

TOWARDS A DISCOURSE-PRAGMATIC EXPLANATION FOR THE SUBJECT-OBJECT ASYMMETRY IN EARLY NULL ARGUMENTS

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1. Introduction

Children at the early stages of language learning (two-word stage to 4;0+; peak before 2;6 in English) tend to omit arguments in their utterances, regardless of whether the target language permits this or not. Examples are given in (1) through (3) from English, which does not normally permit null arguments in either subject or object position (data from Bloom, 1970, 1973; Bloom *et al.*, 1975).

- (1) Null subject
a. No like celery. (Kathryn 1;10)
(telling her mother she doesn't like celery)
b. Want more apple. (Eric 1;11)
(telling an adult that he wants more apple to eat)
- (2) Null object
a. Mommy open. (Allison 1;10)
(wanting her mother to open a box)
b. Mommy, you wiping. (Allison 1;8)
(wanting her mother to wipe a doll)
- (3) Null subject and object
a. Spill. (Allison 1;10)
(her mother has spilled some juice)
b. Throw away. (Kathryn 1;9)
(saying that her mother will throw something away)

It has frequently been noted in the literature that a clear asymmetry exists between omission of subjects and objects, such that subjects are omitted more frequently than objects in child speech across several languages. This phenomenon occurs regardless of whether the target language uniformly requires overt arguments, as in English (L. Bloom, 1970; Hyams, 1986; P. Bloom, 1990; Valian, 1991; Wang *et al.*, 1992), or uniformly permits null arguments as in Chinese (Wang *et al.*, 1992), Japanese (Mazuka *et al.*, 1986; Hirakawa, 1992), Korean (Clancy, 1993), and Mauritian Creole (Adone, 1994) (though note that Dutch, a topic-drop language, does not show a subject-object asymmetry (de Haan & Tuijnman, 1988; Krämer, 1995)).

Three major types of explanations have been put forth to explain the subject-object asymmetry. First, grammatical accounts assume that there is something non-adult-like about the child's early representation of grammatical structure that causes the child to omit subjects more frequently than objects. The most well-known of these is Hyams's (1986) prodrop parameter account, which claims that children are born with the prodrop parameter in a default setting

permitting the omission of subjects, as in Italian and Spanish. It is only after linguistic triggering or maturation that English-speaking children realize that null subjects are ungrammatical in their language. Since objects are not affected by the prodrop parameter, they remain present throughout development. A second type of grammatical account involves the early absence of functional categories (Radford, 1990). This account claims that children at the early stages of language development can only represent lexical categories (e.g. NP, VP), and not functional categories (e.g. IP, CP). Since the subject is assumed to appear in the SPEC(ifier) of IP position, children will have trouble producing it before they have the syntactic representation for IP. However, the object is assumed to appear in sister of V position, which is not a problem at early stages of development since children are assumed to have the lexical category VP. A third grammatical account assumes that all children begin language production assuming topic drop is possible in their language, as in Chinese and Korean (de Haan & Tuijnman, 1988; Jaeggli & Hyams, 1988; Hyams, 1991; Wang *et al*, 1992; Hyams & Wexler, 1993; Hyams, 1994). Since the topic tends to be more often subject than object, subjects are omitted in child language more often than objects.

Performance accounts have also been put forward to explain the subject-object asymmetry in early null arguments. These accounts typically assume that the child has adult-like grammatical structure from the earliest stages of language learning, but has difficulty in producing all that he or she is capable of due to performance limitations. The most common of these involves processing (L. Bloom, 1970; Pinker, 1984; Mazuka *et al*, 1986; P. Bloom, 1990; Valian, 1991). Since the processing load of a sentence is assumed to be greater at the beginning of the sentence where the subject tends to be, than at the end of the sentence where the object tends to be, the subject is more often dropped than the object. A second type of performance account involves prosody and metrical structure (Gerken, 1990). By this account, the subject tends to appear in a prosodically and metrically more weak position than the object, and thus is omitted more often by children.

Finally, pragmatics accounts have been used in addressing the subject-object asymmetry. These accounts assume that the child's non-adult-like production of null arguments stems from a hypersensitivity to pragmatic features of discourse. Greenfield & Smith's (1976) Principle of Informativeness suggests that children omit those arguments which are less "informative", and that the subject tends to be less informative than the object. Similarly, various authors suggest that the subject more often tends to represent given information while the object tends to represent new information, and therefore the subject is omitted more often than the object (Hyams, 1986; Bloom, 1990; Valian, 1991; Hirakawa, 1993).

Much has been written about the various grammatical and performance accounts explaining the subject-object asymmetry in early null arguments, but relatively little attention has been paid to pragmatics accounts. This paper, then, focuses on the viability of a pragmatics account to explain this phenomenon.

2. A Brief History of the Pragmatics Account

As stated above, many researchers note as a possibility that subjects might be omitted more often than objects in early child language since arguments in subject position usually represent given information while those in object position more often represent new information. This is made explicit in Greenfield & Smith's (1976) Principle of Informativeness (note that this is quite different from the Gricean Principle of Informativeness). They state:

Our examination of children's use of isolated single-word utterances and sequences shows that child language is sensitive to the informational structure of an event. That is, children encode those aspects of the event that are most uncertain Obviously, this principle carries over into later child language, where the problem of "deletion" has been so much discussed. This, of course, explains the frequent deletion of the subject in speech around the three-word level. The subject, often taken for granted, is, therefore, less informative than other constituents of the sentence that resist "deletion". (Greenfield & Smith, 1976: 222-223)

Greenfield & Smith (1976) discuss a number of things that characterize "informativeness". Arguments are informative if they represent a referent which has alternatives or is uncertain:

...given the possibility of encoding a number of different semantic aspects of an event by single words, the child chooses the most informative aspect ... the child encodes that aspect of an event where he sees alternatives, where there is uncertainty in terms of the situational structure... (Greenfield & Smith, 1976: 64)

Arguments are not informative if they represent referents which are presupposed or taken for granted, often including the agent:

...the child will not express verbally the presupposed element in the situation. (Greenfield & Smith, 1976: 64)

...at the one-word stage, [the agent] is only spoken under unusual conditions, such as conflict about agency or an actual change of agent Under normal circumstances, the child takes the agent for granted... (Greenfield & Smith, 1976: 184)

A number of current researchers mention the Principle of Informativeness or its basic principles in passing in their research, typically dedicating only one sentence or paragraph to the idea that subjects tend to more often represent given information while objects tend to more often represent new information. However, a few researchers have paid more attention to pragmatic effects as an explanation for the subject-object asymmetry, including Hyams (1986) and Hyams & Wexler (1993).

Hyams (1986) introduces the possibility of pragmatic factors explaining the asymmetry, but dismisses it rather quickly, reasoning that in most child speech the subject and object are equally uninformative and recoverable. She states:

It is well-known that early language centers largely on objects and events in the immediate environment. Gia, for example, utters 'Gia ride bike' as she gets on her bicycle By the Principle of Informativeness any one of the elements in a sentence of this sort is expendable. Yet we find that in the overwhelming majority of cases, it is only the subject which is 'omitted.' Thus, the Principle of Informativeness alone will not explain subjectless sentences. (Hyams, 1986:97)

Hyams finds the Principle of Informativeness unsatisfying since she does not find that it sufficiently distinguishes between subject and object in determining which arguments are omitted.

Hyams & Wexler (1993) investigate pragmatic factors using a rather more concrete

methodology. They reason that arguments which are either pronominal or null represent information that is “specific” (i.e. taken for granted, given, redundant). This being the case, one would expect an equal proportion of pronominal to null arguments in both subject and object position. However, they find that “specific” arguments are most often pronominalized when they occur in object position, but dropped or pronominalized in about equal proportions when they occur in subject position. They note that such a difference is not predicted by the Principle of Informativeness, though it would be predicted under a grammatical model since the option to drop “specific” arguments is available only for subjects. Hyams (1986) and Hyams & Wexler (1993) both conclude that pragmatics cannot be the full explanation for the subject-object asymmetry found in early null arguments. Though they concede that pragmatic factors may well be involved, they find that the need for a principled grammatical account is not vitiated.

While Hyams’s and Wexler’s conclusion that a pragmatic account cannot provide the full explanation for the subject-object asymmetry may certainly be true, it is not clear that they have given this account a fair trial. First, the reasoning in Hyams (1986) is only an assumption on Hyams’s part. She does not examine any concrete data set to actually determine which arguments are informative or not, and she does not explicate her criteria for what constitutes or exemplifies informativeness. Hyams & Wexler (1993) suffer from similar shortcomings. Though they do work with a concrete data set, they do not assess individual arguments on the basis of any criterion other than form of argument to determine whether they are informative or not, and they do not take into account the different discourse functions of null vs. pronominal arguments. Thus, while their argumentation sounds reasonable on the surface, it would certainly benefit from more detailed investigation addressing these shortcomings.

The present paper seeks to give a rather more thorough treatment to a pragmatics account of the subject-object asymmetry. It identifies a set of factors which characterize typical situations of informativeness, and uses these factors to identify informative arguments in a data set from four children aged 2;0 through 3;6 learning Inuktitut as a first language. In addition, it assesses the extent of the links between features of informativeness on one hand and lexical vs. null and subject vs. object arguments on the other. Results indicate that a pragmatics account of the subject-object asymmetry can indeed be upheld to a much greater extent than previous research indicates, and that the factors characterizing “informativeness” are good indicators of those arguments which tend to be omitted in early child language.

3. Fleshing out the Informativeness Account

While Hyams (1986) is right that most referents involved in early child speech are present in the discourse context, this does not mean the child never has reason to say anything informative (which she also notes). In fact, several types of situations arise in everyday discourse in which the child might feel the need to reduce the potential uncertainty of the listener regarding the referents that he or she is talking about. Eight such situations are identified in the following paragraphs (including ideas taken from Greenfield & Smith, 1976; Clancy, 1980, 1993; Givón, 1983; Hyams, 1986; Chafe, 1987; Du Bois, 1987; Hirakawa, 1993).

Contrast. Children often tend to emphasize contrast in their speech, typically between candidate agents when they want to prohibit others from doing something they are doing, or when they want to do something someone else is doing. In the example in (4), Lizzie is trying to play with a doll that her friend is currently playing with, and is emphasizing that it is now she, Lizzie, that will use the doll, and not her friend. Contrast represents a situation of informativeness since

information about a change in the current situation is being conveyed, and reduces uncertainty about the referent in question.

(4) *Atulaurlara.*

atuq-lauq-lagu

use-POL-ICM.1sS.3sO

'I'll use it.'

(Lizzie 2;6)

Query. Asking or responding to a question to which a referent in subject or object position is the answer is a situation characterizing informativeness since the uncertainty regarding the identity of a given referent is either identified or resolved. In (5), Paul is responding to being asked what he sees through the camera viewfinder. Although the answer is a referent in the physical context and may even have been recently discussed in the discourse, it is now being introduced in a new light.

(5) *Tiivii takujara.*

tiivii-Ø taku-jara

television-ABS.SG see-PAR.1sS.3sO

'I see the television.'

(Paul 3;3)

Absence. Though young children most often talk about referents present in their immediate physical context, they do occasionally also talk about referents which are not present. This represents informativeness since language is used to establish the identity of a referent whose identity cannot be gleaned from context. In (6), Elijah is referring to a hockey stick which is not in the immediate physical context. Since it is not present in view, its mention brings new information to the speech context.

(6) *Haakirutialu silamiittuq qaigumajara.*

haakirutu-aluk-Ø

silami-it-juq

qai-guma-jara

hockey.stick-EMPH-ABS.SG outside-LOC-be-PAR.3sS come-want-PAR.1sS.3sO

'I want to get the hockey stick that is outside.'

(Elijah 2;0)

Newness. Occasion often arises to introduce a new referent into discourse which has not been previously talked about. In (7), Elijah is asking for a ball which is present in the physical context but which has not been talked about before. This represents informativeness since the referent being introduced cannot yet be presupposed.

(7) *Qaiguk pattaq.*

qai-guk

pattaq-Ø

come-IMP.2sS.3sO ball-ABS.SG

'Give me the ball.'

(Elijah 2;0)

Differentiation in discourse. The need often arises to differentiate one referent from other potential referents already established in discourse. In this case, the naming of the desired referent represents informativeness since it decreases potential uncertainty concerning which of the recently-mentioned potential referents is the one now being talked about. In the context of the utterance in (8), several people have been discussed. Now Louisa wants to single out her

mother from these various discourse referents.

(8) *Anaanaga qaisimmat.*

anaana-ga qai-si-mmat
mother-ABS.1Ssg come-PRES-CSV.3sS
'My mother's coming.'

(Louisa 2;10)

Differentiation in context. The need also often arises to differentiate one referent from other potential referents in the physical context. There are often several plausible referents in the physical context which could fit the verb semantics and identifying features of the argument in question. Specifying the intended referent is then informative since it selects among the alternative candidates. In the context of (9), Paul and his brother have been playing with a number of small things, and here Paul points out which one among the various possibilities he means to refer to in this utterance.

(9) *Una uvanga mikijuruluumijuq.*

u-na uvanga miki-juq-guluk-u-mi-juq
this.one-ABS.SG I/me/my/mine small-NOM-DIM-be-also-PAR.3sS
'This one of mine is also small.'

(Paul 3;3)

Third person. Talking about third person rather than about a speech act participant greatly increases the search space for finding a referent for the argument. Rather than searching among two participants, the set of potential referents is almost infinite. Thus, defining the third person being talked about represents a situation of informativeness. In (8), Louisa is telling her conversational partner about someone who is not participating in the conversation.

(10) *Qallunaaq ammutualu.*

qallunaaq-Ø ammu-juq-aluk
white.person-ABS.SG sleep-PAR.3sS-EMPH
'The white person is sleeping.'

(Louisa 3;6)

Inanimacy. The same search space logic can be applied to talking about inanimate rather than animate entities. In the typical child discourse, there are a limited number of animate entities (child, mother, father, sibling, dog, etc.) compared to the vast number of inanimate entities (table, cup, toy, juice, television, plant, clothes, etc.). Thus, the search space is vastly increased once an inanimate entity is being discussed. The utterance in (11) exemplifies such a situation.

(11) *Una ukkuali?*

u-na ukkuaq-li
this.one-ABS.SG close-IMP.3sS
'Shall I close this?'

(Lizzie 2;6)

These eight features, then, will be used in the remainder of the paper as characterizations of informativeness. An argument which represents one or more of these features is informative, while an argument which represents none of these features is not informative.

Identifying factors which characterize informativeness of arguments is a necessary first step

to identifying which arguments are informative or not. In explaining the subject-object asymmetry, it might also be helpful to have some independent research indicating that informative arguments might occur more frequently in object position than subject position. Such an indication is found in at least two characterizations of adult discourse.

DuBois's (1985, 1987) Preferred Argument Structure is one such characterization. It comprises a set of statistical tendencies observed across a number of typologically diverse languages indicating that new arguments rarely appear in subject of transitive position, but rather predominantly appear in subject of intransitive and object of transitive positions. This indicates a potential dichotomy between subject and object at least for transitive sentences. The Animacy Hierarchy (Dixon, 1979; Comrie, 1989) also points to a dichotomy between subject and object. Statistical tendencies here reveal that third person and inanimate referents rarely appear in subject of transitive position, but rather prefer object position (among other possibilities). These two characterizations indicate that at least a subset of the factors of informativeness listed above have been shown to preferentially appear in object position in adult discourse.

4. Inuktitut Data

4.1 Structure

Inuktitut is a language of the Eskimo-Aleut family. It is polysynthetic and morphologically ergative, has basic SOV word order, 4 persons, 3 numbers, and a rich system of nominal and verbal inflections. Particularly relevant for this paper is the morphological form in which arguments appear. Most importantly, verbal inflection is obligatory in Inuktitut. Each verb stem takes one verbal inflection, a portmanteau morpheme which gives information about verbal modality and person and number of both subject and object. Third person arguments may optionally be represented by a lexical or demonstrative noun phrase. However, representation of first and second person arguments other than in the inflection (i.e. by a pronominal) is ungrammatical in the adult language. The utterances in (12) show each of the three possible options of argument representation with the intransitive verb *sinik-* 'sleep': (12a) shows a lexical argument, (12b) a demonstrative, and (12c) a null argument. Each of the three options in (12) is possible for a third person argument, while only (12c) is possible for a first or second person argument.

(12) a. *Piarait sinisijuq.*

piaraq-it sinik-si-juq
 baby-ABS.2Ssg sleep-PRES-PAR.3sS
 'Your baby is sleeping.'

(Paul 3;3)

b. *Una sinisimmat.*

u-na sinik-si-mmat
 this.one-ABS.SG sleep-PRES-CSV.3sS
 'This one is sleeping.'

(Lizzie 2;10)

c. *Sinilirmat.*

sinik-liq-mmat
 sleep-PRES-CSV.3sS
 'He/she is sleeping.'

(Elijah 2;9)

Note that the term "argument" here is meant to indicate mention of referent in subject or

object position, including both independent and inflectional forms. "Overt" means that there is an independent lexical or demonstrative representation of the argument in addition to verbal inflection, while "null" means that the argument is represented only by verbal inflection (or occasionally nothing if the inflection is omitted). Use of this terminology does not intend to indicate a particular position on whether the verbal inflection in Inuktitut is actually a pronominal argument or not, though of course the terminology is one which implies that the inflection does not constitute the argument.

4.2 Methodology

Data used in this study is taken from four Inuit children aged 2;0 through 3;6, living in a functionally monolingual Inuit community of some 200 inhabitants in arctic Quebec (Allen, 1996). Data were collected by videotape, four hours per month for nine months, in naturalistic communication situations with friends and family. The tapes were transcribed and checked by native speakers, and coded for morphology and syntax relevant to this research. Criteria for inclusion of utterances are given in (13).

- (13) a. fully intelligible
 b. complete from the point of view of the child's intonation
 c. no routines (counting, alphabet, songs)
 d. repetitions and imitations included
 e. only utterances containing verb root and/or verbal inflection

This paper analyzes the first, middle and last sessions for each child, as indicated in Table 1.

Table 1: *Data analyzed*

Child	Age	Number of intransitive clauses	Number of transitive clauses	Total
Elijah	2;0	171	41	212
	2;5	223	89	312
	2;9	254	42	296
Lizzie	2;6	109	64	173
	2;10	243	79	322
	3;3	108	20	128
Louisa	2;10	77	33	110
	3;2	261	118	379
	3;6	235	65	300
Paul	2;6	86	22	108
	2;11	60	29	89
	3;3	192	39	231
Total		2019	641	2660

The data comprise both intransitive and transitive clauses. Intransitive clauses include those which are simple active, passive, antipassive, noun incorporation, and complex active (e.g. want to V). Example (14a) shows a simple active intransitive utterance with an overt lexical subject, while (14b) shows a locative incorporation utterance with a null subject.

- (14) a. *Qupanuarulu qailangammat.*
 qapanuaq-guluk-Ø qai-langa-mmat
 bird-DIM-ABS.SG come-FUT-CSV.3sS
 'The little bird is going to come.' (Lizzie 2;11)
- b. *Maunaasijunga.*
 ma-una-aq-si-junga
 here-VIA-go-PRES-PAR.1sS
 'I'm going through here.' (Paul 2;6)

Transitive clauses include those which are simple active, causative, noun incorporation, and complex active (e.g. want to V). Example (15a) shows a simple active transitive utterance with a null subject and an overt demonstrative object, while (15b) shows a causative utterance with both arguments null.

- (15) a. *Una aturtara.*
 u-na atuq-jara
 this.one-ABS.SG use-PAR.1sS.3sO
 'I'm using this one.' (Elijah 2;5)
- b. *Ijukkatilauruk.*
 ijukkaq-tit-lauq-guk
 fall-CAUS-POL-IMP.2sS.3sO
 'Make it fall.' (Louisa 3;2)

All subject and object arguments are coded for the factors described in section 3 above, and listed here in (16).

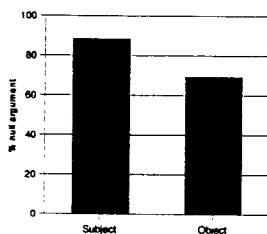
- (16) a. contrast
 b. query
 c. absence
 d. newness
 e. differentiation in discourse (only for third person arguments)
 f. differentiation in context (only for third person arguments)
 g. third person
 h. inanimacy
 i. overall informativeness (one or more of a-f)

5. Results

The question to be answered, then, is whether informativeness could be a reasonable

explanation for the subject-object asymmetry found in argument ellipsis in early child language. Since this paper uses data from Inuktitut, it must first be determined that a subject-object asymmetry of this sort in fact exists in Inuktitut. As noted above, Inuktitut has verbal inflection for both subjects and objects, leading to the expectation that subjects and objects will be treated equally in terms of grammar. Nevertheless, Inuktitut child data shows a subject-object asymmetry for null arguments. As illustrated in Figure 1, subjects are omitted in 85% of cases, while objects are omitted in only 69% of cases.

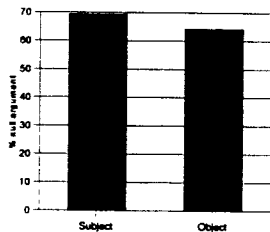
Figure 1: *Percentage of null arguments in subject vs. object position, all persons*



It is possible, however, that the subject-object asymmetry shows up in Inuktitut just because first and second person arguments can never be overt, and first and second person arguments appear more often in subject position than in object position. Two types of data show that this does not appear to be the full explanation.

First, if the subject-object asymmetry were due to the ungrammaticality of overt first and second person arguments, then no asymmetry should be observed for third person arguments ($n=1542$) in these positions. However, Figure 2 indicates that the asymmetry still occurs for third person arguments alone, though it is weaker. Third person subjects are omitted in about 70% of cases, while third person objects are omitted in only about 63% of cases.

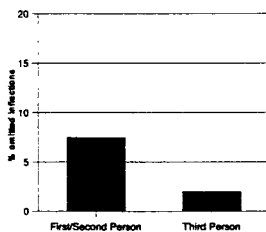
Figure 2: *Percentage of null arguments in subject vs. object position, third person only*



Second, some independent evidence suggests that first and second person arguments would be omitted more often than third person arguments if the opportunity were given in Inuktitut. Research in discourse indicates that first and second person arguments are omitted more often than third person arguments in languages in which overt first and second person arguments are possible. In Inuktitut child language, a similar effect can be seen for the omission of verbal inflection, which is not grammatical in adult language, but is equally possible for all three

persons. Children do occasionally omit the verbal inflection ($n=163$). Thus, if first and second person inflections are omitted more than third person inflections, this would suggest that first and second person overt arguments might well be omitted more than third person arguments if the former were grammatical in Inuktitut. In fact, Figure 3 shows that ellipsis of verbal inflection does occur more frequently in first and second person contexts ($132/1757=7.5\%$) than in third person contexts ($31/1542=2\%$), suggesting that first and second person arguments are preferentially dropped regardless of the typology of Inuktitut in this respect.

Figure 3: *Percentage of omitted verbal inflection in first and second person contexts vs. in third person contexts*



Thus, it seems that the whole explanation for the subject-object asymmetry in Inuktitut does not lie in the fact that first and second person arguments can never be overt in Inuktitut. Nonetheless, the remainder of the results will be presented for both all arguments taken together, and for third person arguments only.

Returning to the main question, then, we have established that there is a subject-object asymmetry in Inuktitut. In order to show that informativeness could provide an explanation for this asymmetry, it must first be shown that it plays a part in determining whether an argument is overt or not. Figures 4 and 5 show that arguments which are overt tend to have a given informativeness feature more frequently than arguments which are null. For example, some 47% of all the overt arguments in the data set introduce new referents, while only about 7% of the null arguments in the data set introduce new referents. This pattern is the same for each of the informativeness features observed, apart from query for which there is too little data to make any clear statements. Figure 5 indicates that the same pattern holds if only third person arguments are considered, though the differences between the percentage of overt vs. null arguments having a given informativeness feature is smaller than if all the arguments are taken together.

Figure 4: *Percentage of arguments with informativeness features for overt vs. null arguments, all persons*

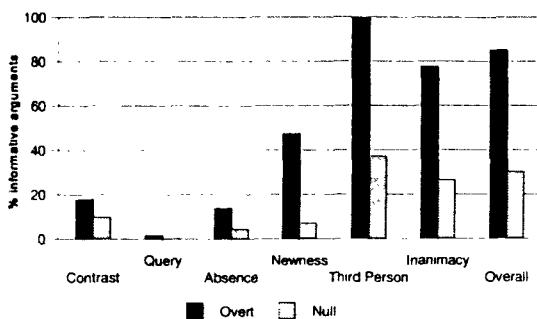
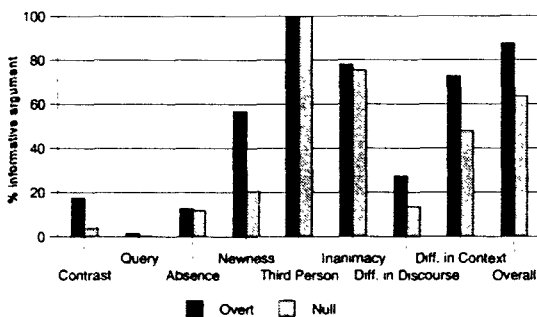
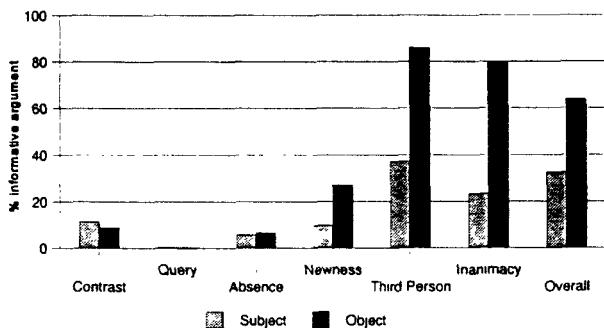


Figure 5: *Percentage of arguments with informativeness features for overt vs. null arguments, third person only*



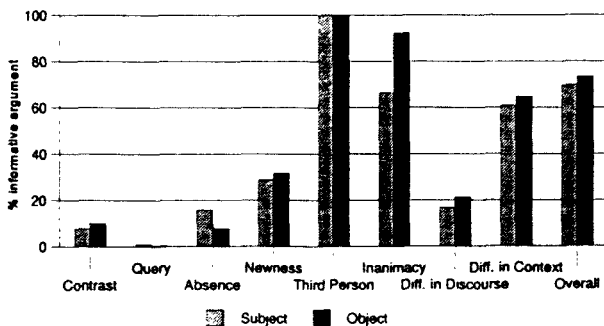
A final piece of evidence needed to argue that informativeness can explain the subject-object asymmetry is whether informative arguments appear more frequently in object position than in subject position. Figures 6 and 7 show that the percentage of object positions containing arguments with a given informativeness feature is higher than the percentage of subject positions containing the same feature for three of the features, and for informativeness overall, when all persons are included. Thus, some 25% of objects serve to introduce new referents, while only some 10% of subjects have this feature. The effect is not seen for query since so few arguments have this feature. The reverse effect is seen for contrast, likely since so much of the contrast in this data set involves contrasting the agents who are permitted to do certain activities, as in (4) above.

Figure 6: *Percent of arguments with informativeness features in subject vs. object position, all persons*



The difference between subject and object in terms of percentage of arguments having a particular informativeness feature is somewhat smaller when only third person arguments are considered, as illustrated in Figure 7. Note that the contrast feature patterns more like the other features when only third person arguments are considered; this is likely because much of the contrast involves disputes between first and second person agents over involvement in activities, and once these are removed from the analysis, the remaining contrasts fall into the expected pattern. It is not clear why more subjects represent absent referents and do objects.

Figure 7: *Percent of arguments with informativeness feature in subject vs. object position, third person only*



To summarize so far, then, four significant results have arisen from examination of the Inuktitut data. First, Inuktitut child language does display a subject-object asymmetry with regard to early null arguments. Second, this asymmetry does not seem to just be due to the ungrammaticality of first and second person overt arguments in Inuktitut. Third, informativeness

does seem to have something to do with overtness of arguments. Fourth, informativeness features also appear more frequently in association with arguments in object position than with arguments in subject position. Thus, we are led to conclude that informativeness could well be an adequate explanation for the subject-object asymmetry.

A stronger position would be that informativeness is a better explanation for the subject-object asymmetry than is a grammatical account. This idea was investigated by comparing two types of subjects - subjects of intransitives (Si) and subjects of transitives (St). Under a grammatical account of the subject-object asymmetry, subjects of transitives should be null equally as much as subjects of intransitives since they are licensed in the same way and positioned in the same place. However, Du Bois (1987) shows that St and Si behave differently in discourse: both lexical and new arguments rarely appear in St position, but often appear in Si position. Thus, a pragmatic but not a grammatical account would predict an asymmetry between St and Si in occurrence of null arguments.

The first question to ask, then, is whether there is an asymmetry between St and Si for null arguments in the Inuktitut data. Figure 8 indicates that there is such an asymmetry. Thus, about 98% of transitive subjects are null, while only about 85% of intransitive subjects are null.

Figure 8: *Percentage of null arguments in St vs. Si vs. object position, all persons*

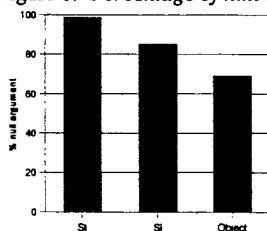
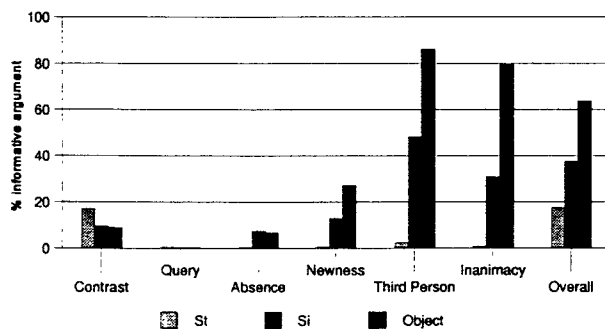


Figure 9: *Percentage of arguments with informativeness features in St vs. Si vs. O positions, all persons*



Not surprisingly, arguments with given informativeness features also appear more frequently in Si position than in St position. For example, Figure 9 indicates that some 15% of arguments in

Si position introduce a new referent, whereas only 1% of those in St position introduce a new referent. This is consistent with adult discourse research such as DuBois's (1985, 1987) Preferred Argument Structure. Since a grammatical account would not predict a difference between Si and St either in terms of the morphological form of arguments (null vs. overt) or in the distribution of informativeness features between Si and St, the results here suggest that a pragmatics account may well be preferable to a grammatical account in explaining the subject-object asymmetry.

6. Conclusion

This paper has shown that a subject-object asymmetry occurs in Inuktitut even though both subject and object ellipsis are licensed through verbal inflection (Figures 1-2). In the Inuktitut data examined here, overt arguments are more frequently informative than null arguments (Figures 4-5), and informative arguments appear more frequently in object position than in subject position, especially arguments that are new, third person and inanimate (Figures 6-7). While the ungrammaticality of overt first and second person arguments in Inuktitut clearly has an effect, it does not appear to be the whole effect (Figures 2, 3, 5, 7). The asymmetry between St and Si for both overtness and informativeness of arguments indicates that a pragmatics account of the subject-object asymmetry may well be preferable to a grammatical account (Figures 8-9). Finally, discourse-pragmatic factors seem to play a much larger role than previously attributed to them in the distribution of null arguments in general, and in the subject-object asymmetry in particular.

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ABBREVIATIONS

ABS = absolutive	POL = politeness (used with imperatives)
CSV = causative	PRES = present
DIM = diminutive	SG = singular
EMPH = emphasis	1Ssg = my singular object
ICM = incontinentative	2Ssg = your (sg) singular object
IMP = imperative	1sS = first person singular subject
LOC = locative	2sS = second person singular subject
NOM = nominalizer	3sS = third person singular subject
PAR = participative (equiv. to indicative)	3sO = third person singular object

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