fruition. After all, it is rather difficult to imagine a workable definition for *reasonable doubt*, for example, when the courts themselves cannot agree on what counts as *reasonable doubts* in the first place. Nevertheless, the practicality of doing away with the archaic style of legal English in favor of one more intelligible to a wider audience is appealing.

Linguists are in an excellent place to collaborate with the legal community on language challenges in the courtroom, improve effective communication with jurors, and craft instructions appropriately so as to help jurors base verdicts on nothing other than the facts of evidence. Given the growth in the field of Forensic Linguistics, the prospects for such collaborative efforts look promising and we should look forward to having our day in court.

REFERENCES

Black's Law Dictionary, Sixth Edition. 1990. St. Paul, MN: West Group.

Committee on Pattern Jury Charges of the State Bar of Texas. 1998. *Texas Pattern Jury Charges-General Negligence and Intentional Personal Torts*. Austin: State Bar of Texas.

Cohen, J. 1995. "The reasonable doubt jury instruction: Giving meaning to a critical concept", *American Journal of Criminal Law* 22: 677-701.

Dumas, B. 2000. "US pattern jury instructions; problems and proposals", *Forensic Linguistics* 7 (1): 50-71.

Fillmore, C. 1975. "An alternative to checklist theories of meaning". In C. Cogen et al. (eds.); *Proceedings of the First Annual Meeting of the Berkeley Linguistic Society*: 123-131.

_____. 1978. "Excerpt from 'On the organization of semantic information in the lexicon'". In D. Farkas et al. (eds.); *Papers from the Parasession on the Lexicon*. Chicago: Chicago Linguistic Society: 165-173.

Jackson, B. 1995. *Making Sense in Law: Linguistic, Psychological and Semiotic Perspectives*. Liverpool: Deborah Charles, 111-139.

"Juror's use of dictionary helps defendant win reversal", *National Law Journal*, 3 January 1993: 21.

Kerr, N., Atkin, D., Stasser, R., Meek, D., Holt, R. and J.H. Davis. 1976. "Guilt beyond a reasonable doubt: Effects of concept definition and assigned decision rule on the judgments of mock jurors", *Personality and Social Psychology* 34J: 282- 294.

Klinck, D. 1992. *The Word of the Law*. Ottawa: Carleton University Press, 208-290.

Kramer, G. and Koenig, D. 1990. "Do jurors understand criminal jury instructions? Analyzing the results of the Michigan juror comprehension projects", *University of Michigan Journal of Law* 23: 401-402.

Linguistic Data Consortium. *Switchboard Transcripts*. University of Pennsylvania. Accessed at http://morph.ldc.upenn.edu, 12 December 2000.

Power, R. 1999. "Reasonable and other doubts: the problem of jury instructions", *Tennessee Law Review*, 67(1): 45-123.

Strawn, D. and Buchanan, R. 1976. "Jury confusion: A threat to justice", *Judicature* 59: 478-481.

Tiersma, P. 1999. *Legal Language*. Chicago: University of Chicago Press.

Webster's Seventh New Collegiate Dictionary. 1969. Springfield, MA: G. & C. Merriam Company.

Legal materials

5th Cir, Crim. Jury Instr. 1.08, 2.21 [1990].
5th Cir. Crim. Jury Instr. 1.31 [1990]
5th Cir. Crim. Jury Instr. 1.35 [1990]
6th Cir. Crim. Jury Instr. 5.01 [1991]
8th Cir, Crim. Jury Instr. 5.06B [1992]
US. v. Nolasco, 926 F.2d 869, 871 [9th Cir. 1991] [en banc]

A KNOWLEDGE-DRIVEN, CONSTRAINT-BASED INFERENCE MECHANISM FOR THEMATIC CHUNKING

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1. INTRODUCTION.

To understand any written sentence fully, it must be considered at the levels of morphology, syntax, semantics, pragmatics, and discourse, as well as integrated with background knowledge of the world (Allen 1995:10). While the complete meaning of a sentence depends on all this complex information, often a simpler representation works surprisingly well: As children learn early in life, the world can usually be described in terms of the broad concepts *who, what, where, when, why,* and *how* (Barr and Feigenbaum 1981:252).

In the parent project of this work (Tappan 2000), this so-called thematic-chunk representation of broad concepts supported an architecture for machine translation. It was hypothesized that these chunks should roughly correspond between English and Russian sentences regardless of other language differences. Consequently, translating them should theoretically be simpler than translating entire sentences (Mahesh 1996:2).

This work extends on the chunk representation. Whereas human interactivity in the process of chunking was the focus of the translation architecture, here an approach for automated chunking is proposed. Other language-related computer applications may benefit from this work as well. For example, automated summarization or abstracting of documents depends on a succinct description of the main points. Similarly, information extraction and retrieval, a major component of the Internet, could match queries against chunked documents for more precise searches.

2. IMPLEMENTATION.

For humans, identifying chunks is normally a trivial exercise. Computers, however, perform this task poorly on natural language because of its widespread ambiguity and heavy use of unspecified information and implicit knowledge (Pinker 1994:209). This work attempts to improve automated chunking by relying on additional resources in four main stages:

1. It analyzes a sentence syntactically to extract grammatical roles and relations.

2. It determines roughly what each word in the sentence explicitly and implicitly means without regard to the context.

3. It identifies chunks by analyzing the role(s) of each word or group of words.

4. It establishes roughly what the sentence means by fitting the chunks into a semantic framework.

2.1. Stage 1: Syntactic Analysis.

Many words are ambiguous in their part of speech and, as a result, often in meaning as well. To narrow their possible semantic contributions to a sentence, syntactic role must be considered (Katz and Fodor 1963:170; van Deemter and Peters 1996:20). Syntactic analysis is performed here by the Brill tagger, a freely available software tool used to annotate words in a sentence with their part of speech (see http://www.cs.jhu.edu/~brill). Since it has been shown for related work that minimal syntactic analysis is often preferred over determining the complete grammatical structure (Cowie and Lehnert 1996:85; Allen 1995:36), some of the tagger output is collapsed into broader categories, recoded, or discarded. Further processing lemmatizes words to their base form to simplify later analysis; e.g., nouns are singular, verbs are in the infinitive, etc. The output of this stage is the lemmatized sentence annotated with basic parts of speech. For example, *The dog chased a big cat into the old barn yesterday* is tagged as *dog*/N-SING *chase*/V-PAST-SIMPLE *big*/ADJ *cat*/N-SING *into*/PREP *old*/ADJ *barn*/N-SING *yesterday*/N-SING.

2.2. Stage 2: Semantic Analysis.

The principle of compositionality states that the meaning of a structure is composed of the meaning of its substructures (Hausser 1999:80). Therefore, a logical approach to analyze the semantics of a sentence is to analyze the semantics of each word in it.

To keep the processing requirements manageable, problematic words and those known to contribute little to overall meaning, as well as most adverbs, are discarded. Semantic analysis is then performed on each remaining word in multiple ways depending on the nature of the sentence.

2.2.1. Primary Lookup via Ontology.

Language is a means of representing the world. In the field of natural language processing, it is agreed that understanding language is predicated on understanding the world (Mahesh and Nirenburg 1995). A popular approach toward solving this problem is to represent knowledge in an ontology, which describes the world as a complex taxonomic hierarchy of interrelations between concepts (Mahesh 1996:5). The Mikrokosmos ontology used here divides these concepts among objects, properties, relations, and events (see http://crl.nmsu.edu/~dtappan/hdls4/mk). This representation corresponds to language well by mapping closely to nouns, adjectives, prepositions, and verbs, respectively. Currently, the focus in this work is on processing nouns and adjectives, with some analysis of prepositions. Events are a complex issue that is limited to basic expressiveness at this time.

An ontology is specifically designed as a resource for extracting and inferring world knowledge. Concepts are located in its hierarchical structure according to how they relate to other concepts. For example, *dog* can be specified as a type of *canine*. *Canine*, likewise, is a type of *mammal*, and *mammal* is a type of *animal*, and so on. As the taxonomy is traversed upward, the concepts become more general.

Each concept maintains its own list of properties (which are also concepts) to describe how it is more specific than its parent concept. For instance, a typical *mammal* is described as

being warm-blooded, *having hair*, and *giving birth to live young*.[1] Along with its own properties, a concept inherits properties of concepts above it (e.g., *animal* tends to be *mobile*, so *mammal* is, too) as well as properties of concepts above its properties (e.g., *hair* is a type of *fur*, so *mammal* has *fur*). This inheritance provides a powerful mechanism to infer conceptual information that is not explicitly stated in a sentence. The ontology serves—in part, at least—as the background knowledge that humans use to fill in gaps in understanding (Mahesh 1996:7).

Semantic analysis is performed on a sentence by looking up each word in the ontology. Both its own and its inherited properties are collected into an associated structure and subsequently organized into related categories to simplify later processing.

2.2.2. Secondary Lookup via Semantic Network.

An ontology is a powerful resource of semantic information. However, it typically focuses on a limited domain and may not contain concepts for all the words in a sentence. Furthermore, it has no convenient mechanism to find related concepts when the desired concept is not present. To improve lookup performance in this case, a second resource, WordNet, is employed. It is a freely available software tool for lexical analysis based on a semantic network (see http://www.cogsci.princeton.edu/~wn). Similar to an ontology, it also contains concepts and many types of relations, but it differs in that no properties are defined (Fellbaum 1998).

Since the purpose of using these lexical resources is to provide semantic properties, WordNet cannot contribute directly. Instead, it serves as a secondary index back into the ontology to find concepts related to ones that are not present. For example, if *dog* is not in the ontology, no further processing is possible using only the lookup via ontology. However, *dog* is present in WordNet, which lists it taxonomically under *canine*, then *carnivore*, *mammal*, *vertebrate*, and so on. Any of these concepts can be looked up in the ontology (assuming they are present, of course) to return partial semantic information. Indeed, nothing specific to *dog* can be inferred, but related properties of *canine* and such do contribute to its semantics. Additional resources like a thesaurus could complement this process even further.

2.2.3. Considerations and Limitations.

The ontology and WordNet are used here to infer implicit information (i.e., to fill in semantic gaps), but not to reason about it (i.e., to draw conclusions). For example, an *animal* is *mortal*, and the properties of *mortal* constrain it to the discrete state of being either *alive* or *dead*. If a sentence declares that the *animal* was *kill*ed, no logical conclusion is made to change its state to *dead*. (In fact, lacking information to the contrary, it is usually only by default that *alive* was originally inferred, simply because it is the more common state of being.) In general, an ontology does support such reasoning (Stede 1999:71), but it is not employed here due to the additional complexity.

An ontology is a conceptual resource. It describes neutral concepts that apply anywhere in the world (or the universe, for that matter) regardless of language, geography, culture, etc. As such, it is not grounded to any actual objects. For example, while an ontology may describe a *dog*, it does not have any reference to a specific instance of one like *Spot*. For this reason, named entities (i.e., proper nouns) cannot be looked up directly.

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[1] The actual encoding is more formal, but for simplicity, it is shown in plain English here.

The world is full of named entities, so this limitation is unacceptably restrictive. A separate resource, known as an onomasticon, is often employed to connect real-world instances to their conceptual descriptions in an ontology (Onyshkevych and Nirenburg 1994:15). For example, an onomasticon could list dog names, and each could be tied to the ontological concept *dog*, as well as to the particular breed, color, and so on. This solution has not been employed here yet. Instead, named entities are simply prohibited and not considered during evaluation.

2.3. Stage 3: Chunk Role Assignment.

Word order, verb case frames, selectional restrictions, and other factors often limit which roles a word can play in a sentence (Levin 1993). Whether a word satisfies the requirements is often based on its syntactic and semantic properties (Levin 1993:12). At this stage, each word has already been annotated with such information. The goal now is to assign a particular role using a subset of the framework defined in the parent project of this work (Tappan 2000). These roles, presented in Table 1, are derived from similar conceptual representations that have proved successful in related work (Jackendoff 1983; Lenat 1988).

Role	Class	Type	Subtype
WHO	DOER		
	DOEE		
	RECIPIENT		
WHAT	COMPLEMENT		
WHERE	LOCATION		
	MOVEMENT	SOURCE	
		DEST	
WHY			
WHEN	POINT		
	DURATION	START	
		END	
HOW	DESCRIPTOR		
	IMPLEMENT		
ACTION	TENSE	GENERIC	
		PRESENT	
		PAST	
		FUTURE	
	GENERAL	DURATION	ONCE
			MULTIPLE
			ONGOING
	LOCOMOTIVE	CONCEPT	GENERAL
			ROUNDTRIP
			ONGOING
			DEPARTED

Table 1: Current chunk roles

Chunk role assignment often relies on the fact that the verb plays a pivotal role in sentence structure. For example, many verbs require an animate subject (e.g., something with an *alive* or *mortal* property). This prerequisite, in combination with the expected subject–verb–object word order of English sentences, can often be used to find the WHO-DOER role (roughly

equivalent to the agent in traditional linguistic terms). Similarly, the syntactic and semantic annotations on each word can be compared against other predefined constraints. Many implausible interpretations can be eliminated in this manner. The example sentence from Stage 1 now appears as [*dog*]/WHO-DOER [*chase*]/ACTION-TENSE-PAST [*big cat*]/WHO-DOEE [*into old barn*]/WHERE-MOVEMENT-DESTINATION [*yesterday*]/WHEN-POINT.[2]

Without the big-picture meaning of the entire sentence to narrow the interpretations at this stage, a chunk may be assigned several ambiguous or even conflicting roles. In such case, it receives all possible assignments, and the final decision is left for the next stage.

2.4. STAGE 4: CHUNK TEMPLATE ASSIGNMENT.

Recursion in linguistic grammars permits an infinite variety of sentence structures to express an infinite variety of meaning (Jannedy et al. 1994:194). However, in practice, the number of structures encountered is limited because humans tend to express things in a relatively small number of predictable ways within a domain of activities (Allen 1995:335). Support for this claim comes from the organization of a typical foreign-language phrasebook for tourists, which serves as a primer for most things a person would commonly need to express or do. Within reason, there are only so many ways to formulate *going somewhere*, *doing something*, etc. using the basic chunks from Table 1. This regularity is the basis for establishing a set of thematic sentence templates.

The goal at this final stage is to determine which template is appropriate for the given distribution of chunks and then to populate it with the available information. Subsequently, the completed template can be passed to other applications for further processing like translation or summarization.

Chunks are first weighted by their relative importance, which was determined experimentally. For instance, a WHO-DOER chunk is considered more important than a WHEN-POINT. They are subsequently mixed and matched against a library of phrasebook-like sentence templates (see http://crl.nmsu.edu/~dtappan/hdls4 for examples). The best template, in terms of the strongest match with the least number of chunks left unused, is chosen. Not all sentences match an available template due to limited coverage. In such case, this stage produces little or no new information. Otherwise, it returns a semantic overview of the entire sentence based on its compositionality and the nature of its chunks.

3. DISCUSSION.

Space restrictions prevent an empirical discussion, so instead general observations will be addressed. Thematic chunking in various forms has an established history (Katz and Fodor 1963; Jackendoff 1983; Abney 1991). This work extends its usefulness by providing a robust inference mechanism to allow additional processing where other methods may come up short. It typically identifies chunks with reasonable accuracy and supplies enough implicit details for good semantic description. This performance is further improved by enforcing syntactic and semantic constraints to eliminate less plausible interpretations. Finally, matching chunks to thematic sentence templates serves to limit interpretations to known contexts. In such form, processing by other applications is likely to benefit.

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[2] Syntactic annotations are not shown for clarity.

On the downside, this approach does not exhibit much elegance in applying linguistic theories of lexical semantics. Granted, research in natural language processing is generally more application-oriented anyway (Brill and Mooney 1997), so it could be argued that this is not really a limitation. However, this approach can still be considered a "shake-and-bake" scheme to teasing semantic content from text by beating it in various ways until results fall out. A clear disadvantage is its limited scalability. Performance, in terms of quality and processing speed, degrades noticeably as sentence length and complexity increase. Sentences with multiple chunks of the same or similar roles frequently generate multiple interpretations that often cannot be constrained further. In addition, unexpected word order, embedded clauses, conjoined phrases, and complex grammatical structures have proved troublesome.

As a prototype work in progress, many issues still need to be resolved. It would be especially desirable is to integrate an onomasticon for named-entity processing. Another goal is to place greater emphasis on analyzing the role of prepositions as semantic "glue" for chunk interrelationships. In addition, completely disregarded at this stage are anaphoric references and discourse structure. Finally, more flexibility needs to be added for chunk identification, and more sentence templates need to be defined. In conclusion, as a proposed mechanism for semantic analysis, this work has so far demonstrated itself as a viable approach with known limitations by both extending the existing functionality of related work and satisfying the needs of its parent project.

REFERENCES

Abney, S. 1991. *Parsing by chunks*. In Principle-Based Parsing, R. Berwick, S. Abney (eds). Dordrecht, Netherlands: Kluwer.

Allen, J. 1995. *Natural Language Understanding*. Redwood City, CA: Benjamin/Cummings and C. Tenny.,

Barr, A. and Feigenbaum, E. 1981. *The Handbook of Artificial Intelligence, Vol 1*. San Francisco: Kaufmann.

Brill, E. and Mooney, R. 1997. "An overview of empirical natural language processing." *AI Magazine* 18(4):13-24.

Cowie, J. and Lehnert, W. 1996. "Information extraction." *Communications of the Association of Computing Machinery* 39(1):80-91.

Fellbaum, C. (ed.) 1998. *WordNet: An Electronic Lexical Database*. Cambridge, MA: MIT Press.

Hausser, R. 1999. *Foundations of Computational Linguistics*. Italy: Springer.

Jackendoff, R. 1983. *Semantics and Cognition*. Cambridge, MA: MIT Press.

Jannedy, S., Poletto, R. and Weldon, T. 1994. *Language Files*. Ohio State University Press.

Katz, J. and Fodor, J. 1963. "The structure of semantic theory." *Language* 39:170-210.

Lenat, D. and Guha R. 1988. "The World According to CYC." Technical Report ACA-AI-300-88. Austin, TX.

Levin, B. 1993. *English Verb Classes and Alternations*. Chicago: University of Chicago Press.

Mahesh, K. 1996. "Ontology development for machine translation: ideology and methodology." Technical Report MCCS-96-292. New Mexico State University: Computing Research Laboratory.

Mahesh, K. and Nirenburg, S. 1995. "A situated ontology for practical NLP." In Proceedings of the International Joint Conference on Artificial Intelligence Workshop on Basic Ontological Issues in Knowledge Sharing. Montreal, Canada.

Onyshkevych, B. and Nirenburg, S. 1994. "The lexicon in the scheme of KBMT things." Technical Report MCCS-94-277. New Mexico State University: Computing Research Laboratory.

Pinker, S. 1994. *The Language Instinct.* New York: William Morrow.

Stede, M. 1999. *Lexical Semantics and Knowledge Representation in Multilingual Text Generation*. Norwell, MA: Kluwer.

Tappan, D. 2000. "Toward a simplicity-based interactive machine translation system for conversational domains." In Proceedings of the Third Annual Conference of the High Desert Linguistics Society. Albuquerque, NM.

van Deemter, K. and Peters, S. (eds). 1996. *Semantic Ambiguity and Underspecification*. Stanford: CSLI.