

Language and Gesture in JSL Discourse Structures: Interplay of Icon and Index

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Abstract

In the current paper, gesture is examined in the context of both spoken language and Sign language discourse. The emphasis is on those features of discourse which are indexic and/or iconic. The primary focus of much of the paper is theoretical, addressing such questions as: What is the relationship of gesture to speech? Is the distinction merely one of form and modality, or is there also some semantic-based difference? If so, how do language and gesture interact on the semantic level? In addition, data from an ongoing research project in JSL discourse analysis are presented, and tentative interpretations of the discourse role of such nonmanual signals (NMSs) as index-finger pointing, eye gaze, upper-body shift, and head tilt are proposed.

Key Words: Discourse, Icon, Index, Japanese Sign Language (JSL), Sign Theory.

1. Introduction

The history of linguistics has been an almost continuous succession of self-redefinition. With this successive redefinition, new fields of study have opened up: dialectology and the study of modern languages in the nineteenth century; phonology, psycholinguistics, sociolinguistics, discourse analysis and Sign linguistics in the twentieth. It is the last two which are the subject of the present paper.

Sign language has often been described as a "gestural language." As such it would seem to provide a bridge between the fields of linguistics and kinesics (gesture studies). The importance of this "bridge" is not entirely limited to theoretical linguistics (though the scope of this paper is clearly such). Present day language teaching, although it too pays lip service to the latest linguistic "fads" in its research, lags far behind in the application of these "fads" to the language classroom. Thus, levels of discourse higher than the sentence (and here I have intonation particularly in mind) are often poorly taught, if taught at all, and nonverbal communication (which we argue is linguistic rather than extralinguistic in nature), though often graded (consciously or unconsciously), is ignored in the teaching curriculum. Presumably, it is assumed that such "extralinguistic" matters can be just picked up as needed by the language learner.

1.1 Present Study: Principles, Methods and Aims

The aim of the present study is to look at the relation of gesture in language (and particularly in discourse, Brown and Yule's (1983, p. 1) "language in use") from a different "angle." In particular, this study examines the role of "gesture" in "gestural" language (= Sign

language), with the aim of ultimately drawing theoretical conclusions which can then be applied to the role of gesture in language in general.

The present study is based on an ongoing analysis of Japanese Sign Language (hereafter JSL) discourse. The JSL discourse corpus was obtained by making videotapes of news broadcasts and televised interviews of NHK's two Deaf¹ newscasters (both aged approximately 30, with one (the present study's H) the child of Deaf parents), and interviews made by the author with Deaf friends (all graduates of Niigata City's School for the Deaf, ranging in age from 20 to 60, with one aged 30 (the present study's K) being the child of Deaf parents). (The current paper is just the second step in this ongoing research. The first step can be found in Morgan (1997)).

This study takes place within a Sign Theoretic Linguistic (aka American Prague School Structuralist, Jakobsonian, van Schooneveldian) framework, wherein language is understood primarily as a semiotic (i.e. sign) system. As such, language in all its manifestations is an inseparable union of "Form" and "Meaning." This union can be described (à la Saussure) as arbitrary, but (thanks to a synthesis with the Peircean concept of sign) only relatively so. Signs can thus be of three types (or indeed of a combination of those three types): Symbol, Index and Icon. According to Peirce (1991):

"there are three kinds of signs ... [T]he first is the diagrammatic sign or icon, which exhibits a similarity or analogy to the subject of discourse; the second is the index, which like a pronoun demonstrative or relative, forces the attention to the particular object intended without describing it; the third is the general name or description which signifies its object by means of an association of ideas or habitual connection between the name and the character signified" (p. 181).

As the Jakobsonian (van Schooneveldian) synthesis of Saussurean and Peircean semiotics has demonstrated time and again, various semiotic systems all seem to be composed of the three sign types: icons, indices and symbols. Peirce argues that the three-way division of signs is inherent to the nature of all signs: "for there is a triple connection of sign, thing signified, cognition produced in the mind" (p. 183).

Awareness of the iconic nature of Sign language clearly antedates the awareness that Sign language is a language (and is probably, more than anything else, the primary reason why that awareness was so long in coming). From the very beginning of Sign linguistics iconicity has been acknowledged as one (if not **the**) chief characteristic feature of Sign language. Indeed, long before the beginnings of Sign Linguistics, Harrington (1938), in a comparative analysis of

American Indian and Deaf Sign languages, classified signs as "gesturing at" (= index) or "painting," "substitution" and "mimicry" (= icon). But as we have seen above, icons (and indexes) are still semiotic signs, and so this fact does not prevent Sign language from partaking of the semiotic.

The point of relative arbitrariness of even indexic and iconic signs can be made clear with an example. The common Japanese gesture for 'me' (which also occurs in JSL as one of several alternatives), whereby the speaker points with his index finger at his nose, is clearly indexic (for my nose is as much a part of me as say my chest is, given the standard Western gesture for 'me' (which also occurs in JSL, this time as the chief among alternates), but the indexic reference is established by (social) language convention. The same applies to iconic signs.

As Jakobson has argued (1964) there seems to be a fundamental (modality-based) difference between aural and visual systems in this respect — with visual semiotic systems being more iconic — and indexical. Quoting from the closing paragraph of Jakobson (1964):

"A manifold dichotomy of signs may be outlined. Primarily representational signs, which display a factual similarity or contiguity with their objects, prove to be mostly visual, in contradistinction to nonrepresentational signs, preponderantly auditory. The former deal mostly with space, the latter with time; simultaneity in the one case and successivity in the other is the principal structuring device." (p. 219)

The question is: What is the significance, if any, of this supposed modality-based difference between visual and auditory sign systems for or understanding of language and gesture on the one hand, and spoken and Sign language on the other. Or is it, as Peirce (1991) claims, that "we have no intuitive power of distinguishing between one subjective mode of cognition and another" (p. 78). Symbol, Icon, and Index, all are equal in the eyes of the semiotic system.

2. JSL and Its Sociolinguistic Setting

JSL is by no means the language (L1 or even L2) of every deaf Japanese person — though it is certainly the language of the Deaf community in Japan, and in many ways the "defining" feature of a Deaf identity (see, for instance, the various articles in Ikeda 1996). It is used as mother tongue (in the literal sense of a language acquired naturally from parents as first language) by perhaps less than 10% of the deaf community, and perhaps as second "native" language (along with Japanese) by a small percentage of hearing children of Deaf parents.

As a minority language with a history of suppression status, there is significant

influence from the majority, national language, Japanese (perhaps more in its written than in its oral form). This is apparent in JSL discourse at all linguistic levels, from the level of vocabulary (especially loan calques and "kanji" words) to syntax, and even "pronunciation" (e.g. "initialized signs and simultaneous mouthing to distinguish meaning). The degree of this influence (and the degree of avoidance of this influence, varies from signer to signer, and attitudes toward JSL held by Deaf adults cover a wide range, which is dependent to a large extent on the "progressiveness" of their environment (urban versus rural, education level, exposure to American Deaf culture, membership in certain Deaf organizations, etc).

Although there are traditionally a number of quite divergent dialects (based on both region and age), the present generation is mostly exposed to and thus uses a "standard" ("National") JSL through the promotional activities of the Japan Federation of the Deaf as well as national TV broadcasts by NHK, etc. All data for the present study are from Sign discourse in this "standard" JSL, though obviously with some variation due to influences on the individual signers as described above).

3. Sign Language Discourse Analysis

Discourse analysis of Sign language is a relatively new field of study, and thus the number of studies is small, and deal predominantly with American Sign Language (ASL). Works focussing specifically on discourse analysis in JSL are even more limited. Rather than review all these studies in detail, I will simply summarize in Fig. 1 (see next page) a tentative list of features interacting with discourse. For convenience of reference, features relating to manual sign production are listed on the left; nonmanual features are listed on the right. References to previous research dealing with a given feature's role in JSL are given in parentheses, while features dealt with in this paper are marked with *. (Research in ASL discourse is considerably advanced relative to JSL. Persons interested in ASL discourse research are referred to the articles (as well as the bibliographies contained therein) in Emmorey and Reilly (1995).)

4. Defining Gesture in Discourse

As the subject of the discussion to this point is Sign language discourse, and *mutatis mutandis* language discourse in general, the question then arises as to where gesture fits in? What is the relationship between language and gesture? What is the boundary between language and gesture?

Assuming that we can, for the sake of argument, eliminate the possibility that gesture

Fig. 1: Tentative List For Sign Language Discourse Analysis

Manual Features	Nonmanual Features
Lexical Sign Formation (Sign Phonology) Dominant Hand: Handshape Change in Handshape Orientation (of Palm & Fingertips) Change in Orientation Location Change in Location (Movement) Contact (with Body or Other Hand) Nondominant Hand (if used): Handshape Change in Handshape Orientation (of Palm & Fingertips) Change in Orientation Location Change in Location (Movement) Contact (with Body or Other Hand)	Torso & Shoulders Facing (Direction) Shift (Ichida 1991, 1994) Forward Lean (Morgan 1997; Ichida 1998; *) Head Facing (Direction) Nod (Ichida 1991, 1997b, 1998) Shake (Ichida 1998) Chin Projection (Ichida 1991, 1994, 1998) Chin Pull (Ichida 1991, 1994, 1998) Sideward Tilt (Ichida 1998; *) Eyes Gaze (Direction) (Ichida 1991, 1996, 1997a, 1997b, 1997c; Morgan 1997; *) Blink Closing (Ichida 1994)
Relation Between Hands Contact Simultaneity or Lag	Eyebrows Raising (Ichida 1991, 1994, 1997b) Lowering
Use of Space Indexing (Ichida 1991, 1994, 1997c, 1998; *) Sign Placement (Morgan 1997)	Mouth Mouth Shape (Itou 1985; Ichida 1994) Corner Mouth Pull Oral Mouthing
Rhythm Tempo Repetition Pause or Hold (Ichida 1991, 1997b)	

is not a communicative sign system, we are left with three possible relations obtaining between language and gesture:

1) Language and gesture as two, overlapping communicative sign systems. This approach is probably typical of the practical, language teacher's approach which teaches gesture in a subordinate, case by case way — as the communicative needs of the student demand.

2) Language and gesture as two, independent communicative sign systems. This approach might well be labelled the "common sense" approach (although it is also typical perhaps of the majority of linguistic research). In the case of spoken language discourse, gesture is normally seen as something very different. This derives from a "common sense" distinction

based on "Form": language is verbal (aural); gesture is manual (visual). Language and gesture are sent over different channels, and have different modalities of existence (oral and manual, or from the addressee's point of view, aural and visual). Therefore they are easily distinguished the one from the other.

oral / aural	=	language
manual / visual	=	gesture

It should be noted, however, that "common sense" is always "common" to a particular given community. In the case of language and linguistics, that community has been and is overwhelmingly hearing, and their focus has been and is overwhelmingly studying spoken language. It is perhaps this "bias" that creates the distinction.

However in a visual ("gestural") language such as Sign language (JSL, ASL, etc), both language and gesture must co-exist on the visual channel, or modality. But this can even be seen by examining a few (constructed) examples of gesture co-occurring along with spoken language. Compare:

a) Speech alone:

The fish John caught was about 6 inches long.²

b) Gesture supporting speech (but providing no independent information):

The fish John caught was about 6 inches long
/palms held about 6" apart/

c) Gesture adding a degree of specificity absent in speech:

The fish John caught was about this long.
/palms held about 6" apart/

d) Gesture aiding the process of conceptualization (thus preceding speech):

The fish John caught was about ... ah ... 6 inches long
/palms held about 6" apart/

e) Gesture substituting for language:

?The fish John caught was about ...
/palms held about 6" apart/

From the above examples it should be clear that, although formally gesture and speech are distinct, the same is not always true of meaning. At least from a truth value semantic standpoint, the words "six inches long" and the gesture /palms held about 6" apart" mean the same thing (i.e. have the same truth value). The gesture in the above examples is a "translation" of the corresponding words.

However the above gestures, which we might call translatable or lexical gestures, are not the only type of gesture (although they are the type most often "taught" to foreign language students, and available in "dictionary form" (e.g. Morris 1994). In addition, there is another type of gesture which we might call "gesticulating."

3) Gesture as a part of language. This view is exemplified in McNeill and colleagues' studies of gesture in narrative discourse (McNeill 1992; McNeill & Levy 1993; Cassell & McNeill 1991). As McNeill and Levy (1993) argue:

"the main explanation for the cooperation of speech and gesture in creating thematic structure is an underlying unity of speech and gesture, that speech and gesture are nonredundant manifestations of one process in utterance and discourse generation. Gesture in this view is actually part of language - not a subsystem, either distinct or overlapping. It is the analogic, imagistic, global and synthetic part of language that is processed together with the familiar hierarchical, linear, segmented, and "linguistic" part." (p. 364)

A variation on this (or perhaps a fourth approach) sees speech as (a part of) gesture. This view is expressed by Armstrong, Stokoe and Wilcox (1995).

The gesture which is the basis of the research by McNeill and colleagues is precisely this second type of gesture, which we will call gesticulating. Such gesticulating is not meaningless; rather it expresses meaning that is more "global-synthetic" than lexical, and unlike lexical items is "noncombinatory" (McNeill 1992, p. 19). Citing an example from McNeill (his example 1.4):

when[ever she] looks at him he tries to make monkey noises

Beat: hand rises short way up from lap and drops back down.

Here the "beat" gesture does not correspond to any word(s) in speech. Rather, it serves a rhetorical, topic-organizational function (and is thus perhaps closer to grammar than lexicon).

In applying the results of studies of use and function of gesture in spoken language discourse, the question presents itself: what of the border between Sign language and gesture in Sign language discourse? How do we distinguish the two? While for spoken language, speech and gesture are in different modalities and therefore easier to distinguish formally, in Sign Language, speech and gesture are in the same modality and so more rigorous meaning-based criteria for distinguishing are necessary.

However, before we go to such (albeit ultimately necessary) extremes, a rough

parallel to gesture in spoken language discourse might be sought in nonmanual signals (NMSs); where manual gesture accompanies oral speech, or NMSs accompany manual speech.

Finally, to expand the vista, we might argue that spoken language discourse is accompanied not only by manual gestures but also by oral gestures - which are normally called intonation. In fact, arguing from the other side, Ichida (1998) has compared NMSs with intonation. If this is the case, then even in spoken language discourse there is no clear-cut formal modality distinction between language and gesture.

An example will illustrate the parallel. Oversimplifying and ignoring less-common Intonation Contours (ICs), Russian ICs can be analyzed as either:

	Statement	Question
Interpretation 1	→ (flat intonation)	↑ (rising intonation)
Interpretation 2	↓ (falling intonation)	↑ (rising intonation)

The difference between the two interpretations is that in Interpretation 1, the statement is interpreted as "more or less" flat, with only the slight, gradual fall automatically accompanying the gradual fall in energy as the utterance progresses.

This iconicity of contrast is reminiscent of Jakobson's analysis of yes/no head gestures (Jakobson 1971). Thus:

	Yes		No
Type 1 (Russian, English, Japanese):	↓	vs	↔
Type 2 (Bulgarian, Turkish, Greek):	↓	vs	↓

5. Illustrations of Indexic and Iconic NMS "Gestures" from JSL Discourse

As this is a working paper dealing primarily with theoretical issues, a thorough analysis of NMSs in JSL discourse is inappropriate; in any case it is premature. Nevertheless, lest the theory remain nebulous, I would like to illustrate with a very few examples taken from the corpus. The discussion of each example includes a hint of theoretical ramifications.

5.1 A Case of Indexic NMS: Index Pointing in JSL

In spoken language discourse, a common gesture is pointing at some item in the speech environment with the index finger, as in:

Hey Jack, who's that over there hitting on Jill?
/index finger pointing/

On occasion the pointing may be with some other means: chin, head nod, or simply eye gaze.

A similar "gesture" also occurs in Sign Language discourse, though with the difference that it is generally seen as part of the linguistic (as opposed to gestural) system. From the corpus we have (with the index point in bold):

K: PT-INDEX>1 COMMUNICATION /.../ SIGN NOT-KNOW PEOPLE / MOSTLY NOTES##

'As for how I communicate, ... with people who don't know sign, I mostly pass notes.'

At first glance one might ask why the index-finger pointing (**PT-INDEX>1**) is not glossed simply as 'I'. In fact, there is considerable argument as to its exact status as pronoun (e.g. Ahlgren 1990; Lillo-Martin & Klima 1990; Meier 1990; Liddell 1995).

In fact it would seem that the index point is the pronoun par excellence; but it is clearly more than this. Compare for example:

K: TEACH(ER) TIME / SIGN NOT-KNOW / PT-INDEX>3R SAY-TO>1 NOT-KNOW

'As for the teachers, they didn't know sign, so I couldn't understand what they said.'

Here again, we could have glossed **PT-INDEX>3R** as 'they'. However, there is a difference between this and the previous example. **PT-INDEX>1** above clearly points to K himself; it indexes a real entity in the speech situation. In the case of **PT-INDEX>3R**, however, the index points at empty space to the right (and slightly above) K. What does it index? In fact, the space pointed at is not "empty" — it is filled by the mention to a previous occupant (sign) in discourse (in the given case, **TEACHER**), filled in by the Hearer based on the shared speaker-hearer perception of (past) narrated situation. This follows what Brown and Yule (1983) call "local interpretation."

In addition, many JSL signs are simple index pointing at something present in the signing environment (e.g. body parts). Such signs are usually glossed as 'head', 'eye', etc. — but formally they are indistinct from so-called pronominal index pointing. To the extent that the speaker possesses an "X" ("elbow," "eye," etc) there is no need for a lexical sign for it: it can always be indicated by indexical reference since it is always present in the speech situation. In fact, this is no different from the case of 'I' and, to the extent that sign language is dialogic 'you', for both are necessarily a part of the speech environment.

As a theoretical implication, it must be noted that if we conclude that there are in fact no personal pronouns (just say a generic pointer), then we must modify Greenberg's (1960, p. 96) so-called Language Universal 42 with regard to personal pronouns.

where in the current analysis "Contact" includes both channel and backchannel, at the very least eye gaze controls the speech situation by controlling the backchannel; to the extent that the addressee cannot begin (successful) sign communication **unless** the current signer is looking at him/her. Removing eye gaze removes the backchannel (addressee control). More generally, the signer's gaze also controls the addressee's gaze (and thus focus); the addressee is directed to focus wherever the signer gazes.

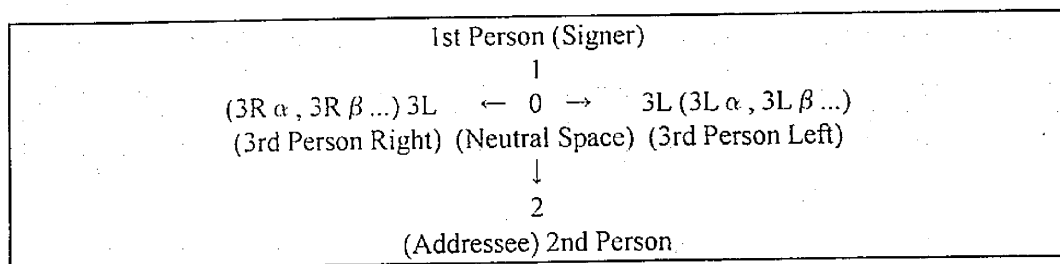
5.3 A Case of Iconic NMS: Body Shift in JSL

One of the major tasks of the addressee in interpreting discourse (and thus one of the signer's major tasks in leading the addressee) is navigating topic shift. Brown and Yule (1983) note this for spoken language discourse as well, noting that "[t]here may be other, more subtle indicators of topic-shift ... [t]he significance of 'speaker gaze'... and specific 'body movements' ... in signalling speaker change in conversation may also be relevant in topic change" (p. 106).

Zubin and Hewitt (1995) present a model of Deictic Center in narrative and particular deictic devices. These devices include: "1. Introducing actors, objects, places, or time intervals into the narrative as potential or actual WHOs, WHATs, WHENs, or WHEREs of the DC. 2. Maintaining stability in the DCs ... 3. Shifting the WHO, WHAT, WHEN, or WHERE of the DC from one character, object, place, or time to another... 4. [V]oiding. One of more DC components may become indeterminate if the presence and identity of a WHO, WHAT, WHEN, or WHERE is not relevant..." (p. 141).

Given that Sign Language (and thus Sign Language discourse) is spatial, in navigating the narration (discourse) we also have to navigate the narrative (signing) space. This space can be diagrammed as in Fig. 3.

Fig. 3: Spatial Layout of Signing Space



In K's discourse we have an example of iconic torso lean to "enter" (produced along with the sign **ENTER**). In addition, this body shift serves to introduce a change in scene (topic).

torso leans forward>0

K: PT-INDEX-1 / FIRST-TIME DEAF SCHOOL ENTER TIME / CHILDREN

'When I first entered the deaf the school, the children ...'

Here K takes the narration (and with it the addressee) by "entering" the deaf school (and the time frame of the narrative as well) not only lexically with the sign **ENTER** but physically (gesturally) with his upper body. By doing this the topic shift is complete; a new where (and when) is introduced, and maintained until there is another body shift.

5.4 Yet Another Case of Iconic NMS: Head tilt in JSL Discourse

Yet another NMS gesture is the (quizzical) head tilt. Such a head tilt occurs with individual lexical items like **DOUBT** (Japanese *ukagai*), **STRANGE** (*fushigi* 'strange', as well as **PERHAPS** (Japanese *kana, deshou*) at the end of phrase or sentence. In the corpus we have the example:

H: AMERICA ARMY- GROUP MOUNTAIN- MOUTH PREFECTURE /
head tilt
MOVE:3L>0 PLAN EXIST:0

'There is a (tentative) plan to move the American Army to Yamaguchi prefecture'

Compare this with the head tilt acting at the level of clause in the following example:

Gaze>SIGN head tilt

H: ... shi- CHIEF / ACCEPT ABLE SEE / STUDY DO / EXPLICIT NARRATE
FINISH

'The mayor clearly said (that) he would study whether we might be able to accept ...'

Here, the first sign of the clause **ACCEPT** has a special NMS of its own, and so is not marked by head tilt. Either head tilt imparts an (subjective, signer's perspective) element of question, skepticism, doubt, etc. In addition, there are examples where it might also be comparable to "reported" speech (cf. Turkish *-miş-*).

That this head tilt is iconic can be seen diagrammatically, remembering our schematization of "yes" and "no" head gestures in Japanese at the end of Section 4. While the "yes" gesture occurs along the vertical axis and the "no" gesture along the horizontal, the head tilt wavers (or inclines) between the two, expressing iconically the element of uncertainty (between "yes" and "no").

While markers that are either lexical or clausal (discourse level) may seem anomalous, compare the above head tilt with Japanese *-ka*, which occurs: lexically (e.g. *nanika* 'something'), clausally (e.g. *iku ka dou ka wo siraberu* 'to check whether (he)'s going or not'), and sententially (*ikimasen ka?* 'Are (you) going?'). Clearly there is some degree of parallel.

Here too we have uncertainty in all cases: with **nanika**, being indefinite, the addressee is uncertain as to its reference. Similarly at the clausal or sentential level, the question particle **ka** indicates the speaker's uncertainty.

6. Conclusion

The current research project is still underway and although it has been possible to give episodic examples and interpretations of various NMS gestures occurring in JSL discourse, a fuller analysis of the features and their interplay in JSL discourse structure promised in my earlier work (Morgan 1997) still awaits much more detailed analysis of the video data. Only then will we see if the interpretations suggested in this paper on the basis of analysis of selected examples from a partial corpus holds for the larger corpus. We must also expand the analysis to include all the features listed in Fig. 1 (and others which might come to light in the course of analysis). In addition, for such an analysis to be complete, the current research must expand its corpus to include a wider range of genre, register, age, social and geographic varieties, as well as simply more analysis of different signers in a large variety of situations

However, the preliminary overview does allow certain tentative, theory-level conclusions to be drawn. First, perhaps the distinction:

Spoken Language	vs	Sign Language
Language	vs	Gesture
Aural Semiotic	vs	Visual Semiotic
Symbolic	vs	Iconic + Indexic
Arbitrary	vs	Non-Arbitrary

is **not** a product of different language (sign) systems, but rather the distinction is a product of the fact that linguistics (and linguists) has(have) traditionally been hearing focussing only on the spoken word, which is not spoken language, but only the aural part of spoken language.

In addition, there appears to be a correlation between NMS gestures and linguistic level. Thus, for instance, the index does not occur at levels below the word (e.g. at the distinctive feature, phoneme or morpheme levels). Liddell (1995) is right concerning the non-existence of a pointing morpheme. This does not, however, mean that the morpheme itself does not exist, but rather that, at the level of morpheme, it does not point. The index as a sign must point at something, and this pointing is possible only when there is something to point at — and extra-linguistic reference occurs only at the level of word and above. Likewise, the head tilt (like the Japanese particle **ka**) occurs only at these levels.

In this regard, we can note the following correlation (see Fig. 4) between gesture

(both translatable, lexical gesture and global-level gesticulation) and intonation and levels of linguistic structure: gesture (including gesture, gesticulating and intonation for spoken language discourse, and various NMSs for Sign language discourse) occurs at precisely those levels of structure where reference is possible to the narrated situation (and indirectly to the real world). Below this level (that is, below the level of word), there is no reference possible, and all meaning is system-internal. Is there a linguistic-theory based motivation for this distinction?

Fig. 4: Linguistic Units, Real-World Grounding, and Gesture

Linguistic Unit (Language Level)	Reference (Grounding)	Gesture and Intonation
discourse	reference to (grounding in) the real-world and the narrated situation	intonation and gesticulation
sentence phrase/clause		
word		lexical gestures
morpheme phoneme phone	no real-world reference; reference limited to the linguistic system	

To answer this question, we can look briefly at the distinction between "langue" and "parole". "Parole" — put simply, what an individual speaker says in an individual situation — has, for most of the present century, been seen as too variable to be a part of "langue," the language system (which is, after all, a system of invariants). And since that is precisely what discourse is (what an individual speaker says in an individual situation), discourse too was shunned (or at least ignored) by most of linguistics. Find a way to incorporate "parole" in the system of "langue", and it is, along with discourse, redeemed as a legitimate field of linguistic study.

This redemption is to be found in van Schooneveld's (1996) analysis, which incorporates all units at all levels of linguistic structure, from phonological distinctive feature to sentence (which I interpret to include both the levels of clause and discourse as well), into the overall, hierarchically-arranged **semantic** structure of language. Within this hierarchy, the sentence is marked by the semantic feature [obj⁰]. As such, it the first level where predication is possible, and predication is **always** an act of parole, incorporating the individualized judgments of the speaker/signer. The sentence, as it were, is **always** subjective, it **always** expresses the projection of the speaker/signer's attitude onto the narrated situation. So too do higher-level gestures — gesticulating and intonation, used to create such distinctions as question versus statement. The word, marked by the semantic feature [verif⁰], is "the first minimally free form, ... and

as such implements an independent reference to extra-linguistic reality" (p. 32). This "independent reference to extra-linguistic reality" is precisely what we find in the lexical index in JSL.

Finally, let me say that the ultimate goal of this research is to address universal discourse principles: 1) universals across languages (e.g. English vis-à-vis Japanese discourse); 2) universals across genre and discourse type (e.g. narrative vis-à-vis conversational discourse); and also 3) universals across modalities (e.g. spoken language vis-à-vis sign language discourse). We are still a long way from this goal, but hopefully this research, and other research in Sign language discourse and the role of gesture in discourse in general, will bring us closer to it.

NOTES

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1. The capital "D" on "Deaf" indicates persons who are culturally, and not merely physically, deaf. This cultural identity entails many things, first and foremost identification with Sign language. (The reader is referred to articles in Ikeda (1996) for discussions on Deaf culture.). For similar reasons, I capitalize the "S" of Sign language, giving it equal status with the names of other languages (e.g. Japanese).
2. Throughout the text, linguistic examples are given in boldface, and translations are given in single quotation marks. While all Sign language examples are real, some of the examples for spoken language discourse were constructed by the author. Cases which are questionable (which may not be accepted by all speakers) are marked with a preceding question mark. In spoken language examples, manual gesturing is indicated on the line below the speech, roughly lined up with the words they accompany. In the Sign language examples, glosses of signs are given in capital letters, with multiple word glosses of single signs connected with hyphens. PT-INDEX indicates an index-finger point, and is always followed (as are other indexic signs) by ">", translatable as "pointing at," and a number, which refers to an area in sign space explained in Fig. 3. Signs produced in repeated form are indicated by following #s (each # represents one repetition). NMS gestures are indicated on the line above the sign, with an underline indicating, roughly, the temporal co-extent of NMS with Sign discourse. Material omitted in the middle of an example is indicated by suspension points (...).

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